Western Electric

ELECTRICAL SUPPLY

YEAR BOOK

1919

# TO THE TRADE

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A uniform discount of 50% from the Western Electric list prices in this Year Book gives the approximate cost to the trade of any article cataloged. Quotations on larger cuantities may be secured from our salesmen, and open orders will be billed at the lowest prices prevailing for the quantity ordered.

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 Pages

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 Panelboards
 1066-1096

 Iron Conduit
 740

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**EQUIPMENT FOR EVERY ELECTRICAL NEED** 

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### **FOREWORD**

We have not permitted abnormal market conditions to interfere with a fixed program of preparing annually a Year Book for the benefit of our customers. We have once more followed the plan of showing list prices, which with a few exceptions, permit a uniform discount, and in addition, print the manufacturers' list prices on standard supplies, for the convenience of customers who prefer to purchase on that basis, or who may wish an independent means of checking our invoices without the necessity of referring to a manufacturer's catalog.

The year 1919 is certain to be a period of fluctuating values and no permanent schedule of list prices could have stability as an accurate quotation basis. Nevertheless, our uniform list price and discount plan provides a very complete electrical guide for estimating, cost requisitions, and for retail counter use. When purchases of any large quantities of supplies are contemplated, and accurate costs are required, a quotation should always be obtained from our representatives, or from our nearest office.

Supplementing this Year Book, we furnish upon request, descriptive matter of all items of electrical equipment dealt in by the electrical trade.

Substantially all the material listed in our Year Book is carried in stock at each Western Electric distributing house.

Customers are urged to anticipate future requirements, wherever possible, by placing orders for supplies in standard packages. By so doing they eliminate the necessity for double handling of material, and can secure a lower price in return for this saving in labor.

We shall be glad to have the opportunity of serving you during the year 1919.

Western Electric Company

### **Prices**

Prices found in this catalog are revised to agree with the latest lists at the time of issue. It is understood that they are subject to change without notice and are, therefore, not offered by us as a quotation. It is contemplated that all prices are for shipment from our warehouse unless otherwise specified, except such goods as are shipped regularly direct from factories, in which cases prices are for factory delivery unless otherwise specifically agreed upon.

### **Orders**

When possible, we have placed opposite each acticle a list number. When ordering material, kindly order by the list number and give a description of the article required.

You are requested to specify the routing over which you prefer shipments to be made. In the absence of specific instructions, we shall use our test judgment in selecting the route, but we are not responsible for extra drayage expenses at destination.

### Terms

Our terms are 30 days not from date of invoice. Cash discount for payment within ten days from date of invoice may be deducted at the rates set forth in the manufacturers' schedules of each discounts, or such each discounts may be deducted for payment with order.

Payments may be made by check, bank draft, postal or express money order, drawn to the order of or endorsed to the order of the Western Electric Company, Incorporated.

Payments in currency through the mails even if registered are not recommended and are at sender's risk. We are not responsible for loss or misearriage of the mails.

Receipts are not issued for remittances unless recuested. Our endorsement on remittance is acknowledgment of the receipt of the funds.

We solicit new accounts on a credit basis, and in order to give prompt service, request that where you are not rated by the Commercial Agencies, references or other information of a credit character be forwarded with the order. These will be immediately acted upon, and the results held in strict confidence for our sole use and, when reasonably satisfactory, shipment will follow with all possible dispatch.

To avoid the delay incidental to communicating with references, etc., it would be mutually convenient, when immediate shipment is desired, to instruct us to ship C. O. D. by express, or parcel post (insured if so instructed) or by freight subject to sight draft through a local bank against bill of lading.

We shall advise the terms on future orders promptly after communications from references are received.

### Returned Goods

To save transportation charges, and to facilitate the handling of goods upon receipt, you are requested not to return goods without having obtained shipping instructions from us.

### Shipments

As experienced packers are employed, and as reasonable care is used in packing, we cannot be held responsible for breakage in packages which are delivered in "good order" by the carrier.

Shipments of glassware are made at your risk.

Goods ordered to be shipped by pareel post will be sent only at the purchaser's risk of loss or damage.

### MATERIAL INDEX

Α	Material	Page
Material Page	Battery Switches	280, 281, 650, 677, 678
i ngo	Battery Testers	
Adapters, Conduit       743, 751         Adapters, Socket       378, 555	Beam Clamps	979
Adjustable Boxes 770, 771	Beam Strap	
Adjustable Brackets. 438–440	Roll Diverse Transform	
Adjustable Insulator Supports. 987	Rolls and Ruzzose 151	s
Adjustable Plaster Drill	242 944	250, 252, 257–275, 489–491
Adjusters, Cord	Belts	
Aerial Cable Rings. 984	Benders, Conduit	
Aglites	Bends, Fiber Conduit	
Air Heaters, Electric335Alcohol Torches1034-1037	Binding Posts	
Alternators	Binding Wire	
Aluminum Sockets. 543	Bit Braces	
Ammeters and Voltmeters 104–121	Bit Holders. Bits, Auger	1021, 1020
Ampere-Hour Meters	Bits, Rapid Fire	070
Anchor Rods963	Black, Underwriter's	511
Anchors, Guy	Blocks Connecting	185 486
Anchors, Screw	Blocks Protector	
Annunciator Cables and Wires. 897 Annunciator Telephones 170, 182	Blocks, Pulley	1010. 1011
Annunciators	Blocks Self Locking	
Anti-Wood Pushes	Blocks Switch Boards, Panel Boards,	707 719 1000 1000
Apartment House Telephones 169, 179–181	Bolt Cutters.	1015
Are Light Rope911	Bolt, Clevis	976
Armalae	Bolts, Carriage	. 065
Armor Cutters	Bolts, Expansion	
Armored Conductors. 741, 742 Arresters, Lightning. 95–101	Bolts, Eve	963
Attachment Plugs	Bolts, Foundation Bolts, Machine	481
608, 610-613, 615, 629, 728, 733, 735, 877-879	Bolts, Spacing.	
Attachments, Oil Lamp	Bolts, Toggle	971
Attachments, Pull	Bonds, Rail	
Auger Bits. 1021, 1022 Augers 999	Booths, Telephone	
Auto Transformers, 54	Border Light Cable. Boring Machines	
Automatic Pen Registers. 243	Box Connectors	712 711
Automobile Cables	Boxes, Battery	
Automobile Meters	Boxes, Branch	701
Automobile Supplies 146–149, 152, 153, 260, 291	Boxes, Conduit	
352, 353, 364, 1035 Axes	Boxes, Cut Out	
	Boxes, Fire Aların. Boxes, Floor.	238-242, 244-251, 252
	Boxes, Fuse	705 708
	Boxes, Junction486, 49	8, 499, 502, 757, 760, 761
	, ,	763, 766
_	Boxes, Relay	
В	Boxes, Service	
	Boxes, Switch. Braces, Bit.	087, 703, 767-769
Baby Knife Switches	Braees, Crossarm	041
Bags, Tool1014	Bracket Fixtures	
Bands, Pole967	Bracket Plates	
Barrier Switches	Bracket Tubes	
Bars, Digging and Tamping	Brackets, Adjustable Brackets, Insulator	
Base Board Receptacles	Brackets, Metal	980
Batteries, Dry	Brackets, Ornamental	478-480
Batteries, Medical	Brackets, Pole	1040
Batteries, Storage	Brackets, Telephone	911
Battery Boxes	Brackets, Transposition	
Battery Charging Sets	Branch Boxes.	
Battery Connectors	Brascolites	110 17
Battery Coppers	Brass Cleats.	770
Battery Fans	Brazing Outlits	1033
Battery Lamps	Break Arms	952, 953, 950
Battery Meters.         134, 167           Battery Sets         157, 158	Breast Drills.	1018
Battery Supplies. 159–167	Brewery Cord.	909
	Brick Drills	

		_
Material Page	Material	Page
Bridge Suspension	Carts, Tool	
Bridle Rings	Ceiling Boxes	
Bronze Wire	Ceiling Brackets	
Buffalo Grips	Ceiling Buttons	
Buffer, Electric	Ceiling Fans	
Bulkhead Fixtures 491, 499	Ceiling Suspensions.	
Bulldog Clips	Ceiling Switches	
Bulls Eye Combination	Cement Mica	
Burglar Alarm Apparatus	Chafing Dishes	
Bus Bar Clamps	Chain Clamps	
Bush Hook	Chain Drill	
Bushing, Conduit	Chain, Oneida	
Bushing Tools. 747 Bushings, Fixture 441	Channel Pins	
Bushings, Lead. 747	Charcoal Furnace	
Bushings, Porcelain	Charging Machines	216, 217
Bushings, Socket	Chatterton Compound	
Buttons, Ceiling 625	Chisels	
Buzzers and Bells . 151, 185, 188, 209, 238, 239, 242, 244-250, 252, 257-275, 489-491	Choke Coils	
244-200, 202, 207-270, 400-401	Christmas Tree Outfits Circuit Breakers	
	Clamp Knobs	
	Clamping Ears	
	Clamps, Beam	
	Clamps, Bus Bar	680
· <b>C</b>	Clamps, Cable	
-	Clamps, Conduit	
O 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Clamps, Crossarm	
Cabinets and Panel Boards. 707–718, 1066–1089 Cabinets, Fire Alarm238, 239, 244–248	Clamps, Guy	
Cable Boxes	Clamps, Messenger	
Cable Cars. 1001	Clamps, Pipe	
Cable Clamps	Clamps, Rope	
Cable Clips	Clamps, Splicing	
Cable Duct Shields	Clamps, Table	
Cable Grips	Clay Conduit	
Cable Hooks	Cleaners, Vacuum	
Cable Insulators 931	Cleats, Brass	
Cable Lug	Cleats, Fiber	
Cable Racks 972, 973, 981	Cleats, Porcelain	
Cable Reels. 1001–1004 Cable Rings	Clevis Bolt	
Cable Rollers	Clevis, Crossarm	
Cable Saws	Climber Straps	
Cable Splitting Knives	Climbers, Pole	
Cable Strippers	Clips, Cable	
Cable Supports	Clips, Test	
Cable Suspension Clamps 978 Cable Taps 682	Clocks, Burglar Alarm	
Cable Terminal 185, 206	Cloth Cutter, Electric	
Cable Wheels	Cloth, Micanite	
Cables and Wires	Cloths, Wiping	
Calipers, Micrometer	Cluster Bodies	
Candelabra Lamps	Clusters, Socket	
Candelabra Sockets. 515, 594	Coat Pocket Flashlights	
Candelabra Switches 537, 555	Coils, Choke	
Candles, Electric294	Coils, Induction	
Canopies	Coils, Sneak	
Canopy Insulators	Coin Collectors	
Cant Hooks	Color Caps	
Canvasite Cord	Colorings, Lamp	
Caps. Pipe	Come-Along Grip	1008
Car Fuses	Combination Bell and Push	
Car Wire	Combination Plates	
Carbon Batteries	Commutator Cement	
Carbon Lamps 354 Card Racks 291	Commutator Lubricant	
	Compensares	
Cargo Lights 461 Carriage Bolts 965	Compensator Switches	
Carriage Call Annunciator	Compensators	
Carrying Hooks 995	Compound, Chatterton	
Cars, Cable 1001	Compound, Commutator	

Mater <sup>i</sup> al	Page	Material Page
Compound, Pothead	512	Decorative Receptacles
Compound Pushes	. 285	Decorative Sockets
Condenser Boxes. Condensers.	188	Deltabeston Wire
Conductors, Armored	7.19	Desk Annunciators
Conduit and Accessories	1-881	Desk Fans.         315           Desk Portables.         432-436
Conduit Benders	1030	Detachable Core's
Conduit Bushing746-748, 751, 752	2, 753	Diamond Drills
Conduit Clamps	3,779	Dial Switches
Conduit, Clay	992	Die Stocks
Conduit Elbow Former.	7. 702 1030	Diggers, Post Role. 999
Conduit Elbows 740,749	1050	Digging Bars. 994 Dim-A-Lite Sockets. 387
Conduit, Fiber	, 991	Dinkey, Pole 998
Conduit Hangers	.753	Directory Push 985
Conduit, Wooden	. 992	Disc Stoves 236
Connecting Blocks 185		Distributing Racks. 972, 973
Connecting Links.	977	Dolly, Track         1003           Door Openers         278-280
Connectors, Battery	, 292	Door Receptacles
Connectors, Box	, 741	Door Springs. 237
Connectors, Conduit		Door Switches570, 627, 643, 648, 650
Connectors, Cord557, 600-603, 610, 611 Connectors, Fixture141		Door Trips
Connectors, Insulated	7.16	Dossert Wire Connectors. 681–683
Connectors, Stud.	.682	Double Arming Bolts. 962 Double Deck Reel 1004
Counectors, Weatherproof	.502	Double Gong Bells. 275
Connectors, Wire	. 981	Draw Knife
Constant Ringing Drop.	.267	Drill, Breast
Copper Wire. Copper Wire, Hard Drawn.	.900	Drills, Brick
Coppers, Battery	166	Drills, Chain and Plaster. 1018 Drills, Diamond
Coppers, Soldering	1038	Drills, Electric
Cord Adjusters	.432	Drills, Hand
Cord, Canvasite	. 909	Drills, Hollow
Cord, Lamp	, 629 749	Drink Mixer
Cord, Switch	.626	Drive Rings. 980 Drop Constant Ringing. 267
Cords, Are Lamp	911	Drop, Wire
Cords, Reinforced	, 896	Dry Batteries
Corner Bit Braces. Corner Brackets.		Duct Rods, Empire
Corner Irons.		Duplex Meters
Cotton Sleeving	.506	Duplex Receptacles 561 Duplex Wire 889
Cotton Tape	.506	Duopods
Counters, Pole	LUUA	Dust Proof Fixtures
Counters, Tally	1005	
Covers, Insulating	683	
Crane Motors.		
Crimping Pliers	.984	
Crossarm Braces		E.
Crossarm Clamps	.975	
Crossarm Straps Crossarms 467, 485,	.970	Ears, Trolley
Crossings, Trolley. 1058-1	060	Ebony Wire Rope
Crow Bars	.994	Eccentric Grips
Crowfeet	445	Economical Lamps. 355 Elbow Formers, Conduit. 1030
Crown Switches	281	Elbow Formers, Condut
Cut Out Boxes	777	Elbows, Conduit. 740, 749, 752 Electrolier Joints 443, 445
Cut Outs	703	Electrolier Sockers
Cutter, Electric Cloth	51	Electrolier Switches573, 633-635, 640, 641
Cutters, Armor		Electro-mechanical Bells
Cutters, Bolt and Wire	010 090	Electrose Insulators 934–938
Cutters, 1 pc	020	Elevator Annunciators         229, 254, 255           Elevator Cable         908
	j	Emergency Jacks 997
		Isinery Cloth
	1	Emery Paper. 505
1)	1	Enamelac         513           Enclosed Fuses         694-702
• •		Enclosed Puses
Daylo Flashlights. 293-	297	Enclosed Switche Steel 719-728 End Plates. 725-727
Dead Men	996 [	Entrance Switches 686-688 724
Deck Cable	908 ]	Equalizers

Material         Page           Escutcheon Push         283           Etch-O-Lite         359           Exhaust Fans         317-319           Expansion Bolts         481, 969           Expansion Shields         968, 969           Expulsion Fuses         102, 103           Extension Bells         185, 201, 209           Extension Bit Holders         1021           Extension Push Buttons         290           Extinguishers, Fire         304           Eye Bolt         963           Eye Nuts         976, 979	Material         Page           Fry.ng Griddle         344           Fuller Board         518           Fur naces, Soldering         1038           Fuse Boxes         705, 706           Fuse Holders         684           Fuse Links         689, 690           Fuse Plugs         692, 693           Fuse Receptacles         487           Fuse Ribbon         689           Fus 2 Wire         690           Fuseless Rosettes         565           Fuses and Cut Outs         601-706           Fuses and Parts         209           Fuses Expulsion         102, 103           Fuswitch         677
F	
Factory Brackets         439           Factory Buzzers         151           Faney Gongs         263-265           Fancy Lamps         357           Fans         315-319           Farm Lighting Outfits         136-143           Feed Through Switches         626, 647           Feeder Ears         1051, 1052           Feeder Taps         1046           Fiber Cleats         781           Fiber Conduit         990, 991           Fiber Rods         508           Fiber Rods         68, 69           Five Alarm Supplies         68, 69           Fire Alarm Annunciators         224, 250           Fire Extinguishers         304           Fire Pots         1036, 1037           Fish Paper         516, 518           Fish Plugs         746           Fish Wire         750           Fixture Bushings         441           Fixture Stems         751           Fixture Studs         444           Fixture Switches         536, 540           Fixture Wire         889, 906           Flashlights         293-297           Flexible Conduit         740           Flexible Conduit	Galvanized Chain. 911 Galvanized Wire. 902, 903 Gang Boxes 765 Gas Engine Switches 678 Gasoline Torches 1034–1037 Gaskets, Condulet 876 Gangs, Wire. 1032 Gera Lamps. 354 Generators. 33, 34, 40–45, 136 Generators, Hand. 210 Giant Strain Insulators 935, 936, 1054 Glass Insulators 925–933 Glass Shades 392–396, 428–431, 875 Globe Holders 390, 391 Gloves, Rubber. 1039 Glower Stoves. 332 Ghe, Insulating 519 Glue Pots. 336 Gravity Batteries. 165 Griddles, Frying 344 Grinders, Portable 49–51, 326 Grip, Arms 485 Grips, Buffalo 1007 Grips, Cable 985 Grips, Wire 1008, 1009 Ground Clamps 778, 779, 981 Ground Rods 202, 982 Guard, Irons 975 Guards, Lamp 370–377, 875 Guy Anchors 983 Guy Clamps 976 Guy Thimbles. 976 Guy Shackles. 976 Guy Shackles. 977 Guy Thimbles. 976
Floor Tread.         291           Flush Annunciators         223, 225, 229	н
Flush Receptacles       500, 501, 560-563, 604-607, 614, 615         Flush Switches       566, 567, 640         Food Warmer       332, 342         Foot Push       291         Forks, Insulated       989         Foundation Bolts       481         Frames, Hack Saw       1024         Framing Chisels       1023         Frequency Meters       120         Friction Tapes       503         Frogs, Trolley       1056-1058	Hack Saw Blades       1025         Hack Saw Frames       1024         Ha.r Dryer       326         Half Shades       393, 416         Hanmers       1026         Hammers, Electric       48         Hand Drills       970, 1018, 1020         Hand Generators       210         Iland Portables       375, 376, 494, 498         Hand Saws       1024

**World Radio History** 

Material Page	Material Page
Hand Sets	Inter-Phone Systems
Hand Vises	Iron Box Bells and Buzzers 261–264
Handles, Socket	Iron Brackets 949–960
Handles, Switch	Iron Clad Switches
Hangers, Cable	Iron Conduit
Hangers, Conduit	Iron Pins
Hangers, Lightning Arresters	Iron Wire
Hangers, Messenger	Ironing Machines
Harpoon Guy Anchors	Iron, Electric
Harps, Trolley	Irons, Soldering
Haven's Grip	,
Head Light Lamp	
Heat Regulators	
Heater Cord	
Heater Switches	
Heaters, Air	J
Heaters, Electric	•
Heating Device Accessories	Jack Rabbit Sewing Machines
Hickeys444, 751	Jack Straps
High Speed Indicators	Jacks, Cable Reel 1001
High Tension Fuses	Jacks, Pole
High Voltage Insulators 467, 920-924, 932, 933	Jacks, Telephone
Hoisting Motors	Jars, Battery 165, 167
Holders, Fuse	Jenney Pole Support 996
Holders, Shade	Jeweler's Lathe Motor 326
Hollow Drills48	Joints, Insulating 443–446
Hollow Handle Tool Sets	Joints, Splicing
Holophane Shade Holders	Junction Boxes
Holophane Reflectors	486, 498, 499, 502, 757, 760, 761, 763, 766
Hood Connectors	Junetion Boxes, Fiber
Hoods, Outlet704, 882	Jumper Wire Reel 1003
Hook, Bush	Jupiter Insulators
Hook, Pipe	V 4/1007
Hooks, Cable	
Hooks, Cant	
Hooks, Carrying	
Hooks, Guy	
1100KS, Lug	
	v
Hooks, Rack	K
Hooks, Rack	
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annunciators       226-228, 230-233	Kerosene Torches. 1034–1037
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annunciators       226-228, 230-233         House Pumps       320, 321	Kerosene Torches. 1034–1037 Key Arm Switches 555
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annunciators       226-228, 230-233         House Pumps       320, 321         Hub Guards       974	Kerosene Torches.         1034-1037           Key Arm Switches.         555           Keys, Switch         575
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annunciators       226-228, 230-233         House Pumps       320, 321         Hub Guards       974         Hylo Economical Lamps       355	Kerosene Torches.       1034–1037         Key Arm Switches.       555         Keys, Switch.       575         Keys, Telegraph.       219, 220
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annunciators       226-228, 230-233         House Pumps       320, 321         Hub Guards       974	Kerosene Torches.       1034–1037         Key Arm Switches.       555         Keys, Switch.       575         Keys, Telegraph       219, 220         Kitchenette Ranges.       334
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annunciators       226-228, 230-233         House Pumps       320, 321         Hub Guards       974         Hylo Economical Lamps       355	Kerosene Torches.       1034-1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annunciators       226-228, 230-233         House Pumps       320, 321         Hub Guards       974         Hylo Economical Lamps       355	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annunciators       226-228, 230-233         House Pumps       320, 321         Hub Guards       974         Hylo Economical Lamps       355	Kerosene Torches.       1034-1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651-677         Knives       1015, 1023, 1031
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annunciators       226-228, 230-233         House Pumps       320, 321         Hub Guards       974         Hylo Economical Lamps       355	Kerosene Torches.       1034-1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651-677         Knives       1015, 1023, 1031         Knobs, Clamp       483
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annuciators       226-228, 230-233         House Pumps       320, 321         Hub Guards       974         Hylo Economical Lamps       355         Hydrometer Syringe       167	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annunciators       226-228, 230-233         House Pumps       320, 321         Hub Guards       974         Hylo Economical Lamps       355	Kerosene Torches.       1034-1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651-677         Knives       1015, 1023, 1031         Knobs, Clamp       483
Hooks, Rack       981         Horns, Signal       148-151, 188         Hospital Annuciators       226-228, 230-233         House Pumps       320, 321         Hub Guards       974         Hylo Economical Lamps       355         Hydrometer Syringe       167	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918
Hooks, Rack 981 Horns, Signal 148–151, 188 Hospital Annuciators 226–228, 230–233 House Pumps 320, 321 Hub Guards 974 Hylo Economical Lamps 355 Hydrometer Syringe 167	Kerosene Torches.       1034-1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651-677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913-915, 918
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annuciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167     Ignition Cables   146	Kerosene Torches.       1034-1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651-677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913-915, 918
Hooks, Rack   981   148-151, 188   Horns, Signal   148-151, 188   Hospital Annuciators   226-228, 230-233   House Pumps   320, 321   Hub Guards   974   Hylo Economical Lamps   355   Hydrometer Syringe   167	Kerosene Torches.       1034-1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651-677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913-915, 918
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annunciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Incandescent Lamps   346-357     Indicating Fuses   603-702	Kerosene Torches.       1034-1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651-677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913-915, 918
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annunciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Ineandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032	Kerosene Torches.       1034-1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651-677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913-915, 918
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annunciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Incandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396	Kerosene Torches.       1034-1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651-677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913-915, 918         K.W. Rosettes       564
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annuciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Incandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annunciators   226-228, 230-233     House Pumps   320, 321     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Incandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Induction Motors   30, 31	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annuciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Incandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Induction Motors   30, 31     Industrial Signals   148-151	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Switch       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564             L         Lacquer, Lamp       359         Ladders, Manhole       1006
Hooks, Rack   981     Horns, Signal   148-151, 188     Horns, Signal   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Ineandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Induction Motors   30, 31     Industrial Signals   148-151     Insulated Connectors   746	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564             L         Lacquer, Lamp       359         Ladders, Manhole       1006         Ladles, Pouring       1038
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annuciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Ineandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Industrial Signals   148-151     Insulated Connectors   746     Insulating Joints   443-446	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Switch       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564             L         Lacquer, Lamp       359         Ladders, Manhole       1006
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annunciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Ineandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Induction Motors   30, 31     Industrial Signals   148-151     Insulated Connectors   746     Insulating Joints   443-446     Insulating Joints   443-446     Insulating Tapes   503, 506, 507	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564             L         Lacquer, Lamp       359         Ladders, Manhole       1006         Ladles, Pouring       1038         Lag Serew Wrench       1016
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annuciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Ineandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Industrial Signals   148-151     Insulated Connectors   746     Insulating Joints   443-446	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 103         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564             Lacquer, Lamp       359         Ladders, Manhole       1006         Ladles, Pouring       1038         Lag Screw Wrench       1016         Lag Screws       962
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annunciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Ineandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Induction Motors   30, 31     Industrial Signals   148-151     Insulated Connectors   746     Insulating Joints   413-446     Insulating Tapes   503, 506, 507     Insulating Tapes   503, 506, 507     Insulator Brackets   986     Insulator Supports   987	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564             Ladders, Manhole       1006         Ladders, Manhole       1016         Ladg Screw Wrench       1016         Lag Screws       962         Lamp Changers       370, 371         Lamp Coloring       359         Lamp Cords       741, 742
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annunciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Ineandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Induction Motors   30, 31     Industrial Signals   148-151     Insulated Connectors   746     Insulating Joints   43-446     Insulating Tapes   503, 506, 507     Insulating Tapes   503, 506, 507     Insulator Brackets   986     Insulator Supports   987     Insulator Supports   987     Insulators, Cable   931	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564             Lacquer, Lamp       359         Ladders, Manhole       1006         Ladles, Pouring       1038         Lag Screw Wrench       1016         Lag Screws       962         Lamp Changers       370, 371         Lamp Coloring       359
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annuciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Incandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indicators, High Speed   1032     Induction Coils   210     Induction Motors   30, 31     Industrial Signals   148-151     Insulated Connectors   746     Insulating Joints   443-446     Insulating Tapes   503, 506, 507     Insulating Varnishes   511, 512     Insulator Brackets   986     Insulator Supports   987     Insulators, Cable   931     Insulators, Electrose   934-938	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Switch       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–67         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564     Lacquer, Lamp  Ladders, Manhole  Ladders, Manhole  Ladders, Manhole  Lag Screw Wrench  1016  Lag Screws  962  Lamp Changers  370, 371  Lamp Coloring  359  Lamp Cloring  359  Lamp Cords  741, 742  Lamp Guards  371, 875  Lamps, Incandescent  346–357
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annuciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Incandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Induction Motors   30, 31     Industrial Signals   148-151     Insulated Connectors   746     Insulating Joints   413-446     Insulating Joints   413-446     Insulating Tapes   503, 506, 507     Insulator Brackets   986     Insulator Supports   987     Insulators, Cable   931     Insulators, Clabs   934-938     Insulators, Class   925-933     Insulators, Class   925-934     Insulators, Class   925-93	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564     Ladders, Manhole  Ladders, Manhole  Ladders, Manhole  Ladders, Pouring  1038  Lag Screw Wrench  1016  Lag Screws  962  Lamp Changers  370, 371  Lamp Coloring  Lamp Coloring  1359  Lamp Cords  741, 742  Lamp Guards  370–377, 875
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annuciators   226-228, 230-233     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Ineandescent Lamps   346-357     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Induction Motors   30, 31     Industrial Signals   148-151     Insulated Connectors   746     Insulating Joints   413-446     Insulating Tapes   503, 506, 507     Insulating Varnishes   511, 512     Insulator Supports   986     Insulators, Cable   931     Insulators, Cable   931     Insulators, Class   925-933     Insulators, High Voltage   467, 920-924, 932, 933	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564     Lacquer, Lamp  Ladders, Manhole  Ladders, Manhole  Ladders, Pouring  1038  Lag Screw Wrench  1016  Lag Screws  962  Lamp Changers  370, 371  Lamp Coloring  339  Lamp Coloring  339  Lamp Cords  741, 742  Lamp Guards  370–377, 875  Lamp Guards  346–357  Lanterns, Electric  296  Lead Bushings  747
Hooks, Rack   981     Horns, Signal   148-151, 188     Hospital Annunciators   226-228, 230-233     House Pumps   320, 321     Hub Guards   974     Hylo Economical Lamps   355     Hydrometer Syringe   167      Ignition Cables   146     Ineandescent Lamps   346-357     Indicating Fuses   693-702     Indicating Fuses   693-702     Indicators, High Speed   1032     Indirect Lighting Units   396     Induction Coils   210     Induction Motors   30, 31     Industrial Signals   148-151     Insulated Connectors   746     Insulating Joints   413-446     Insulating Joints   413-446     Insulating Tapes   503, 506, 507     Insulator Brackets   986     Insulator Supports   987     Insulators, Cable   931     Insulators, High Voltage   467, 920-924, 932, 933     Insulators, Porcelain   913-915, 917, 920-924     Hylo Economical Lamps   326-238     Insulators, Porcelain   913-915, 917, 920-924     Hylo Economical Lamps   326-238     Insulators, Porcelain   913-915, 917, 920-924     Hylo Economical Lamps   326-238     Hylo Economical Lamps   326-238     Hylo Economical Lamps   326-238     Hylo Economical Lamps   326-238     Hylo Economical Lamps   326-338     Hylo Economical Lamps   326-238     Hylo Economical Lamps   326-328     Hylo Economical Lamps   326-328     Hylo Economical Lamps   326-328     Hylo Economical Lamps   326-328     Hylo Economical Lamps   326-228     Hylo Economical Lamps   326-328     Hylo Economical Lamps   326-238     Hylo Economical La	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564     Ladders, Manhole  Ladles, Pouring  1038  Lag Screw Wrench 1016  Lag Screw Wrench 1016  Lag Screws 962  Lamp Changers 370, 371  Lamp Coloring 359  Lamp Coloring 359  Lamp Cords 741, 742  Lamp Guards 370–377, 875  Lamps, Incandescent 346–357  Lanterns, Electric 296  Lead Bushings 747  Lead Encased Wires 894
Hooks, Rack	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Kaixon Horns       148, 149         Knife Switches       651–677         Knives.       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564     Lacquer, Lamp     359         Ladders, Manhole       1006         Ladgles, Pouring       1038         Lag Screw Wrench       1016         Lag Screw Wrench       1016         Lag Screws       962         Lamp Changers       370, 371         Lamp Coloring       359         Lamp Cords       741, 742         Lamp Guards       370–377, 875         Lamps, Incandescent       346–357         Lanterns, Electric       296         Lead Bushings       747         Lead Encased Wires       894         Learners Instruments       218, 219
Hooks, Rack	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Klaxon Horns       148, 149         Knife Switches       651–677         Knives       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564     Lacquer, Lamp  1038  Ladders, Manhole 1006  Ladles, Pouring 1038  Lag Screw Wrench 1016  Lag Screws 1046  Lamp Changers 1078  1089  1096  1096  1096  1097  10
Hooks, Rack	Kerosene Torches.       1034–1037         Key Arm Switches       555         Keys, Switch       575         Keys, Telegraph       219, 220         Kitchenette Ranges       334         Kaixon Horns       148, 149         Knife Switches       651–677         Knives.       1015, 1023, 1031         Knobs, Clamp       483         Knobs, Porcelain       913–915, 918         K.W. Rosettes       564     Lacquer, Lamp     359         Ladders, Manhole       1006         Ladgles, Pouring       1038         Lag Screw Wrench       1016         Lag Screw Wrench       1016         Lag Screws       962         Lamp Changers       370, 371         Lamp Coloring       359         Lamp Cords       741, 742         Lamp Guards       370–377, 875         Lamps, Incandescent       346–357         Lanterns, Electric       296         Lead Bushings       747         Lead Encased Wires       894         Learners Instruments       218, 219

Material Page	Material Page
Line Carts	Mine Insulators
Line Material 1040–1065	Mine Suspension. 1042, 1043
Lineman's Block	Mine Telephone. 200, 201
Lineman's Tool	Miner's Flashlights
Linen Tape	Miniature Lamps
Link Fuses. 689, 690 Links, Connecting. 977	Miniature Sockets 545, 594 Mining Cable 893
Locomotive Lamps. 349	Mogul Sockets
Locking Lamps. 356	Molding Metal
Locking Lamp Guards	Molding Spacers
Locking Shade Holder	Molding Wire Grip
Locknuts	Monitor Bells
Locks, Burglar Alarms. 236 Locks, Pole 484	Motor Plugs
Low Voltage Outfits. 136–143	Motor Starting Panels. 59
Loys	Motor Starting Rheostats
Lubricant, Commutator	Motor Starting Switches 673, 674, 723, 725
Lug Hooks	Motors and Generators 30–45, 136
Luminous Radiators 334, 335	Motors Induction
Thirmtons Therefores	Mule Supports 996
	Mul iple Batteries
	Multiple Plugs
	Multiple Push Buttons
M	
Machine Bolts	
Magnet Wire.         904, 905           Magneto Stations.         253	N
Magneto Telephone. 189–191, 208	
Magneto Test Set	Nail Puller
Manhole Cover Lifters	Newell Posts
Manhole Ladders	Newgard Receptacles. 368 Nipples Conduit. 750
Manhole Skids	Non-Metallic Conduit
Massage Vibrators 305	Nuts, Eye
Mast Arm Ropes	
Matting, Rubber	
Mattocks	
Mazda Lamps. 346–357 Measuring Tapes. 1031	
Measuring Outfits. 1005	0
Mechanical Ears. 1050–1052	O
Mechanical Signaling Systems. 187, 188	Office Wire
Medical Batteries 305 Melting Pots 1038	Oil Break Switches. 83–90
Mercury Rectifiers. 145	
	Oil Fuse Cut-Outs
	Oil Lump Attachments
Messenger Car 1001 Messenger Clamps 1010	Oil Lump Attachments 519 One da Chain 911
Messenger Car1001Messenger Clamps1010Messenger Hangers973	Oil Lump Attachments         519           One da Chain         911           Openers, Door         278–280           Ornamental Brackets         478–480
Messenger Car.         1001           Messenger Clamps.         1010           Messenger Hangers.         973           Messenger Strands.         902	Oil Lump Attachments       519         One da Chain       911         Openers, Door       278–280         Ornamental Brackets       478–480         Ornamental Posts       469–477, 481, 482
Messenger Car.         1001           Messenger Clamps.         1010           Messenger Hangers.         973           Messenger Strands.         502           Messenger Wire Grips.         1009	Oil Lump Attachments       519         One-da Chain       911         Openers, Door       278-280         Ornamental Brackets       478-480         Ornamental Posts       469-477, 481, 482         Outlet Box Fittings       447
Messenger Car.         1001           Messenger Clamps.         1010           Messenger Hangers         973           Messenger Strands         902	Oil Lump Attachments       519         One-da Chain       911         Openers, Door       278-280         Ornamental Brackets       478-480         Ornamental Posts       469-477, 481, 482         Out let Box Fittings       447         Out let Boxes and Covers       754-766
Messenger Car       1001         Messenger Clamps       1010         Messenger Hangers       973         Messenger Strands       902         Messenger Wire Grips       1009         Metal Case Annunciators       221-225       229       254       255         Metal Molding and Fittings       729-736         Metal Plates       284	Oil Lump Attachments       519         One-da Chain       911         Ope ners, Door       278-280         Ornamental Brackets       478-480         Ornamental Posts       469-477, 481, 482         Out let Box Fittings       447         Out let Boxes and Covers       754-766         Out let Hoods       704, 882
Messenger Car       1001         Messenger Clamps       1010         Messenger Hangers       973         Messenger Strands       902         Messenger Wire Grips       1009         Metal Case Annunciators       221-225       229       254       255         Metal Molding and Fittings       729-736         Metal Plates       284         Metal Push Buttons       282-291	Oil Lump Attachments       519         One-da Chain       911         Openers, Door       278–280         Ornamental Brackets       478–480         Ornamental Posts       469–477, 481, 482         Out let Box Fittings       447         Out let Boxes and Covers       754–766         Out let Hoods       704, 882         Out lets Floor       780
Messenger Car       1001         Messenger Clamps       1010         Messenger Hangers       973         Messenger Strands       902         Messenger Wire Grips       1009         Metal Case Annunciators       221-225       229       254       255         Metal Molding and Fittings       729-736       284         Metal Plates       284       284         Metal Push Buttons       282-291         Metal Reflectors       397-427	Oil Lump Attachments       519         One-da Chain       911         Ope ners, Door       278-280         Ornamental Brackets       478-480         Ornamental Posts       469-477, 481, 482         Out let Box Fittings       447         Out let Boxes and Covers       754-766         Out let Hoods       704, 882
Messenger Car       1001         Messenger Clamps       1010         Messenger Hangers       973         Messenger Strands       902         Messenger Wire Grips       1009         Metal Case Annunciators       221-225       229       254       255         Metal Molding and Fittings       729-736         Metal Plates       284       284         Metal Push Buttons       282-291         Metal Reflectors       397-427         Meter Trims       726	Oil Lump Attachments       519         One-da Chain       911         Openers, Door       278–280         Ornamental Brackets       478–480         Ornamental Posts       469–477, 481, 482         Out let Box Fittings       447         Out let Boxes and Covers       754–766         Out let Hoods       704, 882         Out lets Floor       780
Messenger Car       1001         Messenger Clamps       1010         Messenger Hangers       973         Messenger Strands       902         Messenger Wire Grips       1009         Metal Case Annunciators       221-225       229       254       255         Metal Molding and Fittings       729-736       284         Metal Plates       284       284         Metal Push Buttons       282-291         Metal Reflectors       397-427	Oil Lump Attachments       519         One-da Chain       911         Openers, Door       278–280         Ornamental Brackets       478–480         Ornamental Posts       469–477, 481, 482         Out let Box Fittings       447         Out let Boxes and Covers       754–766         Out let Hoods       704, 882         Out lets Floor       780
Messenger Car       1001         Messenger Clamps       1010         Messenger Hangers       973         Messenger Strands       902         Messenger Wire Grips       1009         Metal Case Annunciators       221-225       229       254       255         Metal Molding and Fittings       729-736         Metal Plates       284       284         Metal Push Buttons       282-291         Metal Reflectors       397-427         Meter Trims       726         Meters, Battery       134       167         Meters, Wire       1032         Mica Cut       509	Oil Lump Attachments       519         One-da Chain       911         Openers, Door       278–280         Ornamental Brackets       478–480         Ornamental Posts       469–477, 481, 482         Out let Box Fittings       447         Out let Boxes and Covers       754–766         Out let Hoods       704, 882         Out lets Floor       780
Messenger Car       1001         Messenger Clamps       1010         Messenger Hangers       973         Messenger Strands       902         Messenger Wire Grips       1009         Metal Case Annunciators       221-225       229       254       255         Metal Molding and Fittings       729-736       428         Metal Plates       282-291         Metal Push Buttons       282-291         Metal Reflectors       397-427         Meter Trims       726         Meters, Battery       134       107         Meters, Wire       1032         Mica Cut       509         Mica Fuses       209	Oil Lump Attachments       519         One-da Chain       911         Openers, Door       278-280         Ornamental Brackets       478-480         Ornamental Posts       469-477, 481, 482         Out et Box Fittings       447         Out et Boxes and Covers       754-766         Out et Hoods       704, 882         Out ets Floor       780         Ovens, Electric       342, 343
Messenger Car.       1001         Messenger Clamps.       1010         Messenger Hangers.       973         Messenger Strands.       902         Messenger Wire Grips.       1009         Metal Case Annunciators.       221-225, 229, 254, 255         Metal Molding and Fittings.       729-736         Metal Plates.       284-291         Metal Push Buttons.       282-291         Metal Reflectors.       397-427         Meter Trims.       726         Meters, Battery.       134, 167         Meters, Wire.       1032         Mica Cut.       509         Mica Fuses.       209         Mica Sockets.       619	Oil Lump Attachments       519         One-da Chain       911         Openers, Door       278–280         Ornamental Brackets       478–480         Ornamental Posts       469–477, 481, 482         Out let Box Fittings       447         Out let Boxes and Covers       754–766         Out let Hoods       704, 882         Out lets Floor       780
Messenger Car       1001         Messenger Clamps       1010         Messenger Hangers       973         Messenger Strands       902         Messenger Wire Grips       1009         Metal Gase Annunciators       221-225       229       254       255         Metal Molding and Fittings       729-736         Metal Plates       284       284         Metal Push Buttons       282-291         Metal Reflectors       397-427         Meter Trims       726         Meters, Battery       134, 167         Meters, Wire       1032         Mica Cut       509         Mica Fuses       209         Mica Sockets       619         Micanite Cloth       515	Oil Lump Attachments       519         One-da Chain       911         Openers, Door       278–280         Ornamental Brackets       478–480         Ornamental Posts       469–477, 481, 482         Out let Box Fittings       447         Out let Boxes and Covers       754–766         Out let Hoods       704, 882         Out lets Floor       780         Ovens, Electric       342, 343
Messenger Car         1001           Messenger Clamps         1010           Messenger Hangers         973           Messenger Strands         902           Messenger Wire Grips         1009           Metal Case Annunciators         221-225         229         254         255           Metal Molding and Fittings         729-736         284         284         48	Oil Lump Attachments       519         One da Chain       911         Openers, Door       278–280         Ornamental Brackets       478–480         Ornamental Posts       469–477, 481, 482         Outlet Box Fittings       447         Out let Boxes and Covers       754–766         Outlet Hoods       704, 882         Outlets Floor       780         Ovens, Electric       342, 343
Messenger Car       1001         Messenger Clamps       1010         Messenger Hangers       973         Messenger Strands       902         Messenger Wire Grips       1009         Metal Gase Annunciators       221-225       229       254       255         Metal Molding and Fittings       729-736         Metal Plates       284       284         Metal Push Buttons       282-291         Metal Reflectors       397-427         Meter Trims       726         Meters, Battery       134, 167         Meters, Wire       1032         Mica Cut       509         Mica Fuses       209         Mica Sockets       619         Micanite Cloth       515	Oil Lump Attachments 519 One-da Chain 911 Ope ners, Door 278–280 Ornamental Brackets 478–480 Ornamental Posts 469–477, 481, 482 Out let Box Fittings 447 Out let Boxes and Covers 754–766 Out let Hoods 704, 882 Out lets Floor 780 Ovens, Electric 342, 343  P. and B. Compounds 513 Packing House Cord 909
Messenger Car         1001           Messenger Clamps         1010           Messenger Hangers         973           Messenger Strands         902           Messenger Wire Grips         1009           Metal Case Annunciators         221-225         229         254         255           Metal Molding and Fittings         729-736         729-736         729-736         728         728         729-736         726	Oil Lump Attachments       519         One-da Chain       911         Openers, Door       278–280         Ornamental Brackets       478–480         Ornamental Posts       469–477, 481, 482         Out let Box Fittings       447         Out let Boxes and Covers       754–766         Out let Hoods       704, 882         Out lets Floor       780         Ovens, Electric       342, 343         P       Packing House Cord       909         Pads, Strap       1012         Paints and Varnishes       511, 512
Messenger Car         1001           Messenger Clamps         1010           Messenger Hangers         973           Messenger Strands         902           Messenger Wire Grips         1009           Metal Case Annunciators         221-225         229         254         255           Metal Molding and Fittings         729-736         729-736         729-736         728-736         729-736         729-736         729-736         729-736         729-736         729-736         729-736         729-736         729-736         739-727         740-7	Oil Lump Attachments 519 One-da Chain 911 Openers, Door 278–280 Ornamental Brackets 478–480 Ornamental Posts 469–477, 481, 482 Out let Box Fittings 447 Out let Boxes and Covers 754–766 Out let Hoods 704, 882 Out lets Floor 780 Ovens, Electric 342, 343  Packing House Cord 909 Pads, Strap 1012 Paints and Varnishes 511, 512 Panel Boards and Cabinets 707–718, 1066–1089
Messenger Car         1001           Messenger Clamps         1010           Messenger Hangers         973           Messenger Strands         902           Messenger Wire Grips         1009           Metal Case Annunciators         221-225         229         254         255           Metal Molding and Fittings         729-736         284         284           Metal Plates         282-291         284	Oil Lump Attachments 519 One-da Chain 911 Openers, Door 278–280 Ornamental Brackets 478–480 Ornamental Posts 469–477, 481, 482 Outlet Box Fittings 447 Outlet Boxes and Covers 754–766 Outlet Hoods 704, 882 Outlets Floor 780 Ovens, Electric 342, 343  Packing House Cord 909 Pads, Strap 1012 Paints and Varnishes 511, 512 Panel Boards and Cabinets 707–718, 1066–1089 Panel Board Switches 642, 648
Messenger Car         1001           Messenger Clamps         1010           Messenger Hangers         973           Messenger Strands         902           Messenger Wire Grips         1009           Metal Case Annunciators         221-225         229         254         255           Metal Molding and Fittings         729-736         284         284           Metal Plates         282-291         284	Oil Lump Attachments 519 One-da Chain 911 Openers, Door 278–280 Ornamental Brackets 478–480 Ornamental Posts 469–477, 481, 482 Outlet, Box Fittings 447 Outlet, Box Fittings 754–766 Outlet, Hoods 704, 882 Outlets Floor 780 Ovens, Electric 342, 343  Packing House Cord 909 Pads, Strap 1012 Paints and Varnishes 511, 512 Panel Boards and Cabinets 707–718, 1066–1089 Panel Board Switches 642, 648 Panel Box Connectors 744 Panel Switches 685, 686
Messenger Car         1001           Messenger Clamps         1010           Messenger Hangers         973           Messenger Strands         902           Messenger Wire Grips         1009           Metal Case Annunciators         221-225         229         254         255           Metal Molding and Fittings         729-736         729-736         729-736         728-736         729-736         729-736         729-736         729-736         729-736         729-736         729-736         729-736         729-736         739-727         740-7	Oil Lump Attachments 519 One-da Chain 911 Openers, Door 278–280 Ornamental Brackets 478–480 Ornamental Posts 469–477, 481, 482 Outlet Box Fittings 447 Outlet Boxes and Covers 754–766 Outlet Hoods 704, 882 Outlets Floor 780 Ovens, Electric 342, 343  Packing House Cord 909 Pads, Strap 1012 Paints and Varnishes 511, 512 Panel Boards and Cabinets 707–718, 1066–1089 Panel Board Switches 642, 648

Material	Page	Material	Page
Paper Dials		Pole Supports	
Paper, Emery		Pole Top Pins	
Paper, Micanite		Polerector	
Paper Pulleys		Poles, Pike	
Paper, Sand		Poles, Steel	942, 943
Paper Sleeves		Poles, Wood	
Paper Weight Push		Police Telephones	
Papers, Miscellaneous		Polisher, Electric	
Parabola Shade		Polyphase Wattmeter	
Parabolites		Porcelain Bushings	
Park Cable		Porcelain Cap Switches	580, 636, 637
Paste, Soldering		Porcelain Cleats	
Paul Pumps		Porcelain Insulators9	13-915, 917, 920-924
Pay Out Reels		Porcelain Knobs	913-915, 918
Pay Stations		Porcelain Receptacles 549-55	66, 592, 596, 620-624
Pear Pushes		Porcelain Shades	
Peavies, Socket		Porcelain Sockets	
Pendent Fixtures		383, 384, 391, 541, 542, 59	92, 597, 617, 620, 628
Pendent Pushes		Porcelain Tubes	
Pendent Switches 378	8, 576, 577, 626, 643, 647	Porch Bands	
Perculators, Electric		Portable Drills	47, 49, 50
Piano Lamps		Portable Grinders	
Picks		Portable Instruments	
Pike Poles		Portable Lamps Guards	
Pilot Light Receptacles	642	Portable Lighting Outfits	
Pin Insulators	934	Portable Sewing Machines	
Pincers		Portable Telephone	191
Pins, Channel		Portable Vacuum Cleaners	306-309
Pins, Metal	944-948, 952, 956	Portables	
Pins, Wood	945	Portables, Desk	
Pipe Benders	1030	Portables, Floor	
Pipe Caps	748	Portables, Hand	
Pipe Clamps	1042	Post Hole Augers	999
Pipe Cutters	1029	Post Hole Diggers	000
Pipe Hooks	750	Post Tops	
Pipe Tablets	881-884	Posts, Binding	
Pipe Straps	779	Posts, Ornamental	169-477 481 489
Pipe Threaders	1029	Pothead Compound	519
Pipe Vises	1029 1020	Pothead Supports	
Pipe Wrenches	1023	Pothead Wires	
Pistol Flashlights	90.1	Potheads	481
Plaster Drills	1018	Pots, Fire	
Plate Warmer, Electric	2.19 2.15	Pots, Glue	
Plates, Bracket		Pots, Melting.	
Plates, End	795_797	Pouches, Leather	
Plates, Micanite	511 515 517	Pouring Ladles	
Plates, Push	981	Power and Light Outfits	
Plates, Push	071	Power-Factor Meter	
Plates, Switch56	7 500 500 c t t 6 te 650	Prepayment Meters	
Plates, Switch	7-309, 362, 044, 040, 030		
Diam.	004 1010	Pressboard Pressing Irons	
Pliers		Pressing from Pressure Switches	
Plug Cut-Outs	201	Prest-o-Lites	
Phys. Cats.	180	Primary Batteries	
Plug Sets	500_509_849_799	Protection Strips, Pole	
Plugs and Receptacles Plugs, Attachment386.	197 557_561 509 601	Protector Blocks	
riugs, Attachment. 380,		Protectors	
005, 010-015, 015, 02	9,728,733,735,877-879	Protectors, Telephone	
Plugs, Fish	200 200	Pruners, Tree	
Plugs, Fuse		Pull Chain Clusters	
Plugs, Receptacle		Pull Switches	
Plugs, Socket			
Plugs, Spark		Pulley Blocks	
Pocket Meters		Pulleys, Motor	400
Pole Bands		Pulleys, Pole	
Pole Brackets		Pumps, Electric	
Pole Changers		Push Buttons1	80, 282-291, 490, 496
Pole Climbers		Push Button Sockets	
Pole Counters	1005	Push Button Switches 56	66, 667, 627, 641, <u>646</u>
Pole Dinkey	998	Push Out Springs	
Pole Jacks		Push Plates	
Pole Loeks	484	Pyrene Fire Extinguishers	304
Pole Protection Strips			
Pole Pulleys	466, 483	_	
Pole Seats		Q	
Pole Shirns		6 11 5 1 6 1 1	001 00E 050 053
Pole Steps		Quick Break Switches	661-665, 670-672

Material	Page	Material Page	
R		Rosettes533, 564, 565, 625, 733, 735, 877–880	
	40.4	Rotary Pole Changers	
Rack Hooks		Rotary Switches 640	
Racks, Cable	972, 973, 981	Rotating Sockets	
Racks, Distributing	972, 973	Rul ber Base Switches. 280 Rubber Covered Wires 888–892	
Radiant Heaters		Rulber Gloves	
Rail Bonds	1063, 1064	Rul-ber Handle Pliers. 1019	
Railway Annunciators		Rul-ber Matting	,
Railway Cut-Outs		Rubber Rods	
Railway Lamps	1010 1005	Rubber Sheets	
Railway Material	1040-1000	Turner brices, , ,	
Railway Switches.			
Railway Telephone Apparatus	220-244		
Ranges, Electric	070		
Rapid Fire Drills	970		
Ratchet Braces	1020		
Realite Units	395	S	
Reamers	747	5	
Deceivers Telephone			
Receptacle Boxes	55, 756, 758, 759	Safety Strain Insulators	í
Receptacles and Plugs 5	00-502, 643, 728	Safety Straps	3
Receptacles and Sockets. 378-387.	488, 489, 521-	Salts, Soldering	ŀ
563, 583-597, 600-607, 611-61	3, 617-624, 628,	Sard Paper	,
642, 643, 7	33-735, 877-880	Samovar, Tea	?
Receptacles, Watertight488, 4	89, 495, 501, 502	Samson Batteries	5
Rectifiers, Mercury	145	Sarison Spot Cord911	L
Rectifiers, Tungar	144	Sash Cord	l
Reducers, Socket	378, 555	Saws	Ĺ
Roel Jacks	1001	Seissors	)
Reel Stand	1001	Serupers1031	
Roels Wire	1001-1004, 1034	Screw Anchors	3
Reflector Lamp Guards	371–374	Screw Duct Rods980	)
Reflector Sockets	419	Screws, Lag962	2
Reflectors Motal		Screws, Wood960	)
Reflectors, Porcelain Enameled	417, 424	Scrulix Anchors	3
Register, Automatic Pen	243	Seats, Pole985	2
Registers Tally	1005 -	Secondary Racks975	2
Regulators, Heat	303, 338	Section Insulators	3
Regulators Speed	60–63, 72	Section Switches	)
Reinforced Cords	41, 742, 895, 896	Sectional Boxes	,
Relay Boyes	188	Self-Locking Blocks. 101	i
Rolays Fire Alarm.	243	Self-Starters	ŧ
Rolans Line		Service Boxes	6
Relays Signaling		Service Switches	5
Roleys Telegraph		Sewing Machine Motors	7
Romote Control Switch		Shackles, Guy	5
Renewable Fuses		Shade Holders.       388-391, 87         Shades, Glass.       392-396, 428-431, 87	<i>D</i>
Reset Annunciator		Shades, Class	1)
Resin Core Solder		Shades, Porcelain	e C
Resistance Units		Sheaves. 100 Sheet Fiber	Q
Return Call Annunciator		Sheets, Hard Rubber	a
Rheostats	. 58, 60-63, 68-70	Shields, Cable Duct	ä
Ribbon, Fuse		Shields, Expansion	
Ridge Brackets	999	Shims, Pole	ĭ
Rigid Conduit	1010	Shoe Dryer	å
Rimco Pliers	100 100 919	Shovel Handles	ä
Ringers, Telephone	190-192, 212	Shovels	3
Ringing Sets	070	Show Case Fixtures	ĭ
Rings, Bridle	190	Shunts, Instrument	5
Rings, Cable	090	Shutter Springs	7
Rings, Drive	555	Sign Flashers	6
Rings, Socket	266	Sign Lamps31	6
Riot Beis	963	Sign Lighting Transformers	7
Rods, Anchor	1006	Sign Receptacles	2
Rods Empire, Duct	508	Signal Sockets	;3
Rods, Fiber	202 982	Signaling Relays	51
Rods, Ground	510	Signaling Systems, Mechanical 187, 18	38
Rods, Hard RubberRods, Screw Duct	080	Signalite	)9
Rods, Screw Duct	1001	Signals, Warning	1
Rollers, Cable	1047	Silent Call Signal Systems	33
Root Fastenings	484	Silk Tape	)7
Rope Clamps.	484	Skeleton Bells	1
Rono Paner		Skids, Manhole	)6
Rope, Weatherproof		Slack Tackle101	1
nope, weatherproof			

Material	Page	Material	D
Sleeve Clamps	1017		Page
Sleeves, Copper.	010	Stud Connectors	
Sleeves, Paper.	=10	Studs, Fixture	
Sleeves, Splicing.	019 1059	Stuffing Bushings	
Sleeving, Cotton.	50a	Suburban Cables.	
Slicks	000,	Supports, Pothead	
Slow Burning Wire.	887	Suspension Streethoods	463, 464
Snap Switches 572-575, 5	78-580 630-630	Suspension Trolley	1041–1047
	645, 732	Switch Bases	
Sneak Coils	702	Switch Blocks	575
Socket Adapters	278 555	Switch Boxes	687, 703, 767–769
Socket Bushings	616	Switch Covers	
Socket Extension	378	Switch Handles. Switch Plates567-569,	575, 639
Socket Handles	. 616	Switchboard Brackets	082, 044, 046, 650, 677
Socket Peavies		Switchboard Cables	
Socket Reducers	378 555	Switchboards, Telephone	
Socket Rings	555	Switches, Battery	290 291 670 677 679
Sockets and Receptacles	378-387, 488, 489.	Switches, Bryant	200, 201, 000, 677, 678
521-563, 583-597,	617-824, 628, 733-735	Switches, Burglar Alarm.	0.00
Soldering Coppers		Switches, Baby Knife	675 675
Soldering Irons		Switches, Candelabra.	597 557
Soldering Outfits	1033-1038	Switches, Canopy.	555 655
Soldering Supplies		Switches, Ceiling.	595 578
Sol-Lux Pendents	.468	OWITCHES, Compensator	700
Sof-Lux Reflectors	425-427	Switches, Door	570 627 643 649 650
Sounders, Telegraph		SWITCHES, Enclosed Steel.	710_700
Spacers, Molding		Switches, Entrance.	686_689 704
Spacing Bolts		Switches, Feed Thro	696 617
Spades		Switches, Field Discharge	670
Spark Plugs.		Switches, Fixture	536 540
Speed Regulators	60–63, 72	Switches, Float	42-
Splicing Clamps	1017	Switches, Flush	566 567 640
Splicing Compounds		Switches, Gas Engine.	670
Splicing Ears.		Switches, Heater	556, 560, 571, 570
Splicing Joints		Switches, Nev Arm	555
Splicing Sleeves. Split Conduit Fittings.		Switches, Knife.	651 655
Spoon Handles		Switches, Motor Starting	673 674 793 795
Spoons, Long Handle.		Switches, Off Break	83-00
Spot Cord.	011	Switches Panel	(16) = (17)
Spot Lights	244	Switches, Panel Board. Switches, Pendent 378,	642, 648
Spreader Brackets.	185 051 059_0go	Switches, Pendent 378,	576-577, 626, 643, 647
Springs, Door and Window	927	owneres, Tressure	111
Springs, Push Out	270	Switches, Pull	<u></u>
Spuds, Digging	1.00	Switches, Pull Electrolier 3	63, 633–635, 640, 641
Squeeze Connectors		Switches, Push Button Switches, Railway	006, 567, 627, 641, 646
Stage Cable		Switches, Remote Control	638, 639
Stage Pockets		Switches, Rotary	
Stands, Cable Reel	1001	Switches, Section	1000
Starters, Motor	55 64 71	Switches, Service	705 700 710 700
Steel Conduit, Flexible		Switches, Snap .572-575, 578-	580 620 620 645 705
Steel Pins		Switches, Tank	P 10
Steel Reflectors, Enameled	417. 420	Switches, Telephone.	677 670
Steel Tapes		Switches, Time	267
Stems, Fixture		SWITCHES, LOGGIC	581 500
Steps, Pole		Switches, Vacuum	60
Stick, Soldering.		SWITCHES, Wall	59 (
Storage Batteries	143, 152, 153	Switches, Weatherbroof.	500
Stove Wire.		Swivel Attachment Plug	994
Stoves, Electric	32, 335, 339–344, 345	Swivel Lugs.	Ren
Strain Arms.	485	Synchroscope	191
Strain Insulators	, 935, 936, 1054, 1055	Syringe, Battery	
Strain Plates			
Strand Wire	980		
Strand, Wire	1015		
Strap Pads	751		
Straps, Climber.	1010		
Straps, Crossarm	077	Т	
Straps, Pipe	770	•	
Straps, Safety	080 1019	That I Chan	
Straps, Wall.	076	Table Clamps	
Street Lighting Lamps.	210	Tackle Block.	
Streethood Sockets		Tackle, Slack.	
Streethoods	462-464	Take-Up Reels Tally Counters	
Strippers, Cable	1031	Tally Register.	
•		- mile sec Succession	1005

Material	Page	Material Page
Tamping Bars		Tubular Flashlights
Tank Switch		Tubular Fuses
Tapes, Measuring	503 506 507	Tubular Lamps
Taplets, Pipe.	881-884	Tungar Rectifiers
Tans Cable	682	Turnbuckles
Tans Current 379, 557, 59	38-601, 609, 629	Turn Down Lamps
Taps, Feeder		Tungsten Dry Batteries
Tees Conduit		Twin Sockets
Telecode Relays	151	Twin Wrench
Telegraph Apparatus. Telegraph Wires.	899 903	Twisting Wrenches. 912 Two-way Plug. 379
Telephone Booth	204	Two way I ragii
Telephone Booth Fans.		
Telephone Brackets Telephone Switch Plates.	568 560 677	
Telephone Switches.		
Telephone Wires		U
Temperature Regulators		O
Temporary Receptacles. Terminal Bushings.	747	Underdome Gongs
Terminal Cable	185, 206	Unit Fixtures
Torminal Wrench	1016	Universal Grips
Test Clips		Uno Shade Holders
Testers, Battery	133, 213	Untreated Papers
Theater Cord.	909	ern, conce freater
Thermometers	167	
Thermo-Wynks		
Threaders Pine.	1029	
Time Detectors		V
Time Switches	330-342	V
Torole Bolts		Vacuum Cleaner Cord910
Toggle Switches.		Vacuum Cleaner Cord
Tool Bags.	1014	Vacuum Switches
Tool Belts		Vapor Proof Fixtures
Tool Grinders	<del>. 1</del> 9	Vapor Proof Lamp Guards. 368, 369, 376 Varnished Tape 507
Tool Sets	1015, 1016	Varnishes, Insulating
Tools, Bushing	993-1039	Vehicle Call Annunciators
Torches Soldering		Vehicle Flashlight .296 Ventilating Fans .317–319
Toy Transformers		Ventilating rans Verdelites Portables 435, 436
Toys, Electric	298-302	Vest Pocket Flashlights
Traffic Posts	478	Vibrating Gongs
Train Lighting Lanus		Vibrators, Electric Massage
Transformers, Bell. Transformers, Bell Ringing	261, 274 $276, 277$	Vises 747, 1027, 1028, 1029
Transformers Line		Vitrified Clay Conduit
Transmitters, Telephone		Volt-anmeters. 108, 117 Voltmeters and Anmeters. 104-121
Transom Springs.		Offineters and Immediate
Transposition Brackets	928	
Treads, Floor,		
Tree Insulators		
Tree Pruners		w
Trimmer, Rope		W.
Trimmers Tree	1000	Wall Brackets
Triple Insulation Arms	445	Wall Insulators
Tring Door		Wall Lamp Guards
Trolley Ears	1048–1052	Wall Plates
Trolley Posts	477, 943	Wall Sockets
Trolley Wire	244–248	Wall Straps
Trouble Elashlights		Wall Switches
Truck Reels	1002	Washing Machines 310–312 Wasson Reels 1002
Tubes, Bracket		Watch Case Buzzers
Tuking Micanite	520	Watchman's Time Detector
Tubing, Soft Rubber	510	Water Heater Electric

Material	Page	Material	Page
Water Heaters	339	Wire Rope Clips	1 age
water rumps	350 351	Wire Strand	
waterproof Cord.	0.1.1	Wire Tools	,
waterproof Gloves	368 360	Wireless Clusters	
watertight Bells.	.100	Wireless Outfits	378-382
waterught Boxes	771	Wireless Outfits	
watertight bushings	7.16	Wiremold	
watertight Buzzers	.180101	Wires and Cables	146, 186, 205, 885–911
waterught Fixtures	-191 - 194 - 198 - 191	Wood Base Switches	
waterught rings	197 100	Word Brackets	
Watertight Push Buttons.	200 405 40a	Wood Brackets	
waterught Receptacles 188 .	489 405 501 500	Wood Crossarms	
watthour Meters.	199_139	Wood Eye Blocks	
wattmeters	110-119 110	Wood Moulding	
Weatherproof Bells	258 250	Wood Polos	
weatherproof Coloring.	250	Wood Poles	
wcamerbroof rixthres	461	Wood Pulley Blocks Wood Push Buttons	107, 207, 202
weatherproof Receptacles. 488.4	489 495 501 509	Wood Screws.	185, 285, 289, 290
Weatherbroot Robe	19.1 0.11	Wood Strain Insulators	
weatherproof Sockets and Recepta	acles	Wooden Conduit	
385, 542, 545-4	548, 604, 605, 697	Wooden Conduit	
Weatherproof Switches.	500	Wrenches, Twisting	
weatherproof Wire	885 886 807	Wringers, Electrie	
Webbing	506 507	Tringers, Electric	
Wedge, Root.	1047		
Well Plimps	320 321		
Wheels, Cable Reel	000		
wheels, I rolley	1065	37	
Windlasses	444	X	
Window Springs.	937	77 15 15 45 1	
wiping Cloths	1038	X-Ray Reflectors	
wire, Binding	905		
wire Clamps	1017		
wire Connectors	380 683 912 981		
Wire Cutters		37	
Wire, Fish		Y	
Wire, Fuse.	690	**	
Wire Gauges.	1032	Yard Lights	
Wire Grips	1008, 1009		·
Wire Guards	$40^{\circ}$ $377,422,875$		
Wire Lug.			
Wire Measuring Outfits	1005		
Wire Meters	1032	Z	
Wire Reels.	1001-1001, 1032		
Wire Rope		Zincs, Battery	

### TO LIGHTEN THE LABOR OF SELLING

### Western Electric

### **Quality Products**

The Western Electric Company accepts as its position and obligation in the industry not only to distribute appliances that are recognized as "Quality Products," but to assist its agents "TO LIGHTEN THE LABOR OF SELLING":

Hence—The Western Electric popular magazine publicity. Educational publicity selling the idea of doing it electrically in the home—a policy that is different from the advertising of most manufacturers and absolutely unique among jobbers. It directs the purchaser to the electrical dealer—our merchant-customer. It is a force that is helping to build up the electrical industry and "TO LIGHTEN THE LABOR OF SELLING":

Hence—The Western Electric corps of expert sales specialists, which is at all times at the disposal of the merchant-customer, who wishes to put on a special campaign. These men are experienced. They are ready and willing to assist you;

Hence—The Western Electric complete line of perchandising helps—window display outfits—newspaper advertising electrotypes—small mailing folders and booklets—lantern slides for the movies—all of these are available for the use of our merchant-customer, and without charge.

In this manual you will find samples and reproductions of our complete line of selling helps, designed for your use. Put them to work for you; tie up with the magazine publicity and proclaim your store the place to buy this nationally advertised line of "Quality Products." Use these sales helps for they will LIGHTEN THE LABOR OF SELLING.

### POINTERS ON ORDERING SALES HELPS

### NEWSPAPER PRINTING PLATES

Standard ready-to-use advertisements—specify number only, with ordering, as V-112 or SM-9.

Standard printing plates for making up your own advertisements—always specify width, as SM-4, 1¼ inches wide, or W-28, 2¼ inches wide.

Special plates—DO NOT ORDER AS "COLUMN" OR "DOUBLE COLUMN" plates—always give both dimensions of space available—width first, height second.

Electrotype is the name given to a copy of either a halftone or line plate—don't use it to distinguish. For newspaper work, line plates are preferable, but coarse screen half-tones can be supplied.

If half-tones are required for catalogs, tell us the kind of paper (rough or smooth) that is to be used.

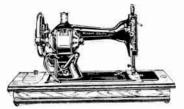
SMALL FOLDERS
DISPLAY CARDS and
LANTERN SLIDES

In ordering any of these with your imprint, give name, address, telephone number, etc., just as you want them to appear. In ordering printed matter be sure to specify quantity desired.

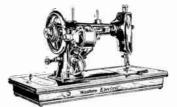
Order All Sales Helps by Number

### PORTABLE SEWING MACHINES

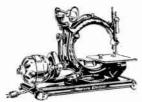
Newspaper Printing Plates



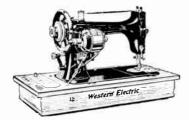
SM-2



SM-15



SM-16



SM-28



SM-5



SM-17

UPSTAIRS-DOWNSTAIRS-SEW ANYWHERE



SM-3

Note In ordering SM-2, 3, 5, 15, 16 17 and 28 always specify the width desired, in inches.



SM-9 Double Column 7 inches high



SM-10 Double Column 7 inches high



SM-11 Single Column 7 inches high



SM-24 Double Column 7 inches high



SM-25 Double Column 7 inches high



SM-26 Double Column 7 inches high

### PORTABLE SEWING MACHINES

Newspaper Printing Plates



You can orw where you libe at any time you like, can new at your neighbor's or at the Red Cross.

### Western Electric

Rotary Portable Sewing Machine

ior it is portable—no larger than a traveling bug and is easily carried or put away. Take it with you wherever ross much to orw. It is electric you do none of the hard work. No sur-some treading

it is high-grade has rotating bobben, is silent and does repocially beautiful work

It is economical crets less than most makes of pedal power mechanis, and one cent's worth of electricity runs it three hours West at you'll actually get more done, wish less time and

> SM-29 Double Column 7 Inches High

o Bobbin Bother

Just think of it, no more bobbins to

Western Electric

Two Spool

Portable Sewing Machine you simply insert a spool of thread in place of a bobbin, and sew direct from two spools instead of from one spool and a bobbin.

Besides, this machine is portable— no larger than a traveling bug and as easily carried and put away. It is electric; no more tiresome pedaling.

Double Column



SM-30 Double Column 7 Inches High



SM-31 Double Column 7 Inches High



Here's the machine that makes your sewing so easy. With it you actually get more done, and with less effort. For it is run by electricity,

### The Western Electric

Rotary Portable Sewing Machine

as not only easy to see with, but so conven-tent. No larger than a traveling bag, and as-emily carried and put away; you can saw wherever you like with it—at your neighbors' or the Red Cross. Soil it as full sized. It is un-uousably adent, for it has the rotating bobbins which friese it from vibration.

SM-27 Double Column 10 Inches High

Display Card



C-709

### M A New Way to Sew There's a new way to sew—one that will help you in the war economy of making your own and your children's clother. With the Western Electric Automatic Portable Sewing Machine you actually get more sewing done in the same time, and with less effort, for It is portable. No larger than a traveling bag and as easily carried and put away, you can carry it wherever you wish to sew. It is electric, you have none of the hard work. The children can safely play on the floor around it—there are no belts or wheels to catch their clothes or ingers. It is economical: one cents worth electricity runs it three hours, and it sis less than most well known makes pedal power machines. rill make your sewing a pleasure!

SM-33 Double Column 10 Inches High

TO GOOD THE PARTY

For Bill and Letter Heads

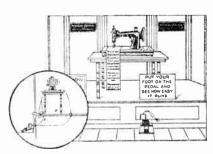


SM-14 Furnished in Three Sizes,

1 Inch, 11 Inches and 21 Inches Wide Specify size; wanted

Window Displays





W-109

W-113

### PORTABLE SEWING MACHINES

# Stickers To attach to monthly bills



B-162



B-163



B-160



B-161

Lantern Slides



B-164 Stickers Are 6 x 31/4 Inches



LS-624



LS-625



LS-626



LS-627



LS-628



LS-629

# WASHING MACHINES Newspaper Printing Plates



Double Column 6% inches high



W-2 Single Column 612 inches high



W-7 Single Column 612 inches high



Western Electric Washer and Wringer

will do the wailing of a fam'y of forces 60 master at a cost of cells 2 cents for electricity.

\$10. down

bil, will gut the mediane of sour home.

You can pay for it with the

Connect to any olectric last nocket.

We will send you a macha

We will send you a mach for 15 days' free trial.

W-8 Single Column 6½ inches high

### WASHING MACHINES

Newspaper Printing Plates



W-9 Double Column 7 inches high



W-10 Double Column 7 inches high



W-11 Double Column 7 inches high



W-14 Double Column 7 inches high



W-16 Double Column 7 inches high



W-27 Double Column 7 inches high



W-30 Single Column 6½ inches high



W-31 Single Column 6½ inches high



W-32 Single Column 6½ inches high



W-33 Double Column 6¾ inches high



W-34 Double Column 7 inches high



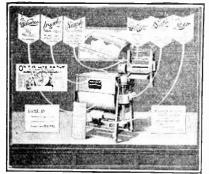
W-35 Double Column 7 inches high



W-28 Furnished in three sizes 1½".2¼ ", and 4" wide Specify size wanted

### WASHING MACHINES

### Window Display



W-116

### Display Card



Display Card Set-W-117











Lantern Slides







LS-614



LS-615



LS-616

### Small Folders



B-155



B-156



B-157

# Stickers To attach to monthly bills



B-167



B-168 Stickers are 6 x 3 14 inches

### HEAT REGULATOR

### Display Board



A nominal charge will be made for this display board W-115

# Newspaper Printing Plates



HR-1 Double Column 7 inches high



HR-2 Double Column 7 inches high



HR-3 Double Column 7 inches high



HR-4 Single Column 6½ inches high



HR-5 Single Column 6½ inches high

### Small Folder



B-154

### **IRONS**

### Newspaper Printing Plates



E1-4
Double Column
7 inches high



THE IRONS HOT-

BUT YOU'RE COOL

E1-6 Single Column inches high



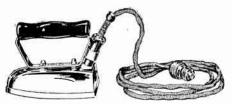
E1-5
Double Column
4 inches high



E1-7 Single Column 5¾ inches high

### **IRONS**

### Newspaper Printing Plates



EI-3 Furnished in Three Sizes, 2½ Inches, 3½ Inches and 4½ Inches Wide Specify size wanted





EI-8 EI-9 Furnished in Two Sizes, 1 Inch and 2½ Inches Wide

### Window Display



W-114

# Western Electric GETS HOT OURCHLY

This is an integral part of window display outfit W-114. After using in the window, it can be used on your store counter. The little girl is shown to give an idea of the size of the cut-out.

### Lantern Slides



LS-543



LS-617

Small Folder



B-166

Display Card



G-710

### **VIBRATORS**

Newspaper Printing Plates



VR-1 Furnished in three sizes 134 inches, 234 inches and 4 inches wide



VR-2
Furnished in three sizes
134 inches, 234 inches and 4 inches wide



B-134

Lantern Slide



LS-543

### SEWING MACHINE MOTORS

Newspaper Printing Plates



SM-1 3 inches wide, 5 inches high

Lantern Slide



LS-540



SM-18
Furnished in two sizes
11/4 inches and 21/4 inches wide



SM-19 Actual Size





B-170



SM-13 Actual Size

### **HEATING PADS**

Newspaper Printing Plates



HP-1 Double Column 7 inches high



HP-2 Single Column 7 inches high



IIP-3 Furnished in two sizes 1½ inches and 2½ inches wide Specify size wanted

### Lantern Slide



LS-546

### **TOASTERS**

Newspaper Printing Plates



ET-1 Double Column 7 inches high



ET-2 Single Column 7 inches high



ET-3 Furnished in two sizes 1½ inches and 2½ inches wide Specify size wanted

### Lantern Slide



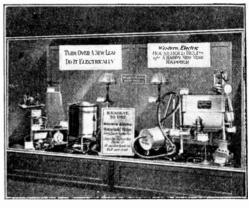
LS-529

### SEASONABLE WINDOW DISPLAYS

Use your window to tie up to current events—either national or local. The window displays here illustrated offer seasonable suggestions. Order the outfits by number.

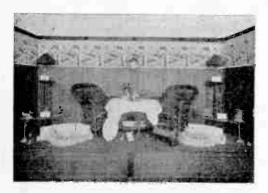
If there is any special event in your town for which you desire a suitable window—such as an "Old Home Week"—write to us. We will be glad to prepare a display.

Write for Our Window Display Service Book



For New Year's W-108

### SEASONABLE WINDOW DISPLAYS



An Easter Window W-97



For Decoration Day W-112



For June Weddings W-99



For Fourth of July W-101

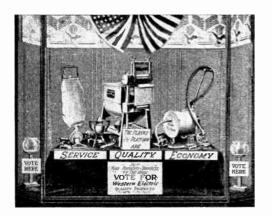


For Labor Day W-100



For Hallowe'en W-103

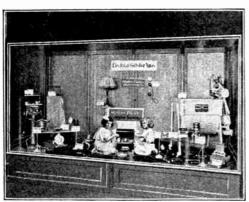
### SEASONABLE WINDOW DISPLAYS



For Election Day W-106



For Thanksgiving Day W-104 GENERAL FOLDER



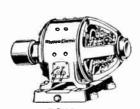
For Christmas W-107

This folder describes the eight leading Western Electric Quality Products—Washing Machine, Vacuum Cleaner. Sewing Machine, Iron, Toaster, Heat Regulator, Heating Pad and Portable Lamps.



B-169

### BUSINESS MOTORS Newspaper Printing Plates



RC Motor Furnished in five sizes: RC-1/8", 11/4", 13/4", 2" and 3"



KT Motor Furnished in three sizes: KT-1½", 1¾" and 2"

Half-tone electrotypes in various sizes—of Type KT, KS, RI, SA, RC, RCS, and SD motors and of motor generator charging outfits (MG) are available. Order by specifying type of motor and width of electrotype desired.

### Lantern Slides

### For Bill and Letter Heads



WS 1 Actual size



TO TURN
USE A'
Western Electric
MOTOR

LS-537

LS-533

### SUNBEAM MAZDA LAMPS



### NEWSPAPER PRINTING PLATES

### Write for

This Mazda Ad Book No. 4. It contains a large number of reproductions of live, snappy newspaper a livertisements that will keep your stock of Sunbeam Mazdas constantly on the move.

### MOTION PICTURES

The Western Electric Company has prepared two motion pictures that will put over your sales message in your town. They tell about the changes that take place in home life when electrical appliances are introduced. One is called "A Square Deal for His Wife," the other, "The Education of Mrs. Drudge." Run them at your local theatres—arrange for bookings with us.

### Small Folder



B-171

#### Lantern Slides



LS-634



LS-635

These sales helps—the folder distributed to users of electric light in your town and the lantern slides to be used in theatres where the film is to be shown—will serve as announcements and bring people to see the picture.

# POWER AND LIGHT OUTFITS AND WATER SYSTEMS

For the use of those engaged in the sale of Western Electric Power and Light Outfits and Water Systems, there is available a complete assortment of attractive, interest-creating sales helps.

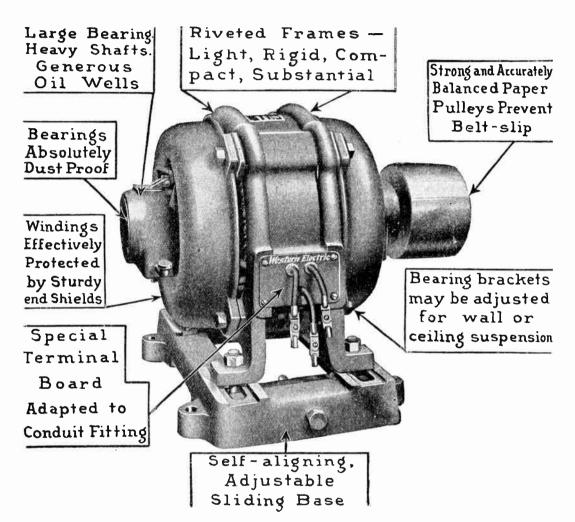
These sales helps include a large number of newspaper printing plates featuring the outfits, as well as a number featuring accessories and water systems; lantern slides to be shown at your local motion picture theatres; a number of folders printed in colors; booklets and lithographed signs, that can be placed in store windows or fastened to fences and barns in the territory.

Further details may be obtained by writing to our nearest house.

### SINGLE TWO AND THREE PHASE INDUCTION MOTORS

1/1 TO 5 H.P.

60, 40, 25 Cycles-110, 220, 440 and 550 Volts



### Type K Squirrel Cage Type Induction Motors

RIVETED FRAME DESIGN

Construction Details

Frame. Stator laminations of selected sheet steel are securely elamped and riveted under heavy hydraulic pressure between two heavy flanges.

Windings. The stator coils are form wound, and thoroughly insulated. The stator slots in which they are embedded are overhung or partially enclosed, thus offering perfect mechanical protection to the coils.

Insulation. The completed stator is dipped in a heavy insulating compound and baked for several hours at a high temperature—resulting in a moisture proof winding.

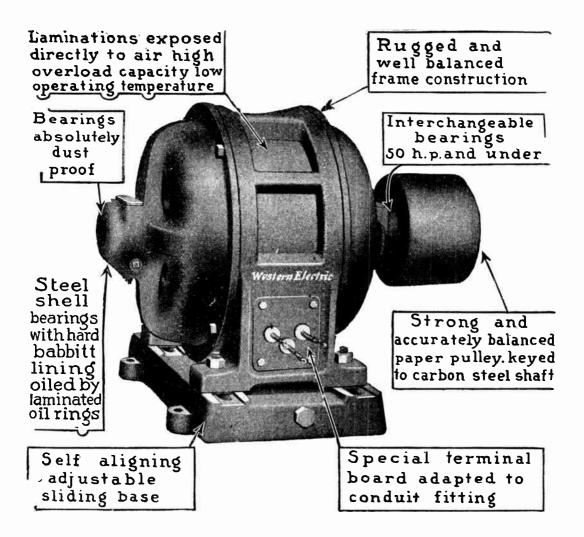
Rotor. Built up of selected steel laminations, securely elamped between heavy end rings under hydraulic pressure and keyed directly to rotor shaft. Rotor bars are embedded in the core slots and short circuited at their projecting ends.

The rotor of the Type KS motor is similar except that the rotor is mounted on an arguto plug bearing lining which is placed between the steel sleeve upon which the core is assembled, and the shaft.

# TWO AND THREE PHASE INDUCTION MOTORS

Types KQ and KT Form B

5 TO 200 H.P.



### Construction Details

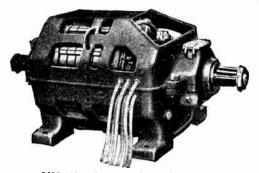
Frame. The skeleton frame consists of a single casting of two end rings connected by horizontal ribs. On the inner surface of the ribs the laminated steel core is securely keyed, and is held in place by heavy end flanges.

Windings. The coils are form wound and thoroughly insulated with a moisture-resisting insulating compound. The coils for stators of frames 322 and larger are of the molded type, as these frames have open slots.

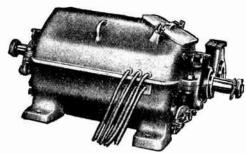
Rotor. The rotor is built up of selected steel laminations, carefully annealed, japanned and clamped between, heavy end rings under hydraulic pressure. It is keyed direct to the shaft on the smaller frames and built upon a spider on the larger motors. The rotor winding consists of copper bars imbedded in the rotor and short circuited at their ends by being solidly welded to a copper ring.

Ventilation. The laminations of the core are directly exposed to the air and numerous ventilating ducts are provided in the rotor and stator through which the air is drawn when the motor is in use.

# Western Electric ALTERNATING CURRENT MOTORS



MIS 105 to MIS 109, Form A Open Type Mill Motor



M1 101 to M1 109, Form B Totally Enclosed Mill Motor

Alternating Current Mill Type Motors 25 CYCLES—3 TO 150 H.P.

The Western Electric alternating current mill type motors have proven remarkably successful when applied to the externally severe service conditions which are met with in steel mills, crane and hoist service, etc. The best grade of materials enter into their construction and special care and attention is given to attaining the best mechanical and electrical characteristics, insuring the utmost service reliability, and ability to withstand severe strains and heavy overloads.

Ratings—The totally enclosed mill type motors (M1 design) are furnished for mill service, based on sixty-minute operation in capacities ranging from 3 h.p. to 150 h.p. The open mill type motors (MIS design) are furnished for continuous service in sizes ranging from 25 h.p. to 150 h.p. The motors are wound for 220 or 440 volts, 25 cycles, three phase circuits, and will carry their full rated load with a temperature rise not to exceed 75 degrees C. on all parts.

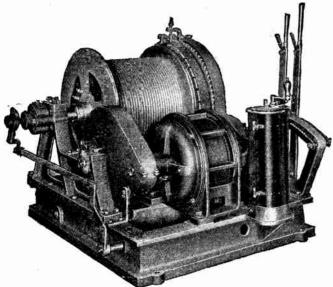
The synchronous speed of the motors up to and including 20 h.p. is 750 r.p.m.; from 25 h.p. to 100 h.p.,

inclusive, 500 r.p.m., and the 150 h.p. motor operates at 375 r.p.m.

The standard motors are designated as Form A, but when furnished with axle brackets for back gear equipment are known as Form B. Back gear pinions and enclosing covers for the gears may be supplied, and solenoid brakes of exceptionally strong construction are built for these motors.

The solenoid brake is furnished with a special brake shoe of special molded asbestos compound. The coils of the brake are wound single phase and may be connected across any single, two or three phase circuit without change. They have a maximum retarding torque of not less than full load torque of the motor, and a holding torque of not less than 125% of full load torque.

Prices and data on application.



Sing Drum Hoist

### Hoist Equipment

The Western Electric hoists are of the friction drum type and are intended for general hoisting works in docks, ferries, warehouses, factories, quarries and similar places. They are of sturdy construction and can be depended upon for reliable service under the most exacting conditions.

The hoist equipment may be either single friction drum, double friction drum with the drums rotating in the opposite direction, double drum with the pinion between the drum gears and having both drums rotating in the same direction, or double drum with pinion between the drum gears and the boom swinging gear mounted in front.

The motors used with these hoists combine compact and rigid construction with high electrical efficiency. The shaft and bearings are unusually large while the electrical parts are designed to carry heavy overloads with safety.

Alternating current hoists are equipped with variable speed phase wound induction motors, operating on circuits of 220, 440 or 550 volts at 60 cycles.

The controllers have a single operating handle, the speed changes being obtained by means of a resistance external to the motor. This resistance is constructed for severe service and is practically indestructible. They are supplied in hoisting capacities ranging from 300 lbs. to 6000 lbs., with rope speeds of 100 to

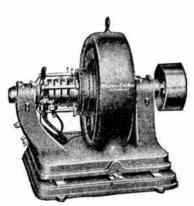
200 feet per minute.

The motors are rated from 1½ h.p. to 52 h.p. Prices and data on application.

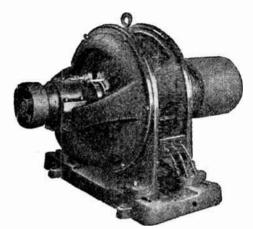
### Western Electric

### ALTERNATING CURRENT GENERATORS

### Belt Driven Alternators



Type TAB or QAB Form ML Belt Driven Alternators, Self-excited Revolving Armature Type



ATB 150 KW 900 RPM 2300 Volt 60 Cycle Belt Driven Alternator

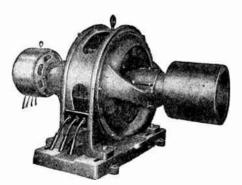
### SELF-EXCITED REVOLVING ARMATURE TYPE TAB AND QAB FORM ML $7\frac{1}{2}$ , 15 AND 25 KW.

The self-excited revolving armature Form ML alternator is especially adapted for installation in isolated plants and small power plants. It is exceptionally compact and simple in construction and operation. The first cost as well as the operation and maintenance expenses are lower than if two separate units were used.

Ratings. The alternators are built in three sizes, 7½, 15 and 25 km., 120, 240, 480 and 600 volts, 60 cycle two phase or three phase. They may be operated as single phase alternators by employing two of the three phases. Their single phase rating is 70 per cent. of their three phase rating.

### TYPES ATB AND AQB FORM PB 25 TO 200 KW.

The Form PB belt driven alternator is especially adapted for installation in small plants where lew power factor is to be encountered. This condition exists on a line where power is supplied to induction motors, transformers or other inductive apparatus.



Type ATB Form PB Belt Driven Alternators
With Direct Connected Exciters

Ratings. These alternators are so designed that they operate at high efficiencies at all leads on power factors of from 80 to 100 per cent. They range in capacity of from 25 kw. to 200 kw., 60 cycles, two or three phase and voltages of 240, 480, 600, 1150 or 2300 volts.

They may be operated as single phase alternators by using two of the phases, and may then be rated at 65 per cent. of the polyphase rating. They may be furnished with or without direct connected exciter.

The Form PB alternators may be used as synchronous motors, synchronous condensers, and for this duty they are equipped with squirrel eage winding in the pole faces, which does not interfere with their use as generators.

Prices and data on application.

### ALTERNATING CURRENT BELT DRIVEN GENERATORS

60 CYCLES-3 or 2 PHASE

### Self-excited, Revolving Armature-Form ML

Type TAB or QAB 120, 240, 480 or 600 Volta

K. Capa 40°	eit <b>y</b> C.			Ship. Wt.		Efficiency 1.0 P.F. 0.8 P.F.					Net Weight in Lbs.				
1.0 P.F.	0.8 P.F.	Speed R.P.M.	List Price	Lbs. (Ap- prox.)	Poles	Full Load	1.0 P.F	Load	Full Load	34 Load	Load	Rotor	Stator	Sub-	Total
7.5 15 25	6 12 20	1800 1800 1800	\$6.82 8.80 11.88	860 1300 2050	4 4	86 0 88.0 88.5	83.5 85.5 86.0	79.0 81.5 82.0	83.0 85.5 86.0	80.0 82.5 83.0	75.0 77.5 78.0	120 165 235	500 810 1160	95 95 140	715 1070 1535

Prices are F. O. B. tactory boxed, and include standard pulley, belt tightener and field rheostat.

The generators are equipped with an auxiliary direct current armature winding and commutator from which the field excitation is obtained. The alternating current winding can be two or three-phase at the same price.

Single-phase capacity is 70 per cent, of the above capacity.

The above listed generators will operate at rated load and voltage continuously with heating not to exceed 40 degrees C. rise and with 25 per cent, overload for 2 hours, with heating not to exceed 55 degrees C. rise.

For different conditions of power and lighting service the following is recommended:

Lighting Load Service Power Service Alone KW. Maximum H.P. per Motor Maximum H.P. per Motor Total II.P. of Total H.P. Capacity Generator Capacity With of With Without of Without Motors Compensator Compensator Motors Compensator Compensator 3 71/2 71/2 15 25 1.5 71/2 25 71/2

Synchronous Motors. These machines may be sold for use as synchronous motors at the same prices as above, the requisition should state, however, that they are for this use and should call for grid damping device inserted in pole faces. These parts are necessary for synchronous motor operation.

Rotary Condensers. These machines may be sold as rotary condensers with ratings, 6 kv-a., 12 kv-a., and 20 kv-a. respectively at the same prices as above.

Special Rotary Condensers. These machines can be equipped with special field windings for operation as rotary condensers with ratings of 7.5 kv-a., 15 kv-a. and 25 kv-a. respectively for price 10 per cent greater than the above.

Starting Compensators are not included in the above prices.

Starting Compensators are not included in the above prices.

### With or Without Direct Connected Exciter Form PB Types ATB or AQB 240, 480, 600, 1150 or 2300 Volts

	('ond. Rat- ing			List Price		Ship. Wt.	Normal Approx.		†Efficiency		
Capa- city K.W. 1.0 to 0.8 P.F.		Speed R.P.M.	Without Exe.	With Direct Con. Exc.	Allow- ance for Omissions  Driv- ing Sub- Pulley Base	with- out Exc. With Direct Con. Exc.	K.W. K.W. of Losses 125 Volt at Excited Sync.	Poles	K.W. 1.0 P-F. Full 34 1/2 Load Load		
30 45 60 90	37.5 56.3 75 112.5	1200 1200 1200 1200 1200	\$1718.20 2008.60 2202.20 2516.80	\$1984.40 2286.90 2480.50 2904.00	\$15.74 19.36 19.36 53.24 19.36 65.34 24.20 72.60	2100 2350 2800 3150 3250 3600 3900 4400	$ \begin{array}{c cccc} 114 & 5 \\ 112 & 6 \\ 112 & 712 \\ 212 & 912 \end{array} $	6 6 6	89.0 87.5 85.0 90.0 88.7 85.5 91.5 90.2 87.0 88.3		
90 120 120	112.5 150 150	900 720 600	2783.00 3521.10 4380.20	3170.20 4077.70 4924.70	39.94 104.06 117.38 89.54 100.44	4300 4800 5500 6300 6000 6800	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8 8 10	92.0 91.0 88.0 92.5 91.5 88.5 92.5 91.3 88.5		
180 180 180	225 225 225	900 720 600	3799.40 4089.80 4694.80	4307,60 4646 40 5408 70	75.03 94.38 117.38 100.44 159.72 106.48	6475 7175 6650 7450 8100 9200	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	8 10 12	$ \begin{vmatrix} 93.3 & 92.3 & 89.6 \\ 93.2 & 92.2 & 89.4 \\ 93.2 & 92.2 & 89.4 \end{vmatrix} $		

\*Synchronous condenser guarantees are 50 degrees C. rise for armature and field under continuous operation.

overload.

Prices are F. O. B. Factory, boxing included. Prices include generator, field rheostat, main driving and exciter driving pulleys and sliding base with ratchet belt-tightening device instead of rails.

When the above generators are used as synchronous motors or as synchronous condensers, add a list price for damping device of \$67.76 to 30, 45 and 60 K.W.; \$133.10 to 90 and 120 K.W.; \$133.00 to 180 K.W.; and for compensator withswitches add a list price of \$231.00 to 30, 45 and 60 K.W.; \$338.80 to 90 and 120 K.W.; and \$605.00 to 180 K.W. All compensators have self-contained switches except 180 K.W. at 240 volts, for which the switches should be mounted on a panel, and will be shipped only at an extra charge.

tEfficiencies include load losses, friction and windage, and field rheostat losses at rated exciter voltage, but do not include the exciter losses.

the exciter losses.

Single-phase rating of the above generators at unity power factor will be 80 per cent. of the three-phase rating and at 0.8 P-F. it will be 65 per cent. of the three-phase kilovolt-ampere rating.

Heating Guarantees. Full load continuously 0.8 p-f. 50 deg. C. rise stator and rotor; 1.0 p-f. 40 deg. C. rise stator, 35 deg. C. rise rotor. No overload.

If it is desired to obtain an 0.8 p-f. rating on which 25 per cent. overload for two hours may be guaranteed, this rating will be \$25 per cent.

will be \$3\frac{1}{2}\$ per cent. of the corresponding one given above.

For this rating heating guarantees will be full load continuous 40 deg. C. rise on any part.

125 per cent. load two hours 55 deg. C. rise on any part.

1a determining efficiencies, the following losses are included: Total armature loss at short circuit which includes load loss are loaded to the continuous 40 deg. C. rise on any part.

and I R armature (resistance being measured at 75 deg. C.); field loss (includes rheostate loss when operating exciter at rated voltage) and core loss

Friction and windage is included.

### **ENGINE-DRIVEN ALTERNATORS**

The engine-driven alternators listed below are designed with spider, permitting them to be bored within the limits as specified in the columns "Bore of Hub in Ins." If it is necessary to change this bore it will probably affect the price and shipment and the General Office should be consulted.

All engine-driven alternators are furnished with rheostat and brush rigging, consisting of collector rings, brushes, brush-holder studs and ring for supporting studs. This equipment is all that is necessary when the engine is not of the cross-compound type and is furnished with a sub-base.

When alternators are to be direct connected to cross-compound engines, rails, carriers, brushholder stand and brushholder stand support must be supplied.

The rails consist of two plates long enough to allow sufficient movement of the stator parallel to the shaft, and are placed on top of the concrete or other foundation.

The carriers are small shoes placed between the foot of the stater and the rail. A lug projects from the carrier against which a jack screw is made to act so that the stator may be moved along so as to clear the rotor.

The brushholder stand is a pedestal on which is placed the brush rigging and is supported by brushholder stand support, which is a platform extending across the pit over which the alternator is mounted.

### TWO AND THREE-PHASE ENGINE-DRIVEN ALTERNATORS

Kise 2					and ush	Ship, Wt. in Lbs. (Approx.)			25 ired					Efficiency			
		N.				Total		V. of 125 Required						1.0 P.	F.		
		Speed R.P	En	Steam Engine Type		Hea- viest			Gas En- gine	Normal K.W.	Bore of Hub in Ins	Poles	Fly- wheel Effect WR	Po			
	0.8 P.F.	1	Less Exci- ter	With Direct Con- nected Exciter	gine Type Less Exci- ter	Part	Less Exci- ter	With Direct Con- nected Exciter	Type Less Exei- ter	Norm Volt E					Full Load		1 <sub>2</sub> Load
30 42 60	34	300	\$2468.40 2589.40 2686.20		2795.10	1600	2650 2650 3250	4080	2700 2700 3300	3 4 5	$\begin{array}{c} 4 & 6^{1}_{2} \\ 4 & 6^{1}_{2} \\ 4 & 6^{1}_{2} \end{array}$	24 24 22	1400 1400 1650	70 70 125	86.7 88.2 88.7	83.8 86.3 87.1	79 2 82.5 84.0
60 90 90	72	300 300 277	2734 60 3182.30 3303.30	4319.20	3388.00	2750	3300 4450 4500	6100	3400 4500 4600	5 6 6	$\begin{array}{c} 4 - 616 \\ 516 - 716 \\ 512 - 712 \end{array}$	24 24 26	1750 2600 2700	170	90 2	87.1 88.8 88.8	85.7
$\frac{90}{120}$	- 96	$257 \\ 225 \\ 200$	3509.00 4259.20 4719.00	5880,60	3702.60 4489.10 4948.90	3600	4600 6150 7300	8450	4700 6200 7400	6 6 6	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	28 32 36	3700 6300 11000	215	91.7	88.9 89.8 89.8	88.5
150 150 150	120	277 257 225	4259.20 4622.20 4767.40	6183.10	4464.90 4852.10 5033.60	3550	6100 6200 <b>7</b> 100	8500	6200 6300 7200	7 7	6-814 6-814 8-10	26 28 32	4700 5000 11500	270 260 250	92.2	90.8 90.8 90.8	87.5
180 *180 210	144	120	7865.00	7187.40 10151.90 7090.60	8252.20	6800	7900 13500 8000	17800	8000 13600 8100	$\frac{7^{+}_{2}}{8^{+}_{7^{+}2}}$	8-10 10-12 8-10	36 60 28	13000 52000 13500	250 330 240	92 2 91 7 92.7	90.8 90.3 91.8	89 0 87 5 90.0
210 210 240 240	168	$\frac{150}{200}$	5735,40 6655,00	7356.80 9728.40 7394.20 9147.60	7828,70 6981,76	$\frac{6800}{5600}$	8250 12700 1000 10600	16900 13100	8400 12800 10000 10700	$\frac{712}{8}$	8-10 10-12 9-11 10-12	32 48 36 44	15000 52000 16000 26000	460	92 7	$\frac{90.8}{91.8}$	90 0 88 5 90.0 89.5

<sup>\*</sup>Prices include rails.

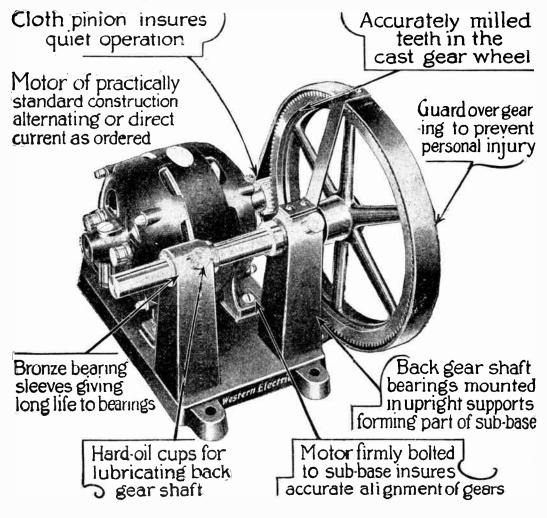
### Rails

Rails are not included in the list price of the alternator. Where necessary they can be supplied at the following additional list price:

K.W.	Cycles	Speed	List Price	Ship. Wt. in Lbs. (Approx.)	K.W.	Cycles	Speed	List Price	Ship. in Lbs. (Approx.)
30	60	300	\$108.90	420	150	60	277	\$145.20	575
42	60	300	108.90	420	150	60	257	181.50	575
60	60	<b>3</b> 27	108.90	420	150	60	<b>2</b> 25	181.50	575
60	60	300	108.90	420	180	60	200	181.50	755
90	60	300	121.00	510	210	60	257	181.50	755
90	60	277	121.00	510	210	60	225	181.50	755
90	60	257	121.00	575	210	60	150	217.80	980
120	60	225	133.10	575	24C	<b>6</b> 0	200	205.70	900
120	60	200	181.50	755	240	60	164	217.80	920

### TYPE SA AND TYPE SD

FRACTIONAL H.P. BACK GEARED MOTORS



### Type SA and SD Back Geared Motors

The standard gear ratios are 4 to 1; 5 to 1; 6 to 1; 7 to 1.

The motors are wound for 110 and 220 volts alternating current or for 110 and 220 volts direct current. The alternating current motors can be furnished for either 1800 R.P.M. or 1200 R.P.M.; the direct current motors can be furnished for either 1700 R.P.M. or 1100 R.P.M. The full load speeds of the alternating current motors are approximately the same as those of the direct current motors, 1700 R.P.M. and 1100 R.P.M. respectively.

Motors of 1/8 to 1/2 H.P. can be supplied with back gears.

Back geared Types SD and SA motors can be furnished at an additional price over standard listed motors as follows:

For Motor Fr	ames———	-Addition to List Price of Standard Motor (Less Price)					
Туре	Туре	Gear I	Ratio				
ŠÁ	ŚĎ	4:1 or 7:1	5:1 or 6:1				
145-147-155	244-246-254	Prices on	Prices on				
165	264	Application.	Application.				

Back geared equipment consists of motor with pinion mounted on a cradle attachment consisting of a bedplate carrying countershaft and gear of specified ratio, thus making a complete self-contained unit. Both gear and pinion are covered with a protective guard. Oil or dust-tight gear casing cannot be furnished.

Delivery F. O. B. Factory, Ft. Wayne, Ind. For warehouse deliveries write nearest house.

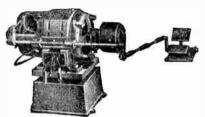


### ALTERNATING CURRENT MOTORS

VARYING SPEED INDUCTION MOTORS



Type BSS Motor with Type CR-6045 Hand Controller



Type BSS ¼ II. P. Single Phase Motor With Foot Controller

Brush Shifting Varying Speed Motors
TYPE BSS—SINGLE PHASE—60 CYCLES—110 OR 220 VOLTS

The single phase brush shifting motor is a varying speed motor, speed variation being obtained by

shifting the brush yoke. As at present built these motors are of two types.

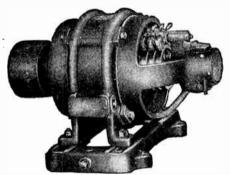
One type furnished with foot controller, ratings from 4 to 1 H. P. inclusive, and the type operated by hand controller from 2 H.P. to 7½ H.P. inclusive.

With the foot controlled motor bolted to any machine, such as a printing press, the operator has the use

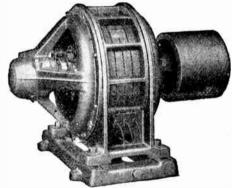
of both hands at all times for feeding the press.

The speed range is approximately from maximum down to  $\frac{1}{2}$  or  $\frac{1}{2}$  minimum; the number of speeds obtainable is almost unlimited, therefore the operator can easily run his machine at exactly the proper speed best suited to his work.

There is no current wasted in resistances when varying the speed, so that the power used is nearly in proportion to the speed and is greatly reduced as the speed is reduced. Prices and data on application.



Riveted Frame Form M Varying Speed Induction Motor ¼ to 10 H. P. Capacity



Skeleton Frame Form M
Varying Speed Induction, Motor 71/2 to 200 H. P. Capacity

Three and Two Phase—Slip Ring Type—Induction Motors

The Western Electric slip ring motor is designated as Form M. and is designed for varying speed service or for constant speed service requiring at starting an extremely high torque with a minimum starting current. It is extensively used for crane or hoist service, printing plant installations and individual drive of machine tools, etc. The rotor windings are connected to slip rings, from which leads are taken to the

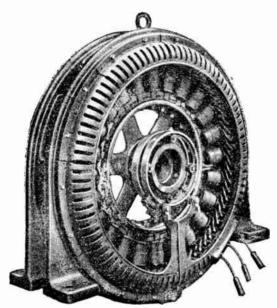
controller, which may be located to suit the convenience of the operator.

All slip ring motors will start under heavy load and are adaptable to remote control. Provision may be made for short circuiting the slip rings and raising the brushes when the motor has come to tull speed, thus eliminating the loss from brush friction during operation. Motors equipped with this feature are known as Form P, and are to be recommended for service where the motors operate continuously at constant speed but require an especially high starting torque.

Slip ring motors are all furnished with both drum and dial type of controllers.

CR-6050 Dial Con- The dial type of controller is designed for capacities up to 10 H.P., while the capacity of the drum type ranges from 1 to 200 H.P. Prices and data on application.

### **ALTERNATORS**



Western Electric Engine Driven Alternator Skeleton Frame Construction

# Engine Driven Alternators

The Western Electric engine driven alternators are especially adapted for central stations and isolated plants where reliable service and economical operation are essential. They may be directly connected to a steam or gas engine and form a compact generating unit of exceptionally high operating efficiencies, requiring a minimum floor space and operating with practically no noise or vibration. They are furnished in capacities ranging from 30 K.W. to 240 K.W., in the standard engine speeds for 60 cycles, 240, 480, 600 or 2300 volts. 60 cycle generators employ the skeleton frame construction. Larger generators and 25 cycle machines are of the box frame type. Standard 25 cycle sizes are 180 K.W. and 240 K.W.

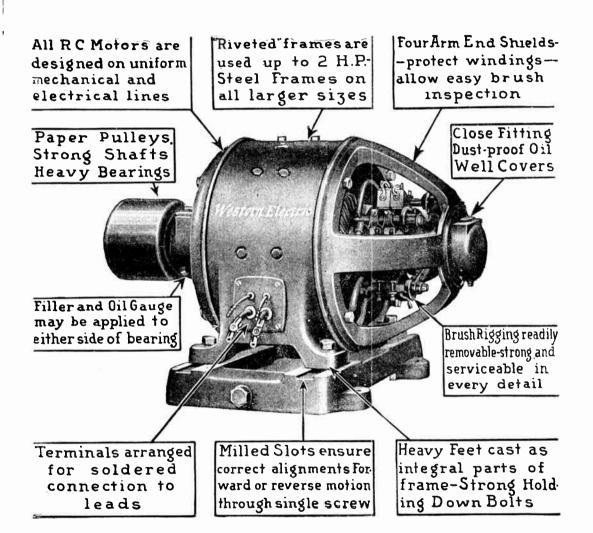
Standard alternators are wound for either 2 or 3 phase service, but may be operated single phase, the 3 phase delivering 70 per cent. of their rated 3 phase output, the 2 phase 50 per cent. of their rated 2 phase output. When 60 cycle alternators are furnished with direct connected exciters, exciters are provided without base, shaft or bearings, and are mounted outside of the engine company's pillow block on a suitable bracket or other support, the exciter rotor being pressed on an extension of the engine shaft.

Prices and data on application.

# Western Electric

#### TYPE RC MOTORS

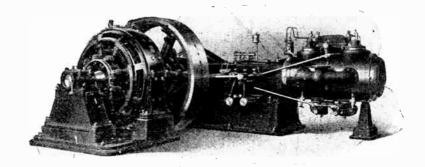
# Direct Current—Commutating Poles



# Type RC Motors

These Western Electric Type RC direct current motors are designed to meet the most exacting conditions. They are furnished from ½ to 75 horsepower and for 115, 230 and 550 volt circuits, with either shunt, series or compound windings.

### DIRECT CURRENT ENGINE DRIVEN GENERATOR



Western Electric 3 Wire Direct Current Engine Driven Generator Direct Connected to a Skinner "Universal Unaflow" Engine

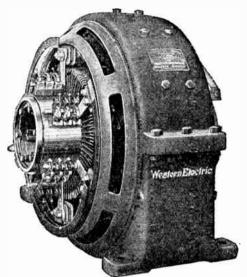
#### TYPE MPC, FORMS LD AND LDS COMPOUND WOUND

Kw.	Kw. Speed		List Price		1	ping We in Lbs. Approx	_	Am	rmal pere ting	Aver- age	Poles		iency i Wire			
		i-	LI) (2 Wire)	1.DS (3 Wire) 125- 250 V	*For DS-2 Parts Add	LI) (2 Wire)	LDS (3 Wire)	For DS-2 Parts Add	Line	3 Wire Neu- tral	per Bar	1 01.55	1¼ Load	Full Load	3/4 Load	½ Load
25 25	310 †280	$\begin{array}{c} 125 \\ 250 \\ 125 \\ 250 \end{array}$	\$2637.80 2637.80 2698.30 2698.30	\$3205,50 3279,10	\$641.30 641.30 641.30 641.30	3000 3000 3000 3000	3250 3250	1000 1000 1000 1000	200 100 200 100	25 25	10 10 10 10	6 6 6	8534 8614 8514 8534	863 87 86 86.5	87 87 861 <sub>4</sub> 86½	86 86 8517 8534
35 35	300 †270	125 250 125 250	2938,10 3012,90 3158,10 3121,80	3630,00 3726,80	701.80 701.80 701.80 701.80	3500 3500 3500 3500		1100 1100 1100 1100	280 140 280 140	35 35	12 12 12 12	6 6 6	87½ 87¼ 86.5 86¾	88 88¼ 87¼ 87½	8814 8: 1/4 8: 1/4 88	871/2 88 87 87/4
50 50	290 †260	125 250 125 250	3690,50 3630,00 3872,00 3775,20	4307.G0 4477.O0	762.30 762.30 762.30 762.30	4750 4750 4750 4750	5050 5050	1300 1300 1300 1300	400 200 400 200	50 50	7 14 7 14	6 6 6	89 89 88¼ 88¼	89%4 90 89 89	9014 901/ <sub>2</sub> 891/ <sub>4</sub> 891/ <sub>4</sub>	8914 8914 8814 8814
75 75	275 †250	125 250 125 250	4706 90 4489,10 4912,60 4670,60	5108.70 5578.10	907.50 907.50 907.50 907.50	6900 6700 6900 6700	l	2000 2000 2000 2000	600 300 600 300	75 75	9 9 9 9	6 6 6	89.5 90 8914 8934	90½ 90¾ 90 90½	91 91½ 90½ 91	90 90½ 89½ 90
100 100	260 †235	125 250 125 250	5735,40 5445,00 5929,00 5687,00	6509.80	1052.70 1052.70 1052.70 1052.70	8350 8300 8350 8300	l	2800 2800 2800 2800	800 400 800 400	100	10 10 10 10	6 6 6	901/4 903/4 90 90.5	91 91½ 90¾ 91¼	91¼ 91¾ 91 91½	90½ 91 90 90¾
125 125	250 †225	125 250 125 250	6763.90 6425.10 7005.90 6715.50	7574.60 7840.80	1234,20 ;234,20 ;1234,20 ;1234,20	10500 10400 10500 10400		4000 4000 4000 4000	1000 500 1000 500	125 125	11 11 11 11	6 6 6	9034 91 8934 90.5	$91 \\ 9134 \\ 9034 \\ 9142$	91¼ 92¼ 91 91¾	9014 9134 90 91
150 150	225 †200	125 250 125 250	8369,90 $7526,20$ $8748,30$ $7877,10$	8808,89 9208,10	1415.70 1415.70 1615.70 1415.70	11500 11300 11500 11300		4400 4400 4400 4400	1200 600 1200 600	150 150	8 15 8 15	8 8 8	89½ 91¼ 89¼ 90½	90½ 91¾ 90¼ 91¼	$90\frac{1}{2}$ $91\frac{3}{4}$ $90\frac{1}{4}$ $91\frac{1}{4}$	891/ 911/ 891/ 901/
200 200	200 †180	125 250 125 250	$\begin{array}{c} 10781,10 \\ 9534,80 \\ 11228,82 \\ 9958,30 \end{array}$	11047.30 11495.00	*621.40 1621.40 1621.40 1621.40	15450 15250 15450 15250		4900 4900 4900 4900	1600 800 1600 800	200	9 16.5 9 16.5	8 8 8	90 91¼ 89¾ 91	91 92 90½ 91¾	91 92 90½ 91¾	90 91¼ 89¾ 91
200 200	150 †135	125 250 125 250	13310 00 12705.00 13611.40 13068.00	14883.00 15246.00		21200 20700 21200 20700	22100 22100		1600 800 1600 800	200	8 16.5 8 16.5	8 8 8	90 91 89½ 90¾	$90\frac{8}{4}$ $91\frac{1}{2}$ $90\frac{1}{4}$ $91\frac{1}{4}$	90 34 91 ½ 90 ¼ 91 ¼	90 91 891 9034
200 200	†100	125 $250$ $125$ $250$	16335,00 15488,00 16335,00 15488,00	17666.00 17605.50		23000 23000 23000 23000	24800 24800		1600 800 1600 800	200	6.5 16.0 6.5 6.5	10 10 10	89 90 881/2 891/2	90 90¾ 89½ 90¼	90 90 1/4 89 1/2 90 1/4	89 90 8814 8914

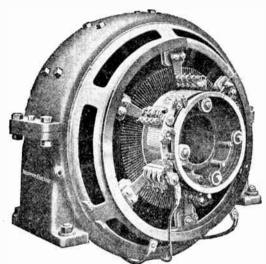
<sup>\*</sup> DS-2 parts include base, shaft, 2 pedestals with bearings. Coupling is extra. Half coupling is not recommended. Base supports generator magnet frame and both bearings only. It is not a common base for engine and generator. † These machines are designated as slow speed.

\*\* Generators driven by grs engines should be recommended on a D.D.-0 basis, i.e., without base, shaft or bearings. Prices are F.O.B. factory, including boxing and field rheostars, and for three wire machines also compensator and collector ring. Standard connections are located on under side of frame. For any other location, add \$55.00 list per machine.

# DIRECT CURRENT GENERATORS



Western Electric Direct Current Generator
Type LD 2 Wire



Western Electric Direct Current Generator
Type LDS 3 Wire

# Type LD-2 Wire and Type LDS-3 Wire

The type LD and LDS engine type generators represent the highest development in generators designed primarily for central station and isolated plant equipments. All generators of this design are equipped with commutating poles which insure practically sparkless commutation over the entire range of operation. The general construction embodies simplicity and mechanical strength together with high efficiency and low operating temperatures.

Standard 2-wire generators may be converted into 3-wire generators by the addition of a compensator mounted on the rear end of the armature and a slip ring mounted on the commutator end.

#### Frame

The yoke is east of soft steel selected for high magnetic permeability and is divided horizontally above the center line to avoid disturbance of the poles in assembling or disassembling. The inside of the frame is bored to form a continuous finished seat for the reception of the poles.

#### Poles

The main poles are of laminated steel accurately punched. Commutating poles are made from rolled steel stock. All poles together with their coils are easily removable without disturbing the magnet frame or brush rigging.

#### Fields

The main field coils are wound on metal spool bodies with a series coil mounted outside of the shunt coil with large ventilating space between. The commutating field coil is a helical winding of copper wound edgewise, permitting a most effective heat radiation.

#### Armature

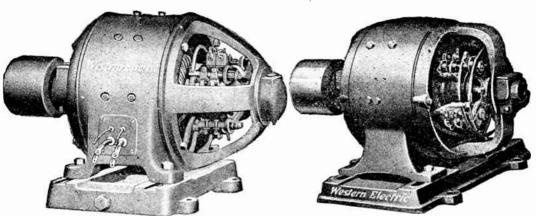
The armature core is built up of soft steel laminations thoroughly annealed after punching. Large air ducts are provided to insure perfect ventilation. Commutator segments are of selected hard drawn copper insulated from each other by high grade mica segments of proper hardness to insure even wear and sparkless operation. The commutator face is extra long, permitting the brushes to be staggered.

#### Brush Rigging

The commutating poles permit a permanent setting of brushes at the electrical neutral throughout the entire range of operation.

Prices and data on application.

# D. C. BELT DRIVEN GENERATORS & EXCITERS



Type R. C. Generator

Type L. C. Generator

# Type R. C. Direct Current Belt Driven Generators

The Type R. C. machines are furnished both as generators and exciters. They have commutating poles which render them capable of operation under variable loads without the necessity of brush shift. All standard generators are supplied with open frames. If semi-enclosed ventilated or totally enclosed construction is desired, the matter should be referred to the General Office for ratings, etc.

Type R. C. Belt Driven Generators and Exciters

				25	O 75 K	w.					-
			List	Price	Shpg	. Wt.	Norma	l Ampere 1	{atings		l.,
K.W.	Speed	Volts	2-Wire	3-Wire	2-Wire	3-Wire	2-Wire	3-Wire Line	Neutral	Frame	Poles
$\overline{25}$	950	125	\$1427.80		1680		200			32	4
-0	950	250	1427.80	\$1706, 10	1680	1810	100	100	10	32	4
	1050	575	1427.80		1680	1	43			32	4
30	925	125	1766.60		1900	1	240		1.3	33	4
1,(,	925	250	1730.30	2020.70	1900	2050	120	120	12	33	4
	1025	575	1730.30		1900	1	52	1		33	4
35	900	125	1936.00		2300		280			34	-1
170	900	250	1851.30	2178.00	2300	2480	140	140	1.4	34	4
	1000	575	1851.30	_	2300	1	61			34	1-4
35	1300	125	1597,20		1680	1	280	1		32	4
90	1300	250	1476,20	1730,30	1680	1810	140	140	11	32	4
	1425	575	1476.20		1680		61			32	4
40	850	125	2250,60		2900	1	320			35	-1
40	850	250	2214.30	2541.00	2900	3100	160	160	16	35	4
	950	575	2099,35	_	2900		70			35	1 4
40	1250	125	1790.80		1900		320			33	4
40	1250	250	1718.20	2020.70	1900	2050	160	160	16	33	-1
	1375	575	1718.20		1900		70			33	4
50	775	125	2740.10		3740		400	ŀ		36	4
OO	775	250	2613.60	3025,00	3740	3980	200	200	20	36	4
	850	575	2528,90		3740	}	87	1		36	1 4
50	1200	125	2093.30		2300		400	1		34	4
00	1200	250	1972.30	2335,30	2300	2480	200	200	20	34	4
	1325	575	1925.95		2300		87		1	34	4
65	1150	125	2420.00		2900		520			35	4
()()	1150	250	2299.00	2686, 20	2900	3100	260	260	26	35	4
	1250	575	2190.10		2900	1	113			35	4
75	750	125	3472.70		4750		600			37	4
<b>75</b>	750	250	3363.80	3811.50		5100	300	300	30	37	4
	100	1 200	1 0.00.00	1 00722100							

# Type L. C. Direct Current Belt Driven Generators and Exciters

The Type L. C. generators are of the commutating pole construction and are manufactured in both two and three wire type (the three wire type from 12½ to 50 K.W. inclusive). The generators can be supplied with either shunt or compound windings and with the armature wound for the following voltage, will meet the standard heat and over load tests. The generators are designed for 125 or 250 volts two wire, or 125/250 three wire.

Prices and data on application.

# DIRECT CURRENT BELT-DRIVEN GENERATORS AND EXCITERS Belt-driven Generators

	TYPE ML, TWO BEARING								TYPE M	IL, THRI	EE BEARI	NG.F	LY WE	EEL	TYPE
					‡List Pric	'cs	1			List Price		Ship.			
KW.	Speed	Frame	Poles	35 Volt Shunt	125 or 250 V. Com- pound	Volts Com- pound	in l (App	rox.)	35 Voit Shunt	125 or 250 V. Com- pound	Volts Com- pound	Wt. in Lbs. (Ap-	No. 50 Watt Lights	in	ulley imen. Inches
					2-Wire	3-Wire	Ship.	Net	li	2-Wire	3-Wire	prox.)		Dia.	Width
34 1 112 112 2 212 3	1200 1550 2000 1150 1500 1800 2000 1050	в в в с с с с	4 4 4 4 4 4	\$242.00 242.00 242.00 308.55 308.55 308.55	\$242.00 242.00 242.00 308.55 308.55 308.55		230 230 230 350 350 350 350	150 150 150 260 260 260	\$290.40 290.40 290.40 363.00 363.00 363.00 363.00 484.00	\$290.40 290.40 290.40 363.00 363.00 363.00 363.00 484.00		315 315 315 500 500 500 500 800	15 20 30 30 40 50 60	4 4 5 5 5 5 6	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 2 3 2 3
4	1350 875	D E	4	417.45 538.45	417.45 538.45		575 825	460 685	484.00 605.00	484.00 605.00		\$00 1100	80 80	6	3 3 1/4
55 6 6 7 7 1/2 8 10 11 12 15 16 16 22 25	1700 700 1850 1275 1600 1050 650 1400 600 950 525 1250 875	PP DEEF GF H G I GHH.	4 4 4 4 4 4 6 4 6 6 6 6	683,65 417,45 538,45 538,45	683,65 417,45 538,45 538,45 683,65 883,30 1221,00 883,30 1403,60 883,30 1221,00 1221,00	\$653,40 653,40 822,80 1046,65 822,80 1415,70 1046,65 1415,70 1415,70 1415,70	1200 557 825 825 1200 1700 1200 2100 2500 1700 2500 1700 2100	1000 460 685 685 1000 1465 1000 1650 1465 2150 1465 1650	484.00 810.70 484.00 605.00 605.00	484.00 810.70 484.00 605.00 605.00 810.70 1028.50 1810.70 1379.40 1028.50 1609.30 1028.50 1379.40 1379.40	\$726.00 726.00 943.80 1191.85 943.80 1573.00 1191.30 1863.40 1191.30 1573.00 1573.00	800 1650 800 1100 2800 2400 1650 2800 2400 2400 2400 2400 2800 2800	100 100 120 120 150 150 200 220 240 300 320 320 440	6 10 6 8 8 10 12 10 14 12 16 12 14 14	34333454655566
25 30	875 1050	I	6		1403,60 1403,60	1657.70 1657.70	2500 2500	2150 2150			1863.40	3600 3600	500° 600	16 10	9

#### TYPE LF, TWO BEARING

					‡List Pric	·es	1 11/4	. in				‡List Pric	ces		
KW.	Speed	Frame	Poles	35 Volts Shunt	125 or 250 V. Com- pound	250 Volts Com- pound	(App	orox.)	KW.	Speed	35 Volts	125 or 250 V. Com- pound	Volts Com- pound		08. 0 rox.)
					2-Wire	3-Wire	Ship.	Net			Shunt	2-Wire	3-Wire	Ship.	Net
20	500	15	6			\$1960.20		2635	45	375		\$2807.20	\$3182.30	6330	5240
27	475	20	6		2129.60	2492,60		2975	50	650			2698.30		
30	750	15	6		1960.20			2635	55	950		2129.60	2492.60	3400	2975
35	465	25	6			2668,60		4160	70	925		2666.20	2783.00	4950	4160
40	1000	15	6			1960.20		2635	75	620			3448.50		
40	700	20	6		2129.60	2492.60	3400	2975	90	750	1	3182.30	3593.70	6330	5240

In ordering, state size of pulley and whether front or back of board type rheostat is desired.

These generators will carry full rated load for 24 hours with a rise in temperature as measured by thermometer not exceeding 40 degrees C. on windings and 45 degrees C. on commutator; they will then carry 25 per cent. overload for 2 hours with a temperature rise not exceeding 55 degrees C. on any part of the machine, and will carry 50 per cent. overload momentarily without injury.

Shunt-wound generators are recommended for use in parallel with storage batteries.

Belt-driven Exciters, Type ML, 125 Volts

To Be Used with Alternators as Listed

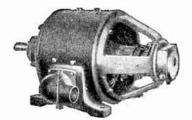
				To Be	Used with	Alterna	tors as	Listed				
Ex	citers	Kv-a.	KW. 0.8	Speed	KW, Excitation	Form	Poles	Wgt. (Ap)	in Lb. prox.)	Frame	Poles	‡List Price, Exciters
KW.	Speed		P-F.		Required			Ship.	Net		1 0100	Only
11/5	2000		$\begin{cases} \frac{25}{3714} \\ \frac{50}{60} \end{cases}$	1200 1200 1200	$\begin{array}{c} 1 & 0 \\ 1 & 1 \\ 1 & 2 \end{array}$	*PB *PB *PB	6 6	230	150	В	4	\$242.00
234	1800		75	1200	2 0 2 5	*PB	6 8	350	260	C	4	308.55
4	1350	25 35	[100	300 300 900	3 1 3 1 3 4	†1) †1) *PB	24 } 24 } 8	575	460	D	4	417.45
5	1800		150 100 100 150	900 720 600 720	3 8 3 8 3 5 4 7	*PB *PB *PB	8 10 12 10	575	460	Ð	4	417.45
6	1275		$\begin{cases} 150 \\ 200 \\ 200 \end{cases}$	600 720 600	4 5 5.0 5.6	*PB *PB *PB	$\begin{vmatrix} 12 \\ 10 \\ 12 \end{vmatrix}$	825	655	L	4	538.45
71/2	1600	50 50 75 75 75		327 300 300 277 257	4.6 4.6 5.6 5.6 4.5	†D †D †D †D †D	22 24 24 26 28	825	6\$5	Е	4	538.45
8	1050	100 100 125 125 175		225 200 277 257 257	6.3 6.6 6.7 6.6 6.3	+D +D +D +D +D	32 36 26 26 26	1200	1000	F	4	683.65
10	1400	125 150 175		225 200 225	5.6 8.0 6.0	†D †D †D	32 36 32	1200	1000	F	4	683.65
10 11	850 600	200 150		164 120	9 5 10.0	†D †D	4 I 60	1700 2100	1465 1650	G	4	883.30
15	525	$\left[\begin{array}{c} 150 \\ 250 \\ 312 \end{array}\right]$		120 120 120	14.0 15.0	†D †D	60 60 }	2500	2150	I	6	1222 . 10 1403 . 60

NOTE: Prices include iron sub-base, belt-tightener, pulley and rheostat.

\*Belt-driven alternator. †Engine driven alternator. These exciters may be used with or without TA voltage regulators.

\*Delivery F. O. B. Factory, Ft. Wayne, Ind. For warehouse deliveries write nearest house.

# DIRECT CURRENT MOTORS ADJUSTABLE SPEED



Type RA Open Motor



Type RA Enclosed Motor

# Type RA Adjustable Speed Motors

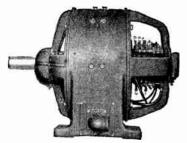
115, 230 and 550 Volts

The Western Electric Type RA adjustable speed motor is especially adapted for installations requiring from \(^3\)\(^4\) to 1\(^2\) H.P. capacity. The speed adjustment is obtained by field control, and full rated horse power may be obtained over range of speed indicated. Speed at full load for these motors is subject to a maximum variation of 5 per cent, above or below rated speed specified. The motors may be obtained for a 2 to 1, 3 to 1 or 4 to 1 speed adjustment.

Prices and data on application.



Type RF Open Motor Frames 7-11

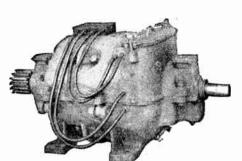


Type RF Open Motor Frames 12-17

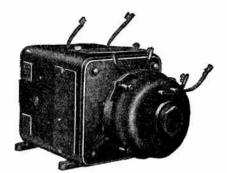
# Type RF Adjustable Speed Motors 230 and 550 Volts

The Western Electric Type RF motors range in capacity of from 2 to 50 H.P., and speed variations of 3 to 1 or 4 to 1. They are exceptionally rugged in mechanical construction and are absolutely reliable under the most severe service conditions. They are equipped with commutating poles, which permits rapid fluctuation in loads with no sparking at the brushes, resulting in long life for the commutator.

Prices and data on application.



CO-2000 Motor



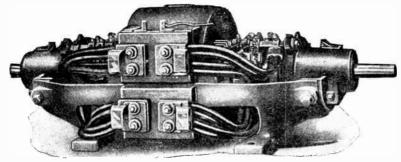
CO-2500 Motor with Solenoid Brake

# Crane and Hoist Motors

The Western Electric crane and hoist motors range in capacity of from 1 to 200 h.p. These motors possess all the electrical and mechanical features necessary to successfully perform the exacting duties incident to general hoisting work. They are especially adapted to intermittent service. They are reversible and operate at low temperatures and with heavy overloads with absolute reliability.

Prices and data on application.

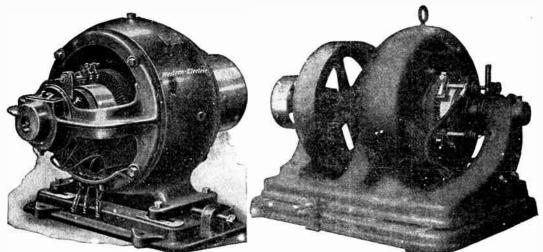
# Western Electric DIRECT CURRENT GENERATORS



Western Electric Electrolytic Generator DEG Design

## Electrolytic Generators DEG Design

The Western Electric Type DEG generator for use in electro-metallurgy is furnished in five sizes. The 1½ k.w. 250 amperes, and 3 k.w. 500 amperes at 1800 r.p.m. for 2 to 6 volts, are self-exciting and furnished with one commutator only. The larger sizes, 5 k.w., 10 k.w., and 15 k.w., with two commutators are separately excited, and have current capacities at 10 volts of 500, 1000 and 1500 amperes and at 5 volts of 1000, 2000 and 3000 amperes respectively. They may be equipped direct connected to an alternating or direct current motor for all standard voltages, or with pulley for belt drive.



Western Electric Type B Low Voltage Direct Current Generator

Western Electric ML No Flicker Generator

# Belt Driven Low Voltage Generators

The Western Electric Type ML and Type B direct current generator is especially adapted for service requiring a low voltage generator of from \$\frac{1}{2}\$ to 9 k.w. capacity. The voltage of this generator is from 30 to 35 volts, and they are extensively used in low voltage solated plant installations.

The Type B generator has been adopted as standard by the Electric Storage Battery Company for the isolated plants which they handle.

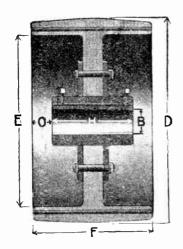
### No Flicker Generator FOR GAS ENGINE DRIVE

The Western Electric Type ML generators are peculiarly adaptable to gas engine belt drive. They have proved exceptionally valuable in isolated plants and small central stations due to their service reliability and economy of operation and maintenance. A line of these generators wound for low voltage is especially adapted to charging storage batteries. Smooth operation and excellent voltage regulation are insured by a perfectly balanced flywheel supported between pedestal bearings.

Ratings The Type ML generators range in capacities from 34 to 16 k.w. for voltages of 35, 125, 250 or 550 volts and may be shurt or compound wound. The standard accessories supplied with each generator consist of pulley, base, flywheel and rheostat.

Prices and data on application.

### PAPER PULLEYS





Paper Pulley

## Rockwood Paper Pulleys

The effectiveness of belted machinery is dependent on a uniform speed. Iron, wooden and covered iron pulleys are unreliable. A belt pulley of paper to a large degree, if not entirely, overcomes the annoyance and loss occasioned by slipping belts. Paper pulleys are especially recommended for operating electric light plants and electric motors, where the highest belt efficiency is necessary for their success.

The advantages of the paper pulley are: reduced slipping, decreased belt tension, more power trans-

mitted, and lower total cost of pulleys and belting.

There being no shrinkage strains, as in cast iron, or numerous pieces, as in wood pulleys, they may be run at very high rates of speed with safety, and are not easily damaged in handling.

The following specifications should be given.

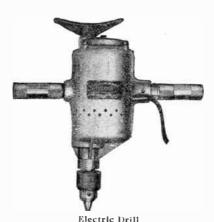
1. Number of pulleys wanted. 2. Diameter (D). 3. Total width of face. 4. Width of belt. 5. Exact bore or shaft diameter (B).8. Length of hub (see note 4). 9. Distance from end of hub edge of rim (O). 10. Kind of face, whether crown, straight, double crown or combination. 11. (a) If double crown give width of crown on side dimension "O" is given. 12. (a) If combination face, give width of crown face. (b) Width of straight face. 13. Least allowable inside diameter of rim (E).

DOUBLE BELT Manufacturer's Lists. Special Discounts on Application

Dia. 2 In. 3 In.	4 In.	5 In	6 In.	7 In.	8 In.	9 In.	10 In.	II In.	12 In.	13 In	14 In.	15 In.	16 In.
Ins. Face Face	Face	Face	Face	Face	Face	Face	Face	Face	Face	Face	Fan	Face	Face
2   \$2.00   \$2.05   2   19   3   4   2   15   2   20   3   4   2   21   5   2   20   4   1   2   2   5   4   1   2   2   5   4   2   2   5   5   2   2   30   2   35   5   2   2   35   3   4   5   6   6   7   3   2   2   3   5   5   2   2   3   5   5   2   4   2   2   3   5   5   2   4   2   2   3   5   5   4   2   2   3   3   5   5   10   3   3   5   5   10   3   3   5   5   10   3   3   5   5   10   3   3   5   5   10   1   4   4   2   4   2   5   1   1   1   4   2   2   4   2   5   1   1   1   1   1   1   1   1   1	7.55 8.00 8.45 8.80 9.25 9.75 10.25	2 25 2 36 2 37 2 47 2 56 3 25 3 26 3 3 5 3 3 5 4 30 5 3 7 6 5 3 7 0 6 5 5 7 0 7 7 3 8 25 9 26 9 10 10 10 10 10 11 26 11 28	\$2.35 \$2.40 2.45 2.55 2.55 2.65 2.65 2.70 3.355 3.355 3.75 3.95 4.55 5.40 7.60 7.60 7.95 9.00 9.55 10.10 10.50 11.70 12.95 10.10 10.	\$2, 65 2, 70 2, 75 2, 85 2, 90 4, 20 4, 40 4, 40 6, 40 6, 10 6, 10 7, 7, 75 8, 65 9, 20 9, 80 11, 45 11, 45 11, 45 12, 45 14, 10 14, 10 16, 10 17, 10 18, 10	\$2.95 3.00 3.05 3.10 3.15 4.00 4.50 4.50 4.50 6.60 7.20 7.80 8.45 9.10 10.00 10.70 11.40 12.05 12.45 13.10 13.90 14.60 15.40 15.40 15.40 15.40 16.55					\$6.80 7.00			

Rockwood paper pulleys are made up to and including 72 in. diameter and 34 face. Prices of larger sizes than those listed will be made on application.

#### ELECTRIC DRILLS



Western Electric

#### Electric Drills

Bearings. All drills except the ¼ inch size have ball bearings on the armature shaft. The ¼ inch size has bronze bearings made of Cramp's special bearing bronze, provided with oil grooves and liberally designed. The specially wound armature and distributed field windings give electrical and mechanical balance and excellent insulation. The large commutator is mica insulated. No fibre is used. The brushes are large and the holder properly insulated. The construction of the commutator and brush holders promote freedom from ground and short circuits.

Fan. The liberally designed fan keeps the motor cool.

Gear Cases and Gears. The gear case is entirely separated from the motor, with gears running in grease like an automobile transmission. The gears are of special alloy steel, heat treated, and are journaled on both ends. No gears running on studs. Each gear can be taken out separately and replaced if necessary.

The Ball Bearing Thrust and the long bronze bearing for the spindle insures minimum friction and maximum life.

The Casing of the tool is aluminum with properly positioned handles, one of which is removable.

Switch. The switch is specially constructed but may be replaced with a standard C.H. 7007 Switch,

Chuck. The high-grade three jaw chuck takes drills from the smallest to the capacity of the machines.

Tie Rods. The use of tie rods eliminate the abnormal wear which is experienced with threaded aluminum and is a feature which will be appreciated.

By taking off the four hexagon cap nuts on end bell and three screws from gear case cover, the whole, machine can be quickly disassembled. These points make for accessibility, durability and power.

The torque is so much in excess of capacity requirements that stalling when breaking through or cramping in a hole is practically eliminated.

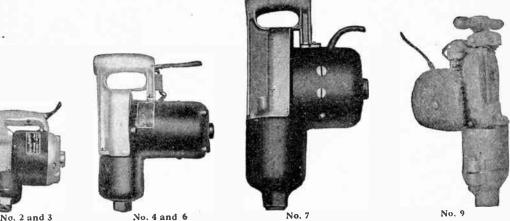
Each machine complete with 8 feet of wire and plug, breast plate, D handle, extra side handle, three jaw chuck and wrench. Pressure screw or "Old Man" can be furnished. Price \$4.00.

Each machine will safely drill holes in steel 20 per cent. over rated capacity; or ream holes up to 80 per cent. over rated capacity.

List		Full Load	Capacity		List Price
No.		Speed	in Steel	Weight	Each
UB	Electric drill, complete	650 R.P.M.	0 to 1/4 in.	7 lbs.	<b>\$9</b> 2.80
UC	Electric drill		0 to 3/8 in.	14 lbs.	118.40
UD	Electric drill	350 R.P.M.	0 to $\frac{1}{2}$ in.	18 lbs.	144.00
$\mathbf{U}\mathbf{E}$	Electric drill	300 R.P.M.	½ to ½ in.	21 lbs.	156.80

Note: These drills will operate on either direct or alternating current. Built for 110 or 220 volts. State voltage when ordering.

## Western Electric HAMMERS



Electric Hammers

These hammers will do the work of pneumatic tools of like capacity at about 15 per cent. of the power cost and without the expense and inconvenience of compressor, air piping hose, etc. Over hand work, the economy is from 80 per cent. to 90 per cent., and it is by no means uncommon for a tool to save its cost in a week. Every tool is controlled by a switch mounted in the handle and equipped with flexible cord and plug. They may be attached to any lamp socket.

A man drilling by hand strikes from 40 to 65 blows per minute.

These hammer from 1000 to 4000 D.C. ONLY-110 OR 220 VOLTS

Type D-3	Approximate Ca or Lim Diam. of Drill ins.	pacity Concrete lestone Drill Speed ins.	Power Watts	Blows per Min.	Net Wt.	Shpg. Wt.	List Price Each \$216.00
D-4 D-7 D-0	1 1 1/2 1 1/2 PERATE ON A	2 3 6 <b>A.C. OR D.C.</b>	220 550 620	1800 1300 1100	25 50 75 <b>CYCLES</b> —1	35 65 95	261.00 351.00 432.00
U-2	1/2	2	240	1800	27	37	324.00

For drilling speed in brick multiply by 2. For drilling speed in granite divide by 2 and use diamond drills. Each tool is complete with cord and plug and runs from a light socket.

STANDARD DRILLS

List Price per Dozen for Drilling Lengths

Type D-3 D-4 U-2 U-6 D-4,7 U-6	Dia. of Drill \$\frac{8}{16} \\ \frac{1}{5} \\ \frac{9}{16} \\ \frac{1}{5} \\ \frac{8}{8} \\ \frac{9}{16} \\ \frac{1}{5} \\ \frac{8}{8} \\ \frac{1}{8} \\ \fr	5 In. \$28.80 30.60 34.20 36.00	8 In. *\$36.00 *36.00 *37.80 *37.80	*39.96 *39.96	U-6 D-7 {	Dia. of Drill  7/8  1 11/4 11/2	8 In. \$38.70 39.60 41.40 45.00 48.60	12 In. \$41.40 43.20 45.00 48.60 54.00	50.40 54.00	\$55.80 58.50 63.00 34.65	36 In. *\$70.20 *73.89 *81.00	
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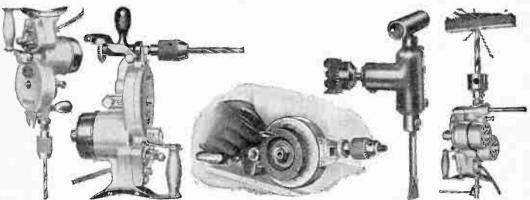
*8	pecial; not in stock DIAMOND D					CHISELS	Round	Shank
All Types	$\begin{cases} \frac{1}{2} \text{ in. or under} \\ \frac{5}{8} \\ \frac{3}{4} \end{cases}$	8 In. \$25.20 27.00 31.50 34.20	12 In. \$27.00 28.80 34.20 37.80	Width of Face 1/2 in. or under 5/8 3/4	8 In. \$28.80 30.60 34.20 37.80	12 In. \$30.60 32.40 36.90 41.40	Leng 8 In. \$25.20 27.00 31.50 34.20	12 In. \$27.00 28.80 34.20 37.80

HOLLOW DRILLS

		IIOLL	W DKILLS		
		List Price			List Price
Diameter	Length	Each	Diameter	Length	Each
	10	\$8.10	1 3	36	<b>\$</b> 15.30
1 7 1 6 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	24	10.80	110	48	18.00

To be used with Type D-7 only. To be used with water feed a set consists of one of each size. Delivery F. O. B. Chicago, Ill. For warehouse deliveries write nearest house.

Electric Drills



Model B Drill Model B Drill Show-Showing General ing Method of Using Construction Breakover Feature

220006

220008

Garage Type

Valve Model C Drill Grinder Similar in Construction to Model B

147.00

146.00

### Western Electric Portable Drills

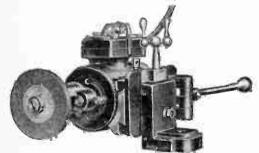
These drills are thoroughly reliable, strongly built, light in weight and convenient in shape. They operate on either alternating or direct current and are reversible. Attachment is made to the ordinary drop cord or incandescent lamp socket.

Model B: Has the breakover feature for changing drills or taps instantly by hand without the use of chuck wrench or key.

Model C: Has two speeds, the gears running in grease. It has the offset spindle, allowing close quarter

drilling. \*List Price Max. Diamood of Drill for Drilling Wood Max. Diameter of Tap for Tapping Shpg. with Cord List Thin Steel Wgt. and Plug Thick Steel lron No.  $0-\frac{3}{8}$  in. Model B Drill 0 to 1 in.  $0 - \frac{3}{8}$  in. 12 lbs.  $0-\frac{3}{8}$  in. \$100.00 With 38 in. chuck... 220000 104.00 220002 With Jacobs geared chuck..... 3.50 Add for emery wheel attachment..... 220003 Add for valve grinder attachment . . . . . . . 14.00 220004 Complete Garage Outfit (Model B Drill with Nos. 220000, 220003 and 220004) 12 lbs. 117.50220007 Model C Drill  $0-\frac{1}{2}$  in. 0 to 1 in.  $0-\frac{1}{2}$  in. 0- $\frac{1}{2}$  in. 0- $\frac{1}{2}$  in. 22 lbs. With  $\frac{1}{2}$  in chuck for S. S. Drills. \$140.00 220005 With ratchet feed with ½ in. chuck for S. S. Drills.

With No. 2 Morse Taper Drills.....



Tool Post Grinder



Buffer and Polisher

# Western Electric Tool Post Grinder

This tool is not only adapted for grinding centers on lathes, but also for grinding dies, reamers and cutters and for universal grinding as well.

Shpg. \*List Price List with Cord and Plug Wgt. No. 23 lbs. \$100.00 220009 

## Western Electric Buffer and Polisher

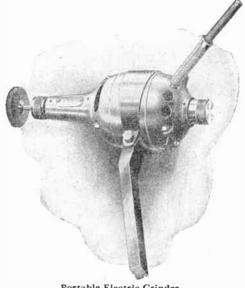
This tool is very useful for buffing and polishing brass, steel and other metals and when equipped with the small emery wheel is well adapted for light grinding also. \$50.00

Voltages regularly furnished, 32, 100, 110, 120, 240 or 250. Always specify voltage wanted in ordering.

# ELECTRIC PORTABLE GRINDERS AND DRILLS



Electric Drill





Portable Electric Grinder

Model O Electric Drill

### Electric Portable Grinder

The handy tool that grinds dies, reamers, etc. Only the highest grade of materials used in its construction. Complete it weighs only 5 lbs., the outer eastings are made throughout of highly polished aluminum. The dustproof bearings are made of highest grade speed nickel babbitt. The armature shaft is ground on centers to a mirror finish assuring extreme accuracy.

The motor is air cooled and proof against excessive heat. This air cool feature has double functions, that of keeping the motor cool, at the same time clean and free from dust. The adjustable end thrust and bearing take up all wear, assuring long life. A special feature is the dustproof bearing caps. Operates from any electric light socket on both direct and alternating current, voltage from 104 to 120 volts.

		List
L <sup>:</sup> st		Price
No		Each
220000		Each
220023	Electric Portable Grinder, 12 H.P.	<b>\$33</b> .00
	very F. O. B. Racine, Wis. For warehouse deliveries write nearest house.	••••

# Western Electric

### Portable Electric Drills

Model A Drill. This tool was designed for drilling in either metal or wood. It will run on either alternating or direct current. The offset spindle allows drilling in close corners. The main driving spindle is run in a tobin bronze bushing, two inches in length. The lower handle can be readily removed when necessary.

The body is made of aluminum thoroughly strengthened and supported where the strain is most severe. Arrangements are made for positive and effective oiling for the motor shafts, driving spindle and all parts that are subjected to wear. The gears are accurately machined and run in grease. This drill is very light and convenient to handle. It is especially useful for drilling in sheet metal of all kinds. Also for drilling name plate and oiler holes and for light drilling in wood.

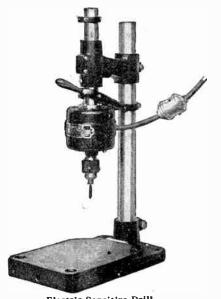
Model O Drill. Specially designed for light drilling in wood.

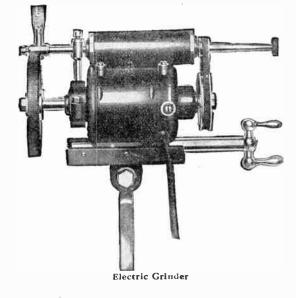
This drill is a sturdy little tool, light in weight, convenient to handle and operate. The spindle is offset and run in a thrust. It operates on either A.C. or D.C. Attachment is made to the ordinary electric drop cord.

			Capacity in	Distance from	Net	
	Std.	Length Over Al	I Steel and	Center of Chuck	Weight	*List Price
Model	Voltage	with Chuck	Other Metals	to Edge of Motor	Complete	Each
A	32,100,110,120,240 or 250	14 ins.	0 to ½ in.	$\frac{7}{8}$ in.	9 lbs.	\$76.00
O	32,100,110,120,240 or 250	13 ins.	0 to $\frac{3}{10}$ in.		9 lbs.	56.00

Delivery F. O. B. Factory, Leinsic. (). For warehouse deliveries write nearest house.

# DUMORE ELECTRIC SPECIALTIES





Electric Sensitive Drill

List No.

220024

220025

### Dumore Electric Sensitive Drill

The Dumore electric sensitive drill is especially adapted for the use of jewelers, watchmakers, instrument manufacturers and gold and silver smiths. The feed control, which is equipped with a spring balance,

is extremely sensitive and the most delicate piece of work can be drilled accurately and rapidly.

Height 18 inches; weight 17 lbs.; stroke 2 inches. Drills to center of a six-inch pipe. Drilling capacity

Steel 0 to  $\frac{3}{2}$  inch; brass, aluminum and soft alloys, 0 to  $\frac{13}{2}$  inch. Equipped with a high speed universal motor which operates on either D.C. or A.C. Speed 8000 R.P.M. Imported S.K.F. ball bearings to eliminate of the strong inate vibration.

Dumore electric sensitive drill.....

List Price Each \$80.00

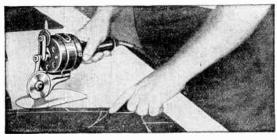
## Dumore Electric Grinder

The Dumore portable electric grinder cuts grinding costs because it is correctly designed and because with it you get the right cutting speed at the wheels. The motor spindle operates at a speed of 10000 R.P.M., and the internal attachment at 30000 R.P.M. The Dumore grinder is dynamically balanced, insuring perfect work; free from chatter marks. The Dumore costs no more than other grinders, the initial section of the costs of the but it will do more work in less time than any other similar tool on the market. It is particularly adapted for grinding gauges, dies, reamers, cutters, etc.

Dumore electric grinder.....

# Dumore Electric Cloth Cutter

The Dumore electric cloth cutter is a small light weight cutter especially adapted for cutting one, two and three layers and up. The thin circular knife, keen as a razor, revolving at 6000 R.P.M., slips through the cloth at a speed limited only by the operator's ability to follow the lines of his pattern. Clothing manufacturers, custom tailors, dressmakers, and all kind of garment manufacturers, will find the Dumore a wonderful



**Electric Cloth Cutter** 

time saver. Workmen become expert in handling them in a few hours. The Dumore, while mod-erate in price, (costing less than one-quarter as much as large electric cutters) is a high-grade. practical cutter. An entirely new principle is embodied; the power is transmitted from the rotor to the cutting blade by a belt, doing away with the disagreeable, nerve-racking gear noises. The motor is universal—operating on direct or alternating current. The cutter is connected to any convenient electric light socket.

A small emery wheel running at right angles to the cutting blade—leaving it hollow ground—gives it a keen razor edge. When blade becomes dull it can be instantly sharpened.

Dumore electric cloth cutter..... ............ **220**026 Delivery F. O. B. Factory, Racine, Wis. For warehouse deliveries write nearest house.

# Western Electric **TRANSFORMERS**



Type H Transformer

Capacity



Transformer Without Case



View Showing Connection Block

Type H Transformers

In the Western Electric Type H transformers are incorporated many refinements of design that are the result of extended investigation under actual operating conditions, and an exhaustive analysis of the most successful modern types.

Notable among the many excellent features are the means adopted to secure cool operation, the convenience and security of the terminal connections, the care taken to insure ease in handling, and the perfected methods which attain the ultimate degree of insulation. Both core and copper losses have been reduced to a minimum, the symmetrical core structure insuring a balanced magnetic condition and maintaining uniform effective radiation of heat.

Single-phase Transformers for Outdoor or Indoor Installation-50 to 140 Cycles, for Power and Lighting Service—Suspension Hooks Provided with all Sizes 50 KV-A and Below

TYPE H TRANSFORMERS

	Voltage 2200 to 110-220	Voltage	Voltage				Prima	ıry	Se	econdary
KvA.	2200 to 122–244 2200 to 220–440 2200 to 244–488 2200 to 575 2300 to 115–230 2300 to 230–460 2400 to 120–240 2400 to 240–480	440 to 110-220 460 to 115-230 480 to 120-240	550 to 110-220 575 to 115-220				2200-4 2200-4 2300-4 2400-4	400 600 800	122 115	)-220 2-244 3-230 3-240
	List Price	List Price	List Price	App Shpg in I		Quarts of Oil Re-	List Price	App Shpg in I	. Wt.	Quarts of Oil Re-
				Tran.	Oil	quired		Tran.	Oil	quired
1	* \$69.00	*\$69.00	*\$69.DD	140	15	6	\$89.46	150	25	10
2 3 5	* 97.98	* 97.98	* 97.98	165	20	9	101.18	185	30	14
3	* 121.44	*121.44	*121.44	210	30	13	141.12	240	35	16
	* 171.12	*171.12	*171.12	295	45	21	185.22	295	45	21
$\frac{712}{10}$	* 223.56	*223.56	*223.56	395	70	32	236.88	395	70.	32
10	* 271.86	*271.86	*271.86	475	90	40	283.50	475	90	40
$\frac{15}{25}$	* 361.56 * 524.40	357.42	*361.56	710	155	. 68	365.40	710	155	68
371/2	* 702.42	520.26	520.26	950	270	121	525.42	950	270	121
50	*1863.88	698.28 859.74	698.28	1285	400	177	696.78	1285	400	177
75	1081.92		859.74	1530	525	233	849.24	1550	525	233
100	1299.96	1081.92	1081.92	2085	495	220	1962.18	1900	495	220
125	1472.46	1299.96	1299.96	2335	540	240	1260.00	2190	540	240
150	1644.96			2200	900	400	1427.58	2300	900	400
200	1897.50			$\frac{2400}{3250}$	990 1750	440	1568.00	2440	990	440
	- free h C-4	7. 10400F.		0200 (	1190	780	1814.40	3250	1750	780

\*Two fuse boxes Cat. No. 104227 included in price. Fuse boxes for other sizes should be ordered sep-

arately. Prices include oil and boxing.

The secondary of sizes 1 to 100 Kv.-A. can be arranged for series, multiple or three-wire service by connection of the secondary leads outside of the transformer tank.

The secondary of sizes 125 to 200 Kv.-A. inclusive, is arranged for series and three-wire service.

The 575 volt secondary line has been standardized for 550 volt motor service. Delivery F. O. B. Pittsfield, Mass. For warehouse deliveries write nearest house.

# Western Electric **TRANSFORMERS**

# Types A and H Transformers

FOR 60 CYCLE CIRCUITS—OUTDOOR INSTALLATION

Pole Type Except 75 and 100 Kv.-A. Type A and 125, 150 and 200 Kv.-A. Type H

		Type A	Transform	ners			Type H Tr.	ans <b>for</b> mer	s
Caj	pacity	50 KvA.	s Include Oil a Sizes Two Pri *104227 and I Primary Vol Secondary V	mary Fuse I Hanging Hoo tage 1150–23	300	P	(List Prices a Fuse Boxes I rimary Voltag Secondary Vol	Vot Included es 6900-1195	0
	50	Quarts	Shpg. Wt.	in Lbs.	List	Quarts	Shpg. W	t. in Lbs.	List
KvA.	Watt Lamps	Oil	Trans.	Oil	Prices	Oil	Trans.	Oil	Prices
$\frac{1}{1\frac{1}{2}}$	20 30	4	100	10	\$59.34	16	235	35	\$146.28
3	40 60	6 8	150 190	14 17	84.18 107.64	16 32	250 365	35 70	186.30 235.98
2 3 5 7½	100 150	12 14	275 315	26 30 44	144.90 193.20 235.98	40 68	435 645	90 155	293.94 349.14
10 15	200 300 500	21 24 40	450 480 700	51 85	314.64 452.64	88 136	770 1020	200 305	444.36 625.14
$\begin{array}{c} 25 \\ 37\frac{1}{2} \\ 50 \end{array}$	500 750 1000	184 208	1600 1650	400 450	598.92 734.16	229 156	1540 1250	515 350	821.10 993.60
75 100	1500 2000	308 310	1725 2200	675 750	972.90 1203.36	228 360	1980 2500	510 820 1530	1222.68 $1418.64$ $1607.70$
125 150	2500 3000					680 760 860	3000 3400 3600	1710 1950	1791.05 2111.40
200	4000					11 800	3000	1 1000	12111.10

Transformers wound for more than one primary voltage are equipped with porcelain connection boards for adapting the primary to either circuit.

\*Sizes 37½ and 50, when operated on 1150 volts, take Cat. No. 106918, which should be ordered separately.

#### 6900 VOLT TRANSFORMERS

Standardized voltage ratings for nominal 6900 volt distribution are as follows:

	Decoi	idaly voicages Delvi	
	Lighting		Secondary
W 4 77 11	and Motor	Motor	Distribution
Primary Voltages			
Name plate rating H-60 (KvA.) 6900/11950 Y with taps for		200 /400 FTF	2400 delta
6585/6275/5980	115/230	230/460:575	2400 detta
These standardized lines are designed for operation on the f	allowing uing	uite giving second	lary voltages
These standardized lines are designed for operation on the i	Ollowing cire	tites, giving accome	itti ji voriti goz
as shown:	110/220	220/440:550	2300 delta
6600/11430 Y with taps for 6300/6000/5700		240/480:600	2500 delta
7200/12470 Y with taps for 6875/6545/6220	120/240	240,400.000	20,000
1200/12110 2			10 comt.

For secondary voltages of over 1000, increase list prices of sizes 1.5 to 25 Kv.-A. inclusive, 10 per cent: 37.5 to 100 Kv.-A. inclusive, 5 per cent.

Prices include oil and boxing.

All sizes suitable for outdoor installation.

Suspension hooks are regularly provided with all sizes 100 Kv.-A. and below. Sizes 125 to 200 Kv.-A. are not suitable for pole suspension.

Secondaries of transformers rated 115/230 in sizes 1.5 to 100 Kv.-A. inclusive, also secondaries of transformers rated 230/460 in sizes 1.5 to 200 Kv.-A. inclusive, can be arranged for series, multiple or three-wire service by connection of the secondary leads outside of the transformer tank. Secondaries of transformers rated 115/230 in sizes 125 to 200 Kv.-A. inclusive, are arranged for series and three-wire service only.

When fuse boxes are desired, two List No. 155757 should be ordered separately for sizes 1.5 to 75 Kv.-A., or two List No. 106918 for sizes 100 to 200 kv.-A. inclusive.

Delivery F. O. B. Ft. Wayne, Ind., for Type A, and Pittsfield, Mass., for Type H. For warehouse deliveries write nearest house.

# Western Electric TRANSFORMER SPECIALTIES

After a complete investigation of the various demands for small electrical capacity, at low voltage, we developed a uniform line of parts for manufacturing miniature air cooled transformers (Type M), ranging from 15 watts capacity to and including 2½ kilowatts.

The broad use of alternating current and the economy and ease with which its pressure may be varied through the medium of the Type M transformer to meet various requirements has made it preferable in all applications not inherently requiring direct current. By substituting this transformer for batteries or magneto generators no maintenance or replacement charges, due to wear, are incurred, less space is required and cleanliness and reliability are assured.

The parts developed are suitable for capacities of 15 to 2500 watts inclusive, 25 cycles, at voltages 550 and below. The construction may be for indoor or outdoor service as desired. Type M transformers are sufficiently attractive to permit of their installation in any place where good appearance is desired or necessary.

The following applications are representative of the many to which the Type M transformer may be readily adapted:

Railway signals.

Railway signals.

Two phase to three phase transformation. Nitrogen filled lamps.

Operation of small low voltage motors from higher voltage circuits.

Nitrogen filled lamps.



Standard Transformer for Sign Lighting



Special Three-Phase or Two-Phase Transformer



Special Transformer for Operating Electric Stop-Motion of Textile Machinery



Transformer for Signal Operation



Special Transformer for Electric Welding

## SIGN LIGHTING TRANSFORMERS TYPE M PRIMARY 110-220 VOLTS; SECONDARY 11-22 V FREQUENCY RANGE 60 TO 140 CYCLES VOLTS

		Core	Copper	Pull	Wall		Approx	mate	List	
Watts	List	1.089	1.088	Load	Space	Depth	Wgt. in		No. of	T .
Cap.	No.	Watts	Watts	Eff.	in Ins.					_List
250	76676	0	17	90.5		in lns.	Net	Ship.	Base	Price
			17		4 % by 8 %	35/8	15	20	78663	\$25.00
500	76678	17	22	92.7	5½ by 9½	4 1/4	20	30	78664	32.00
750	146138	24	25	93.8	$5\frac{1}{2}$ by $9\frac{1}{8}$	4 17	25	40		
1000	76680	29	29	94.5	61% by 11	7.69			146140	39.00
1500	146139					4 /8	35	50	78665	46.00
		40	33	95.3	6½ by 11¾	4 1/8	40	55	146141	57.00
2000	76683	55	36	95.4	75% by 123%	58%	60	80	78666	
Th	ie above electi	rical data	applies to	listed sure	lighting transformers:	data hair-	1	200	19000	70.00

ormers; data being based on 60 cycle, sine wave, 110 or 220 volts The above weights and prices do not include slate bases. The bases will be supplied at an additional net charge of 50

cents each.

cents each.

Note: When placing requisition for slate base which is to be used for mounting a transformer already in service, the serial number of the transformer should be given so that the proper base may be supplied. This is necessary by reason of slight changes which have been made from time to time in the dimensions of the transformer cases. The shipping weight of the base is approximately 15 pounds.

Four c.p. 5 watt Mazda lamps having a range of volts from 10 to 12, have been found best adapted for sign lighting and the transformers have been designed to take care of this range of secondary voltages. They are rated for 60 cycle operation but will operate successfully on circuits from 60 to 140 cycles. They are designed with series multiple primary rating of 110-220 volts so that they can be operated on either 110 or 220 volt circuits. They are adapted for use on circuits from 100 to 120 volts or 200 to 240 volts, having a range of transformation at full load of 10:1 or 20:1 depending upon the connection.

Due to the fact that the transformers are designed for use on a wide range of primary voltages they will operate successfully on practically all sign lighting circuits, and lamps can be ordered to meet exact conditions.

These transformers are designed for use on a wide range of primary voltages they will operate successfully on practically all sign lighting circuits, and lamps can be ordered to meet exact conditions.

without changing their existing wiring.

# **AUTO TRANSFORMERS**

List	770	1	Ship.		Approximate 1	Dimensions in	Inches-	List
No.	Type	†Kv-a.	Wgt. in Lbs	. Depth	Wall Space	Height	Floor Space	Price
79883	M	1	30	4 1/4	8% by 51%			
79884	M	1.5	35	47%	1012 by 612			\$34.00
79885	M	2.0	40	172	1072 by 612			44.00
79886	3.4	2	±0	4 7 / 8	10 /8 Dy 6 /2			54.00
79887	3.6	0	.50	4 /8	12 by 61/2			69.00
	IVI	4	15	5%	121/4 by 75%			83.00
79888	M	5	80	53/4	13 by 75%			97.00
189909	Н	7.5	120	75%	95% by 14			
189910	H	10	145	75%	95% by 151%			132.00
79891	Ħ	15	470	. 78	378 Dy 1078	* * * * * * * * * * * * * * * * * * * *	************	163.00
		110 14 - 0	3 - 2 11	111		26	18¼ by 18½	213.00

7891 H 15 470

\*\*Tkv-a. output at 110 volts 2 wire or allowable unbalancing at 110-220 volts 3 wire.

Type M is air cooled. Type H is oil cooled. Shipping weight includes oil for the Type H units. All the above listed sizes of transformers are suitable for outdoor installation. Hanging hooks will be furnished with the Type H sizes.

The above auto transformers are designed for single phase, two phase or open delta transformation. These auto transformers are not designed to transform power three phase to three phase from 220 volts to 110 volts, nor can they be used to transform three to two phase power as special taps must be provided to obtain proper voltage ratio.

#### SPECIAL TRANSFORMERS

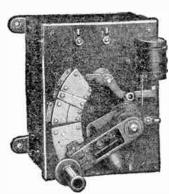
Prices and information, therefore, involving auto transformers for three-phase transformation, or for three-phase to two-phase transformation, or for special electric welding, signal, etc., operation, sent on application.

Delivery F. O. B. Factory, Schenectady, N. Y. For warshouse deliveries write nearest house.

**World Radio History** 

# Western Electric CONTROLLING DEVICES

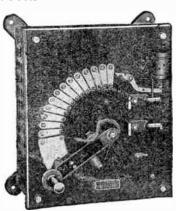
FOR ALTERNATING CURRENT MOTORS







For Type RI Repulsion Induction Single Phase Motor Up to 7½ H.P.



For Type RI Repulsion Induction Single Phase Motors Larger than  $7\frac{1}{2}$  H.P.

CR 1025 Motor Starters

## Single Phase Motor Starters

Salient Features

lst. The low voltage release opens the circuit in case of failure of power. 2nd. A long dead segment at the off position insures that the arc will be broken. 3rd. Large fibre washer protects the hand of the operator.

Type CR 1027 for Squirrel Cage Motors

The Type CR-1027 starters are designed for starting Western Electric Type KS Squirrel Cage single-phase induction motors, and consist of a resistance-reactance coil assembled in a well-ventilated box, on the front of which is mounted a slate base containing the starting switch and no-voltage release.

The switch contacts are composed of renewable segments. One of these segments is made un of two parts, one part being connected to the resistance and the other to the reactance. A stop latch located underneath the starting arm prevents the operator from throwing the arm to the running position without first stopping on the starting segment.

The 10 and 15 H.P. starters are provided with tap on the starting resistance-reactance so that the starting torque can be changed to meet service conditions. Taps are not necessary on the smaller sizes.

		110 Volts					220 Volts		
H.P.	List	No.		Approx.	H.P.	List No.			Approx.
of Motor	60 Cycles	4() Cycles	List Price	Ship. Wt.	of Motor	60 Cycles	40 Cycles	List Price	Ship. Wt.
1/4	187090 187092 197094	187108 187110 187112	\$40.00 40.00 48.00	25 25 60	1 2 2 1	187091 187093 187095	187109 187111 187113	\$40.00 40.00 48.00	25 25 60
2 3 5	187096 187098 187100	187114 187116 187118	48.00 56.00 56.00	60 75 75	2 3 5	187097 187099 187101	187115 187117 187119	48.00 56.00 56.00 68.00	60 75 75
71/2 10 15	187100 187118 187102 187120 187104 187122 187106		68,00 100.00 112.00	90 110 140	7½ 10 15	187103 187105 187107 187129	187121 187123	84.00 100.00 100.00	90 110 140 140

Ordering Directions

When ordering CR-1027 starters the H.P., voltage, speed, frequency and serial number of the motor with which it is to be used should be clearly stated.

The Type CR-1025 starting rheostats have been designed primarily for use with the Western Electric single-phase repulsion motor (Type RI) where the inrush of current resulting from throwing the motors directly upon the line is objectionable. When these motors are started by being thrown directly upon the line they require from 2½ to 3½% of full load current. While in many cases this starting current may not be objectionable, it is recommended that a starting load to installed is every case with the 7½, 10 and 15 H.P. motors and with the smaller motors where it is desired to reduce the starting current. When a starting box is used, the inrush of current at the instant of starting is approximately 1½ full load current.

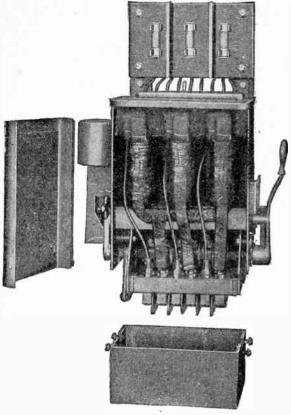
These rheostats are for starting duty only where the starting period does not exceed one minute. Type CR 1025 for Repulsion Motors

	110 Volts,	60 Cycle			220 Valts, 6	0 Cycle	
H.P.	List No.	List Price	Approx. Ship. Wt.	H.P.	List No.	List Price	Approx. Ship. Wt.
Up to 1 Incl.  2 3 5 71/2 10 15	187072 187073 187074 187075 187076 187077	\$19.00 19.00 21.00 24.0.0 60.00 60.00	20 20 25 35 75 80	Up to 1 incl.  2  3  5  73/2  10  15	187079 187080 187081 187082 187083 187084 187085	\$19.00 19.00 21.00 24.00 30.00 60.00	23 23 24 30 38 80 85

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest bouse.

# CONTROLLING DEVICES

FOR ALTERNATING CURRENT MOTORS



Form H2 Compensator with Fuses, Cover and Oil Tank



H-2 Compensator with Fuses, Cover and Oil Tank in place



Form 3 Compensator with Overload Relays

# Type CR 1034 Starting Compensators for TWO AND THREE PHASE SQUIRREL CAGE INDUCTION MOTORS

The Form K, or squirrel cage, motor can be started by simply closing the stator or primary switch, and the motor will then carry its load up to nearly synchronous speed, but with a large inrush of current at the moment of starting.

In order to reduce this current, when the maximum starting effort is not necessary, a Type CR-1034 Starting Compensator is employed. This compensator acts as a transformer, reducing the potential at the terminals of the motor and consequently diminishing the current taken by it.

The compensator consists of coils (three for three phase and two for two phase) wound upon laminated iron cores, and an oil immersed switch assembled in a suitable case. The switch in the off position is held by a latch in such a way as to prevent its being thrown directly into the running position.

## SALIENT FEATURES OF WESTERN ELECTRIC COMPENSATORS

The handle cannot be left in starting position.

The handle cannot be moved to running position without first being thrown to the starting position.

The low-voltage release opens the circuit in case of failure of voltage.

Fuses or overload relays open the circuit in case of overload.

Switches are oil immersed, thus eliminating sparking and insuring long life of contacts.

Compound treatment of the coils makes them practically waterproof.

Simplicity of wiring.

Accessibility of taps and contacts.

See following page for prices.

## **CONTROLLING DEVICES**

# For Alternating Current Motors

TYPES CR-1034 STARTING COMPENSATOR FOR TWO AND THREE PHASE SQUIRREL CAGE INDUCTION MOTORS

Enclosed	Overload	Relay	or	Fuses
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#### Low-Voltage Release

										reage rec			
L	ist		Forms H-3 With Overlo	ad Relays	Size	No.	L	ist	1	With Over	I-3 and J-3 load Relays	Size	No.
3-Phase	2-Phase	H.P.	List Price 3-Phase	List Price 2-Phase	3- Phase	2- Phase	3-Phase	2-Phase		List Price 3-Phase	List Price 2-Phase	3- Phase	2- Phase
	11	0 VOL	TS60 C	YCLES				440 V	OLTS—	60 CYC	LES (Cor	nt'd)	
1601 1605 1609	1759 1763 1767	5-5½ 7½ 10	\$180.00 180.00 188.00	\$184.00 184.00 196.00	1	1 1 1	1641 1644 1647 1857	1802 1805	110–125 135–150 175–200 250	484.00	\$452.00 504.00 560.00	4 4 5	3 4 4
1613 1617	1771 1775	20	188.00 308.00	196.00 316.00	3	1 3					CYCLES		
1621	1779  : <b>22</b>		336.00   S—60 CY	344.00 CLES	3	3	1604 1608 1612	1762 1766 1770	$\begin{bmatrix} 5-5\frac{1}{2} \\ 7\frac{1}{2} \\ 10 \end{bmatrix}$	\$180.00 180.00 188.00	\$184.00 184.00 196.00	1 1 1	
1602 1606 1610	1760 1764 1768	$ \begin{array}{c} 5-5\frac{1}{2} \\ 7\frac{1}{2} \\ 10 \end{array} $	\$180.00 180.00 188.00	\$184.00 184.00 196.00	1 1 1	1 1 1	1616 1620 1624	1774 1778 1782	12-15 $20$ $25$	188.00 208.00 216.00	196.00 212.00 220.00	1 1 1	1 1 1
$\begin{array}{c} 1614 \\ 1618 \\ 1622 \end{array}$		12–15 20 25	188.00 208.00 216.00	$196.00 \\ 212.00 \\ 220.00$	1 1 1	1 1 1	1627 1627 1627	1785 1785 1785	30 35 40	$248.00 \\ 248.00 \\ 248.00$	252,00 252,00 252,00	2 2 2	2 2 2
$\begin{array}{c} 1625 \\ 1625 \\ 1625 \end{array}$	1783 1783 1783		300.00 300.00 300.00	308.00 308.00 308.00	2 3 3	2 3 3	1631 1635	1789 1793	50 60-75	268.00 344.00	280,00 352,00	2 3	2 3
1629 1633 1637	1787 1791 1795		328.00 400.00 456.00	336.00 420.00 472.00	3 3 3	3 3 4	1639 1642 1645 1648	1803	85–100 110–125 135–150 175–200	436.00 484.00	380.00 452.00 504.00 560.00	3 4 4 4	3 4 4
	44	o VOLT	rs-60 CY	CLES						TS—60 verload	CYCLES Relays		
1603 1607 1611	1761 1765 1769	5-5½ 7½ 10	\$180.00 180.00 188.00	\$184.00 184.00 196.00	1 1 1	1 1 1	2719 2720 2721	2738 2739 2740	15-20 25 30-40	п	а	3 3 3	3 3
1615 1619 1623		12-15 20 25	188.00 208.00 216.00	196.00 212.00 220.00	1 1 1	1 1 1	2722 2722 2723	2741 2742 2742	50-55 60 75	pplicatio	application	3 3 4	3 4 4
1626 1626 1626	1784 1784 1784	35	248.00 248.00 248.00	252.00 $252.00$ $252.00$	$\begin{array}{c} 2 \\ 2 \\ 2 \end{array}$	2 2 2	2724 2725 2726	2743 2744 2745		0 %	Prices on ap	4 4 4	4 4 4
1630 1634 1638	1788 1792 1796		268.00 344.00 372.00	$280.00 \\ 352.00 \\ 380.00$	2 3 3	3 3	2727 2728		175–200 250	Pri	Pri	4 5	5

Prices cover compensators complete with no-voltage release and oil for switch tank. They also include fuses and fuse bases for compensators of 550 volts or less, and overload relays with enclosing covers for 2200 volt compensators.

#### **EXTRAS**

For overload relays with enclosing covers in place of fuses for 550 volts or less add \$16.00 list to the above prices.

For overload relays and ammeter, add \$60.00.

For overload relays, ammeter and conduit wiring case, add \$8.00.

For enclosing covers for fuse panels, add \$7.00.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

# Western Electric CONTROLLING DEVICES

FOR DIRECT CURRENT MOTORS For Series, Shunt or Compound Wound Motors







Fig. 2 CR-1000 Direct Current Motor-Starting Rheostats

CR-1000 rheostats are recommended for use with motors which, when not overloaded in starting, will attain full speed in one minute or less. They can also be used for starting motors overloaded 50 per cent., providing the resistance is not in circuit over thirty seconds. These rheostats have been so designed that they comply with the service rules of the American Institute of Electrical Engineers, viz., one minute starting duty every four minutes for one hour.

Fig. 3 illustrates the type of starter used above 35 H.P., 115 volts, 50 H.P., 230 volts, and 20 H.P., 550 volts. This starter comprises a knife-blade type of dial switch so interlocked with a line contactor as to provide low-voltage release as well as positive making and breaking of the circuit. This contactor is also

provided with a magnetic blowout coil.

The motor circuit is not made or broken on the dial switch and no arcing can possibly occur thereon. The contactor when once opened can be closed again only with the starting arm at the initial starting

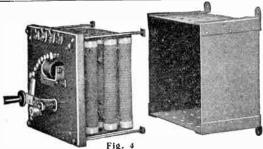
point Resistance units throughout this entire line of motor-starting rheostats are absolutely fireproof. 9000. Form P resistance units are used in the following sizes:

15 H.P. inclusive, 115 volts. 18-71/2 H.P. inclusive, 230 volts. 18-20 H.P. inclusive, 550 volts.

In the larger sizes cast grid resistance units are used.

In rheostats 2 H.P. and larger the Form P units are mounted on supports independent of the iron box the supports being fastened to the slate top of the rheostat; consequently the resistance can be removed for inspection or necessary repairs without disturbing the units or their connections.

115 Volts   230 Volts	550 Volts	9		
Good for 90 to 130 Volts Good for 180 to 260 Volts G	Good for 450 to 600 Volts			
H.P. List List Approx. Fig. List List Approx. Fig. No. Price Ship. No. No. Price Ship. No. No.	List Price	Ap- prox. Fig. Ship. No.		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9,50 9,50 9,50 17,00 17,00 19,00 22,00 34,00 34,00 117,00 117,00 117,00 117,00 184,00 184,00 184,00 196,60 208,00 208,00 208,00 212,00	16 1 1 16 1 1 16 1 1 16 1 1 16 1 1 22 1 1 26 1 1 32 1 1 32 1 1 36 1 1 32 1 36 1 1 35 2 1 300 3 300 3 300 3 300 3 350 350 350 350		



CR-1000 Rheostat with Resistance Removed from Box

The above prices cover rheostats with low-voltage release only.

#### Overload Release

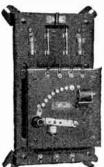
If on sizes up to and including 35 H.P., 115 volts; 50 H.P., 230 volts and 20 H.P., 550 volts, an overload release is desired in addition to low-voltage release, add \$7.70 list to above prices. For larger sizes CR-1102 is recommended.

#### ORDERING DIRECTIONS

Rheostats with low-voltage release only should be ordered by List No.

Rhcostats with low-voltage and overload release should not be ordered by List No., but order should give the H.P. rating and voltage of the motor, with the state-ment that the overload release is desired.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.



# Western Electric CR-1100 D.C. MOTOR STARTING PANELS

# FOR DIRECT CURRENT MOTORS

#### Line Switch and Fuses

CR-1100 Starting Panels consist of standard CR-1000 Starting Rheostats and a double-pole line switch and fuses, mounted on a slate base. The resistance is designed for one minute starting duty once every four minutes for an hour. These panels are all arranged for wall mounting and are particularly recommended on account of economy of space, compactness and the added neatness given the complete equipment.

#### Overload Protection

These rheostats may be furnished with an overload release coil which in case of overload will short circuit the low-voltage release coil, allowing the starting arm to CR-1100 Starting Panel return to the "off" position.

		115 V	olts			230 V		550 Volts				
H.P.	List No. of Panel	List Price	Ship. Wt.	List No. of Fuses		List Price	Ship. Wt.	List No. of Fuses	List No. of Panel	List Price	Ship. Wt.	List No. of Fuses
1 1 2 3 5 7 1/2 10	112673 112674 112675 112676 112677 112678 112679 119787 119788	\$32.00 32.00 32.00 32.00 44.00 48.00 56.00 76.00 104.00	60 60 60 80 80 80 150	59379 59381 34952 34953 34956 34958 34962 34967 34970	112684 112685 112686 112687 112688 112689 112690 112691 119790	\$32.00 32.00 32.00 32.00 44.00 44.00 52.00 52.00 84.00	60 60 60 60 80 80 80 80	59951 59379 34950 59381 34953 34955 34956 34959 34961	112695 112696 112697 112698 112699 112700 112701 112702 112703	\$40.00 40.00 40.00 40.00 48.00 48.00 52.00 56.00	60 60 60 80 80 80 80 80	42638 42639 42639 42639 34992 34993 59385 34995 34997 34998
15 20	$\begin{array}{ c c c c c }\hline 119789 \\ 112683 \\ \hline \end{array}$	$\frac{112.00}{112.00}$		34976 34980	$\begin{array}{ c c c c c }\hline 119791 \\ 119792 \\\hline \end{array}$	$\begin{vmatrix} 104.00 \\ 112.00 \end{vmatrix}$	$\frac{150}{150}$	34967 34970	$\begin{array}{ c c c c c }\hline 112704 \\ 112705 \\\hline \end{array}$	$\begin{bmatrix} 60.00 \\ 80.00 \end{bmatrix}$		35100 35103

The above prices cover panels with low-voltage release only.

#### Overload Release

If overload release is desired in addition to low-voltage release, add \$7.00 list to above prices.

# CR-1102 D.C. Motor Starting Panels

CR-1102 Starting Panel is the same as CR-1100 except that the fuses are replaced by a double pole circuit breaker, and the starter has a low-voltage release.

#### Circuit Breaker

		115 Volts			230 Volts			550 Volts	
H.P.	List No.	List Price	Approx. Ship. Wt.	List No.	List Price	Approx. Ship. Wt.	List No.	List Price	Approx. Ship. Wt.
1 2 3 5 7 <sup>1</sup> / <sub>2</sub> 10 15 20 25 30 35	104247 104248 104249 104250 119795 119800 119801 104254 104255 104256 104257	\$64.00 68.00 68.00 72.00 100.00 116.00 164.00 164.00 176.00	124 124 124 150 170 180 275 400 400 450 450	104258 104259 104260 104261 104262 119802 119803 119804 119805 104267 104268	\$64.00 68.00 68.00 68.00 72.00 112.00 120.00 156.00 164.00	124 124 124 170 170 175 250 270 270 425 450	104271 104272 104273 104274 104275 104276 104277 101278 198011 198012 198013	\$72.00 76.00 76.00 76.00 80.00 81.00 88.00 100.00 252.00 252.00	124 124 124 170 170 175 250 270 350 350 350
40 50 60 75 85 100 125	126935 126936 126937 126938 126939 126940 142763	308.00 352.00 364.00 376.00 748.00 760.00 1672.00	425 425 425 425 425 600 600 750	$\begin{array}{c} 104269 \\ 104270 \\ 126941 \\ 126942 \\ 126943 \\ 126944 \\ 126945 \end{array}$	164.00 164.00 308.00 320.00 364.00 376.00 408.00	450 500 425 425 425 425 425	198014 198015 126949 126950 126951 126952 126953	252.00 252.00 288.00 288.00 296.00 296.00 308.00	400 400 425 425 425 425 425

#### ORDERING DIRECTIONS

Give the List Number of the starting panel and state the horse power and voltage of the motor with which the starting panel is to be used.

Delivery F.O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

# Western Electric CONTROLLING DEVICES For Direct Current Motors







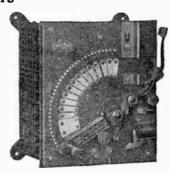


Fig. 1

Fig. 2

Fig. 2 16 Field Points

16 Field Points

Fig. 3 10 and 15 H.P. Incl., 1157Volts 10 to 25 H.P. Incl., 230 Volts 10 to 20 H.P. Incl., 550 Volts 11 Starting and 20 Field Points

Fig. 4 20 to 35 H.P. Incl., 115 Volts 30 to 50 H.P. Incl., 230 Volts 12 Starting and 20 Field Points

#### CR-1200 D.C. SPEED REGULATING RHEOSTATS

For Shunt or Compound Wound Variable Speed Motors Only

CR-1200 rheostats are designed for use with variable speed motors, the speed control of which is obtained by varying the resistance inserted in the field circuit.

These controlling rheostats comprise a starting switch of the type used on CR-1000 rheostats. The starting switch is provided with a projection carrying a sliding contact which bears on the centact buttons connected to the field resistance. An auxiliary arm on the rheostat front retains a short circuit on the field resistance during the period of starting, and on the starting resistance after the motor attains normal speed. The short circuit is also retained on the starting resistance, when the starting arm is turned back to vary the running speed of the motor.

When starting the motor, the starting arm cannot be left in any position on the contact buttons until it has been turned to the right and engaged the auxiliary arm, forcing the latter to be retained by the low-voltage release coil. The auxiliary arm then withholds the spring which affects the starting arm, and thereby makes it possible to leave the starting arm in any position that will give the desired speed control of the motor. Upon tailure of voltage the retaining coil is de-energized, releasing the auxiliary arm, which releases the spring that carries the starting arm to the "off" position, thus opening the motor circuit. circuit

A feature is provided, however, so that it requires a little extra pressure to move the arm beyond the maximum speed point to call the operator's attention to maximum speed position so he will not unintentionally shut down the motor.

The contacts of the auxiliary arm are designed to take sere of any possible arcing and in the larger sizes are protected by

an auxiliary carbon block.

Overload Protection: These rheostats can be furnished with an overload release which in case of overload will short

circuit the low-voltage release coil

Fireproof and moisture proof resistance units are used with the controllers as follows:

All field resistances; all starting resistances up to and including 10 H.P., 115 and 230 volts; up to and including 20 H.P.,

550 volts, CR-9000 (Form P).

Ail starting resistances 15 H.P. and larger 115 and 230 volts. Cast Grid (Form C)

	_			L	st Prices					
HP.	2 to 1	Speed Vari	ation	3 to 1	Speed Vari	ation	4 to 1	Speed Vari	ation	Approx. Ship. Wt.
Mot⇔r	115 Volts	230 Volts	550 Volta	115 Volts	230 Volta	550 Volts	115 Volts	230 Volta	550 Volts	** •.
1/4 1/6 3/4 1/2	\$34.00 34.00 36.00 34.00	\$34.00 34.00 34.00 34.00	\$34.00 34.00 34.00 34.00	\$42.00 42.00 44.00 42.00	\$42.00 42.00 42.00 42.00	\$42.00 42.00 42.00 42.00	\$52 00	\$48.00	\$48.00	20 20 20 20 20
1 2 3 4 5	36.00 40.00 40.00 52.00 52.00	38.00 40.00 44.00 44.00 44.00	38.00 40.00 48.00 48.00 48.00	44.00 48.00 48.00 60.00 60.00	48.00 48.00 52.00 52.00 52.00	48.00 56.00 56.00 56.00	52 00 56 00 56 00 68 00 68.00	52.00 56.00 60.00 60.00 60.00	52.00 56.00 60.00 60.00 64.00	25 25 25 25 25 35
7½ 10 15 20 25 30 35 40 50	52.00 76.00 104.00 124.00 128.00 144.00 164.00	52.00 76.00 100.00 104.00 104.00 128.00 136.00 144.00	52.00 76.00 100.00 104.00	60.00 84.00 116.00 132.00 136.00 172.00	60,00 84,00 108,00 116,00 116,00 136,00 144,00 152,00 164,00	60.00 84.00 112.00 116.00	68.00 92.00 120.00 140.00 144.00 160.00 180.00	68.00 92.00 116.00 120.00 120.00 144.00 148.00 160.00 168.00	68.00 92.00 116.00 120.00	40 45 100 100 100 150 150 200 200

With low-voltage release only.

If overload release is desired in addition to low-voltage release, add \$7.00 list to above prices.

Ordering Directions: In ordering rheostats give H.P. rating and voltage of the motor.

If the rheostat is to be used with a W.E. motor, the order should be accompanied with the complete name plate rating of the motor. If the rheostat is to be used with other than a W.E. motor the order should be accompanied with advice as to the maximum shunt field current and the ohms necessary to insert in the field circuit to give the maximum speed increase.

In ordering rheostats with low-voltage and overload release include, in addition to above, the statement that the overload

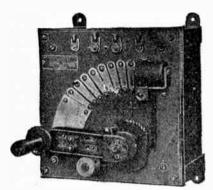
release is desired.

Delivery F. O. B. Factory, Schenectady, N Y For warehouse deliveries write nearest house.

Note. Motor Agents, U. S. Government and Machine Manufacturers, consult Specialist.

# Western Electric CONTROLLING DEVICES

FOR DIRECT CURRENT ADJUSTABLE SPEED MOTORS ARMATURE CONTROL—MACHINE SERVICE



CR-1220—Renewable Segment Type Speed Regulating Rheostat

# CR-1220 Speed Regulating Rheostats

CR-1220 speed regulators for machine service are designed to reduce the speed of the motor 50 per cent, from normal at full load by inserting resistance in the armature circuit, the resistance and switch contacts having ample capacity to carry the current continuously on any point without overheating. These rhoostats should be installed with motors where the same amount of current is required at half speed as at full speed. CR-1220 rheostats are equipped with renewable segments which may be easily replaced from the front of the rheostat should they become worn or pitted by frequent operation.

The retaining coil for low-voltage protection is connected across the line in series with a high resistance and is, therefore, independent of the strength of the motor field current. This permits the same rheostat to be used with either shunt, series or compound wound motors.

In the large sizes the motor circuit is made and broken by a contactor and not on the switch contacts, thus preventing arcing and subsequent burning of these contacts. A rugged knife-blade type of switch is used, with segments that can be renewed, if desired, but this is seldom necessary, as all arcing is handled by the contactor, which is provided with a strong magnetic blowout, and all parts liable to wear are renewable. The switch is interlocked with the contactor, so as to provide low-voltage protection.

#### With Overload Release

These rheostats can be furnished with an overload release, which in case of overload will short circuit the low-voltage protective coil.

		115 Volta			230 Volts			550 Volts	
H.P. of Motor	List No	List Price	Approx. Ship. Wt.	List No.	List Price	Approx. Ship. Wt.	List No.	List Price	Approx. Ship. Wt.
34 34 34 12 3 5 734 10 20 25 30 35 40 45 50 60 75 100	59209 59210 59211 59212 59213 59214 100818 144787 144788 *144789 *144791 *144791 *144792 *144794 *144795 †144796 †144796	\$24 00 28 00 32 00 34 00 48 00 56 00 76 00 100 00 220 00 100 00 231 00 332 00 340 00 352 00 648 00 648 00	30 35 47 47 47 82 112 120 335 500 700 870 1040 1200 1700	59216 59217 59218 59218 59219 59220 59221 100819 144798 144800 144801 144802 *144803 *114804 *114806 *144806 *144807 *144808 *144808	\$24.00 28.00 32.00 34.00 56.00 76.00 104.00 128.00 176.00 200.00 264.00 308.00 408.00 408.00 409.00 409.00 572.00 572.00	30 35 47 47 47 82 112 120 325 325 500 740 770 780 1250 1250 1250 1250 1300 1700	59225 59226 59227 59228 59229 59230 100820 144813 144815 144816 *1144816 *1144818 *1144818 *1144820 *1144821 *1144821 *1144821 *1144821 *1144821 *1144821 *1144821 *1144821	\$25.00 28.00 28.00 34.00 36.00 48.00 56.00 72.00 104.00 116.00 1232.00 264.00 276.00 332.00 332.00 332.00 336.00 396.00	30 35 47 477 82 112 120 330 335 515 515 650 650 1200 1200 1200 1250
125 150				†*144811 †*144812	904.00 968.00	2230 2250	†*144826 †*144827	552.00 660.00	1350 1700
200 250							†*144828 †*144829	1068.00 1200 00	2800 3000

<sup>\*</sup>Rheostats equipped with contactor for making and breaking the armature circuit.

#### Overload Release

If overload release is desired in addition to low-voltage protection, add \$7.00 list to above prices for sizes up to and including 15 H.P., 115 volts; 25 H.P., 230 volts, and 20 H.P., 550 volts. For overload release on larger sizes prices will be furnished on application.

#### ORDERING DIRECTIONS

Rheostats with low-voltage protection only should be ordered by List No.

Rheostats with low-voltage protection and overload release should not be ordered by List No., but order should give the H.P. and voltage of the motor with the statement that the overload release is desired. Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

<sup>†</sup>Speed controlling rheostat panel.

The above prices cover rheostats with low-voltage protection only.

# Western Electric CONTROLLING DEVICES



CR-1221 D.C. Speed Regulating Rheostat

## For Direct Current Adjustable Speed Motors

#### CR-1221 D.C. SPEED REGULATING RHEOSTATS

#### Button Contacts-Armature Control-For Machine Service

CR-1221 Speed Regulating Rheostats for machine service are designed to reduce the speed of the motor 50 per cent, from normal at full load by inserting resistance in the armature circuit, the resistance and switch contacts having ample capacity to carry the current continuously on any point without overheating. These rheostats should be installed with motors where the same amount of current is required at half speed as at full speed.

The retaining coil for low-voltage protection is connected across the line in series with a high resistance and is, therefore, independent of the strength of the motor field current. This permits the same rheostat to be used with either shunt, series or compound wound motors.

CR-1221 Rheostats are supplied with button contacts. If renewable segments are wanted, see CR-1220.

#### With Overload Release

These rheostats can be furnished with an overload release which in case of overload will short circuit the low-voltage protective coil.

H.P.		115 Volts			230 Volts			550 Volts	
of Motor	List No.,	List Price	Approx. Ship, Wt.	List No.	List Price	Approx. Ship. Wt.	List No.	List Price	Approx. Ship. Wt.
1/8 1/4 1/2	58314 58315 58316	\$17.00 24.00 24.00	20 30 35	58326 58327 58328	\$17.00 24.00 24.00	20 30 35	58338 58339 58340	\$17.00 24.00 24.00	20 30 35
1 2	58317 58318 58319	26.00 30.00 42.00	47 47 82	58329 58330 58331	26.00 30.00 42.00	47 47 82	58341 58342 58343	26.00 30.00 42.00	47 47 82
3 5 7½	58320 100815	52.00 72.00	112 120	58332 100816 144830	48.00 68.00 88.00	112 120 325	58344 100817 144832	48.00 68.00 100.00	112 120 300
10 15				144831	96.00	325	144833 144834	104.00 144.00	300

The above prices cover rheostats with low-voltage protection only.

#### Overload Release

If overload release is desired in addition to low-voltage protection, add \$7.00 list to above prices.

#### ORDERING DIRECTIONS

Rheostats with low-voltage protection only should be ordered by List No.

Rheostats with low-voltage protection and overload release should not be ordered by List No., but order should give the horse power rating and voltage of the motor with the statement that the overload release is desired.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

### CONTROLLING DEVICES

# For Direct Current Adjustable Speed Motors

CR-1225 Speed Regulating Rheostats for fan service are designed to reduce the speed of the motor 50 per cent. from normal, at full speed where the load varies directly with the speed, by inserting resistance in the armature circuit, the resistance and switch contacts having ample capacity to carry the current continuously on any point without overheating.

They should be specified for use with motors driving ventilating fans, small job presses, ice cream

freezers, centrifugal pumps, etc.

CR-1225 Rheostats are supplied with button contacts. If renewable segments are wanted, see CR-1224. The retaining coil for low-voltage protection is connected across the line in series with a high resistance and is, therefore, independent of the strength of the motor field current. This permits the same rheostat to be used with either shunt, series or compound wound motors.

#### With Overload Release

These rheostats can be furnished with an overload release which in case of overload will short circuit the low-voltage protective coil.

# CR-1225 D.C. SPEED REGULATING RHEOSTATS Button Contacts—Armature Control—For Fan Service

Н.Р.		115 Volts	1		230 Volts			550 Volts	
Motor  1/8 1/4 1/2 1 2 3 5 7 1/2 10 15	List No. 59607 59608 59609 59610 59611 59612 59613 100821	List Price \$17.00 24.00 24.00 26.00 30.00 42.00 50.00 68.00	Approx. Ship. Wt. 20 30 35 40 40 85 110 200	List No. 59619 59620 59621 59622 59623 59624 59625 100822 144863 144864	List Price \$17.00 24.00 26.00 30.00 42.00 48.00 68.00 88.00 112.00	Approx. Ship. Wt.  20 30 35 40 40 85 110 200 300 300	List No. 59631 59632 59633 59634 59635 59636 59637 100823 144865 144866 144867	List Price \$17.00 24.00 26.00 30.00 42.00 48.00 68.00 100.00 120.00	Approx. Ship. Wt.  20 30 35 40 40 85 100 200 300 300 440

# CR-1224 D.C. SPEED REGULATING RHEOSTATS Renewable Segments—Armature Control—For Fan Service

1/4	59827	\$24.00	30	59834	\$24.00	30	59843	\$25.00	30
1/4 1/2 3/4	59828	30.00	35	59835	28.00	35	59844	28.00	35
8/	59829	32.00	40	59836	32.00	40	59845	34.00	40
1′*	59830	34.00	40	59837	34.00	40	59846	36.00	40
$\hat{2}$	59831	48.00	85	59838	48.00	85	59847	48.00	85
3	59832	56.00	110	59839	56.00	110	59848	56.00	110
5	100824	72.00	200	100825	76.00	200	100826	72.00	200
71/2	144835	76.00	375	144843	96,00	300	144853	104.00	300
10	144836	116.00	375	144844	120,00	300	144854	132.00	300
15	144837	156.00	480	144845	144.00	460	144855	168.00	440
20	*144838	296.00	550	144846	188.00	500	144856	176.00	500
$\widetilde{25}$	*144839	308.00	700	144847	212.00	780	*144857	264.00	600
30	*144840	352.00	740	*144848	308.00	780	*144858	264.00	650
35	*144841	376.00	780	*144849	352.00	780	*144859	308.00	670
40	*144842	396.00	1060	*144850	364.00	1060	*144860	332.00	930
45	111012	333.00		*144851	408.00	1140	*144861	364.00	930
50				*144852	420.00	1200	*144862	376.00	930
00	1			.,					

<sup>\*</sup>Rheostats equipped with contactor for making and breaking the armature circuit.

#### Overload Release

If overload release is desired, in addition to low-voltage protection, add \$7.00 list to above prices tor sizes up to and including 15 H.P. 115 volts, 25 H.P. 230 volts and 20 H.P. 550 volts. For overload release on larger sizes prices will be furnished on application.

#### ORDERING DIRECTIONS

Rheostats with low-voltage protection only should be ordered by List No.

Rheostats with low-voltage protection and overload release should not be ordered by List No., but order should give the horse power rating and voltage of the motor, with the statement that the overload release is desired.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

The above prices cover rheostats with low-voltage protection only.

### MOTOR STARTERS

CR-2301 Self-starters-Low-Voltage Protection



Type CR-2301

# Type CR-2301 Self-starters

The following prices cover the devices complete exclusive of float switch, pressure governor or switch for hand contact.

		CR-	-2301		
	115 Volts			230 Volts	
List No.	H.P. of Motor	List Price Each	List No.	H.P. of Motor	List Price
176099	1 or less	\$22.00	176102		Each
176100	2	24.00	176102	1 or less	\$24.00
176100	3	24.00	176104	2	26.00
194539	5	60.00	194540	3	26.00
194009	i)	00.00	194541	5	60.00
			1	71/2	60.00
			194542	10	72.00
			2302		
194543	1 or less	\$34.00	194547	1 or less	\$36.00
194544	2	36.00	194548	2	36.00
194545	3	36.00	194549	3	36.00
194546	5	74.00	194550	5	76.00
			194551	$7\frac{1}{2}$	76.00
			194552	10	84.00
		CR-	2303		
194553	1 or less	\$52.00	194557	1 or less	\$52.00
194554	2	52.00	194558	2	56.00
194555	3	52.00	194559	3	56.00
194556	5	92.00	194560	5	92.00
			194561	$7\frac{1}{2}$	92.00
			194562	10	100.00
		CR-	2305		
194563	1 or less	\$56.00	194567	1 or less	\$60.00
194564	2	60.00	194568	2	60,00
194565	3	60.00	194569	3	60.00
194566	5	100.00	194570	5	100.00
			194571	$7\frac{1}{2}$	100.00
			194572	10	108.00

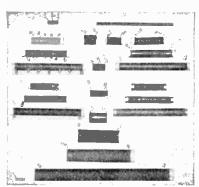
#### †Note Carefully-Voltage Variation

All of the above starters are suitable only on circuits where the line voltage is never more than 10

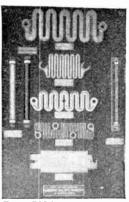
All of the above starters are statable only on cleans where the line voltage is never inote than to per cent. lower or higher than the values given above.

CR-2302, CR-2303 and CR-2305 Self-starters are designed for use with motor-driven pumps where it is desired to automatically start and stop the motors depending upon a predetermined change in fluid level, fluid pressure or air pressure. They are, however, well suited to start and stop motors by hand control from points remote from the motor.

## CR 9000 G. E. RESISTANCE UNITS



Form P Resistance Units



Form PM Resistance Units



Form PE Resistance Units

## Type P Resistance Units

In the construction of Form P resistance units, a low temperature coefficient resistance wire is wound on an asbestos tube making them non-fragile. After being wound the tube is treated with a special compound forming a coating inside and out, reinforcing the tube and imparting strength and solidity. A porcelain bushing is inserted in each end of the tube, the conting compound cementing it in place. The unit when thoroughly baked results in a very efficient unit, the coating being a good conductor of heat; this produces uniform radiation.

Form P units are extensively used in small motor starting and controlling apparatus and for armature and field resistance. They are also used as permanent resistances to protect circuit breaker coils, and as series resistance in signal work, etc. The units are mounted in punched end frames by means of porcelain

bushings which insure good insulation from the frames.

Range Amnere Canacity

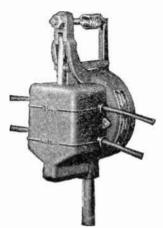
Form PM units are similar to the Form P, except that metal bushings are used in place of the porcelain. The Form PE unit is a special type of the Form P and is used extensively in connection with switchboard instruments. A special porcelain bushing is used in this type and the leads are attached on the inside of the tube. They are enclosed in perforated metal casings, to adapt them for switchboard mounting, which produces a near appearance, and at the same time provides good ventilation and protection.

#### List Prices and Data Forms P and PM Resistance Units

Ohms	Continuous	List Price Each
Size A. $5\frac{1}{2}$ ins. long,	1 in. diameter, capacity: less than 500 olms, 35 watts; 500 ohms a	
15 watts.	, and the state of	maranave,
From 0.25 to 125	From 12 to 0.528	\$0.S0
From 150 to 300	From 0.438 to 0.342,	90
From 500 to 3500	From 0.17 to 0.065	1.10
Size B. $7\frac{1}{2}$ ins. long,	1 in. diameter, capacity: less than 500 ohms, 50 watts; 500 ohms a	nd above
20 watts.		
From 0.25 to 150	From 14 to 0.576	\$0.00
From 175 to 400	From 0.535 to 0.35	1.10
From 500 to 5000	From 0.20 to 0.063	1 20
Size C. 11½ ins. long	g, 1 in. diameter, capacity: less than 500 ohms, 80 watts; 500 ohms a	ind above,
30 watts.	T 00.0 / 0.86	
From 0.10 to 150 From 200 to 450	From 28.2 to 0.73	\$1.20
From 500 to 1800	From 0.63 to 0.421	1.10
From 4800 to 5000	From 0.24 to 0.12	1.30
	From 0.08 to 0.07	1.40
From 0.25 to 450	e ins. diameter, capacity 175 watts.	20.00
		\$2,00
0.25	2 ins. diameter, capacity 350 watts.	
From 0.3 to 0.6		
From 0.75 to 3.5		
From 4 to 7.5	From 22 to 10.5 From 10 to 7.2	
From 10 to 30	From 6.2 to 3.6	
From 35 to 450	From 3.3 to 0.88	1.80
Size F. 7½ ins. long.	2 ins. diameter, capacity 115 watts.	1.00
From 0.25 to 450	From 21.4 to 0.5	\$1.60
Note: Type Form PM	units are the same as the prices of the Form P for the A, B and C	sizes only
When ordering specify	exact ohms and ampere capacity desired.	
Delivery F. O. B. Factor	ry, Schenectady, N. Y. For warehouse deliveries write nearest house	
• •	v, ville included months with included included	**

Capacity Range

# Western Electric DIAPHRAGM PRESSURE AND VACUUM SWITCHES



CR 2925 Pressure Switch with Metal Cover



CR 2925 Pressure Switch with Cover Removed

### Pressure and Vacuum Switches

The diaphragm pressure and vacuum switches are designed for the automatic control of electric motors which drive pumps for hydraulic or pneumatic water and vacuum systems. They are positive in operation and will open and close at a predetermined pressure with no danger of the contacts stacking or "freezing."

The bottom of a cip or pan-shaped body casting is closed by a flexible phosphor-bronze diaphragm. The switch mechanism is mounted on top of this casting. As the position of the diaphragm is varied by the internal pressure, its motion is communicated to the switch mechanism which in turn causes the switch contacts to open and close when certain ranges of movement of the diaphragm are reached.

The switch is of double-pole, quick-break construction and the current carrying parts are exceptionally rugged and are capable of heavy overloads. The normal rating is 20 amperes at 110 volts and 10 amperes, 220 volts, either alternating or direct current.

Connecting cables are secured directly to stationary contacts eliminating the necessity of flexible connection to movable parts of the switch.

The pressure switch is supported by the 3% inch supply pipe, requiring no other bracket or support.

The vacuum switch is provided with 3 feet for wall mounting.

Both the pressure and vacuum switches can be provided with either glass or metal covers.

The range of a ljustment of each switch is given in the tabulation shown below. These valves are secured by tightening or loosening the spring.

Either glass or metal covers are furnished for all switches, vacuum or pressure. The List Nos. cover switches with metal covers. If a glass cover is required the order should read as follows—one CR 2925 (state vacuum or pressure) switch similar to List No. (give No.) except with glass cover.

#### SALIENT FEATURES

A phosphor-bronze diaphragm is used which is practically indestructible.

The current-carrying parts of the double-pole switch are entirely insulated from the mechanism.

The quick-break feature insures absolute rupture of all arcs.

Switch mechanism is positive in its action and will not vary with operating pressure.

Auxiliary contacts prevent switch contacts from burning.

Switching in chanism is totally enclosed.

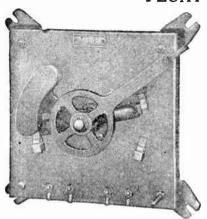
These switches occupy a comparatively small space and weigh very little.

		Star	ndard		Range of	f Adjustmen	.t	Ap-	List
List No.	*Rating	Adju	stment	Min	imum	Maxi	mum	prox. Shpg.	Price Each
		Closes	Opens	Closes	Opens	Closes	Opens	Wt.	
99817 99188 99818 190381 99819 191284	Low pressure  *Low pressure Medium pressure Medium pressure High pressure High pressure	90 lbs.	30 lbs. 50 lbs. 50 lbs. 50 lbs. 110 lbs. 180 lbs.	5 lbs. 20 lbs. 20 lbs. 20 lbs. 70 lbs. 130 lbs.	20 lbs. 30 lbs. 35 lbs. 40 lbs. 90 lbs. 160 lbs.	25 lbs. 60 lbs. 70 lbs. 65 lbs. 110 lbs. 170 lbs.	40 lbs. 70 lbs. 85 lbs. 85 lbs. 130 lbs. 200 lbs.	35 35 35 35 35 35	\$37.40 37.40 37.40 37.40 37.40 48.40
190382		:	15 ins.	5 ins.	15 ins.	20 ins.	30 ins.	35	55,00

<sup>\*</sup>These switches are capable of handling 20 amperes at 110 volts, or 10 amperes at 220 volts, on either alternating or direct current circuits.

Delivery F. O. B. Factory, Ft. Wayne, Ind. For warehouse deliveries write nearest house.

# Western Electric FLOAT SWITCHES







Totally Enclosed Float Switch with Cover in Place

### CR-2930 Single Pole Float Switch

CR-2930 single pole float switches are used for remote control of automatic starting rheostats or panels together with the usual accessories, namely, float, chain pulleys and counterweight, for the automatic starting and stopping of motors when it is desired to maintain a predetermined water level on an open tank or reservoir system. The switch contacts are designed for handling pilot circuits for self-starters, or for controlling the main line circuits of small motors where the current does not exceed the values given in the table below.

List No.	Description	Amperes Capacity (A.C. or D.C.)	Wgt. Lbs.	List Price
58971	Single pole	(15 at 110/125 Volts) 10 at 220/250 Volts 5 at 500/550 Volts)	20	\$14.00
58972	Double Pole	(25 at 110/125 Volts) 15 at 220/250 Volts (10 at 500/550 Volts)	45	22.00

#### Accessories for Use with the Above Float Switches

# CR-2931 Totally Enclosed Float Switches

For Use as Either Tank or Sump Switches

CR-2931 enclosed switches are weatherproof and are suitable for tank or sump switches, in the case of the latter, it only being necessary to change the lever or the float from the right to the left side of the switch.

The switches are enclosed in a cast iron case arranged for 1½ inch conduit which enters at the top. The lower half of the case is removable for making connections and inspection.

All sizes are suitable for 30 amperes, either alternating or direct current, up to 550 volts, when connected in a motor circuit and are also suitable for all control circuits.

To eliminate all arcing and burning of the contacts, the switch is arranged for quick breaking. This snap action is accomplished by means of a counterweight.

List No.	Form	No. of Poles	Wgt. Lbs.	List Price	List No.	Form!	No. of Poles	Wgt. Lbs.	List Price
141636	A	S.P.	40	\$46.00	141644	C	S.P.	75	\$56.00
141637	A	D.P.	40	48.00	141645		D.P.	75	58.00
141638	A	T.P.	65	58-00	141646	C	T.P.	100	68.00
141639	A	4P	65	60.00	141647		4P.	100	70.00
141640	B	S.P.	75	52 .00	141648	D	S.P.	65	58.00
141641	B	D.P.	75	54 .00	141649	D	D.P.	65	60.00
141642	B	T.P.	100	64.00	141650	D	T.P.	90	70.00
141643	B	4P.	100	66.00	141651	D	4P.	90	72.00

Form A is for clamping to the inside top edge of the tank and is operated by a rod and float.

plished by means of a counterweight.

Form A is for elamping to the inside top edge of the tank and is operated by a rod and float.
Range, 10 inches to 2 feet.
Form B is for bolting to tank cover and requires a guide in the cover for the operating rod.
Range, 10 inches to 3½ feet.
Form C is the same as Form B except that no guide is required in the tank cover.
Range, 10 inches to 3½ feet.
Form D is for bolting to tank cover and is operated by a chain and float, thus being suitable for any depth of tank or variation in water level not less than 10 inches.
Length of chain should be specified on all orders.
Motors of ¾ H.P. and less, 115 and 230 volts, can be thrown directly on the line by means of float switch, pressure governor or knife switch.
Deligvery F.O. B. Factory, Schenestady, N.Y. For warehouse deligation write account.

Delivery F. O. B. Factory, Schenectady, N. Y. For warghouse deliveries write nearest house.

# Western Electric FIELD RHEOSTATS

### For Direct Current Generators

CR-8000 AND CR-8001 D.C. FIELD RHEOSTATS
For Front and Back of the Board Mounting
Plate Type—Hand-Operated

#### CONSTRUCTION

In the construction of CR-8000 and CR-8001 field rheostats resistance coils of negligible temperature co-efficient are imbedded and held in place in a special cement, which is a particularly good heat conductor and electric insulator. As shown by Figure 1, the contact buttons are circular and are spaced a sufficient distance apart to prevent dirt or dust from accumulating and short circuiting them.



Fig. 1 CR-8000 Field Rheostats for Mounting in Front of Switchboard Panel

#### **HANDWHEELS**

In order to conform to the present standard switchboard practice, that is, of having instruments and fittings on the front of the board of a black finish, the standard handwheels supplied with these rheostats are of a highly polished black material, thereby adding greatly to the appearance of the rheostats, as well as furnishing a pleasing effect when mounted on the switchboard panel.

A polished brass handwheel can be supplied if necessary.

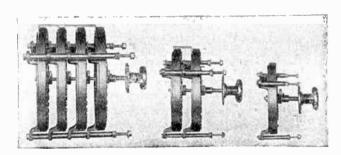


Fig. 2

CR-8001 Field Rheostats for Mounting on Back of Switchboard Panel

#### DRILLING TEMPLATES

In order to facilitate the drilling of switchboard panels on which these rheostats are to be mounted, drilling templates are always forwarded with the rheostats when they are shipped.

#### RESISTANCE

The resistance material used in field rheostats is an alloy which has a negligible temperature co-efficient, and which will not disintegrate under constant use. Hence the rheostats maintain constant resistance when in service. Attention is called to the large number of divisions of resistance in this line of field rheostats. It will be noted that the 10-inch plates have 35 divisions of resistance, the 12-inch plates have 50 divisions of resistance, and the 15-inch plates have 70 divisions of resistance. The advantages obtained by having a large number of divisions of resistance are evident, that is, the operator can maintain a very even generator voltage or accurately adjust the speed of motors when the rheostats are used for this purpose.

See following page for prices.

# D.C. FIELD RHEOSTATS

(CONTINUED)

For Direct Current Generators CR-8000 AND CR-8001 D.C. FIELD RHEOSTATS

		CR-800						
Lis	t No.		Атреге С	apacity	No. of	Diameter	List Pr	
CR-8000	CR-8001	Ohms	First	Last	Plates in Multiple	of Plates in Inches	CR-8000 Front of	CR-8001 Back of
Front of Panel	Back of Panel	i	Step	Step	Mutiple	III THEIRES	Panel	Panel
101101				125 Volts				
08484	108485	353	1.5	0.71	1	10 10	\$11.00 11.00	\$15,00 15,00
43576	43577 108487	300 286	0.5	0.25 1	1	10	11.00	15.00
.08486 43578	43579	240	0.63	$\hat{0}, 32$	1	10	11.00	15.00
.08488	108489	210	2.8	1 20	1	10 10	11.00 11.00	15.00 15.00
43580	43581 108491	200 175	0.75	0.38	1	10	11.00	15.00
.08490 43582	43583	150	ĭ	0.5	ī	10	11.00	15.00
08492	108493	146	4.5	1	1	12 10	15.00 11.00	20.00 15.00
43584	43585 43587	120 100	$\frac{1.25}{1.5}$	0.63 0.75	1	10	11.00	15.00
43586 .08494	108495	100	5.5	1.7	1	12	15.00	20.00
08496	108497	88	6 2	2	$\frac{2}{1}$	12 10	28.00 11.00	34.00 15.00
43588	43589 108499	75 70	9	1.4	2	12	28.00	34.00
08498 43590	43591	60	2.5	1.25	1	10	11.00	15.00
08500	108501	55	10	1.5	$\frac{2}{1}$	12 10	28.00 11.00	34.00 15.00
43592	43593 108503	50 45	3 14	2.4	$\frac{1}{2}$	15	34.00	38,00
08502 08504	108505	42	16.5	3	3	15	52.00	56.00
43594	43595	37.5	4 5	$\frac{2}{2.5}$	1	10 12	11.00 15.00	15.00 20.00
43596	43597 108507	30 30	21	3.6	3	15	52.00	56,00
08506 43598	43599	25	6	3	1	12	15.00	20.00
08508	108509	22.5	28	4.8	$\frac{4}{2}$	15 12	68.00 28.00	72.00 34.00
61794	61795 43601	22 18.8	12 8	4	i	12	15.00	20.00
43600 [08510	108511	18	35	6	5	15	84 00	92.00
43602	43603	15	10	5	1 9	15 12	19.00 28.00	24.00 34.00
61718	61719 61721	15 15	14 18	6	2 2 3	15	34.00	38.00
61720 108512	108513	15	42	7.2	S	15	100.00	104.00
64636	64637	13.5	12.5	6.3	$\frac{2}{3}$	12 15	28.00 52.00	34.00 56.00
61722	61723	12 9.4	25 16	7.5 8	2	12	28.00	84,00
43606 43608	43607 43609	7.5	20	10	2	15	34.00	38.00
64638	64639	6.3	25	12.5	2 3 3 3	15 15	52.00 52.00	56.00 56.00
61724	61725	6	30 30	12 15	3	15	52.00	56.00
43612 43614	43613 43615	$\frac{5}{3.75}$	40	20	4	15	68.00	72.00
43616	43617	3	50	25 30	5 6	15 15	84.00 100.00	92.00 104.00
43618	43619	2.5	60	250 Volts	1 0	1		
	10001	1 300	1	1 .5	1 1	10	\$11.00	\$15.00
43620 43622	43621 43623 43625	240	1.25	.63	ĺ	10	11.00	15.00
43624	43625		1.5	, 75	1	10	11.00	15.00
43626		200			1 1	10	11 (11)	15.00
	43627	150	2 5	1 25	1 1	10 12	$11.00 \\ 15.00$	20.00
43628	43627 43629		$\frac{2}{2.5}$	1 25 1.5	1 1	12	15.00 15.00	20.00 20.00
43628 43630 43632	43627 43629 43631 43633	150 120 100 75	3 4	1 25 1 5 2	1 1 1	12 12 12	15.00 15.00 15.00	20.00 20.00 20.00
43630 43632 43634	43627 43629 43631 43633 43635	150 120 100 75 60	3 4 5	1 25 1.5 2 2.5	1 1	12	15.00 15.00 15.00 19.00 19.00	20,00 20,00 20,00 24,00 24,00
43630 43632 43634 43636	43627 43629 43631 43633 43635 43637	150 120 100 75 60 48	3 4	1 25 1.5 2 2.5 3.2 4	1 1 1 1 1 2	12 12 12 12 15 15	15.00 15.00 15.00 19.00 19.00 28.00	20,00 20,00 20,00 24,00 24,00 34,00
43630 43632 43634	43627 43629 43631 43633 43635 43637 43639 43641	150 120 100 75 60 48 37.5	3 4 5 6.3 8 10	1 25 1.5 2 2.5 3.2 4 5	1 1 1 1 1 2 2	12 12 12 15 15 15 12 15	15.00 15.00 15.00 19.00 19.00 28.00 34.00	20.00 20.00 20.00 24.00 24.00 34.00 38.00
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43630 43632 43634 43636 43838 43640 43642 43644	43627 43629 43631 43633 43635 43637 43639 43641	150 120 100 75 60 48 37.5 30 25 20	3 4 5 6.3 8 10 12.5 15	1 25 1 5 2 2 2 5 3 2 4 4 5 6 3 7 5	1 1 1 1 1 2 2 2 2 3	12 12 12 15 15 15 12 15 15 15	15.00 15.00 15.00 19.00 19.00 28.00 34.00 34.00 52.00 68.00	20,00 20,00 20,00 24,00 24,00 34,00 38,00 38,00 56,00
43630 43632 43634 43636 43838 43640 43642 43644 43644 43646	43627 43629 43631 43633 43635 43637 43639 43641 43643 43645 43647 43649	150 120 100 75 60 48 37.5 30 25 20 15	3 4 5 6.3 8 10 12.5 15 20 25	1 25 1.5 2.5 3.2 4 5 6.3 7.5 10 12.5	1 1 1 1 1 2 2 2 3 4 5	12 12 12 15 15 15 15 15 15 15 15	15.00 15.00 15.00 19.00 19.00 28.00 34.00 34.00 52.00	15.00 20.00 20.00 20.00 24.00 24.00 38.00 38.00 72.00 92.00
43630 43632 43634 43636 43838 43640 43642 43644 43644	43627 43629 43631 43633 43635 43637 43639 43641 43643 43645 43647	150 120 100 75 60 48 37.5 30 25 20	3 4 5 6.3 8 10 12.5 15	1 25 1 5 2 2 5 3 2 4 5 6 3 7 5 10 12 5	1 1 1 1 1 2 2 2 2 3	12 12 12 15 15 15 12 15 15 15	15.00 15.00 15.00 19.00 19.00 28.00 34.00 34.00 52.00 68.00 84.00	20.00 20.00 20.00 24.00 24.00 38.00 38.00 56.00 72.00
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43630 43632 43634 43636 43838 43640 43642 43644 43646 43648 43650 49144 49146	43627 43629 43631 43633 43635 43635 43641 43643 43645 43647 43649 43051	150 120 100 75 60 48 37.5 30 25 20 15 12 10 2000 1600 1300 1000 800 600	3 4 5 6.3 8 10 12.5 15 20 20 30 	1 25 1.5 2.5 3.2 4 5 6.3 7.5 10 12.5 550 Volts 38 .40 .45 .5	1 1 1 1 2 2 2 2 3 4 5 6	12 12 12 15 15 15 15 15 15 15 15 15 15 15 15 15	\$15.00 15.00 15.00 19.00 19.00 28.00 34.00 52.00 68.00 84.00 100.00 \$19.00 19.00 15.00 15.00 11.00	20, 00 20, 00 20, 00 24, 00 24, 00 38, 00 38, 00 72, 00 92, 00 104, 00 24, 00 20, 00 20, 00 15, 00
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43630 43634 43634 43636 43636 43640 43642 43646 43646 43648 43650 49144 49146 49148 49150 49150 49152 43656	43627 43629 43631 43633 43635 43635 43641 43643 43645 43647 43649 43051	150 120 100 75 60 48 37.5 30 25 20 15 12 10 2000 1600 1300 1000 800 600	3 4 5 6.3 8 10 12.5 15 20 25 30 	1 25 1.5 2.5 3.2 4 5.5 6.3 7.5 10 12.5 15 550 Volts 35 .38 .40 .45 .5 .63 .75	1 1 1 1 1 2 2 2 3 3 4 5 6	12 12 12 15 15 15 15 15 15 15 15 15 15 15 15 15	\$15.00 15.00 15.00 19.00 19.00 28.00 34.00 52.00 68.00 84.00 100.00 \$19.00 19.00 19.00 11.00 11.00 15.00 15.00	20, 00 20, 00 20, 00 24, 00 34, 00 38, 00 72, 00 92, 00 104, 00 24, 00 24, 00 20, 00 15, 00 20, 00 2
43630 43632 43634 43636 43640 43642 43644 43646 43646 43650 49144 49146 49148 49150 49144 49150 49145 49150 43652 43652 43658 43658	43627 43629 43631 43633 43635 43635 43637 43641 43643 43645 43647 43651 49147 49149 49151 49153 43653 43655 43657 43669 43661	150   120   100   75   60   48   37.5   30   25   20   15   12   10   2000   1300   1300   1000   800   600   480   400   300   256	3 4 5 6.3 8 10 12.5 15 20 25 30 -7 .76 .84 .9 1 .25 1.5 2	1 25 1 5 2 5 3 2 4 5 6.3 7 5 10 12 5 550 Volts 3 35 38 40 45 56 63 75 10 12 5	1 1 1 1 2 2 2 2 3 3 4 5 6	12 12 15 15 15 15 15 15 15 15 15 15 15 15 15	\$15.00 15.00 19.00 19.00 28.00 34.00 52.00 68.00 84.00 100.00 \$19.00 15.00 11.00 15.00 15.00 15.00 15.00 15.00	20.00 20.00 24.00 24.00 38.00 38.00 56.00 92.00 104.00 24.00 24.00 20.00 15.00 20.00 20.00 21.00 20.00 20.00 21.00 20.00 21.00 20.00 21.00 20 20 20 20 20 20 20 20 20 20 20 20 2
43630 43632 43634 43636 43636 43640 43642 43644 43646 43646 49146 49146 49146 49152 49152 43652 43654 43658 43660 43660	43627 43629 43631 43633 43635 43635 43637 43641 43645 43645 43649 43651 49147 49149 49151 49153 43653 43655 43657 43669 43661	150   120   100   75   60   48   37.5   30   25   20   15   12   10   2000   1300   1300   1480   400   300   250   200   250   200	3 4 5 6.3 8 10 12.5 15 20 20 30 	1 25 1.5 2.5 3.2 4 5.5 6.3 7.5 10 12.5 15 550 Volts 35 .38 .40 .45 .5 .63 .75	1 1 1 1 2 2 2 2 3 4 5 6	12 12 15 15 15 15 15 15 15 15 15 15 15 15 15	\$15.00 15.00 19.00 19.00 28.00 34.00 34.00 52.00 68.00 84.00 100,00 \$19.00 15.00 11.00 15.00 11.00 15.00 19.00 28.00	20.00 20.00 24.00 34.00 38.00 56.00 104.00 22.00 24.00 24.00 20.00 20.00 20.00 20.00 24.00 24.00 24.00 20.00 20.00 24.00
43630 43632 43634 43636 43636 43640 43642 43644 43646 43646 43650 49144 49146 49148 49150 49152 43652 43656 43666 43666 43666	43627 43629 43631 43633 43635 43635 43637 43641 43643 43645 43647 43651 49147 49149 49151 49153 43653 43655 43657 43669 43661	150   120   100   75   60   48   37.5   30   25   20   15   12   10   2000   1300   1300   1000   800   600   480   400   300   256	3 4 5 6.3 8 10 12.5 15 20 25 30 -7 .76 .84 .9 1 1.25 2.5 2.5 3 4 5	1 25 1.5 2.5 3.2 4 5 6.3 7.5 10 12.5 550 Volts 338 .40 .45 .5 .63 .75 1 2.5 1 2.5 1 2.5 1 38 .40 .45 .63 .75 .63 .75 .63 .75 .63 .75 .75 .75 .75 .75 .75 .75 .75 .75 .75	1 1 1 1 2 2 2 2 3 4 5 6	12 12 15 15 15 15 15 15 15 15 15 15 15 15 15	\$15.00 15.00 19.00 19.00 28.00 34.00 52.00 68.00 84.00 100.00 \$19.00 19.00 15.00 11.00 11.00 15.00 15.00 19.00 28.00 34.00	20, 00 20, 00 24, 00 34, 00 38, 00 38, 00 56, 00 104, 00 24, 00 24, 00 20, 00 24, 00 20, 00 20, 00 20, 00 20, 00 24, 00 24, 00 38, 00 3
43630 43632 43634 43636 43636 43640 43642 43644 43646 43650 49144 49146 49148 49150 49152 43652 43656 43666 43666 43666 43666 43668	43627 43629 43631 43633 43635 43635 43637 43641 43645 43645 43645 43649 43651 49147 49149 49151 49153 43655 43657 43663 43665 43667 43667 43667 43667	150 120 100 75 60 48 37.5 30 25 20 15 12 10 2000 1300 1000 800 480 400 300 250 200 150 150 100 1000	3 4 5 6.3 8 10 12.5 15 20 25 30 -7 ,76 ,84 ,9 1 1,25 1,5 2,5 15 2,5 30 -7 ,76 ,84 ,9 1 1,5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1	1 25 1.5 2.5 3.2 4 5 6.3 7.5 10 12.5 15 550 Volts 35 38 40 45 63 75 1 25 1 25 1 5 1 25 2 5 3 38	1 1 1 1 2 2 2 2 3 4 5 6	12 12 15 15 15 15 15 15 15 15 15 15 15 15 15	\$15.00 15.00 19.00 28.00 34.00 34.00 34.00 68.00 84.00 100.00 \$19.00 19.00 11.00 15.00 11.00 15.00 19.00 34.00 34.00	20, 00 20, 00 24, 00 34, 00 38, 00 56, 00 72, 00 92, 00 104, 00 24, 00 20, 00 15, 00 20, 00 24, 00 20, 00 24, 00 20, 00 38, 00 38, 00 38, 00 56, 00 72, 00 92, 00 24, 00 20, 00 24, 00 24, 00 24, 00 25, 00 26, 00 27, 00 28, 00 28, 00 29, 00 20, 00 24, 00 24, 00 24, 00 24, 00 25, 00 26, 00 27, 00 28, 00 28, 00 29, 00 20, 00 21, 00 2
43630 43632 43634 43636 43640 43642 43644 43648 43650 49144 49146 49146 49148 49150 49150 49152 43654 43658 43658 43668 43668 43668 43668 43668	43627 43629 43631 43633 43635 43635 43641 43643 43645 43647 43649 43651 49145 49147 49151 49153 43655 43657 43659 43665 43667 43669 43669 43669	150   120   100   75   60   48   37.5   30   25   20   15   12   10   2000   1300   1000   1300   1000   480   400   300   250   200   150   1	3 4 5 6.3 8 10 12.5 15 20 25 30 -7 -76 .84 .9 1 1.25 1.5 2 2.5 3 3 4 5 6 7,5	1 25 1.5 2.5 3.2 4 5 6.3 7.5 10 12.5 15 550 Volts 38 .40 .45 .5 .63 .75 1 12.5 1 15 .38 .40 .45 .5 .63 .75 .63 .35 .35 .45 .35 .45 .45 .45 .45 .45 .45 .45 .4	1 1 1 1 2 2 2 2 3 4 5 6 6	12 12 15 15 15 15 15 15 15 15 15 15 15 15 15	\$15.00 15.00 19.00 19.00 28.00 34.00 52.00 68.00 84.00 100.00 \$19.00 15.00 15.00 11.00 11.00 11.00 19.00 28.00 34.00 55.00 100.00	20.00 20.00 24.00 34.00 38.00 56.00 72.00 92.00 104.00 24.00 20.00
43630 43632 43634 43636 43640 43642 43644 43646 43646 43650 49144 49148 49150 49152 43652 43656 43666 43666 43666 43666 43668	43627 43629 43631 43633 43635 43635 43637 43641 43645 43645 43645 43649 43651 49147 49149 49151 49153 43655 43657 43663 43665 43667 43667 43667 43667	150 120 100 75 60 48 37.5 30 25 20 15 12 10 2000 1300 1000 800 480 400 300 250 200 150 150 100 1000	3 4 5 6.3 8 10 12.5 15 20 25 30 -7 ,76 ,84 ,9 1 1,25 1,5 2,5 15 2,5 30 -7 ,76 ,84 ,9 1 1,5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1	1 25 1.5 2.5 3.2 4 5 6.3 7.5 10 12.5 15 550 Volts 35 38 40 45 63 75 1 25 1 25 1 5 1 25 2 5 3 38	1 1 1 1 2 2 2 3 4 5 6 1 1 1 1 1 1 1 1 1 2 2 2 3 3 4 5 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12 12 15 15 15 15 15 15 15 15 15 15 15 15 15	\$15.00 15.00 19.00 19.00 28.00 34.00 52.00 68.00 84.00 100.00 \$19.00 15.00 11.00 15.00 11.00 15.00 19.00 28.00 34.00 34.00 34.00 34.00 35.00 36.00	20.00 20.00 20.00 24.00 24.00 38.00 38.00 56.00 72.00

The above prices cover rheostats with black polished handwheel.

A polished cast brass handwheel (List No. 59286) can be furnished with CR-8001 back of panel field rheostats instead of the polished black handwheel, at an additional list price of \$13.20.

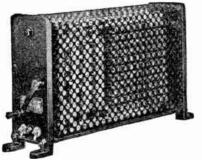
ORDERING DIRECTIONS

Rheostats should be ordered by List No. If front of the board mounting is wanted, call for CR-8000. If back of the board mounting is wanted, call for CR-8001.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

# Western Electric

# BATTERY CHARGING RHEOSTATS



CR-9200 Battery Charging Rheostat

#### DESCRIPTIVE AND GENERAL

For charging automobile or other small batteries from circuits not exceeding 125 volts, we recommend the new CR-9200 battery charging rheostat. In order to meet more exactly the variety of charging conditions due to the different types and number of cells used in vehicle batteries, the previous line has been expanded. The rheostat is of very rugged construction, the frame being made of two iron castings which form the ends and which are fastened together with tie rods. A perforated sheet metal enclosing cover, which is easily removable, prevents accidental contact with live parts, but at the same time provides for ample ventilation.

A dial switch is entirely enclosed.

The cover is easily removed, allowing complete inspection and access to all parts.

Large number of contacts insures close regulation.

Can be placed on floor, wall or switchboard.

Charging Amperes

Large number of sizes standardized.

Rheostats have been designed for use where it is desired to charge Edison batteries above their normal rate. The resistance is so proportioned that any charging rate from double normal to normal may be obtained.

### CR-9200 Battery Charging Rheostats

Resistance

List No.	Type of	No. of	Resista	nre	Charging Amperes		No. of	Approx. Ship. Wt.	List
	Cells	Cells	Permanent	Total	Start	Finish	Steps	in Lbs.	Price
		FO	R CHARGIN	G AT NO	RMAL R	ATE ONL	Y		
125953 125954	Lead Lead	12-18 12-18	3.6	17.0 17.0	15 20	5 6	15 15	140 140	\$66,00 72.00
$\frac{125955}{125956}$	Lead Lead	20-28 20-28	1.85 1.7	$\frac{13.0}{9.0}$	20 25	5 8	15 15	140 140	$\frac{72.00}{78.00}$
125957 125958	Lead Lead	30- <b>3</b> 6 30- <b>3</b> 6	. 46	4.0	30 40	10 10	15 15	180 160	66.00 66.00
$125959 \\ 125960$	Lead Lead	37-40 37-40	.345	$\frac{2.6}{2.6}$	30 40	10 10	15 15	170 180	60.00 60.00
$\frac{125951}{125962}$	Lead Lead	41-44 41-44		1.5	30 40	10 10	15 15	160 160	52.00 52.00
$\frac{125963}{125964}$	Lead Lead	41-44		$\frac{1.28}{1.0} \\ \frac{2.8}{2}$	50 60 30	12 15 30	15 14 15	160 160 170	60.00 60.00 62.00
125965 125966	Edison A- 4 Edison A- 4 Edison A- 6	20 40 44 60 20 40	.64	$\frac{1}{1}.7$ $\frac{2}{2}.0$	30 45	30 30 45	15 15	150 170	56.00 58.00
125967 125968 125969	Edison A- 6 Edison A- 8	41 60 20 32	,68	1.2 1.4	45 60	45 60	15 14	160 180	52.00 72.00
125970 125971	Edison A- 8 Edison A- 8	36-44 48-60	.44	1.0	60	60	14 14	170	62,00 60,00
127052 127053	Edison A-10 Edison A-10	20 32 36 44	, 60 , 36	1.17 .81	75 75	75 75	10 10	180 180	92.00 82.00
127054 127055	Edison A-10 Edison A-12	48-60 20-32	,56	,60 .96	75 90	75 90	10 10	170 185	$72.00 \\ 92.00$
$\frac{127056}{127057}$	Edison A-12 Edison A-12	36-44 48-60		.68 .48	90	90 90	19 10	180 170	82.00 74.00

#### FOR CHARGING AT EITHER NORMAL OR DOUBLE NORMAL RATE

#### Private Garage

134605 134606 134607 157718	Edison A- 4 Edison A- 6 Edison A- 8 Edison A-10	60 60 60 60	• • • •	.56 .34 .26 .28	60 90 120 150	30 45 60 75	14 14 10 14	150 175 175 180	\$58.00 58.00 82.00 100.00
157719	Edison A-12	60		. 255	180	90	1.5	180	106.00

#### Public Garage

157720	Edison A-4, 6, 8, 10, 12	60	1	.535	180	30	16	190	\$106.00
134611 149937	Edison A-1, 6, 8 Edison A-8, 10, 12	60 60		, 63 , 265 , 235	120 180 180	30 60 <b>75</b>	10 10	200 180 180	88.00 94.00 114.00
157721	Edison A-10, 12	60	1	, 230	190	1 (0	1 10	1 100	114.00

### C-H. MOTOR STARTERS

No. 9110 A. C. Single Phase Motor Starter

# FOR ALTERNATING CURRENT MOTORS

No. 9110

The motor starting rheostat listed is designed for use with single phase self-starting motors operating on either a 110 volt circuit of 60 or 133 cycles, or or, a 220 volt circuit of the same frequencies.

The resistance used is of the ventilated tubular type, and is so arranged as to eliminate the effect of inductance and consequently to provide the highest possible power factor obtainable in starters of this type.



No. 3110 Speed Regulator, No-Voltage Release

### A.C. Single Phase Motor Starters Without Automatic No-voltage Release No. 9110

Н.Р.	Fo	r 25 and 60 Cy	rcle	For 133 Cycle				
	110 Volts List Price	Style	220 Volts List Price	Style	440-550 Volts List Price	Style	Lbs. Boxed	
1	\$20.80	A	\$24.00	A	\$28.80	В	50	
$\hat{2}$	22.40	A	24.00	A	28.80	В	50	
3	30.40	В	24.00	A	30.40	В	50	
	32.00	B	32.00	В	30.40	В	50	
4 5	33,60	В	32.00	B	32.00	В	50	
$7\frac{1}{2}$	44.80	Ċ	35.20	В	33.60	В	50	
10	46, 40	C	36.80	B	35, 20	В	50	
121/2	51.20	Ċ	48.00	C	54.40	$^{\mathrm{CD}}$	100	
15	83.20	D	51.20	Ċ	56.00	$^{\rm CD}$	100	
20	83.20	D	60.80	ČD	59.20	CD	100	
25	, , , , , ,		60.80	CD	59.20	$\overline{\mathrm{CD}}$	100	
30			83.20	D	88.00	D	125	
35		1	83.20	D	94.40	D	125	
40			83.20	D	99.20	Ď	125	

On 25 and 60 cycle starters only the no-voltage release feature can be supplied at the following prices:

 Type A.
 \$11.20 list
 Type CD.
 \$11.20 list

 Type B.
 11.20 list
 Type D.
 11.20 list

 Type C.
 11.20 list
 Type D.
 11.20 list

# D.C. Motor Speed Regulators, with No-voltage Release

No. 3110

	115	Volts	230	Volts	500 V	500 Volts		
H.P.	Ventilating Fan Type List Price	Machine Type List Price	Ventilating Fan Type List Price	Machine Type List Price:	Ventilating Fan Type List Price	Machine Type List Price		
1/2	\$17.60 19.20 22.40	\$17.60 19.20 32.00	\$17.60 19.20 22.40	\$17.60 19.20 32.00	\$19,20 20,80 22,40	\$19.20 20.80 32.00		
1½ 2 3	32,00 35,20 44,80	35 20 44 80 52 80	32.00 55.20 44.80	35.20 44.80 52.80	$32.00 \\ 35.20 \\ 44.80$	35.20 44.80 52.80		
4 5 7½	57.60 67.20 89.60	$\begin{array}{c} 62.40 \\ 72.00 \\ 89.60 \end{array}$	57.60 67.20 89.60	72.00 89.60 110.40	$62.40 \\ 89.60 \\ 107.20$	72.00 89.60 110.40		
10 15 20	115.20 160.00 187.20	115.20 160.00 204.80	115.20 142.40 160.00	115.20 142.40 177.60	$134.40 \\ 177.60 \\ 195.20$	152.00 195.20 214.40		
25 30 35	240.00 267.20 320.00	240.00 267.20	232.00 249.60 320.00	233.60 249.60 320.00	230,40 249,60 320,00	232.00 249.60 320.00		
40 50		• • • • •	355,20 444,80	355.20 444.80	355,20 444,80	355.20 444.80		

Delivery F. O. B. Factory, Milwaukee, Wis. For warehouse deliveries write nearest house.

### C-H. SPEED REGULATORS

FOR ALTERNATING CURRENT MOTORS



6 Inch Speed Regulator



No. 9320 A. C. Polyphase Motor Speed Regulator

# 6 Inch Speed Regulator-D. C.

These 6-inch Speed Regulators are for use as a means of varying the speed of small motors, such as are now employed for operating small blowers, fans, buffers, adding and copying machines, jewelers' and dentists' lathes and drills, sewing machines, washing machines, etc.

The operation is by means of a simple sliding lever, seven contacts being provided. If the first contact is an "off" or open point, the motor will be started on the second contact, giving six running positions. Without an "off" point there are seven running positions with six possible speed changes. The resistance is moisture-proof and dust-proof, the resistor wire being wound on a flat porcelain core and imbedded in a special cement.

These devices are also used as field regulators, dimmers for lighting circuits, heating coil regulators, in connection with plating baths, etc.

The limitations in standard design are as follows: Maximum watt capacity, 125. Maximum resistance per step, 150 ohms. Maximum amperes, 10. Maximum voltage of circuit, 250. Net weight, 3 pounds. Diameter 6 inches. Height of casting 15% inches.

Resistances higher than 150 ohms per step furnished at advanced price.

List Price Each

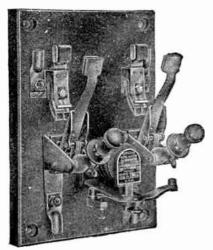
6-inch Speed Regulator,  $\frac{1}{2}$ , II.P.,  $\frac{1}{16}$  H.P.,  $\frac{1}{16}$  H.P.,  $\frac{1}{16}$  H.P.,  $\frac{1}{18}$  H.P.,  $\frac{1}{16}$  H.P.,  $\frac{1}{16}$  H.P., and  $\frac{1}{16}$  H.P., and whether for compound or machine type load.

# SPEED REGULATORS FOR ALTERNATING CURRENT SLIP RING MOTORS No. 9320

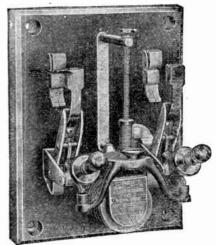
	Weight	List Price		Weight	List Price
H.P.	Lbs. Boxed	Each	H.P.	Lbs. Boxed	Each
1/4 + Plate	30	\$28,80	4	175	\$97.60
1 1 2 1 type 1 4 1 4 1 5 2 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	30	28.80	$\begin{bmatrix} 4 \\ 5 \end{bmatrix}$	175	102.40
1/4	40	25.60	712	175	112.00
1/2	40	27.20	10	225	112.00
3/1	40	28.80	15 Type B	250	118.40
1 1	50	33,60	20	275	142.40
112 Type A	60	43.20	25	275	164.80
$\begin{pmatrix} 1/2 \\ 2 \end{pmatrix}$ Type A	70	52.89	30	475	235.20
21/6	80	57.60	35	525	256.00
$\begin{bmatrix} 2\frac{1}{2} \\ 3 \end{bmatrix}$	80	62.40	20	300	177.60
4	125	65,60	25	300	205.20
5	125	70.40	30	525	272.00
$\left\{ egin{array}{c} 4 \ 5 \ 2 \ 2^{1/2} \end{array} \right\}$	125	76.80	35 Type C	550	300.80
21/6	125	76.80	40	675	305.60
3 2	125	76.80	50	725	345.60
31/2	125	78.40	60	800	380.80
4 Type AB	125	78.40	75	900	409.60
4 Type AB	150	83.20			
712	150	86.40			
10 2	150	92.80			
15	175	99,20			

Note: Full load rotor current per ring must not exceed: 6 amperes for plate type or 20 amperes for type (A), for 280 volts; 40 amperes for type (AB), for 320 volts; 75 amperes for type (B), for 320 volts; 150 amperes for type (C), for 400 volts.

Delivery: F. O. B. Factory, Milwaukee, Wis. For warehouse deliveries write nearest house.



200 Amperes, 250 Volts, without Barrier



200 Amperes, 500 Volts, DP Underload

-----List No.---

### Type C, Form G, Carbon Break-Direct Current-Overload

Recommended for small panels for motor control, mercury rectifiers, etc.

Single Pole, 500 Volts or Less

		E-41514	2 A 11/4	•
G VI		Front	Back Connected for 1½ In.	List Price
Minimum	Maximum	on Base	Panel	Each
1.5	5	39899	39911	<b>\$2</b> 8.80
3	8	39903	39915	28.80
5	15	39907	39919	28.80
10	25	35483	35507	28.80
15	4()	35487	35511	<b>2</b> 8.80
25	75	35491	35515	28.80
50	150	35495	35519	<b>2</b> 8.80
100	300	35499	35523	43.20
200	450	35503	35527	48.00
	Double Pol	e, 500 Volts	•	
1.5	5	39990	39912	\$45.60
3	8	39904	39916	45.60
5	15	39908	39920	45.60
10	25	35484	35508	45.60
15	40	35488	35512	45.60
25	75	35492	35516	45.60
50	150	35496	35520	45.60
100 -	300	35500	35524	69.60
200	450	35504	35528	76.80
	Minimum  1.5 3 5 10 15 25 50 100 200  1.5 3 5 10 15 25 50 100 100	1.5 5 8 8 5 15 10 25 75 50 150 100 25 75 50 150 100 25 75 50 150 100 25 15 40 25 75 50 15 40 25 75 50 150 100 25 15 40 25 75 50 150 100 7 300	Pront   Connected   On Rase   1.5   5   39899   3   8   39907   35483   35491   350   35483   35483   3550   35484   355   35484   355   35484   355   35484   355   35484   355   35484   355   35485   35485   35500   355	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

#### Direct Current-Underload

Single Pole, 550 Volts or Less

Double Pole, 550 Volts

	List No						
		Back			Back		
	Front	Connected for	List	Front	Connected for	List	
Ampere	Connected	1 ½ 1n. or 2 1n.	Price	Connected	$1\frac{1}{2}$ In, or 2 In.	Price	
Capacity	on Base	Panel	Each	on Base	Panel	Each	
15	37493	37517	\$31.20	37494	37518	\$50.40	
25	37497	37521	31.20	37498	37522	50.40	
50	37501	37525	31.20	37502	37526	50,40	
100	37501	37529	31.20	37506	<b>37</b> 530	50.40	
200	37509	37533	48.00	37510	37534	76.80	
300	37513	37537	52.80	37514	37538	84.00	

Note: Ampere capacity denotes the load that the breaker will carry continuously at 30 degrees C. rise or less. Underload breakers can be set to trip between the minimum limit of 10 per cent, and the minimum limit of 20 per cent, of their carrying capacity.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house,

### Type C, Form G, Carbon Break

#### ALTERNATING CURRENT-PLAIN SHUNT TRIP

With Circuit Opening Auxiliary Switch

#### Single Pole, 600 Volts or Less

	††List No.			1171 7.1	111. 110.
Front	Back Connected		Approx, Shi		††List Price
Connect d	for $1\frac{1}{2}$ or 2 In.	Ampere	()n	For	Each
on Base	Panel	Capacity	Base	Panel	
110547	110559	100	20	12	\$33 60
110551	110563	200	32	20	55.20
110555	110567	300	32	20	60,00
	Г	Pouble Pole, 600 V	olts		
110548	110560	100	25	15	\$52.80
110552	110564	200	48	32	88.80
110556	110568	300	48	32	96.00
	7	Triple Pole, 600 Vo	olts		
110593	110596	100	40	30	\$76.80
110594	110597	200	65	50	127.20
110595	110598	300	65	50	136.80

### Direct and Alternating Current Attachments-Auxiliary Switches

Circuit	Closin <sub>o</sub>	Circuit	Opening	Circuit (	bined Opening nd Closing	Am. Cap. of	For Mounting
List No.	List Price Each	List No.	List Price Each	List No.	List Price Each	Circuit Breaker	on
37553 37554 37555 37556 37557 37558	\$6,00 6,00 6,00 6,00 6,00 6,00 6,00	37547 37548 37549 37550 37551 37552	\$6.00 6.00 6.00 6.00 6.00 6.00	37559 37560 37561 37562 37563 37564	\$8.40 8.40 8.40 8.40 8.40 8.40	3-100 3-100 3-100 200-300 200-300 200-300	1½ in. Base 1½ in. Panel 2 in. Panel 1½ in. Base 1½ in. Panel 2 in. Panel

#### †Shunt Trip Attachments

	Voltage		ription of t Breakers	List
List No.	of	Ampere	Poles	Price
Attachment	Circuit	Capacity		Each
37545	125-250-500	3-100	Single and Double	\$9,60
37546	125-250-500	200-300	Single and Double	9,60

#### \*Under Voltage Release Attachments

Alternat	ing Current						
List No.	List		List	Voltage	Approx.	<ul> <li>-Description</li> </ul>	of Circuit Breakers-
Attach-	Price	List	Price	of	Releasing	Ampere	
ment	Each	No.	Each	Circuit	Voltage	Capacity	Poles
43378	\$14.40	37539	\$13.20	125	60	3-100	Single and Double
43381	14.40	37542	13.20	125	60	200-300	Single and Double
43379	16.80	37540	15.60	250	125	3-100	Single and Double
43382	16.80	37543	15.60	250	125	200-300	Single and Double
43380	20.40	37541	19.20	500 (600)	250	3-100	Single and Double
43383	20.40	37544	19.20	500 (600)	250	200-300	Single and Double
20000	207.10			. ,			_

<sup>\*</sup>Release at one-half rated load.

†Should be allowed to remain in circuit only momentarily.

Same attachments with either single or double pole breakers.

Only one pole (the right hand from the front) is tripped out by these attachments.

††List No. and list price includes circuit opening auxiliary switch for opening shunt coil circuit.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries, write nearest house.

### Type C, Form G, Carbon Break-Direct Current PLAIN SHUNT TRIP, WITH CIRCUIT OPENING AUXILIARY SWITCH

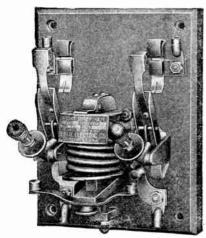
Single Pole, 550 Volts or Less

	-List No				
Front	Back Connected				List
Connected	for 1½ In. or	Ampere	Approx. Sh	p. Wt., Lbs.	Price
on Base	2 In. Panel	Capacity	On Base	For Panel	Each
110571	110358	100	20	12	\$28.80
110575	110587	200	32	20	43.20
110579	110591	300	32	20	48.00
		Double Pole	, 500 Volts		
110572	110584	100	25	15	\$45 60
110576	110588	200	48	32	69.60
110580	110592	300	48	32	76.80

Note: No overload coils on these breakers.

### Type C, Form G, Carbon Breaker-Alternating Current

Single Pole, 600 Volts or Less



Double Pole, Type C, Form G, Front Connected

e roie, ou	U VOITE OF	Less			
			List	No	
				Back	
			Front	Connected	
			Connected	for 112 In.	List
Ampere	~ Calibr	ration	on	or 2 In.	Price
Capacity	Minimum	Maximum	Base	Panel	Each
3	1.5	5	43340	43352	\$33.60
5	3	8	43344	43356	33.60
10	.5	15	43348	43360	33.60
15	10	25	38144	38168	33.60
25	15	40	38148	38172	33.60
50	25	75	38152	38176	33.60
100	50	150	38156	38180	33.60
200	100	300	38160	38184	55.20
300	200	450	38164	38188	60.00
Do	uble Pole.	600 Volts.	One Over	load Coil O	nlv
• >				40050	

#### 1.5 43341 43353\$52.80 3 8 43345 43357 52.8010 5 15 43349 43361 52.8015 10 25 38145 38169 52.8025 15 40 3814952.8038173 50 25 75 38153 52.8038177 100 50 38157 15038181 52.80200 100 300 38161 38185 88.80 3 0 200450 38165 38189 96.00

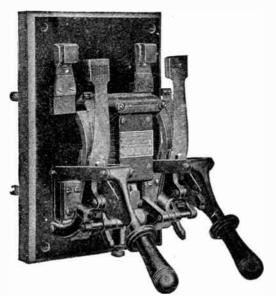
Triple Pole, 600 Volts, Two Overload Coils Only

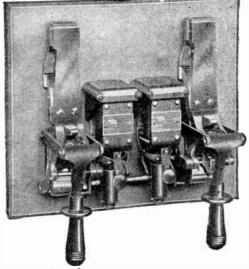
### Triple Pole, 600 Volts, 25-40-60 Cycles, One Overload and One Under Voltage Coil

			Lis	t No.——		Lis	No	
				Back			Back	
			Front	Connected		Front	Connected	
			Connected	for $\frac{1}{2}$ In.	List	('onnected	for 1½ In.	List
\mpere ~	Calibra	ition	on	on	Price	on	or 2 In.	Price
Capacity	Min.	Max.	Base	l'anel	Each	Base	Panel	Each
3	1.5	5	46268	46277	<b>\$</b> 91.20	46274	46283	\$100.80
5	3	8	46269	46278	91.20	46275	46284	100.80
10	5	15	46270	46279	91.20	46276	46285	100.80
15	10	25	38190	38214	91.20	38202	38220	100.80
25	15	40	38191	38215	91.20	38203	38221	100.80
50	25	75	38192	38216	91.20	38204	38222	100.80
10 <b>0</b>	50	150	38193	38217	91.20	38205	38223	100.80
200	100	300	38194	38218	148.80	38206	38224	158.40
300	200	450	38195	38219	160.80	38207	33225	170.40
3.7		., 1	4 41 F	1 /1 / /1 1	1 111		1	

Note: Ampere capacity denotes the load that the breakers will carry continuously at 30 degrees C. rise or less.

Use one overload coil on balanced circuits; two overload coils on unbalanced circuits. Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.





Single Pole, Overload, 650 Volts, 500 Amperes

Double Pole, Overload, 250 Volts, 1200 Amperes

### Type C, Form P, Carbon Break

#### BACK CONNECTED DIRECT CURRENT—OVERLOAD

Recommended for general switchboard work. Main contact brushes are protected by carbon and metal secondaries. Contact pressure adjustable. Each breaker calibrated individually and has wide range of calibration, clearly marked. Double pole breakers, each pole separate handle: triple pole breakers, one handle for all poles and "trip-free" feature. Contact study and blocks drop forged in one piece.

#### Single Pole-650 Volts or Less

### Double Pole—250 Volts (One Overload Coil)

			List	No.	•	List	No.	
				For 1½ In.			For 11/2 In.	
*Ampere	Calibr	ation	On 1¼ In.	or 2 In.	List Price	On 11/4 In.	or 2 ln.	List Price
Capacity	Minimum	Maximum	Base	Panel	Each	Base	Panel	Each
15	10	25	36206	36233	\$57.60	36205	36232	\$86.40
25	15	45	36209	36236	57.60	36208	36235	86.40
50	25	75	36212	36239	<b>57</b> . 60	36211	36238	86.40
100	50	150	36215	36242	57.60	36214	36241	86.40
200	100	300	36218	36245	72 .00	36217	36244	108.00
300	200	450	36221	36248	84.00	36220	36247	132.00
500	300	750	36224	36251	110.40	36223	36250	177.60
600	400	900	†105725	105731	134.40	†105724	105730	216.00
800	500	1200	† 36227	36254	151.20	† 36226	36253	228.00
1000	600	1500	†105728	105734	177.60	†105727	105733	266,40
1200	800	1800	† 36230	36257	204.00	† 36229	36256	307.20

#### Double Pole, Double Coil, 250 Volts

List No.

st Price
Each
127.20
127.20
127.20
127.20
156.00
180.00
232.80
280.80
302,40
355,20
408,00
23: 280 30: 35:

#### **NUTS AND TERMINALS**

List prices include complete equipment of nuts and terminals for each stud.

\*Load which the breaker will carry continuously at 30 degrees C. rise or less.

†Mounted on 1½ inch base.

1Double pole, 650 volt breakers, prices on application, stating requirements.

Underload breakers may be set to trip between the limits of 10 per cent. and 20 per cent. of their rated ampere capacity.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

### Type C, Form P, Carbon Break-Direct Current-Underload

#### BACK CONNECTED

#### Single Pole, 650 Volts or Less

#### Double Pole, 250 Volts or Less

	List	No		lis	t No	_
Amp. Cap.	On 1½ In. Base	For 1½ In. or 2 In. Panel	List Price Each	On 1¼ In. Base	For 1½ In. or 2 In. Panel	List Price Each
15	42076	42103	\$93.60	42075	42102	\$122,40
25	42079	42106	93.60	42078	42105	122.40
50	42082	42109	93.60	42081	42108	122.40
100	42085	42112	93.60	42084	42111	122,40
200	42088	42115	108.00	42087	42114	144.00
300	42091	42118	120.00	42090	42117	168.60
500	42094	42121	146.40	42093	42120	213.60
600	107012	107018	170.40	107011	107017	252.00
800	42097	42124	187.20	42096	42123	264.00
1000	107015	107021	213.60	107014	107020	302.40
1200	42100	42127	240.00	42099	42126	342.20

### Overload and Underload-Direct Current

Single Pole, 650 Volts or Less-Back Connected

Double Pole, 250 Volts or Less

		,	List	No		List 1	Vo	
		/		For 1 <sup>1</sup> <sub>2</sub> In.			For 1 1/2 In.	
Amp.			√ On 1¼ In.	or 2 In.	List	On 114 In.	or 2 In.	List
Cap.	Min.	Max.	Base	Panel	Price	Base	Panel	Price
15	10 /	25	107024	107057	\$124.80	107023	107056	\$151.20
25	15	45	107027	107060	124.80	107026	107059	151.20
50	25	75	. 107030	107063	124.80	107029	107062	151.20
100	. 20	150	107033	107066	124.80	107032	107065	151.20
200	100	300	107036	107069	144.00	107035	107068	180.00
300	200	450	107039	107072	158.40	107038	107071	204.00
500	300	750	107042	107075	189.60	107041	107074	256.80
600	400	900	107045	107078	223.20	107044	107077	304.80
800	500	1200	107048	107081	264.00	107047	107080	338.40
1000	600	1500	107051	107084	302.40	107050	107083	391.20
1200	800	1800	107054	107087	343.20	107053	107086	444.00
3.7	3.7 1	To		1 1 1	1 21	1 1 1 11 41		

Note: No relays used. Both underload and overload coils are combined with the breakers,

### Direct Current-Plain Shunt Trip

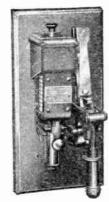
Used with Circuit Closing Relays, Speed Limit Devices, Push Button Control, Etc.

Single Pole, 650 Volts or Less-Back Connected

#### Double Pole, 250 Volts

Amp. Cap.	On 1 <sup>1</sup> / <sub>4</sub> In. Base	st No.  For 1½ ln. or 2 In. Panel	List Price Each	On 1½ In. Base	For 1½ In. or 2 In. Panel	List Price Each
100 200	1072 <del>44</del> 1072 <del>4</del> 7	$\frac{107268}{107271}$	\$57.60 72.00	107243 107246	107267 107270	\$86.40 108.00
300	107250	107274	84.00	107249	107273	132.00
500 600	$\frac{107253}{107256}$	$\frac{107277}{107280}$	110.40 134.40	$\frac{107252}{107255}$	$\frac{107276}{107279}$	177.60 216.00
800 1000	$\frac{107259}{107262}$	$\frac{107283}{107286}$	151.20 $177.50$	$\frac{107258}{107261}$	107282 107286	228.00 $266.40$
1200	107265	107289	204.00	107264	107288	307.20

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse delivery write nearest house,



S. P .- 500 Amperes, 650 Volts-Reverse Current

### Direct Current—†Reverse Current—Back Connected

Generally used for protecting generators, storage batteries and like service.

Reverse current feature does not operate on overload. Potential coil only in circuit while breaker is being closed, requires no exciting current in normal operation.

Is independent of voltage in operation and, consequently, not affected by low voltage conditions.

Single Pole-650 Volts or Less

Double Pole-250 Volts

	Calibration		List	No.	List	List	List	
*Ampere Capacity			On 11/4 In. Base	Race Of 2 111.		On 11/4 In. Base	For 1½ In. or 2 In.	Price Each
	Minimum	Maximum		Panel			Panel	
15			107112	107145	\$93,60	107111	107144	\$122.40
25			107115	107148	93,60	107114	107147	122,40
50	5%	20%	107118	107151	93,60	.107117	107150	122.40
100	of	of	107121	107154	98,60	107120	107153	122.40
200	Rated	Rated	107124	107157	108,00	107123	107156	144.00
300	Ampere	Ampere	107127	107160	120,00	107126	107159	168,00
500	Capacity	Capacity	107130	107163	146,40	107129	107162	213,60
600	on	on	†107133	107166	170,40	†107132	107165	252,00
800	Reversal	Reversal	†107136	107169	187.26	†107135	107168	264.00
1000			†107139	107172	213.60	†107138	107171	302.40
1200		J	†107142	107175	240.00	†107141	107174	343.20

### Direct Current—‡Overload and Reverse Current—Back Connected

15	10	25	107178	107211	\$124.80	107177	107210	\$151,20
25	15	40	107181	107214	124,80	107180	107213	151.20
50	25	75	107184	107217	124.80	107183	107216	151,20
100	50	150	107187	107220	124.80	107186	107219	151,20
200	100	300	107190	107223	144.00	107189	107222	180.00
300	200	450	107193	107226	158,40	107192	107225	204.00
500	300	750	107196	107229	189.60	107195	107228	256,80
600	400	900	†107199	107232	223,20	†107198	107231	304.80
800	500	1200	†107202	107235	264.00	†107201	107234	338.40
1000	600	1500	†107205	107238	302.40	107204	107237	391.20
1200	800	1800	†107208	107241	343.20	†107207	107240	444.00

#### **NUTS AND TERMINALS**

List prices include complete equipment of nuts and terminals for each stud.

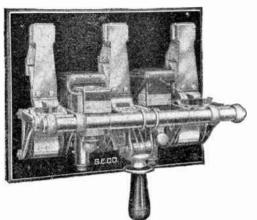
\*Load which the breaker will carry continuously at 30 degrees C. rise or less.

†Mounted on 1½ inch base.

‡Calibration of reverse current coil is from 5 per cent, to 20 per cent, of rated ampere capacity on reversal.

ttNo overload coil, operates on reversal only.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.



# Type C, Form P, Carbon Break

Back Connected Alternating Current Overload Single Pole, 650 Volts or Less

Title Nice

	IAS	[ ] ( OS	`
Amp.	On 1¼ In. Base	For 1½ or 2 In. Panel	List Price Each
15	40879	40906	\$64.80
$^{25}$	40882	40909	64.80
50	40885	40912	64.80
100	40888	40915	64.80
200	40891	40918	79.20
300	40894	40921	93.60
500	40897	40924	127.20
600	*107364	107370	148.80
800	* 40900	40927	168.00
1000	*107367	107372	196.80
1200	* 40903	40930	216.00

Triple Pole, Overload and Low Voltage Attachment

#### Double Pole, 480 Volts or Less

#### Triple Pole, Two Overload Coils 650 Volts or Less

	I.i.	st Nos.	List Nos					
	On 11/4 In.	On 112 or 2 In.	List Price	On 11/4 In.		List Price		
Amp.	Base	Panel	Each	Rase	Panel	Each		
15	40878	40905	<b>\$</b> 93.00	60664	60791	\$172.80		
25	40881	40908	93.60	60665	60792	172.80		
50	40884	40911	93.60	60668	60793	172.80		
100	40887	40914	93-60	60776	60794	199.20		
200	40890	40917	$120 \ 00$	60777	60795	216.00		
390	40893	40920	146 - 40	60778	60796	259.20		
500	40896	40923	196.80	60779	60797	357.69		
600	*107333	107369	$240 \ 00$	*114640	114644	417.60		
800	* 40899	† 40926	252.00	* 60780	† 60798	456.00		
800		†† 40932	252.00		†† 62347	456.00		
1000	*107366	†107373	295 - 20	*114642	114646	532.80		
1000		††107374	295.20		††114648	532.80		
1200	* 40902	† 40929	338.40	* 60781	60799	609.60		
1200		†† 40935	338.40		††62348	609.60		

# Alternating Current—Plain Shunt Trip Back Connected 1Single Pole, 650 Volts or Less 1Double Pole, 480 Volts or Less

	7	,		'	*	
100	114521	114545	\$64.80	114520	114544	\$93.60
200	114524	114548	79.20	114523	114547	120.00
300	114527	114551	93.60	114526	114550	146.40
500	114530	114554	127.20	114529	114553	196.80
600	*114533	114557	148.80	*114532	114556	240.00
800	*114536	114560	168.00	114535	114559	252.00
1000	*114539	114563	196.80	114538	114562	295.20
1200	*114542	114566	225.60	114541	114565	338.40

#### Triple Pole, 65 Volts or Less

	List	Nos.———		List Nos			
Amp. 100 200 300 500	On 1½ In.  Base 114650 114652 114654 114056	On 1½ or 2 In. Panel 114666 114668 114670 114672	Each \$158.40 175.20 216.00 304.80	Amp. 600 800 1000 1200	On 1½ In. Base  *114658  *114660  *114662  *114664	On 1½ or 2 In. Panel 114674 114676 114678 114680	List Price Each \$357.60 369.60 432.00 496.80

<sup>\*</sup> Mounted on 1½ inch base.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

<sup>†</sup> For mounting on  $1\frac{1}{2}$  inch panel.

<sup>††</sup> For mounting on 2 inch panel only. 

† The coils used with the shunt trip breaker will operate on any direct current voltage (650 or less).



Circuit Closing Switch



Combined Circuit Closing and Circuit Opening Switch



Circuit Opening Switch

### Type C, Form P, Carbon Break—Attachments Alternating and Direct Current

Shunt trip and low voltage release attachments where mounted on a standard multiple breaker trip out all poles.

Shunt trip should be connected in circuit only momentarily.

Low voltages can be connected in circuit continuously. Always specify voltage so proper resistance can be supplied. Low voltage releases at approximately one-half voltage.

†Shunt Trip Attachment

Alternating Current	Direct Current	Voltage List Price		with Circuit Breaker		
List No. of Attachment	List No. of Attachment	of Circuit	Each	Ampere Capacity	Poles	
36267	36267	650 or less	\$12.00	15- 600	Single, Double, Triple	
43371	36269 36268	650 or less.	$12.00 \\ 12.00 \\ 12.00$	800-1200 800-1200 800-1200	Single	
36268	30208	250 or less	12.00	800-1200	Double and Triple	

Approximate shipping weight, 10 pounds. Should be left in circuit only momentarily.

#### **!Under Voltage Release Attachment**

Alternating Current	Direct Current		**List	Price	Used wit	th Circuit Breaker
**List No. of Attach- ment	**List No. of Attach- ment	Voltage of Circuit	Alternating Current	Direct Current	Ampere Capacity	Poles
43362 43363 43364 43368 43369 43370	36258 36259 36260 36264 36265 36266 36261 36262	125. 250. 650 (480)*. 125. 250. 650 (480)*. 125. 250. 650 (480)*. 125.	\$19.20 21.60 26.40 19.20 21.60 26.40	\$16.80 19.20 24.00 18.00 20.40 25.20 16.80 19.20	15- 600 15- 600 15- 600 800-1200 800-1200 800-1200 800-1200	Single and Double Single and Double Single and Double Single Single Single Double Double
43365 43366 43367	00202	125. 250. 650 (480)*	19.20 21.60 26.40		800-1200 800-1200 800-1200	Double and Triple Double and Triple Double and Triple

Approximate shipping weight, 15 pounds.

\*For use on alternating current only at 480 volts. Attachments with 650 volt, 480 volt rating adjusted to release at approximately 240 volts. ‡Releases at approximately one-half rated voltage. \*\*Include series resistance for low voltage coil.

**Auxiliary Switches** 

Circuit	Circuit Closing		Circuit Opening		bined Closing nd Opening	For Mounting	Used With Circuit Breaker	
List No.	List Price Each	Tist No.	List Price Each	No.	List Price Each	OD	Amp. Cup.	For
36270 36271 36272 36273 36274 36275	\$7.20 7.20 7.20 7.20 7.20 7.20 7.20	36278 36279 36280 36281 36282 36283	\$7.20 7.20 7.20 7.20 7.20 7.20 7.20	36286 36287 36288 36289 36290 36291	\$13.20 13.20 13.20 13.20 13.20 13.20	Base (1½ ins. thick) 1½ in. panel 2 in. panel Base (1½ in. thick) 1½ in. panel 2 in. panel	15-200	
36276 36277 43372 43373	7.20 7.20 7.20 7.20 7.20	36284 36285 43374 43375	7.20 7.20 7.20 7.20 7.20	36292 36293 43376 43377	13.20 13.20 13.20 13.20	1½ in. panel or base 2 in. panel	600-1200 600-1200	Single or clouble pole direct current, double or triple pole alternating cur- rent. Single pole alternating

32494

32499

32500

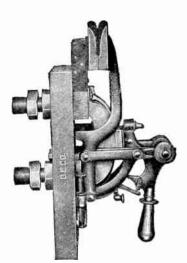
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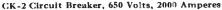
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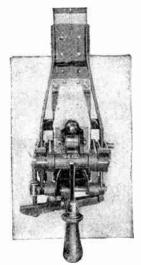
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7.20

### G. E. CIRCUIT BREAKERS







CK Circuit Breaker, 250 Volts, 2000 Amperes

 $\bar{2}$ 

 $\frac{1}{2}\frac{1}{2}$ 

 $2\frac{1}{2}$ 

 $2\frac{1}{2}$ 

13.20

13.20

13.20

13.20

6000

6000

8000

10000

### Type C, Form K, Carbon Break

ALTERNATING CURRENT-OVERLOAD-BACK CONNECTED Type C, Form K-2-Single Pole, 650 Volts Type C, Form K-Single Pole, 480 Volts

			last No.		List No.	
			for	List	for	List
*Ampere	Calib	ration	Mounting on	Price	Mounting on	Price
Capacity	Min.	Max.	2 In. Panel	Each	2 In. Panel	Each
1500	1000	3000	1912301G-3	\$276.00	1912311G-3	\$312.00
2000	1200	4000	1912303G-3	348.00	1912313G-3	396.00
3000	1500	6000	1912305G-3	504.00	1912315G-3	552.00
4000	2000	10000				

#### †Type C, Form K—Double Pole, 480 Volts Type C, Form K-2—Double Pole, 650 Volts or Less \$588.00 1912311G-4 \$672.00 1912301G-4 3000 1500 1000 1912313G-4 828.00 744.004000 1912303G-4 2000 1200 1912305G-4 1032.00 1912315G-4 1148.00 6000 3000 1500 4000 2000 10000

\*Load which the breaker will carry continuously at 30 degrees C, rise or less,

#### DIRECT AND ALTERNATING CURRENT ATTACHMENTS 250 Volts for Use with Type CK

		450	AGITS TOL CRE	with type cis			
Circı Clos			Circuit Opening		ircuit Opening cuit Closing	Thickness of	For
	List		List		List	Panel	Circuit
List	l <sup>í</sup> rice	List	Price	Lisţ	Price	_ fif	Breaker
No.	Each	No.	Each	No.	Each	Inches	Amp,
119885	\$7.20	202098	\$7.20	119887	\$13.20	2	1500
32496	7.20	202099	7.20	32508	13.20	2	2000
104519	7.20	202100	7.20	104522	13.20	$^2$	3000
32497	7.20	202101	7.20	32509	13.20	2	4000
23498	7.20	202102	7.20	32510	13.20	$^2$	6000
32502	7.20	202103	7.20	32514	13.20	$2\frac{1}{2}$	6000
		650	Voits for Use w	vith Type CK-	2		
119891	\$7.20	203815	\$7.20	119893	\$13.20	2	1500
32492	7.20	203816	7.20	32504	13.20	2	2000
104528	7.20	203817	7.20	104531	13.20	2	3000
32493	7.20	203818	7.20	32505	13.20	2	4000
00101		200010	7 00	20 5 00	19 90	9	ROOO

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

7.20

7.20

7.20

7.20

203819

203819

203820

203821

32506

32511

32512

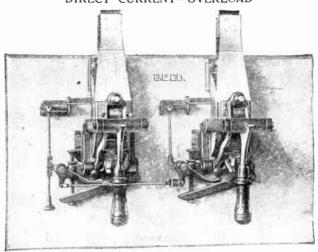
32513

<sup>\*</sup>Double pole, two coil breakers, consist of two single pole overload breakers with mechanical interlock.

### Western Electric

### G. E. CIRCUIT BREAKERS

DIRECT CURRENT-OVERLOAD



D. P., 2000 Amperes, 250 Volts, Type C, Form K

### Type C, Forms K and K-2, Carbon Break

Type C, Form K-Single Pole, 250 Volts

Type C, Form K-2-Single Pole, 650 Volts List No.

Amp. Capac- ty	- Calib Min.	oration . Max.	For Mounting on 2 In. Panel	For $M$ ) inting on $2^{+}_{2}$ In. Panel	List Prize Each	For Mounting on 2 In. Panel	$\begin{array}{c} \text{For} \\ \text{Mounting} \\ \text{on } 2^{+}_{2} \text{ In.} \\ \text{Panel} \end{array}$	List Price Each
1500	1000	3000	1912301 G-1		\$252.00	1912311 G-1		\$288.00
2000	1200	4000	1912303 G-1		321 00	1912313 G-1		360,00
3000	1500	6000	1912305 G-1		456 00	1912315 G-1		504 00
1000	2000	10000	1912307 G-1		600 00	1912317 G-1		648,00
6000	2000	15000	1912309 G-1	1912009 G-3	888 00	1912319 G-1	1912319 G-1	948.00
•	Type C, 1	Form K—	Double Pole, 250	Volts	Type (	C, Form K-2-Do	ouble Pole, 650 V	olts
1500	1000	3000	1912301 G-2		\$540.00	1912311 G-2		\$612.00
2000	1500	4000	1912303 G-2	*	684 00	1912313 G-2		756.00
3000	1200	6000	1912305 G-2		948.00	1912315 G-2		1044.00
4000	2000	10000	1912307 G-2		1248,00	1912317 G-2		1344.00
6000	2000	15000	1912309 G-2	1912309 G-2	1824.00	1912319 G-2	1912319 G-2	1944.00

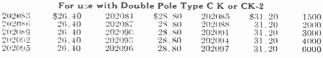
### Type C, Form K, Carbon Break-Direct Current Attachments





#### UNDER VOLTAGE RELEASE ATTACHMENTS For Use with Single Pole C K or C K-2

110-125	i Volts	220-25	0 Volts	~500-6	00 Volts-	
List	List	List	List	List	List	
No.	Price	No	Price	No.	Price	Amps.
2020(62	\$26.40	202043	\$28.80	202064	\$31.20	1500
202065	26,40	202066	28,80	202067	31.20	2000
202068	26.40	202069	28.80	202070	31.20	3000
202071	26.40	202072	28,80	202073	31,20	4000
202074	26.40	202075	28.80	202076	31 20	6000
202077	26.40	202078	28,80	202079	31.20	8000
202086	26.40	202081	28.80	202082	31.20	10000
	W-1	201 Pt 1	1 70 1 70	0 11	011.0	



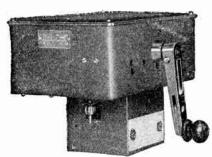


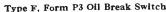
#### SHUNT TRIP ATTACHMENTS

125, 250 or 650 Volts for Use with Type C, Form K or Form K-2

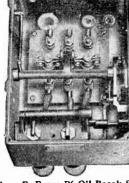
List For Circ	euit Breaker——	Approx. Shpg. Wt.	List Price
No	Amperes	in Lbs.	Each
119877	1500	1.5	\$18,00
32456	2000	15	18.00
104513	3000	15	18.00
32457	4000	15	18.00
324:58	6000	15	18.00
32459	8000	15	18.00
32459	10000	15	18.00

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.









Type F, Form P6 Oil Break Switch

Types F, Forms P3 and P6 Oil Switches

Type F, Forms P3 and P6 are designed specially for use in industrial plants in connection with induction mators of capacities not in excess of 25 horse power at 600 volts, or with normal current ratings not greater than 50 amperes at voltages less than 600. They are arranged for mounting directly on a wall, post, or where used with spinning frames in textile mills on the frame itself. When mounted on the spinning frame the switch is operated by a shipper rod. The live parts being entirely enclosed the switches are particularly suitable for use in factories in which the air contains inflammable particles, or where explosive materials are prevalent. materials are prevalent.

The Type F, Form P3 Oil Switch is made non-automatic only.

The Type F, Form P6 Oil Switch is made automatic only.

In the main these switches are similar and differ only in a

few details.

Capacities. These switches are made in the following capacities:
Type F, Form P3 non-automatic 600 volts, 50 amperes triple pole and four pole, single throw.
Type F, Form P6 automatic 600 volts, 50 amperes, triple pole, single throw.

# Type F, Form P3 Oil Break Switches FOR WALL MOUNTING (SPINNING FRAMES, MACHINE TOOLS) ETC.)

Non-automatic (Quick Make and Quick Break)

Ampere Capacity 50	Voltage 600	Rating Motors of 25	**Poles and Throw T. P. S. T	45	List No. 6406	Price \$39.60
50 50	600 600	h.p. or less	4 P. S. T.	50	6406	

\*\*Include wooden handle and plate to adapt switch for hand operation. As switches are bosed with these parts included, no deduction can be made for their omission.

#### GRAVITY CLOSED, DUST-PROOF CUTOUTS

#### (Without Fuses)

#### For Use With Type F, Form P3 Non-automatic Oil Switches Conduit Drilling

				- · · · · · · · ·		Package	
Amp. Cap. 30 30	Volt- age 600 600	Poles T. P. 4 P.	Top (Service) 1% in. for 1 in. Conduit 1% in. for 1% in. Conduit 1% in. for 1% in. Conduit	Bottom (Feeder) 1¾ in, for 1¼ in. Conduit 2 in, for 1½ in. Conduit 2 in. for 1½ in. Conduit	List No. 48422 58441 48423	Quantity 25 25 25	List Price \$6.84 9.88 9.12

These cutouts take N. E. C. Standard, 600 volt enclosed fuses

### Type F, Form P6 Oil Break Switches FOR WALL MOUNTING (SPINNING FRAMES, MACHINE TOOLS, ETC.)

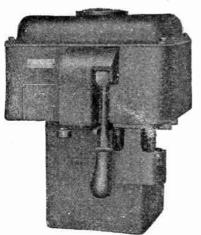
Ampere Capacity		Calibration		Approx. Shpg. Wt.	Only (W	Quick Break Only (Without Quick Make)		ak : and Break
*Switch	†Series Coils‡	Min.	Max.	in Lbs.	List No.	List Price	List No.	List Price
50 50 50 50	2 3 4 6	2 3 4 6	6 9 12 18	70 70 70 70	143104 143105 143106 143107	\$79.20 79.20 79.20 79.20	143117 143118 143119 143120	\$85.80 85.80 85.80 85.80
50 50 50	8 10 12 15	8 10 12 16	24 30 36 48	70 70 70 70	143108 143109 143110 143111	79.20 79.20 79.20 79.20	143121 143122 143123 143124	85.80 85.80 85.80 85.80
50 50 50 50	20 25 30 40	20 25 30 40	60 75 90 120	70 70 70 70	143112 143113 143114 143115	79 20 79 .20 79 .20 79 .20	143°25 143126 143127 123128	\$5.80 \$5.80 \$5.80 \$5.80
50	50	50	150	70	143116	79 20	143129	85.80

<sup>\*</sup>Load which the switch will carry continuously at 28 degrees C. rise or less.
†Load which the series trip coil will carry continuously at 28 degrees C. rise or less. Coil will carry 25 per cent. overload for 2 hours at 45 degrees C. rise.

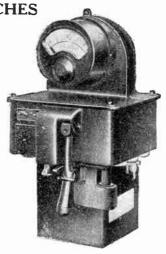
‡For use only in connection with three-phase induction motors of 25 horse power or less.
Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

List

### G. E. OIL BREAK SWITCHES



Form K-20 Oil Switch with Overload and Under Voltage Release



Form K-20 Oil Switch with Overload Under Voltage Release and Cover for Mounting R-6 Ammeter

Includes Transformer Approx. Net Wt. List Price

### Type F Form K-20 Oil Break Switches

2500 VOLTS OR LESS

The Type F Form K-20 Oil Switch is designed especially for the protection of induction motors in industrial application. Switches are made single throw only and are for mounting on wall, post or flat surface.

AUTOMATIC (WITH DOUBLE SERIES LT.L. OVERLOAD TRIP)

	T-:	1. D.I. 6	O 111 A 1 T C	· / AABBER T	JUODLE	SERIES I.I.L. OVERLOAD TRIP)					
	irip	le Pole—S	ingle Li	nrow	* .	Four Pole—Single Throw					
	"Ampere	Capacity	G.E. Oil	Approx.	List	l l	*Ampere	Capacity	G.E. Oil	Approx	List
List		†Series	No. 6	Ship. Wgt.	Price	List		†Series	No 6	Ship. Wgt.	Price
No.	Switch	Coils	in Gal.	in Lbs.	Each	No.	Switch	Coils	in Gal.	in Lhs.	Each
167373	60	2	2	145	\$99.00	167399	60	2	3	185	\$132.00
167374	60	_ 3	2	145	99,00	167400	60	3	3	185	132.00
167375	60	4	2	145	99.00	167401	60	4	3	185	132.00
167376	60	6	2	145	99.00	167402	60	6	3	185	132.00
167377	60	8	2	145	99.00	167403	60	8	3	185	132.00
167378	<sup>#</sup> 60	10	2	145	99.00	167404	60	10	3	185	132.00
167379	60	12	2	145	99.00	167405	60	12	3	185	132.00
167380	60	16	2	145	99.00	167406	60	16	3	185	
167381	60	20	2	145	99.00	167407	60	20	3	185	132.00 132.00
167382	60	25	$\bar{2}$	145	99.00	167408	60	25	3		
167383	60	30	$\bar{2}$	145	99.00	167409	60	30		185	132.00
167384	60	40	2	145	99.00	167410	60		3	185	132.00
167385	60	50	2	145	99.00	167411		40	3	185	132.00
167386	60	60	2	145	99.00	167412	60	50	3	185	132.00
167387	200	70	$\frac{2}{2}$	150	121.00		60	60	3	185	132.00
167388	200	80	2	150		167413	200	70	3 .	195	158.40
167389	200	100	$\frac{2}{2}$		121.00	167414	200	80	3	195	158.40
167390	200	125	$\frac{2}{2}$	150	121.00	167415	200	100	3	195	158.40
167391	200		$\frac{2}{2}$	150	121.00	167416	200	125	3	195	158.40
167391	200	145		150	121.00	167417	200	145	3	195	158.40
		160	2	150	121.00	167418	200	160	3	195	1 <b>5</b> 8.40
167393	200	170	2	150	121.00	167419	200	170	3	195	158.40
167394	200	200	2	150	121.00	167420	200	200	3	195	158.40
167395	300	225	4	200	121.00						
167396	300	250	4	200	121.00						
167397	300	275	4	200	121.00		4444			44747	, , , , , ,
167398	300	300	4	200	121.00						
											* * * * * *

NON-AUTOMATIC (WITHOUT OVERLOAD RELEASE)

				(	A CAPICE	YAD RELEA.	3 5.1		
	Triple	Pole Single	Throw			Four Pole	-Single T	hrow	
List No. 167368 167369 167370	*Ampere Capacity 60 200 300	G,E.Oil No. 6 in Gals, 2 2 4	Approx. Ship. Wt. in Lbs. 130 135 185	List Price Each \$68-20 88-00 127.60	List No. 167371 167372	*Ampere Capacity 60 200	G.E.Oil No. 6 in Gals. 3	Approx. Ship. Wt. in Lbs. 170 180	List Price Each \$101.20 125.40

UNDER-VOLTAGE RELEASE ATTACHMENTS

17160			ircuit	· In	cludes Transforme	r Annre	x. Net Wt.	List Price
No.		Volts	Cycles		Spec. No.		Extra	Each
167421		110	60		none		3	\$13.20
		110	25-40		1		U	φ10.2U
		220	25-40-60		0.50004		_	
167422		440	25-40-60		353001		6	22.00
		550	25-40-60		4			
167423		2200	60		353002		Q.	28,60
167424		2200	25-40		353146		0	
	Site		Mounting Amn		999140		8	30.80
	Switt	III COVERS FOR		neters	. 11		Gaskets	
			Mounts R-6	Approx.	List			List
List	For 8	Switch	Ammeter	Ship. Wt.	Price	For	Switch	Price
No.	Amperes	Poles	Amperes	Extra	Each	Amperes	Poles	Each
167425	60-200	D and T	4 to 300	50	\$17.60	60-200	D and T	
167426	300	D and T	4 to 400	60	19.80			\$8.80
167427	60-200	Four				300	Dand T	8.80
101721	<b>₽</b> 0−200	rour	4 to 300	60	19.80	60-200	Four	8.80

-Circuit-

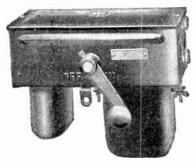
4 to 300 60 19.80 || 50-200 Four 8.80 Overload and Low Voltage Switches

\*Load which the switch will carry continuously at 30 deg. C. rise or less.

†Series coils will carry 25 per cent. overload for two hours at 45 deg. C. rise or less.

Can be secured by combining proper low voltage release attachment with any switch listed above. Give List No. of both switch and under voltage release.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write hearest house.



Type F Form P-10 ()il Switch, 30 Amp., 600 Volt T.-P. S.-T. Automatic with Two Series I T L Overload Trip Colls

### Type F Form P-10 Oil Switches

30 Ampere 600 Volts or Less FOR INDUCTION MOTORS OF 10 H.P. OR LESS

The Type F form P-10 switches are listed triple pole, single throw non-automatic. Automatic with

double series inverse time limit overload trip; and plain low-voltage switches.

These switches are small, compact and inexpensive. Mechanical and electrical features are not surpassed by switches of larger size for motor protection. Although made largely from punchings, all parts are rugged and substantial, ensuring long life under severe operating conditions. All live parts are totally enclosed. Frame, oil vessels and calibrating features are practically dustproof. The frame is provided with a lug to take a padlock by which the switch may be locked in the open position.

The mechanism is simple in construction. All parts held by lock washers, they are practically all made from dies so that they are accurately interchangeable and repair parts can be easily installed. The switch

frame is arranged to take either open or conduit wiring at right hand end of switch.

Automatic switches have series trip coils from 2 to 30 amperes and calibrating from normal to two times normal. These coils are assembled in pairs in a single piece, magnet frame complete with calibrating tubes and time limit features. These units are interchangeable for coils of all ratings. All coils are calibrating triples are calibrating to the coils of all ratings. ed individually.

Triple Pole, Single Throw 600 VOLTS OR LESS Non-Automatic Without Overload Release

List	*A	mpere Capacity———	Approx.	List Price
No.	Switch	Series Coils	Wgt. Lhs.	Each
J71040	30	None	20	\$17.60
	Automat	tic With Double Series I T L C	Overload Trip	
171041	30	2	30	<b>\$</b> 46.2 <b>0</b>
171042	30	3	30	46.20
171043	30	4	30	46.20
171044	30	შ	30	46.2 <b>0</b>
171045	30	. 8	30	46.20
171046	30	10	30	46.20
171047	30	12	30	46.20
171048	30	16	30	46.20
171049	30		30	46.20
171050	30		30	46.20
171051	30	30	30	46.20
	++T T	S. T. Plain Under Voltage Swi	tches	

				Includes		
List	Amp.	Cin	cuit	Transformers	Approx.	List Price
No.	Capacity	Volts	Cycles	Special No.	Wgt. 22	Each
171052	30	110	60	None	$2\overline{2}$	\$35,20
		110	25-40			
171053	30	220	25-40-60	† †191392	25	44.00
		440	25-40-60	191394	20	44.00
		550	25-40-60			

Type F, P-10 Oil Circuit Breaker

Triple Pole, Single Throw, 600 Volts or Less ctive Plugs. Under-Voltage and Overload

Unde	r-voitage bre	akers with r	TOVISION TOL	I torective I rak	s, Oliuci-Volta	ge alla Over	ioau
List	Amp. Cap.				Includes		List
No.	Breaker	Plugs	Volts	Cycle	Transformer	Wgt. Lbs.	Price
177875	30	1 to 20	110	40-60	None	25	\$38,00
			( 110	25			
177876	30	1 to 20	220	25-40-60	191392	30	46.00
311610	90	1 (0.20	1440	25~40~60 {	191092	30	40.00
			550	25-40-60			

List No. and List Price does not include the protective plug.

\*Load which the switch will carry continuously at 30 deg. C. rise or less. †Auto-Transformer with tap tagged to indicate proper connections for various voltages. †Release at approximately one-half rated voltage. Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

Operating Lever for Mounting on 1½ Inch or 2 Inch Panel

# G. E. OIL BREAK SWITCHES Type F, Form K-13 Oil Break Switches

3300 VOLTS-HAND OPERATED-200 AMPERES†

						ting——	For Pane Switch on	d Pipe Mor	inting <del></del> e, 5 Inch
		Poles	Throws	Approx. Shpg. Wt. in Lbs.	List No.	List Price	Approx. Shpg. Wt. in Lbs.	List No.	List Price
4		D. P. T. P. 4 P. D. P. T. P. §4 P.	S. T. S. T. S. T. D. T. D. T. D. T.	80 80 100 130 140 170	129704 129705 129706 129707 129708 129709	\$68.64 84.48 102.96 118.80 166.52 180.84	90 90 110 140 150 180	129734 129735 129736 129737 129738 129739	\$76.56 92.40 110.88 129.36 157.08 191.40
		D. P. D. P.	S. T. D. T.	100 170	$\frac{129728}{129729}$	\$96,36 147.84	110 180	$\frac{129758}{129759}$	\$104.28 158.40
		T. P. 4 P. T. P. 4 P.	8. T. 8. T. D. P. D. T.	120 140 180 210	—Two Coi 129730 129731 129732 129733	lsSeries O \$135,96 154,44 199-32 233,64	verload Tri <sub>l</sub> 130 150 190 220	129760 129761 129762 129763	\$143.88 162.36 209.88 244.20
//		D. P.	S. T.		e with Cu	C—ONE CO rrent Trans \$91.08	formers	10000	#U0 00
		T. P. T. P. 4 P. 4 P. D. P. T. P. T. P. 4 P.	8. T. 8. T. 8. T. 8. T. D. T. D. T. D. T.	90 110 110 150 150 150 150	173653 173654 173655 173656 173657 173658 173659 173660 173661	106.92 106.92 125.40 125.40 142.56 170.28 170.28 204.60	100 100 100 120 120 160 160 160 190	173675 173676 173677 173678 172679 173680 173681 173682 173683	\$99.00 104.84 104.84 133.32 133.32 153.12 180.84 180.84 215.16
é	<u>L</u>	4 P.	D. T.	180 A For Us	173662 UTOMATI se with Cu	204.60 IC -ONE CO Irrent Trans	190 DIL formers	173684	215.16
	natic Triple Pole, hrow Switch on Panel	T. P. 4 P. T. P. 4 P.	8. T. S. T. D. T. D. T.	100 120 160 190	173663 173665 173667 173669	\$126,72 145,20 190,08 232,32	110 130 170 200	173685 173687 173689 173691	\$134.64 153.12 200.64 234.96
				For U	e with Cu	THREE C	OILS formers		
		T. P. 4 P. T. P. 4 P.	S. T. S. T. D. T. D. T.	110 130 170 200	173671 173672 173673 173674	\$155.76 174.24 219.12 253.44	120 140 180 210	$\begin{array}{c} 173693 \\ 173694 \\ 173695 \\ 173696 \end{array}$	\$163,88 182,16 229,68 264,00
Pole	Throws		Approx. Shpg. Wt. in Lbs.		List No.	Switch on Pa	note Control mel Framewo Current Transformers	ork	List Price
D. P. T. P. 4 P. D. P. T. P. 4 P	S. T. S. T. S. T. D. T. D. T. D. T.	No	150 150 150 170 220 230 260	ic—Withou	: Overload 129764 129765 129766 129767 129768 129769	Release	•••		\$102.96 118.80 137.28 187.44 215.16 249.48
				MATIC—O		ners			
D. P. T. P. 4 P. 4 P. D. P. T. P. 4 P. 4 P. 4 P. 4 P.	8. T. 8. T. 8. T. 8. T. 8. T. D. T. D. T. D. T. D. T.		160 160 160 180 180 240 240 240 270 270		173697 173698 173699 173700 173701 173702 173703 173704 173705 173706				\$125,40 141,24 141,24 159,72 159,72 211,20 238,92 238,92 273,24 273,24
				MATIC—TV		ners			
T. P. 4 P. T. P. 4 P.	S. T. S. T. D. P. D. P.		170 190 250 250		173707 173709 173711 173713		••		\$161.04 179.52 258.72 293.04
				ATIC—THE					
T. P. 4 P. T. P. 4 P.	S. T. S. T. D. T. D. T.	Agry Ac	180 200 260 290	t 30 dewenne	173715 173716 173717 173718	0.0	••		\$190.08 208.56 287.76 322.08
	F. O. B. Factory, S						t house.		

### Type F, Form K-13 Oil Break Switches

UNDER-VOLTAGE RELEASE ATTACHMENTS

A complete line of new under-voltage release attachments is listed below for voltages up to and including 550 volts. Above 550 volts, use 110 volt attachment with series resistance in secondary of a voltage or potential transformer.

Plain Under-voltage Operating Levers

The attachments listed are for use with automatic operating levers. Where no overload features are required the left-hand under-voltage attachment for single throw, one coil lever may be used with a special, plain, under-voltage operating lever provided with a tripping toggle for the low-voltage attachment, but otherwise similar to non-automatic mechanism. Plain under-voltage switches are not listed but prices may be obtained by adding the list price of left hand, under-voltage attachment and transformer, if required, to the list price of a non-automatic (single throw) switch and substituting the plain under-voltage operating lever at the extra list price as per the following table:

For Substituting Plain Under-voltage Operating Levers

		*Add to List Price
List		Non-Automatic,
No.	· For Switch Mounted	Single Throw Switch
	On Panel	<b>\$10</b> .56
	On Panel Pipe	
	Remote Control	

\*Double throw switches are usually automatic and would use standard low-voltage attachments as listed. Plain under-voltage, double throw switches will require special consideration. Prices on request.

### \*Under-voltage Release Attachments 25-60 CYCLES

For Single Throw Switch—One Coil Operating Lever Also Plain Under-voltage Operating Lever (Left Hand Only)

	Also Plain Und	er-voltage Operating Le	ever (Left Hand Unly)	
	Approximate	Left Hand	Right Hand	
Line	Ship. Weight	†List	†List	List
Voltage	in Lbs.	No.	No.	Price
<b>‡</b> 110	10	137655	137659	<b>\$2</b> 6,40
220	10	137656	137660	26.40
440	15	137657	137661	<b>30.</b> 36
550	15	137658	137662	<b>30</b> .36
	For Single 7	Throw Switch-Two Coi	il Operating Lever	
<b>11</b> 10	10	137663	137667	<b>\$26.</b> 40
220	10	137664	137668	<b>26.40</b>
440	15	137665	137669	<b>30.</b> 36
55 <b>0</b>	15	137666	137670	30.36
	††For Double	Throw Switch-One Co	oil Operating Lever	
<b>1</b> 110	10	137671	137675	<b>\$26.40</b>
220	10	137672	137676	<b>26.40</b>
440	15	137673	137677	<b>30.</b> 36
550	15	137674	137678	<b>30</b> .36
	For Double	Throw Switch—Two Co	il Operating Lever	
<b>‡110</b>	10	137679	137683	<b>\$2</b> 6.40
220	10	137680	137684	26.40
440	15	137681	137685	30.36
550	15	137682	137686	<b>3</b> 0. <b>3</b> 6

\*Under-voltage release operates at approximately one-half rated voltage.

†Includes series resistance for under-voltage coil, List No. 115968 for 110 volts, List No. 115967 for 220 volts, List No. 115966 for 440 volts, List No. 115965 for 550 volts.

‡For voltages above 550, use 110 volt under-voltage with series resistance and suitable voltage or potential transformer.

††Plain under-voltage operating lever not made for double throw. Use automatic switch with one low-voltage release or refer for special quotation.

#### Shunt Resistance

To be used when under-voltage release is operated by being short-circuited (circuit-closing relays or auxiliary switches).

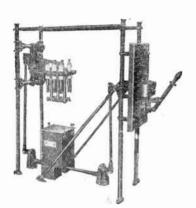
List		Ship. Weight	List
No.	Line Voltage	in Lbs.	Price
137580	110, 220, 450 or 550	5	<b>\$4</b> .80

#### Panels for Mounting

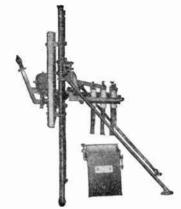
#### Dull Black Marine Finish With 48 Inch Pipe Supports and Floor Brace

			DW16CH	
List No.		All	Capacities	List
of Panel	Description	Form	Throw	Price
133899	16 ins. high, 20 ins. wide, $1\frac{1}{2}$ ins. thick	K-13	S.T.	<b>\$26.40</b>
133900	16 ins. high, 24 ins. wide, $1\frac{1}{2}$ ins. thick			31.68
~ *		1 1		

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.



Triple Pole, Single Throw, K-5 Automatic Oil Break Switch Remote Control



Triple Pole, Single Throw, K-5 Automatic Oil Break Switch Mounted on Panel Pipe Supports

## Oil Break Switches for 600, 4500 and 7500 Volt Alternating Current Service

TYPE F, FORM K-5

The Type F, Form K-5 oil break switch is a thoroughly reliable switch of moderate rupturing capacity for use on alternating current circuits up to 7500 volts.

It is the result of years of study and experience in the design, manufacture and use of oil break switches, and contains every essential for long and reliable service. It is liberally designed and conservatively rated, simple in construction and operation, made of the best materials, and is economical in initial cost, cost of installation and cost of upkeep.

The are incident to opening the circuit is confined in the oil vessel under oil and cannot involve adjacent apparatus. The circuit is ruptured at the zero point of the wave, reducing to a minimum the possibility of a surge occurring on the line.

#### Capacities

This switch is made in the following capacities:

600 volt, 300 and 500 amperes, double triple and four pole, single and double throw. 800 ampere single throw only.

4500 volt, 200 amperes, double, triple and four pole, single and double throw.

7500 volt, 300 and 500 amperes, single, double, triple and four pole, single and double throw.

The double throw switch consists of two single throw units with a common frame and oil vessel. The operating levers are equipped with a simple and positive mechanical interlock so arranged that one switch only can be closed at a time.

#### Types

The Type F, Form K-5 oil break switches can be furnished as follows:

Non-automatic-Without overload release.

Automatic—With overload release, with trip coils for connecting to the secondaries of current transformers, up to 7500 volts; or with trip coils for connecting directly in series with the main circuit, up to 2500 volts.

#### Oil

For oil break switches we recommend No. 6 transil oil, which is prepared by a special process and is of superior quality because of its resistance to carbonizing and its high flash point.

#### Hand-operated Switches Include

Switch complete with oil, cable terminals and insulating sleeves,

Operating mechanism except pipe connecting rods,

Current transformers (for automatic current transformer trip switches only).

#### Solenoid-operated Switches

Solenoid-operating mechanisms can be furnished for operating any of the K-5 switches. These consist of the ordinary closing and opening solenoids wound for 125, 250 or 600 volts direct current, and are operated by suitable control switches and relays.

# Type F, Form K-5 Oil Break Switches

Hand Operated-Without Overload Release-Non-automatic

Poles and Throw	No. Coils	Amp. Cap.	Voltage	FOR	PANEL MOUN Switch on Pane		Su	OR PANEL PH MOUNTING itch on Panel Pi in Back of Pane	pe,
				Approx. Shpg. Wt. in Lbs.	List No.	List Price	Approx. Shpg. Wt. in Lbs.	List No	List Price
D. P.—S. T. D. P.—S. T. D. P.—S. T. D. P.—S. T. D. P.—S. T. T. P.—S. T. 4 P.—S. T. 4 P.—S. T.		300 500. 800. 300. 500. 800. 300. 500.	600 600 600 600 600 600 600 600	160 170 190 170 190 200 230 250 260	1870616G-19 1870616G-22 1870616G-25 1870616G-20 1870616G-23 1870616G-23 1870616G-21 1870616G-21 1870616G-21	\$93.72 121.44 176.88 112.20 153.12 233.64 138.60 190.08 300.96	170 180 200 180 200 210 210 240 260 270	1870618G-19 1870618G-22 1870618G-25 1870618G-20 1870618G-23 1870618G-23 1870618G-21 1870618G-24 1870618G-24	\$108 24 135 96 191 40 126 72 167 64 248 16 153 12 204 60 315 48
D, P.—D, T. D, P.—D, T. T, P.—D, T. T, P.—D, T. 4 P.—D, T. 4 P.—D, T.		300	600 600 600 600 600 600	260 290 280 310 350 410	1870616G-28 1870616G-31 1870616G-29 1870616G-32 1870616G-33 1870616G-33	\$174.24 220.44 208.56 277.20 244.16 333.96	270 300 290 320 360 420	1870618G-28 1870618G-31 1870618G-29 1870618G-32 1870618G-30 1870618G-33	\$195.30 242.86 231.08 299.64 270.60 359.40
D. P.—S. T. D. P.—S. T. D. P.—S. T. T. P.—S. T. T. P.—S. T. T. P.—S. T. 4 P.—S. T. 4 P.—S. T.		200 300. 500. 200. 300. 500. 200. 300. 500.	600 600 600 600 600 600 600 600 600	150 180 190 160 190 200 180 250 260	1870615G-1 1870615G-4 1870615G-7 1870615G-5 1870615G-5 1870615G-8 1870615G-6 1870615G-9	\$91.08 106.92 132.00 105.60 129.36 166.32 126.72 162.36 209.88	160 190 200 170 200 210 190 260 270	1870618G-10   1870618G-13   1870618G-16   1870618G-14   1870618G-14   1870618G-17   1870618G-15   1870618G-15	\$105.60 121.44 146.52 120.12 143.88 180.84 141.24 176.88 224.40
D. PD. T. D. PD. T. D. PD. T. D. PD. T. T. PD. T. T. PD. T. T. PD. T. 4 PD. T. 4 P. D. T.		200. 300. 500. 200. 300. 500. 200. 300. 500.	3300 3300 3300 3300 3300 3300 3300 330	250 290 300 270 310 320 320 400 420	1870613G-10 1870613G-13 1870615G-16 1870615G-11 1870616G-14 1870616G-17 1870616G-12 1870616G-15 1870616G-18	\$170.28 194.04 233.64 195.35 233.64 297.00 231.00 283.80 365.64	260 310 310 280 320 330 330 410 439	1870618G-1 1870618G-4 1870618G-7 1870618G-2 1870618G-5 1870618G-8 1870618G-6 1870618G-6	\$192.72 216.48 256.08 217.80 256.08 319.44 253.4 306.23 388.08

#### OVERLOAD ATTACHMENTS

List	Number of Coils	Rating	List Price
. 10.	Cono		\$.10.56
1912361G-1	1	12 volts, D.C	10.56
1912361G-2	ì	24 30 volts, D.C	10.56
1912361G-3	1	110 125 volts, D.C	
1912361G-4	i	990-950 volta D.C.	10.56
1912361G-5	1	440 volts, A.C	10.56 10.56
1912361G-6	1	220 volts A C	
1912361G-7	1	110 volts, A.C	$\frac{10.56}{10.56}$
1912362G-1	i	5 ampere, A.C. 4 ampere, A.C.	10.56
1912362G-2	1	4 amperc, A.C	18.48
1912362G-3	2	5 ampere, A.C.	18.48
1012362G-4	2	4 ampere, A.C	
1912362G-5	3	4 ampere, A.C. 5 ampere, A.C.	26.40
1912362G-6	3	4 ampere, A.C.	26.40

The overload attachment does not include current transformer

Type TK-5 oil circuit breaker hinged armature type under-voltage. Release for mounting at left of operating lever.

	List		List
Volts	Price	\'olts	Price
110		440	\$33.00
200	_33.00	550	36.96

Delivery F O B Factory, Schenectady, N Y. For warehouse deliveries write nearest house.

TYPE FK-5

### Hand Operated-Without Overload Release-Non-Automatic

OPERATING MECHANISM FOR MOUNTING ON 11/2 INCH OR 2 INCH PANEL

			Su	Remote Cor	
			Approx.	The mountains on a	ape I tume work
Poles and	Ampere		Shpg. Wt.	List	List
Throw	Capacity	Voltage	in Lbs.	No.	Price
D. P.—S. T.	200	4500	230 270	1870617G-1	\$129.36
D. P.—8. T. D. P.—8. T.	300 500	7500 7500	270 280	1870617G-4 1870617G-7	145, 20 168, 96
T. P.—S. T.	200	4500	240	1870617G-2	143.88
T. P.—S. T.	300	7500	290	1870617G-5	167.64
T. P.—S. T.	500	7500	4()()	1870617G-8	203.28
4 P.—S. T. 4 P.—S. T.	200 300	4500 7500	270 330	1870617G-3 1870617G-6	163.68 201.96
4 P.—S. T.	500	7500	340	1870617G-9	248.16
D. P.—D. T.	200	4500	330	1870617G-10	
D. P.—D. T.	300	7500	380	1870617G-13	
D. P.—D. T. T. P.—D. T.	500 200	7500 4500	300 340	1870617G-10 1870617G-11	
T. P.—D. T.	300	7500	390	1870617G-14	
T. P.—D. T.	500	7500	400	1870617G-17	
4 P.—D. T.	200	4500	390 470	1870617G-12 1870617G-15	
4 P.—D. T. 4 P.—D. T.	300 500	7500 7500	480	1870617G-18	
4117. 1.	000	117777	2007	2010021011	, , , , , , , , , , , , , , , , , , , ,
		OIL CIRCUIT	BREAKER PAN	ELS	-List Price
List No.	Description	Throw		Shpg. Wt. D.B.M.F.S	
M-1136755}	Non-automatic	{ S	16x20x1 <sup>1</sup> <sub>2</sub> 16x24x1 <sup>1</sup> 2	100 \$29,04 130 31,68	\$30.36 \$34.32 33.00 36.96
M-1136755 ∫ M-1136755 }		) U	16x20x112	100 29.04	30.36 34.32
M-1138755	Inst. overlead without L. V	. R. D	16x24x1 <sup>1</sup> 2	130 31.68	33.00 36.96
M-1136755)	Inst. overload with L. V. R	. { S	16x20x11/2	100 31.68 130 34.32	33.00 36.96
M-1136755 { P-1604858 {	Time limit overload	} 8	16x24x11/2 36x20x11/2	130 34.32 180 54.12	35.64 39,60 59,40 64,68
P-1604858 }	without L. V. R.	( D	$36x24x1\frac{1}{2}$	210 62.04	66.00 - 72.60
P-1604858	Time limit overload with L.	$V.R. \left\{ egin{array}{c} \mathbf{S} \\ \mathbf{D} \end{array} \right.$	$\frac{36 \times 20 \times 11\sqrt{2}}{36 \times 24 \times 11\sqrt{2}}$	180 59,40 210 64,68	64.68 69.96 68.64 75.24
P-1604858 \$		( *-			00.04 /3.24
			TING REMOTE		
			Breakers on Pipe	e framework or Three Trip Coils	
	But Without Prov	ision for Over	load Relay or U	nder Voltage Releas	se
* * . **	Gira in Luches Th	row Shpi	TV at IN U	List I	
List No. P-1603490	Size in Inches Th	S Supp			3 S. B.V.M .68 \$68,64
P-1603490	1 x20x11/2	D			.88 81.84
	Automatic With	One or Two T	rip Coils and Un	der Voltage Release	
	But		sion for Overload	•	
P-1603490	16x16x1½	8	160 190		.32 \$72.60
P-1603490	1 x20x1½	D	190	79.20	0.52 84.48
	Automatic Wi But	th Three Trip Without Provi	Coils and Undersion for Overload	r-voltage Release I Relay	
P-1603490	16x20x1½	S			5.24 \$79.20
P-1603490	16x24x1½	D	220	81.84 83	88.44
	Autometic With	One, Two or 1	hree Trip Coils	and Overload Relay,	
			for Under Vol	-	
P-1603490 P-1603490	36x16x1 <sup>1</sup> 4 36x20x1 <sup>1</sup> 4	S D	230 250		1.84 \$88.44 08 96.36
1-1003100	Automatic With One or				
P-1603490	36x16x1 <sup>1</sup> / <sub>2</sub>	S Trip Cons			.48 \$91.08
P-1603490	36x20x11/2	D			.04 101,64
	Automatic Wish Th	ree Trip Coile	Overload Relay	and Under-voltage I	Release
	Automatic with in				
P-1603490	36x20x1½	S	250 \$	_	3.44 \$93.72
P-1603490 P-1603490			250	\$84.48 \$88	

### Tripping Current Transformers

This transformer has been developed for tripping oil circuit breakers, for Type FK-5 switches as listed above.

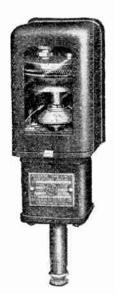
#### 4500 VOLTS OR LESS-25-125 CYCLES

			Approx.		11			Approx.	
List	Amp. Cap.	1	Shpg. Wt.	List	List	Amp.		Shpg. Wt.	List
No.	Prim.	Ratio	Lbs.	Price	No.	Cap.	Ratio	Lbs.	Price
233231	5	1-1	27	\$20,40	233242	100	20-1	27	\$20.40
233232	10	2-1	27	20.40	233243	125	25-1	27	21.60
233233	12.5	2.5-1	27	20.40	233244	150	30-1	27	21.60
233234	15	3-1	27	20.40	233245	200	40-1	27	21.60
233235	20	4 1	27	20,40	233246	250	50-1	27	22.80
233235	25	5 1	27	20,40	233247	300	60-1	27	22,80
233237	30	6.1	27	20.40	233248	400	80-1	30	24.00
233238	40	8-1	27	20.40	233249	500	110-1	30	24.00
233239	50	10-1	27	20,40	233250	600	120-1	30	26.40
233240	60	12-1	27	20,40	233251	800	160-1	30	26.40
233241	80	16-1	27	20.40	l				

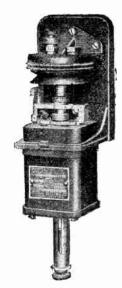
### G. E. ALTERNATING CURRENT RELAYS



P-Q Instantaneous Circuit Closing



P-Q Inverse Time Limit Circuit Closing



P-Q 3 Inverse Time Limit Circuit Opening

### Alternating Current Relays

#### SINGLE POLE—OVERLOAD

#### For Use with Current Transformers Having 5 Ampere Secondaries

All relays are made from the same general parts, consequently any type relay can be readily changed into another type.

These relays are made in single pole units only and replace types P. F. and P. G.

The cover for the relay is provided with a large glass window so that casual inspection can be made without removing cover from relay.

The relay is made dustproof, not only with respect to the upper portion, but also with respect to the coil and calibrating details, all slots are filled and the calibrating tube is provided with a shutter which when turned completely prevents the entrance of foreign matter. After relay is adjusted this locking feature automatically returns to the locked position. In the older types of relays a wrench was required for locking parts.

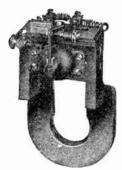
#### For Mounting on 11/2 or 2 Inch Panels

<b>*</b> • •			.———Descri	Normal Normal	Approx. Shpg.	List Price
List No.	Туре	Circuits	Function	Position	Wt.	Each
		SINGLE POLI	E-INSTANTANE	OUS OVERLOAD		
199735 199737	1'Q 1'Q-3	One One	Closing Opening	Open Closed	10 10	$$22.44 \\ 25.08$
		SINGLE PO	LE-INVERSE T	IME LIMIT		
199738 199739	PQ PQ-3	One One	Closing Opening	Open Closed	12 12	\$27.22 30.36
	SIN	GLE POLE—DE	FINITE TIME L	IMIT OVERLOAD		
199740 199741	PQ-3	One One	Closing Opening	Open Closed	12 12	$$27.22 \\ 30.36$

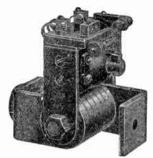
Current transformers not included in price.

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

### G. E. RELAYS



Type R, Form B-2



Type R, Form B-3

### Direct Current Reverse Current Relays

Type R, Form B-2

The Type R, Form B-2 Reverse Current Relay is designed for mounting on circuit breaker studs. It consists of a horseshoe magnet with a shunt wound armature pivoted between its poles. The magnet is mounted on the current-carrying stud of the circuit breaker between the back of the panel and the first contact or supporting nut, and is placed in a vertical position.

The contacts are insulated from the magnet, permitting the use of an auxiliary circuit for the tripping device, independent of the circuit controlled by the circuit breaker. This is highly desirable on 600 volt systems where a reliable low voltage auxiliary source is available.

#### Type R, Form B-3

These relays are for the same purpose and perform the same functions as the Type R, Form B-2, Reverse Current Relays, and they are similar in their method of operation.

Being for smaller capacity service, a coil instead of the stud is used to furnish a field for the armature.

### Instantaneous—Single Pole—Circuit Closing (Normally Open) (No Covers)

#### Type R, Form B-2 Calibration

Size of

			Operates on	Circuit	Shipping	
†List		*Ampere	Reversal	Breaker	Weight	List Prica
No.	Volts	Capacity	Amperes	Stud in Ins.	Lbs.	Each
43462	125	800	200	118	20	\$105,60
102867	125	1000	200	1)4	20	105.60
43463	125	1200	200	$1\frac{1}{4}$	20	105,60
64813	125	1500	200	115	20	105,60
43464	125	2000	200	1 3 4	20	105.6 <b>0</b>
64814	125	3000	200	2	20	105.6 <b>0</b>
<b>4</b> 346 <b>5</b>	125	4000	200	$\frac{21}{2}$ $\frac{23}{4}$	20	105,60
102868	125	5000	200	234	20	105.60
43466	125	6000	200	$3\frac{1}{4}$	20	105,60
64819	125	8000	200	4	20	105,60
43467	250	800	200	$1\frac{1}{8}$	20	105,60
102869	250	1000	200	114	20	105.60
43468	250	1200	200	134	20	105.60
64815	270	1500	200	112	20	105.60
43469	250	2000	200	134	20	105,60
64816	250	3000	200	$\frac{2}{2!}$	20	105,60
43470	250	4000	200	212	20	105,60
102870	250	5000	200	237	. 20	105.60
43471	250	6000	200	3)4	20	105.60
64820	250	8000	200	4	20	105,60
43472	550	800	200	118	20	105.60
102871	550	1000	200	1 1/4 1 1/4 1 1/2 1 3/4	20	105.60
43473	550	1200	200	11/4	20	105.60
64817	550	1500	200	112	20	105,60
43474	550	2000	200	134	20	105,60
64818	550	3000	200	2	20	105,60
43475	550	4000	200	$2\frac{1}{2}\frac{2}{2}$	20	105,60
102872	550	5000	200	$\frac{212}{234}$	20	105.60
43476	550	6000	200	$3\frac{1}{4}$	20	105,60
64821	550	8000	200	4	20	105.60
4.7	2 2 2 2 4 1 1	711	1 . 00 1	7.9 1 1		

\*Load which the relay will carry continuously at 30 degrees C. rise or less.

tProper series resistance for potential circuit is included.
Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

### G. E. RELAYS

### D.C. Reverse Current for Circuit Breakers

### Instantaneous—Single Pole—Circuit Closing (Normally Open)

(No Covers)

Type R, Form B-3

List No.	Volts	Ampere Capacity	Calibration Operates on Reversal Amperes	Size of Circuit Breaker Stud in Ins.	Shipping Weight Lbs.	List Price Each
43441	125	15	4		15	\$77.88
43442	125	25	6	3 0	15	77.88
102858	125	40	10	3/8 3/8 3/8 3/8	15	80.52
43443	125	50	12	3 0	15	80.52
102859	125	75	20	3,0	15	80.52
43144	125	100	25	7.8 3.8 3.8	15	80.52
43445	125	200	50	1.5	15	80.52
43446	125	300	75	5 8	15	80.52
43447	125	500	125	2 5 8 7,8	15	80.52
102860	125	600	150	1 0	15	88.44
43148	250	15	4	3 8	15	77.88
43449	250	25	6	3 8	15	77.88
102861	250	40	10	3 (3) 8 (8) 8 (2) (8) (8) (8) (7) 7 7 7 7 7 8	15	80.52
43450	250	50	12	3,8	15	80.52
102862	250	75	20	3 6	15	80.52
43451	250	100	25	3,8	15	80.52
43452	250	200	50	1/2	15.	80.52
43453	250	300	75	5, 2	15	80.52
43454	250	500	125	7/8	15	80.52
102863	250	600	150	7/8	15	88.44
43455	650	15	4	1	15	77.88
43456	650	25	6	38	1.5	77.88
102864	650	40	10	3 8	15	80.52
43457	650	50	12	3	15	80.52
102865	650	75	20	3. 0	15	80.52
43458	650	100	25	3 8	15	80.52
43459	650	200	50	3 8 1 2	15	80.52
43460	650	300	75	- R	15	80.52
43461	650	500	125	7/8	15	80.52
102866	650	600	150	1	15	88.44

### Direct Current—Overload—Low Tension

SINGLE POLE CIRCUIT CLOSING TWO CONTACT

600 Volts or Less

Instantaneous

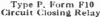
Inverse Time

Type P Form	Amp.	Calib	ration	Shpg.	List Price	Type P Form C25	Amp.	Calib	ration	Shpg.	List
B-25 List No.	Capacity	Min.	Max.	Wgt.	Each	List No.	Capacity	Min.	Max.	Wgt.	Price Each
64802	15	10	25	20	\$26.10	102831	15	10	25	20	\$40.92
64803	25	15	40	20	27.72	102832	25	15	40	20	42.24
64804	40	20	60	20	27.72	102833	40	20	60	20	42.24
64805 64806 64807	. 50 75 100	25 40 50	70 125 150	20 20 20 20	27.72 27.72 27.72	102834 102835 102836	50 75 100	25 40 50	75 125 150	20 20 20	42.24 42.24 42.24
120990	150	75	225	20	39,60	120902	150	75	225	20	52.80
64808	200	100	300	20	39,60	102837	200	100	300	20	52.80
64809	300	150	450	20	39,60	102838	300	150	450	20	52.80
$\begin{array}{c} 120991 \\ 64810 \\ 102829 \end{array}$	400	200	600	30	42.24	120993	400	200	600	30	55.44
	500	250	750	30	42.24	102839	500	250	750	30	55.44
	600	300	900	30	59.40	102840	600	300	900	30	72.60
64811	800	400	1200	35	59.40	102841	800	400	1200	35	72.60
102830	1000	500	1500	35	66.00	102842	1000	500	1500	35	79.20
64812	1200	800	1800	35	71.28	102843	1200	800	1800	35	84.48

Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

#### G. E. RELAYS







Type P, Form B-45 Solenoid Control Relay With Support

### Alternating Current Relays—Low Voltage

INSTANTANEOUS—TYPE P, FORM F10 CIRCUIT-CLOSING TWO CONTACT 600 VOLTS OR LESS FOR MOUNT-ING ON FRONT OF PANEL

The contacts of this relay are similar to those of circuit-closing overload relays except that they are inverted. These relays are connected directly across the line with proper resistance in series with the relay coil. As long as the potential is normal the contact cone is held above the contacts. When the potential falls below one-half normal the core and plunger rod drop and close the contact. This relay does not pick up its own plunger. The plunger rod is pushed up by hand after the potential circuit is established. Low-voltage relays are generally used in connection with a low-voltage release or shunt trip coil on an oil switch or a circuit breaker. They are used in connection with motor-hooster sets to prevent a disastrous speed of the booster which might result from the loss of alternating current power. They are also sometimes used for indicating numbers.

	SINGLE POLE				DOUBLE POLE			
		Approx. Shpg.		Approx. Shpg.				
List		Wt. in	List	List		Wt. in	List	
No.	Volts	Lbs.	Price	No.	Volts	Lbs.	Price	
102819	110 (125)	10	\$26.40	102824	110 (125)	15	\$42.24	
102820	240	10	26.40	102825	240	15	42.24	
102821	370	10	29.04	102826	370	15	50.16	
102822	480	10	29,04	102827	480	15	5 <b>0</b> , 16	
102823	600	10	29.04	102828	600	15	5 <b>0</b> .16	

#### \*OVERLOAD-LOW TENSION SERIES

#### Single Pole-Circuit-closing-Two Contact 600 Volts or Less-Back Connected for Mounting on Front of Panel

Instantaneous	Inv⊬rse				Approx.		
Type P. Form B36	Type P, Form C36				Shpg.	List	Price
l.ist	List	*Ampere	Calibra	ition	Wt. in	Instan-	Inverse
No.	No.	Capacity	Min, ,	Mux.	Lbs.	taneous	Time
102783	102796	15	10	25	20	\$26,40	\$40.92
102784	102797	25	15	4()	20	27.72	42.24
102785	102798	40	20	(II)	20	27.72	42,24
102786	102799	50	25	75	20	27.72	42.24
102787	102800	75	40	125	20	27.72	42,24
102788	102801	100	50	150	20	27.72	42.24
120952	120954	150	75	225	20	39.60	52.80
102789	102802	200	100	300	20	39,60	52,80
102790	102803	300	150	450	20	39.60	52.80
120953	120955	400	200	6(月)	30	42.24	55.44
102791	102804	500	250	750	30	42.24	55,44
102792	102805	600	300	9(3)	30	59.40	72.60
102793	102806	300	400	1200	35	59,40	72.60
102794	102807	1000	500	1500	35	66.50	79.20
102795	102808	1200	600	1800	35	71.28	84.48
*Load which	the relay will carry con	ntinuously at 30	0 degrees C. rise	or less.			

### Direct Current Relays

#### SOLENOID CONTROL-TYPE P, FORM B-45

Single-Pole-circuit Closing-600 Volts or Less-For Use with Solenoid Operated Oil Switches and Circuit Breakers

The Type P Form B-45 relay supersedes the Form B-10. Mounting. The support furnished is so arranged that it Mounting. The support furnished is so arranged that it may be mounted on flat surface or on vertical or horizontal pipe.

Construction. The B-45 is similar to the B-10 except that the break is longer and more rapid. A flexible lead is provided between the movable contact arm and its support, insuring positive connection. The relay can be operated by means of the insulated button.

Contacts. Copper contacts only are furnished and will control circuits of 150 amperes at 125 volts, 75 amperes at 250 volts and 25 amperes at 600 volts. Relays will operate positively at one half of rated voltage.

	Voltage of	ror		Approx.	
*	Control	Mounting		Ship, Wt.	
List No.	Circuit	on	Circuit	in Lbs.	List Price
177898	125	Panel or 114 in.		20	\$21.60
177899	250	vertical or hori-	One	20	24.30
177900	600	zontai pipe.		20	29.70

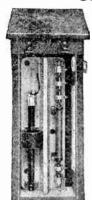
<sup>\*</sup>List No. includes yoke for 114 inch pipe mounting - For flat surface mounting customer will substitute proper length

bolts.

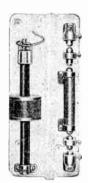
Prices on reverse phase, reverse current and series overload relays, low voltage and signal relays sent upon request.

Delivery F. O. B. Factory, Schenectady, N. Y. For warenouse deliveries write nearest house.

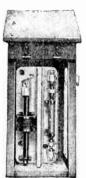
### GARTON-DANIELS LIGHTNING ARRESTERS



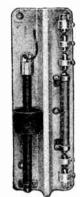




No. 50088



No. 50089



No. 50091

### Alternating Current Types

Garton-Daniels Alternating Current Arresters are furnished according to practically the same specifications applying to the direct current arresters listed on following page. They combine the well recognized principles of a small air gap, a low series resistance, and a circuit-breaker; these three features in combination giving an arrester unsurpassed in points of efficiency, reliability and durability.

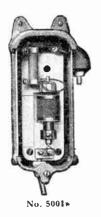
List					Net	List
No.	$\mathbf{Type}$	' Voltage	Description	Dimensions Inches	Weight P	rice Each
<b>3</b> 00	$\mathbf{T}$	Up to 350	Iron covered	$3\frac{1}{2} \times 3\frac{1}{2}$	2 lbs, 10 ozs,	\$3.60
50014	$\mathbf{DF}$	Up to 350	Station	8½ x 3 x 3	$2\frac{3}{4}$ lbs.	7.68
$50016\dots$	$\mathbf{DF}$	Up to 350	Iron covered	$12\frac{1}{2}$ x 6 x 4	$11\frac{1}{8}$ lbs.	9.36
50015	$\mathbf{DF}$	Up to 350	Wood covered	$13\frac{1}{2} \times 7 \times 6$	63/4 lbs.	7.68
50017	$_{\mathrm{FH}}$	350 to 1,200	Station	$10^{1/2}$ x $3^{5}$ x 3	43/4 lbs.	8,40
50018	$_{ m FII}$	350 to 1,200	Iron covered	$14\frac{1}{8}$ x $6\frac{1}{2}$ x $4\frac{1}{2}$	15% lbs.	9.84
50019	$\mathbf{FH}$	350 to 1,200	Wood covered	$14\frac{1}{2} \times 7 \times 6\frac{1}{4}$	83/4 lbs.	8.40
50020	$\mathbf{CE}$	1,200 to 2,500	Station	14 x $3\frac{1}{2}$ x $3\frac{3}{4}$	63/4 lbs.	10.56
50021	$^{ m CE}$	1,200 to 2,500	Iron covered	167/8 x 6 x 5	21 Ibs.	12.00
50022	$^{ m CE}$	1,200 to 2,500	Wood covered	19 x 7½ x 7¼	12½ lbs.	10.56
50088	$_{ m CE-2}$	1,200 to 2,500	Station type	11 x $4\sqrt[3]{4}$ x $3\sqrt[1]{8}$	8 lbs.	10.56
$50089\dots$	$ ext{CE-2}$	1,200 to 2,500	Wood covered	18 x 8½ 6½	13½ lbs.	10, 56
$50329\ldots\ldots$	F-2S	2,500-3ph. Y	Station type	$14\frac{3}{8}$ x $4\frac{3}{4}$ x $3\frac{1}{8}$	11½ lbs.	12.00
$50330\ldots$	F-2S	2,500-3ph. Y	Wood covered	$20\frac{1}{2} \times 8\frac{1}{4} \times 6\frac{1}{4}$	153⁄4 lbs.	12.00
$50091\ldots$	F-2	2,500 to 3,500	Station type	$14\frac{3}{8}$ x $4\frac{3}{4}$ x $3\frac{1}{8}$	11½ lbs.	12.00
$50092\ldots$	F-2	2,500 to 3,500	Wood covered	$20\frac{1}{2} \times 8\frac{1}{4} \times 6\frac{1}{4}$	153/4 lbs.	12.00
$50093\ldots\ldots$	CE-2	3,500 to 5,000	Station	34 x 8 x 6 1/8	$26\frac{1}{2}$ lbs.	22.32
$50094\ldots$	CE-2	3,500 to 5,000	Wood covered	33 x 13 x 15½	49 lbs.	22.32
$50095\ldots\ldots$	$\mathbf{F}$ -2	5,000 to 6,600	Station	$39\frac{3}{4} \times 8 \times 17\frac{1}{2}$	41 lbs.	28.56
50096	F-2	5,000 to 6,600	Wood covered	38 x 13 x $15\frac{1}{2}$	55 lbs.	28.56
$50442\ldots\ldots$	F-2S	*6,600 s. ph.	Station Type	$56\frac{1}{2} \times S \times 17\frac{1}{2}$	58 lbs.	46.92
50443	F-2S	*6,600 s. ph.	Wood Covered	$56\frac{5}{8} \times 13 \times 15\frac{1}{2}$	69 lbs.	46.92
$50097\ldots\ldots$	$\overline{\text{CE-2}}$	6,600 to 7,500	Station	48 x 8 $\times 17\frac{1}{2}$	46 lbs.	43.68
50098	$_{\mathrm{CE-2}}$	6,600 to 7,500	Wood covered	49 x 13 x 15½	59 lbs.	43.68
50099	F-2	7,500 to 8,500	Station	$56\frac{1}{2} \times 8 \times 17\frac{1}{2}$	58 lbs.	46.92
50100	F-2	<b>7,5</b> 00 ta 8,500	Wood covered	$56\frac{5}{8} \times 13 \times 15\frac{1}{2}$	69 lbs.	46.92
50101	F-2	8,500 ta 10,000	Station	73 x 8 x 18	71 lbs.	58.32
50102	F-2	8,500 to 10,000	Wood covered	71 <b>x</b> 13 x $15\frac{1}{2}$	93 lbs.	58.32
$50103\dots$	F-2	10,000 ta 12,500	Station	89 x 8 x 18	89 lbs.	73.08
50104	F-2	10,000 to 12,500	Wood covered	$87\frac{1}{2} \times 13 \times 15\frac{1}{2}$	116 lbs.	<b>7</b> 3.08
50105	F-2	12,500 to 15,000	Station	106 x 8 x 18	106 lbs.	88.68
50106	F-2	12,500 to 15,000	Wood covered	104 x 13 x 15½	139 lbs.	88.68
50107	F-2	15,000 to 17,500	Station	122 x 8 x 18	123 lbs.	106.80
50108	F-2	17,500 ta 20,000	Station	139 x 8 x 18	140 lbs.	120.00
*Railway C	irenit					

#### \*Railway Circuit.

### Alternating Current Arc Arresters

50020	CE CE F-2	Up to 2,500 2,500 to 3,500	Iron Covered Wood Covered Station	 634 lbs. 21 lbs. 12½ lbs. 11½ lbs.	\$10.56 12.00 10.56 12.00
50092 50093		2,500 to 3,500 3,500 to 5,000	Wood Covered	 1534 lbs.	12.00
50094		3,500 to 5,000	Wood Covered	 26½ lbs. 49 lbs.	26.40 26.40

### GARTON-DANIELS LIGHTNING ARRESTERS









No. 50401

Direct Current Types

Direct current arresters, station type, are furnished with highly polished and lacquered metal work. Pole or car arresters have a dipped metal finish, but aside from this, are the same as the station type. Pole and car arresters are furnished in either wooden or iron covers, as required. Iron covers are, however, not furnished on the Types EH, EI and EJ arresters. Both covers are of standard design, fitted with insulated bushings for the leading-in wires and the arrester carefully insulated from the cover.

#### Description and List Prices

List				Dimensions	Wt.	List
No.	Type	Voltage	Description	Inches	Lbs.	Price Each
50014	DF	Up to 350	Station type	$8\frac{1}{2} \times 3 \times 3$	$2\frac{3}{4}$	<b>\$7.</b> 68
50016	DF	Up to 350	Iron covered	$12\frac{1}{2} \times 6 \times 4$	$11\frac{1}{8}$	9.36
50015	DF	Up to 350	Wood covered	$13\frac{1}{2} \times 7 \times 6$	$6\frac{3}{4}$	7.68
50039	EG	350 to 750	Station type	$9\frac{7}{8} \times 3\frac{5}{8} \times 3$	$4\frac{1}{2}$	10.08
50040	$\mathbf{EG}$	350 to 750	Iron covered	$13\frac{1}{2} \times 6\frac{1}{2} \times 4\frac{1}{2}$	$13\frac{1}{2}$	11.52
50041	$_{ m EG}$	<b>350 to 750</b>	Wood covered	$14\frac{1}{2} \times 7 \times 6\frac{1}{4}$	$8\frac{1}{2}$	10.08
11779	EG	350 to 750	Iron car	$13\frac{1}{2} \times 6\frac{1}{2} \times 4\frac{1}{2}$	$13\frac{1}{2}$	11.52
11780	$_{ m EG}$	350 to 750	Wood car	14 x 7 x $6\frac{1}{4}$	$8\frac{1}{2}$	10.08
50338	$_{ m EH}$	750 to 1300	Station	19 x $4\frac{1}{2}$ x $3\frac{1}{8}$	$11\frac{1}{2}$	20.16
50339	EH	750 to 1300	Wood car	$25\frac{1}{4} \times 8\frac{3}{4} \times 7\frac{3}{4}$	21	20.16
50400	EII	750 to 1300	Wood covered	$21\frac{1}{2} \times 10\frac{1}{2} \times 6\frac{3}{4}$	$21\frac{1}{2}$	20.16
50401	ΕI	1300 to 1500	Station	19 x $4\frac{1}{2}$ x $3\frac{1}{8}$	$11\frac{1}{2}$	23.04
50402	$_{ m EI}$	1300 to 1500	$\mathbf{Wood}\ \mathbf{car}$	$25\frac{1}{4} \times 8\frac{3}{4} \times 7\frac{3}{4}$	21	23.04
50403	EI	1300 to <b>1</b> 500	Wood covered	$21\frac{1}{2} \times 10\frac{1}{2} \times 6\frac{3}{4}$	$21\frac{1}{2}$	23.04
50404	EJ	1500 to 1800	Station	19 x $4\frac{1}{2} \times 3\frac{1}{8}$	$11\frac{1}{2}$	24.48
50405	$\mathbf{E}\mathbf{J}$	1500 to 1800	Wood car	$25\frac{1}{4} \times 8\frac{3}{4} \times 7\frac{3}{4}$	21	24.48
50406	EJ	1500 to 1800	Wood covered	$21\frac{1}{2} \times 10\frac{1}{2} \times 6\frac{3}{4}$	$21\frac{1}{2}$	24.48
50426	EK	1800 to 2400	Station	49 x 8 x $17\frac{1}{2}$	45 •	46.08
50427	EK	1800 to 2400	Wood Covered	49 x 13 x $15\frac{1}{2}$	58	46.08

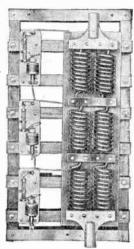
### Direct Current Arc Arresters

Standard types of Garton-Daniels Arc Circuit Lightning Arresters are listed below. These will meet practically all standard conditions. Arresters for higher voltages, or for special conditions, can be furnished to order.

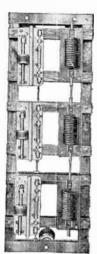
#### Description and List Prices

List No. 50077	Type BD	Voltage of Circuit Up to 4000	Description Station type	Net Weight Each 634 lbs. 1214 lbs.	List Price Each \$12.68 12.86
50078 50073 50074	BD BD BD	Up to 4000 4000 to 6000 4000 to 6000	Wood covered Station type Wood covered	20 lbs. 26½ lbs.	31.68 31.68

### GARTON-DANIELS LIGHTNING ARRESTERS



Panel Board for 600 Volt D. C. Railway Service. Front View



Panel Board for 2500 Volt A. C. Service. Front View



Side View of 2500 Volt A. C.
Panel Board Showing
Supporting Insulators

### Panel Board Types

Garton-Daniels Panel Board Arresters are especially designed for the protection of electrical machinery, either A. C. or D. C., where lightning conditions are unusually severe.

The line or feeder runs to the upper choke coil terminal while to the lower choke coil terminal is connected the feeder from the apparatus to be protected.

The upper lightning arrester unit is connected on the line side of the first choke coil; each of the other two being connected ahead of the other coils. These units are supplied with a common ground, the connectors being run in back of the two lower units as ean be seen in the illustrations.

As to the operation of this arrester, assume that a charge has been set free on the line. The first choke coil chokes back most of this and discharges it over the first arrester unit. The leakage charge through the first choke coil must, as can be seen, pass two other choke coils before it can get into the apparatus. Almost perfect lightning protection therefore may be expected on apparatus protected with these panel board arresters.

These panel board arresters are designed especially for the protection of apparatus up to 6600 volts A. C., up to 2500 volts D. C., railway, and up to 6000 volts D. C., arc, and are furnished in any ampere capacity for voltages within this range.

They are made in double and triple type, one of either type being necessary for the protection of each wire running into or from the apparatus to be protected. They are furnished regularly for station use only, as operating companies usually desire to build small arrester houses to house them for outside installations.

Station panel boards are mounted on heavy impregnated oak frames and are furnished complete with insulators for their installation. The arrester units are furnished with highly polished and lacquered metal work. Choke coils are of copper, black enameled and baked.

#### DIRECTIONS FOR ORDERING

In ordering Garton-Daniels Panel Board Lightning Arresters, it is necessary that the following information be given:

Type desired—Double or triple.

Class of circuit—D. C. or A. C. If D. C., whether grounded or ungrounded, single, two or three wire. If A. C., whether single, two or three phase; two, three or four wire, grounded or ungrounded.

Voltage of circuit.

Amperes per wire in D. C. work or per phase in A. C. work.

Size of wire or cable for which terminals are to be provided, and number of terminals for heavy capacity circuits.

List Prices. For estimating purposes only, an approximate list price may be obtained on Garton-Daniels Panel Board Arresters by adding together the list prices of the arrester units suited for the voltage of circuit (two units for double type, three for triple type), the list price of suitable capacity, AF or AMF choke coils, and adding to this sum \$20.00. The list price so obtained will be approximate, and is subject to regular discounts.

### GARTON-DANIELS CHOKE COILS







AMF Choke Coil



Car Choke Coil

### Standard Types

Choke coils regularly carried in stock are listed below. Coils of higher ampere capacity than these will be furnished to order. In ordering choke coils always give the following information: manufacturer's number, capacity in amperes, size of wire or cable for which terminals are to be provided, number and size of terminals on each end when ordering type AMF coils, mounting, standard or special.

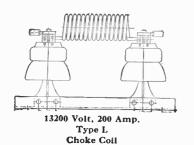
Description and List Prices

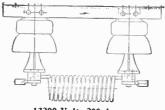
List No. Type		Capacity	Dimensions in Inches	Net Weight Each	Price Each	
50042	S	10 Amp.	Diam. 65/8 x 21/2	4 lbs.	\$4.32	
50043	S	20 Amp.	Diam. $6\frac{5}{8} \times 2\frac{1}{2}$	4 lbs.	5.76	
50044	S	30 Amp.	Diam. $6\frac{5}{8} \times 2\frac{1}{2}$	4 lbs.	6.92	
50045	S	40 Amp.	Diam. $6\frac{5}{8} \times 2\frac{1}{2}$	4 lbs.	8.08	
50046	S	50 Amp.	Diam. $8\frac{1}{8} \times 3\frac{7}{16}$	$9\frac{1}{4}$ lbs.	9.60	
50047	S	100 Amp.	'Diam. $8\frac{1}{8} \times 3\frac{7}{16}$	$9\frac{1}{4}$ lbs.	10.20	
50048	S	125 Amp.	Diam. $8\frac{1}{8} \times 3\frac{7}{16}$	$9\frac{1}{4}$ lbs.	10.80	
50019	S	175 Amp.	Diam. $9\frac{5}{8} \times 3\frac{9}{16}$	$16\frac{1}{4}$ lbs.	12,09	
50050	S	225 Amp.	Diam. $9\frac{5}{8} \times 3\frac{9}{16}$	$16\frac{1}{4}$ lbs.	12.60	
50051	S	260 Amp.	Diam. $9\frac{5}{8} \times 3\frac{9}{16}$	$16\frac{1}{4}$ lbs.	13.20	
11781	Car	75 Amp.	$10\frac{1}{2} \times 4\frac{3}{8} \times 4\frac{3}{4}$	$8\frac{3}{4}$ lbs.	8.40	
11101	9	10" \	101/ - 45/ + 43/	10 lbg	0.32	

00011	a a	40 1	Diam 65/ v 21/	4 lbs.	8.08
5004 <b>5</b>	S	40 Amp.	Diam. 65% x 21/2	9 1/4 lbs.	9.60
50046	S	50 Amp.	Diam. $8\frac{1}{8} \times 3\frac{7}{16}$		10.20
50047	S	100 Amp.	Diam. $8\frac{1}{8} \times 3\frac{7}{16}$	9½ lbs.	
50048	S	125 Amp.	Diam. $8\frac{1}{8} \times 3\frac{7}{16}$	9½ lbs.	10.80
50019	S	175 Amp.	Diam. $9\frac{5}{8} \times 3\frac{9}{16}$	16½ lbs.	12.09
50050	S	225 Amp.	Diam. $9\frac{5}{8} \times 3\frac{9}{16}$	$16\frac{1}{4}$ lbs.	12.60
50051	S	260 Amp.	Diam. $9\frac{5}{8} \times 3\frac{9}{16}$	$16\frac{1}{4}$ lbs.	13.20
11781	Car	75 Amp.	$10\frac{1}{2} \times 4\frac{3}{8} \times 4\frac{3}{4}$	8¾ lbs.	8.40
11782	Car	125 Amp.	$10\frac{1}{2} \times 4\frac{5}{8} \times 4\frac{3}{4}$	10 lbs.	9.32
11783	Car	150 Amp.	$10\frac{1}{2} \times 4\frac{3}{8} \times 5$	$10\frac{3}{4}$ lbs.	10.20
11784	Car	175 Amp.	$10\frac{1}{2} \times 4\frac{3}{8} \times 5$	$11\frac{1}{2}$ lbs.	11.12
11785	Car	200 Amp.	$10\frac{1}{2} \times 4\frac{3}{8} \times 5$	$12\frac{1}{4}$ lbs.	12.00
5005 <b>2</b>	$\mathbf{AF}$	50 Am <b>p.</b>	$10\frac{1}{2}$ x $4\frac{3}{8}$ x 5	$8\frac{1}{2}$ lbs.	11.88
50053	$\mathbf{AF}$	125 Amp.	$10\frac{1}{2} \times 4\frac{3}{8} \times 5$	$8\frac{1}{2}$ lbs.	13.20
50054	$\mathbf{AF}$	160 Amp.	12 x 5 x 5	11 lbs.	13.80
50055	$\mathbf{AF}$	200 Amp.	12 x 5 x 5	$11\frac{1}{2}$ lbs.	14.28
50056	$\mathbf{AF}$	250 Amp.	12 x 5 x 5	$12\frac{1}{4}$ lbs.	14.52
50057	$\mathbf{AF}$	<b>3</b> 25 Amp.	5 $\times 15\frac{1}{2} \times 4\frac{5}{8}$	$15\frac{1}{2}$ lbs.	15.84
50058	$\mathbf{AF}$	400 Amp.	5 x 16 x $4\frac{11}{16}$	$18\frac{3}{4}$ lbs.	22.44
50059	$\mathbf{AF}$	500 Amp.	5 $\times 16^{3}/_{8} \times 4^{15}/_{16}$	211/4 lbs.	33,00
50060	AMF	600 Amp.	10 $\times 17 \times 4\frac{5}{8}$	$33\frac{3}{4}$ lbs.	35.64
50061	AMF	800 Amp.	10 $\times 18\frac{1}{2} \times 4\frac{11}{16}$	$37\frac{3}{4}$ lbs.	42.24
50062	AMF	1,000 Amp.	10 $\times 20\frac{7}{8} \times 4\frac{15}{16}$	483/4 lbs	59.40
50063	AMF	1,200 Amp.	12 $\times 22 \times 4\frac{5}{8}$	$65\frac{1}{2}$ lbs.	66.00
50064	AMF	1,500 Amp.	12 x 22 x $4\frac{15}{16}$	72 lbs.	80.52
50065	AMF	1,600 Amp.	14 $\times 23$ $\times 4\frac{11}{16}$	893/4 lbs.	89.76
50066	AMF	2,000 Amp.	14 x 23 x 4 1 5	102 lbs.	126.72
B0000		-,			

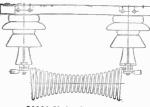
### GARTON-DANIELS CHOKE COILS

HIGH VOLTAGE TYPES





13200 Volt, 200 Amp.
Type LU
Choke Coil



23000 Volt, 200 Amp. Type HU Choke Coll

### Garton-Daniels Choke Coils

Type L choke coils, as illustrated above, are designed for indoor service. The Type LU choke coils are of the underhung type and are designed particularly for outdoor service. The Type II choke coils are of the well-known "hour glass" type and are for indoor service. Type IIU choke coils are of the underhung type and are designed particularly for outdoor service.

All types of choke coils listed are made with a base of channel iron, into which iron pins are riveted and insulators cemented to these pins support iron caps, which in turn support the terminal blocks and coil proper. Channel bases in all types are drilled with 1% inch holes in each end; the coil may so be mounted on any flat supporting member by bolts or lags; or by the use of pipe clamps described and listed in following pages they may be readily supported by piping.

List			Capacity	List Price	List				List
No.	Type	Voltage	Amperes	Each	No.	Туре	Voltage	Capacity	Price
50445	L	Up to 3000	50	\$20.40	50483	LU		Amperes	Each
50446	I	Up to 3000	100	21.60	50484	LU	3000 to 6600	400	\$36.00
50447	L	Up to 3000	150	22.80	50485	LÜ	3000 to 6600	500	39.60
50448	$\mathbf{L}$	Up to 3000	200	24.00	50486	ĹŬ	3000 to 6600 3000 to 6600	600	43.20
50449	L	Up to 3000	250	25.20	50491	LÜ	6600 to 13200	800	48.00
50450	Ī	Up to 3000	300	27.60	50492	ĹŬ	6600 to 13200	100 200	36.00
50451	Ī	Up to 3000	400	30,00	50493	ĹŬ	6600 to 13200	300	39.60 43.20
50452	Î	Up to 3000	500	33.60	50494	LU	6600 to 13200	400	46.80
50453	Ţ	Up to 3000	600	37.20	50498	LU	13200 to 23000	100	42.00
50454 50455	I. L	Up to 3000	800	43.20	50499	LU	13200 to 23000	200	45.60
50456	Ĺ	Up to 3000	1000	55.20	50500	LU	13200 to 23000	300	49.20
50469	Ĺ	Up to 3000 3000 to 6600	1200	68.40	50503	LU	23000 to 35000	100	48.00
50470	Ĺ	3000 to 6600	50 100	26.40	50504	ĻŪ	23000 to 35000	200	54.00
50471	Ĺ	3000 to 6600	150	28.80 30.00	50505	Ħ	Up to 6600	50	28.80
50472	Ĺ	3000 to 6600	200	31.20	50506 50507	H	Up to 6600	100	31.20
50473	Ĺ	3000 to 6600	300	33.60	50508	H	Up to 6600	150	32.40
50474	${f L}$	3000 to 6600	400	36.00	50509	H	Up to 6600	200	33.60
50475	L	3000 to 6600	500	39.60	50510	Ħ	Up to 6600	300	36.00
50476	L	3000 to 6600	600	43.20	50511	Ħ	Up to 6600 Up to 6600	400	37.60
50477	Ī	3000 to 6600	800	48.00	50519	Ĥ	6600 to 13200	500 50	43.20
50487	$\mathbf{\tilde{L}}$	6600 to 13200	100	36.00	50520	Ĥ	6600 to 13200	100	38,40 42,00
50488	Ļ	6600 to 13200	200	39.60	50521	H	6600 to 13200	200	45.60
50489 50490	L L	6600 to 13200	300	43.20	50522	H	6600 to 13200	300	46.80
50495	Ľ	6600 to 13200 13200 to 23000	400	46.80	50523	H	6600 to 13200	400	50,40
50496	Ľ	13200 to 23000	100	42.00	50529	H	13200 to 23000	100	44.40
50497	Ĺ	13200 to 23000	200 300	45.60 49.20	50530	Ĥ	13200 to 23000	200	49.20
50501	Ĺ	23000 to 35000	100	48.00	50531 50535	H	13200 to 23000	300	52.80
50502	Ĺ	23000 to 35000	200	54.00	50536	H H	23000 to 35000	100	51.60
50457	LU	Up to 3000	50	20.40	50512	HU	23000 to 35000	200	57.60
50459	LU	Up to 3000	100	21.60	50513	Ĥΰ	Up to 6600 Up to 6600	50	28.80
50459	LŲ	Up to 3000	150	22.80	50514	HŬ	Up to 6600	100 150	31.20
50460	LU	Up to 3000	200	24.00	50515	HŬ	Up to 6600	200	32.40
50461	ΓÜ	Up to 3000	250	25.20	50516	HŬ	Up to 6600	300	33.60 36.00
50462	LÜ	Up to 3000	300	27.60	50517	HU	Up to 6600	400	39.60
50463	LU	Up to 3000	400	30.00	50518	HU	Up to 6600	500	43.20
50464 50465	LU LU	Up to 3000	500	33.60	50524	HU	6600 to 13200	50	38.40
50466	ĽŬ	Up to 3000 Up to 3000	600	37.20	50525	HU	6600 to 13200	100	42.00
50467	ĽŬ	Up to 3000	800 1000	43.20	50526	HU	6600 to 13200	200	45.60
50468	ĹŬ	Up to 3000	1200	55.20 68.40	50527	HU	6600 to 13200	300	46.80
50478	ĹŬ	3000 to 6600	50	26.40	50528 50532	HU	6600 to 13200	400	50.40
50479	ĹŬ	3000 to 6600	100	28.80	50532	HU HU	13200 to 23000	100	44.40
50480	LÜ	3000 to 6600	150	30.00	50534	нŬ	13200 to 23000 13200 to 23000	200	49.20
50481	LU	3000 to 6600	200	31.20	50537	HÜ	23000 to 35000	300	52.80
50482	LU	3000 to 6600	300	33.60	50538	ĤŬ	23000 to 35000	100 200	51.60
							20000 00 00000	200	57.60

#### Directions for Ordering

In ordering choke coils and disconnecting switches it is necessary to give the following information in order that the coils may exactly meet requirements.

List number; voltage; capacity in amperes; size of wire or cable for which terminals are to be provided; number and size of terminals on each end when ordering Type AMF and high voltage coils; mounting—standard or special, and drillings in base, if other than standard drillings are required.

# GARTON-DANIELS GROUND FITTINGS AND ARRESTER HANGERS



Mfr. No. 50079



Mfr. No. 50080



Mfr. No. 50081



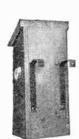
Mfr. No. 50431

Carton.	-Daniels	Ground	Fittings

	Garton-Daniels	Ground Fitt	.mgs		
List No.	Description	Drilled for Wire	Dimensions in Inches	Net Wt. Each	List Price Each
	For Three-Quarte	er Inch (¾ in.) Pipe			
50079	Brass Cap	No. 4 or 6 solid	1 x 13/4 x 1½	5 oz.	\$0.56
50428	Brass Cap	No. 0 cable or solid	1 x 2 x 1 ½	6 oz.	, 56
50429	Brass Cap.	1/4 in. cable	1 x 2 x 1½	6 oz.	. 56
50080	Brass Coupling	No. 4 or 6 solid	15 8 x 13 4 x 10 4	5 oz.	.48
50430	Brass Coupling.	No. 0 cable or solid	15 8 x 2 x 13 8	6 oz.	. 48
50081	Malleable Point (external type)		$3\frac{1}{2} \times 1\frac{7}{16} \times 1\frac{7}{16}$	8 oz.	. 56
50431	Malleable Point (internal type)		23/4 x 1 x 1	7 oz.	.48
42292	Galvanized Pipe Tee		Standard 34 in.	10 oz.	.20
50440	Galvanized Pipe Coupling		Standard ¾ in.		.20
50082	Gray Iron Plate	1	12 x 12 x 3/4	9 lbs.	1.44
00000	For One It	nch (1 in.) Pipe			
FO (99)	Brass Cap	I No. 4 or 6 solid	1 x 2½ x 1¾	6 oz.	1 \$0.68
50432	Brass Cap	No. 0 cable or solid	$1 \times 2\frac{1}{4} \times 1\frac{3}{4}$	7 oz.	.68
50433	Brass Cap.	1/4 in. cable	1 x 2½ x 1¾	7 oz.	. 68
50434	Brass Coupling.	No. 4 or 6 solid	$1\frac{11}{16} \times 2\frac{1}{16} \times 1\frac{3}{4}$	8 oz.	.60
50435	Brass Coupling.	1	1 1 x 2 3 x 1 3 4	8 oz.	.60
50436	Malleable Point (external type)		$3\frac{3}{4} \times 1\frac{11}{16} \times 1\frac{11}{16}$	13 oz.	.68
50437	Malleable Point (internal type)		$3\frac{1}{4} \times 1\frac{3}{8} \times 1\frac{3}{8}$	11 oz.	.60
50438	Calvanized Pipe Tee				.24
50439 50441	Calvaniand Dina Coupling	1	Standard 1 in.	1	.24
30441	BONDS, CONNECTORS, *POLE BAI	NDS CROUND WI	RE DISCONNEC	CTORS	
0 = 5	Type P4A Bond, No. 0 B & S Cable, ½ in.	torming!		per 100	\$79.20
35 [	Type O5A Bond, No. 0 B & S Solid, ½ in.	terminal		per 100	67.20
36	Cylindrical Wire Connector for No. 4 or 6	R.& S. Solid		each	.12
12346	Cylindrical Wire Connector for No. 4 of 6	S Solid		each	. 17
12344	Cylindrical Wire Connector for No. 0 B &	S Cable		each	.32
12342	Fron Pole Band for 65% in pole	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		per doz.	15.60
50331	fron Pole Band for 75% in. pole			per doz.	15.60
50332	Iron Pole Band for 198 in pole			per doz.	15.60
FO 111 /	Chaund Wire Disconnector for No. 4 or 6 1	3 & S Solid		each	1.52
90444	ole Bands include pole band brackets for at	taching to the regular	wood or iron cov	ers.	
*150	DIG Danies mende hore pand praekers for ac		_	- 10	



Style A



Style B



Style C



Style D



Style E

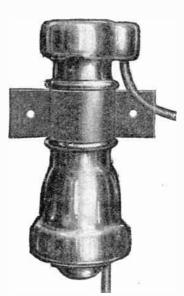
## Garton-Daniels Lightning Arrester Hangers

List No.		ist Price Each
EO 491	Style A Hanger, 31/4 or 31/2 in., single arm, made from iron strap 11/2 x 3/32 in	\$0.48
00421	Byle A Hanger, 374 of 572 hit, single and model from iron streng 11/2 v 32 ill	
50422	Style B Hanger, 31/4 or 31/2 in., single arm, made from iron strap 11/2 x 3/2 in	
50423	Style C Hanger, 31/4 or 31/2 in., double arm, made from iron strap 1 x 3/2 in	04
50424	Style D Hanger double arm made from iron strap I X 📆 In	., .40
50425	Style E Hanger, double arm, made from iron strap 1 x 3/32 in	60

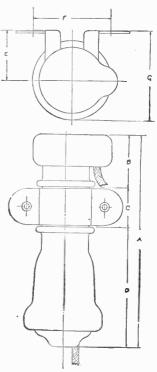
### KEYSTONE EXPULSION TYPE LIGHTNING ARRESTERS



Arresters Nos. 50640 and 50641



Arresters Nos. 50632, 50633 and 50636



Arresters Nos. 50632, 50633 and 50636

The line of Keystone lightning arresters—"the expulsion arrester"—are designed principally for the protection of transformers and similar apparatus.

These arresters combine in a marked degree the desirable features of low first cost, case and cheapness of installation, case of inspection and very desirable operating characteristics. They are not at all designed to supplant or supersede the standard Garton-Daniels lightning arresters, which arresters are recommended for use in protecting important installations of line and station apparatus.

The expulsion arrester fills the demand for an inexpensive arrester, an arrester that is self-contained, that is easy to install and inspect, that is small enough to be installed directly on the transformer pole with-

out crowding and that will give efficient lightning protection.

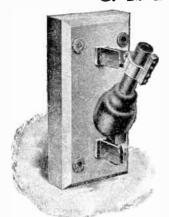
Types N and NS neutral arresters listed below are designed for protecting the neutral wire of transformers installed on grounded neutral circuits, where the neutral wire is grounded only at power or sub-station, and not dead grounded at the transformer installation. They are of the self-contained type, consisting of non-arcing metal electrodes separated by a small air gap, the whole being enclosed in a glazed porcelain body. The type N arrester is supplied with an iron band which slips over the arrester body, so allowing same to be attached to the cross arm or other supporting means. The type NS arrester is designed to be hung directly from the line wire. Maximum height of either type is 25% inches; width, 3½ inches.

List No.	Description	Mfrs. List Each	W. E. List Each
50632	Type EX, Form 1 arrester, 1200 to 2500 volts A.C.	\$6.50	\$7.80
50633	Type EX, Form 2 arrester, 2500 to 3500 volts A.C	7.80	9.36
5U036	Type EA, Form 3 arrester, 2500 volt 2 and 3 phase grounded circuits	7.80	936
50640	Type EX, Form 4 arrester, 3500 to 5000 volts A.C.	14.50	17.40
50641	Type EX, Form 5 arrester, 5000 to 6600 volts A.C.	18.00	21.60
50042	Type N neutral arrester for cross arm mounting	1.50	1.80
50643	Type NS neutral arrester for line suspension	1.45	1.74

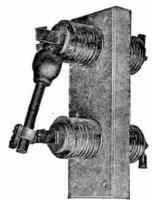
#### Dimensions of Expulsion Type Lightning Arresters

List No.	A Inches	B Inches	C Inches	D Inches	E Inches	F Inches	G Inches	Net Wt. Each
50632 50633	$\frac{10\frac{3}{4}}{11\frac{3}{8}}$	$\frac{27}{8} \\ 27/8$	$\frac{2}{2}$	$\frac{534}{638}$	$\frac{25}{8}$ $\frac{25}{8}$	41/8	43/4 43/4	7
50636 50640	$\frac{11\frac{3}{8}}{26\frac{7}{8}}$	$\begin{array}{c} 27 \\ 61 \\ 4 \end{array}$	2.1§ 18	$\frac{6^{3\frac{9}{8}}}{4^{1/8}}$	$\frac{2^{5}}{4^{1}}$	41/8	434	$22^{7\frac{1}{4}}$
50641	$27\frac{1}{2}$	$6\frac{1}{4}$	18	41/8	$4\frac{1}{2}$			221/2

### G. F. EXPULSION FUSES



Single Pole Fuse Block for 2500 Volts



Single Pole Fuse Block for 7500 Volts

### Expulsion Fuse Holders and Fuses

Type T, Form D-3

The TD-3 expulsion fuse is a simple and effective device for operating on overload and short circuit conditions.

Capacities 100 and 200 amperes 2500 and 7500 volts.

This fuse holder consists of a heavy insulated metal bulb or explosion chamber into which is screwed a fiber tube. At each end are contact blades and accessible binding screws for the fuse, the lower binding screw being carried on the screw plug in the "breech" of the explosion chamber.

The fuse proper which passes through the tube and bulb is made of comparatively small cross section at the lower end, to insure rupturing inside the bulb. The explosion and sudden expansion of gases expels the arc and fused metal and effectively opens the circuit.

These fuses are assembled in the form of complete fuse blocks, single, double and triple-pole, both

2500 and 7500 volts, and four-pole for 2500 volts.

The clips for the 2500 volt fuse holders are mounted directly on marble base of panel, while those for the 7500 volt holders are mounted on one piece porcelain insulators, which in turn are mounted on slate

Barriers are provided for the double, triple and four-pole fuse blocks on bases.

Single pole elements complete with contact clips, but without bases, are listed separately for panel mounting. The necessary barriers are also listed in the same way.

#### 100 Amperes, 2500 Volt Fuse Blocks

	100 Amperes, 2500 Volt Fuse Blocks								
			Front (	'onnected	Back C	onnected			
No. of Poles	Mounted	Barriers	List No.	List Price Each	List No.	List Price Each			
1 2 3 4 1	On Base On Base On Base On Base For Panel	Without With With With Without	59443 59444 59445 59446	\$22.44 51.48 80.52 109.56	59447 59448 59449 59450 59451	\$23.76 54.12 84.48 113.52 15.84			
200 Amperes, 2500 Volt Fuse Blocks									
1 2 3 4 1	On Base On Base On Base For Panel	Without With With With Without	59452 59453 59454 59455	\$29.04 69.96 109.56 147.84	59456 59457 59458 59459 59460	\$31.68 75.24 116.16 155.76 23.76			
	100 Ampere	s, 7500 Volt	Fuse Block	s					
1 2 3 1	On Base. On Base. On Base. For Panel.	Without With With Without	59461 59462 59463	\$29.04 69.96 105.60	59464 59465 59466 59467	\$33.00 77.88 121.44 27.72			
	200 Amperes, 7500 Volt Fuse Blocks								
1 2 3 1	On Base On Base On Base For Panel	Without With With Without	59468 59469 59470	\$38.28 87.12 135.96	59471 59472 59473 59474	\$63.56 99.00 151.80 34.32			

34.32

112427

45000~75000 volts...

### G. E. EXPULSION FUSE HOLDERS

Separate Holders—Without Fuses				1	Single Bar	rriers for	Fuse Bloc	ks
	Type T,	Form D-3	ist Price		Rat	ting of Fuse	Block	List Price
List No.	Volts	Amperes	Each	List No.	Volts	Amperes	Material	Each
59475	2500	100	\$9.24	75935	2500	100	Marble	\$10.56
59476	2500	200	-15.84	75936	2500	200	Marble	13.20
59477	7500	100	-10,56	75937	7500	100	Slate	10.56
59478	7500	200	17,16	75938	7500	200	Slate	10.56
** '		00 000	4.0					

Prices on fuse holders 22,000 to 110,000 volts on application.

Operating Hooks for Expulsion Fuses

The fuse holder may be easily removed from the clip by means of a suitable operating hook, which should always be used, thus eliminating danger to the operator. Rating of Fuse Holder

T	Trucking of 2 abo	110100	
List No.	Volts	Amperes	List Price Each
45229	2500 or 7500	Í00	\$3.96
45230	2500 or 7500	200	3,96

### Fuses for 2500 and 7500 Volt Expulsion Fuse Holders

Amp.					Amp.				
Con. Cur.					Con. Cur.				
Carrying	500 V	Volts	750	0 Volts	Carrying	2500 V	Volts	7500 V	olts
Cap.	List No.	List Price	List No.	List Price	Cap.	List No.	List Price	List No.	List Price
5	118572	\$0.26	118594	\$0.40	80	118583	\$0.26	118605	\$0,40
8	118573	.26	118595	,40	90	118584	,26	118606	, 40
10	118574	.26	118596	,40	100	118585	.26	118607	,40
15	118575	.26	118597	.40	110	118586	.26	118698	.40
20	118576	.26	118598	, 40	125	118587	.26	118609	.40
25	118577	.26	118599	, 40	140	118588	.26	118610	.40
30	118578	,26	118600	,40	155	118589	.26	118611	,40
40	118579	, 26	118601	, 40	170	118590	.26	118612	.40
50	118580	,26	118602	. 40	180	118591	.26	118613	.40
60	118581	,26	118603	, 40	200	118592	.26	118614	. 40
70	118582	,26	118604	.40					
					200	118592	.26	118614	

Fuses are of special metal and have tubular asbestos coverings.

The ampere rating given is the normal carrying capacity of the fuse, and is about 60 per cent. of the load at which it will rupture.

### Fuse Holders, Complete with Fuses

Type T, Form D 2 For Use with Potential Transformer Fuse Blocks

Distance Between Fuse Holders Used with fuse blocks listed above, also with Contact Clip Includes Fuse List potential transformers having fuse clips Centers in Approx. Ship. List List No. Volts on transformer terminals No. Inches Wt. ir Lb. Price 121100 121101 6600 On transformer..... 3 \$3.30 5 83/4 121074 121076 6600 Separate mounting..... 5 3.96 83/4 121074 121076 15000 Separate mounting..... 5 3.96  $11\frac{1}{2}$ 121077 121075 15000 On transformer..... 4.62 5 Transformer or separate..... 121075 121077 22000 5 4.62 121075 111/2 121077 35000 Transformer or separate..... 4,62 10 Transformer or separate..... 121078 60519 45000 10 10.5670000 Transformer or separate.... 121078 24 60519 15 10.56Note: Fuse holders with fuse are included in List No. and List Price of fuse blocks.

FUSES-WITH ASBESTOS COVERING

T-D-2 fuses 3300 to 15000 volts are recommended on systems of 2000 K.W. capacity and below. T-D-2 fuses 3300 to 10000 voits are recommended on 5,500 volts the T-D-2 is suitable for 10,000 K.W. capacity and below.

Length in For Use in Fuse Holder Above

LASO		Trengen in	roi ese ili ruse moruei	LISU
No.	Volts	Inches	List No.	Price
121101	*6600	9	121100	\$0.14
121076	†6600	131/4	121074	.14
121076	†15000	$13\frac{1}{4}$	121074	.14
121077	*15000	16	121075	.14
121077	22000	16	121075	.14
121077	35000	16	121075	.14
121078	45000	30	60519	.20
121078	70000	30	60519	.20
		Cline		

List No.	Used on	List Price
60577	Front connected fuse block or on potential transformers	\$0.26
60578	Back connected fuse blocks	.26
	Operating Hook for Handling Fuse Holders	
112426	6600–15000 volts.	\$22.44
60521	22000-35000 volts.	31.68

Fuse hooks should always be used in removing or replacing fuse holders to avoid danger to operator. Delivery F. O. B. Factory, Schenectady, N. Y. For warehouse deliveries write nearest house.

# WESTON INSTRUMENTS MODEL 1 PORTABLE



Model 1 Voltmeter and Millivoltmeter



Model 1 Ammeter and Milliammeter

### Model 1 DC Voltmeter

List No.	Range in Volts	No. of Scale Divisions	Value of Each Scale Division in Volts	Readable to	W. E. List
1	150	150	1	1/10 of a volt	\$110.00
*2	150	150	1	1/10 of a volt	115.00
_	(150)		(1	1/10 of a volt	150.00
*31/2	3	150	1/50	1/500 of a volt	150.00
2	150	_	1	1/10 of a volt	150.00
*4	15	150	1/10	1/100 of a volt	150.00
1	300	,	12	1/5 of a volt	155.00
*412	150	150	1 1	1/10 of a volt.	155.00
*5	300	150	2	1/5 of a volt	130.00
*6	450	150	3	1/3 of a volt	130.00
*7	600	120	5	1/2 of a volt	130.00
'	(600)		4	1/2 of a volt	160.00
*9	150	150	1	1/10 of a volt	160.00
"	(750 J		5	1/2 of a volt	160.00
*91/2	(150)	150	1	1/10 of a volt	160.00
/2	600	,	4	1/2 of a volt	160.00
*10	300	150	2	1/5 of a volt	160.00
*11	750	150	5	1/2 of a volt	140.00

\*With contact keys. Any of the above with reversing key, price, extra, \$5.00.

When reversing key is applied, contact key is omitted.

Prices for instruments with ranges other than those listed will be the same for those of the next higher range.

Model 1 DC Ammeter

These instruments are extremely compact and will be found very serviceable for rapid work. To provide sufficient carrying capacity for the self-contained shunts, it has been found necessary to make them in three sizes, the main difference-being in the arrangement of the binding posts.

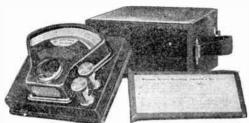
1	5 amp.	100	1/20  amp.	1/200 of an ampere	\$130.00
2	15 amp.	150	1/10  amp.	1/100 of an ampere	130.00
$\bar{3}$	25 amp.	100	1/4 amp.	1/40 of an ampere	130.00
4	50 amp.	100	1/2 amp.	1/20 of an ampere	130.00
5	100 amp.	100	1 ann.	1/10 of an ampere	140.00
6	150 amp.	150	1 amp.	1/10 of an ampere	150.00
7	200 amp.	100	2 amp.	1/5 of an ampere	160.00
8	250 amp.	125	2 amp.	1/5 of an ampere	160.00
0	300 amp.	150	2 amp.	1/5 of an amperc	160.00
10	400 amp.	80	5 amp.	1/2 of an ampere	180.00
11	500 amp.	100	5 amp.	1/2 of an ampere	180.00

Direct-Reading Mil-Ammeters, Model 1

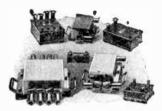
0	150 mil.	150	1 mil.	1/10 of a milliampere	\$100.00
1	300 mil.	150	2 mil.	1/5 of a milliampere	100.00
2	600 mil.	150	4 mil.	2/5 of a milliampere	100.00
3	1000 mil.	100	10 mil.	1 of a milliampere	100.00
4	1500 mil.	150	10 mil.	1 of a milliampere	110.00
5	500 mil.	100	5 mil.	1/20 of a milliampere	120.00
	( 50 mil.)		( 1/2 mil.)		
6	{ 500 mil. }	100	{ 5 mil. }	1/100 of a milliampere	120.00
	10 mil		[ [ 1/10 mil. ]		

### **WESTON INSTRUMENTS**

MODEL 1 (PORTABLE)







Alloy Shunts

### Weston Standard Portable Millivoltmeters, Model 1, For Direct Current

These instruments may be arranged for use with alloy shunts for ampere measurements at an additional cost of \$10. \*List Price List Description Each No. Range, 0 to 20 millivolts, 100 divisions, each representing 0.2 of a millivolt, readable to 0.02 of 1 \$100.00 a millivolt. Range 10 to 0 to 10 millivolts, zero center, 100 divisions, each representing 0.2 of a millivolt, readable to 0.02 of a millivolt. 100.00 Double range, 10 to 0 to 10 and 100 to 0 to 100 millivolts, zero center, 100 divisions, supplied with contact key, by the use of which either range may be employed.

Double range, 0 to 20 and 0 to 200 millivolts, 3 binding posts, 100 divisions, each representing 3 110.00 either 0.2 of a millivolt or 2 millivolts, according to range used..... 110 00

# Weston Patent Alloy Shunts For Use with Portable Standard Millivoltmeter Model No. 1, for Direct Current

These shunts can be supplied in two or more ranges combined in one case, as indicated in price list below.

Shunts w	ith Single Range	Shunts with 2 Ranges in One Cas		Shunts with 3 or More Ranges Combined in One Case		
Range in	W.E. List Price	Range in	W.E. List Price	Ranges in	W.E. List Price	
Amperes	*Each	Amperes	*Each	Amperes	*Each	
1	\$20.00	5 and 1	\$40,00	15-3-0.75	\$60.00	
3	25.00	10 and - 1	45.00	15-3-1.5	60.00	
5	30,00	15  and  -1.5	50,00	30-15-1.5	70.00	
10	30.00	15 and 3	50,00	30-15-3	70.00	
15	30.00	30  and  -3	50.00	30-15-7,5-1,5	95.00	
25	35.00	40 and 4	55.00	50-5-0.5	80.00	
30	40.00	50 and 5	60,00	50-10-1	80,00	
50	45.00	75 and 15	70.00	50-20-5-0.5	110.00	
75	50.00	100 and 10	80.00	75-15-1.5	85.00	
100	60.00	150 and 15	85,00	100-10-1	90.00	
150	65,00	150 and 30	90.00	100-20-2	90.00	
200	70,00	200 and 20	95,00	100-50-20-2	120,00	
250	75.00	300 and 15	105.CO	100-50-20-10-5-1	140,00	
300	80.00	300 and 30	110.00	150-15-1.5	100,00	
400	90.00	300 and 150	120.00	150-15-1.5-, 15	120.00	
500	100.00	400 and 40	120,00	150-75-15	110.00	
600	110.00	400 and 200	130,00	150-75-15-1.5	130.00	
750	120.00	500 and 50	125,00	150-75-15-1.5-0.75	140.00	
800	130.00	500 and 100	130,00	200-20-2	110.00	
1000	160.00	500 and 200	130,00	200-100-10	120.00	
1500	260.00	600 and 60	130.00	300-15-1,5	120.00	
2000	350.00	600 and 300	160.00	300-30-3	120.00	
		750 and 300	180.00	300-75-15	130.00	
		1000 and 500	280.00			

Above prices include adjustment between millivoltmeter and shunts.

# Multipliers for Model 1, Standard Portable Voltmeters For Direct Current

Multiphers are resistance boxes, the coils in which are highly insulated, and are adjusted so that the readings of the instrument may be multiplied by any desired constant. Multipliers are usually constructed so that the indications of the pointer multiplied by 2, 5, 10, 20 or 50, will give the potential of the circuit.

Model 1 standard portable voltmeters, prices on application.
\*Delivery F. O. B. Factory, Newark, N. . For warehouse deliveries write nearest house.

### WESTON INSTRUMENTS Model 45 and 56 Direct Current Portables



Model 45 Voltmeter



Model 56 Duplex

### Model 45 Portable

These instruments are designed to meet the demand for a low-priced voltmeter or animeter of sufficient accuracy for station work and general testing. The movement in this type of instrument is completely enclosed in an iron case (which protects it in a large measure from stray magnetic fields), securely fastened in a wooden carrying box. This box is provided with a hinged cover, which protects the scale and binding

-Model	45 D.C. Volt	meters—		М	odel 45 D.	C. Ammet	er	
Range in Volts	Value of Each Scale Divi- sion in Volts	W. E. List Price Each	Range in Am- peres	Value of Each Scale Divi- sion in Amps.	W. E. List Price Each	Range in Am-	Value of Each Scale Divi-	W. E. List
0 to 3 0 to 5 0 to 15 0 to 150	0.02 0.05 0.1	\$62.50 62.50 62.50 73.76	0 to 1.5 0 to 5 0 to 15 0 to 25	$egin{pmatrix} 0.01 \\ 0.5 \\ 0.1 \\ 0.2 \\ \end{bmatrix}$	$\begin{array}{c} \$62.50 \\ 62.50 \\ 62.50 \\ 62.50 \end{array}$	9 to 200 0 to 250 0 to 300 0 to 400	sion in Amps.  2 2 2 2 5	\$70.00 70.62 70.62 71.26
0 to 300 0 to 600 0 to 750	2 5 3	$81.26 \\ 87.50 \\ 92.50$	0 to 50 0 to 100 0 to 150	$egin{array}{c} 0.5 \ 1 \ 1 \end{array}$	63.76 $66.26$ $67.50$	0 to 500 0 to 600 0 to 750	5 5 5	73.76 76.26 78.76

Double-scale voltmeters in this type will be furnished, when desired, at the price of \$12.50 additional to the list price of the highest range for each step.

For all ranges above 25 amperes these instruments consist of millivoltmeters adjusted with external station type shunts to read direct in amperes.

Two or more shunts may be used, with each instrument. over 750 amperes. Prices on application.

In selecting shunts of different range for use in connection with one instrument should be considered that the higher ranges must be even multiples of the lower one in order to suit the same scale on the instrument.

Model 56 Portable Duplex Instruments

These Duplex Instruments consist of a voltmeter and ammeter combined in one case. The case is of highly finished natural cherry, has a strongly hinged cover, and serves as a carrying box. All connections are made by means of binding-posts inside of the case. These posts are plainly marked, showing their polarity, and to which side of the instrument they are connected.

These instruments are regularly supplied with a single-range voltmeter and a single-range ammeter; they will be supplied, however, with either 2 voltmeter movements or 2 ammeter movements of like or different ranges, if so desired. The voltmeter side may be obtained with a double range at a slight increase. in cost. The ammeter is furnished only in single ranges up to 100 amperes with a self-contained shunt but if multiple or higher ranges are desired they can be obtained by the use of external shunts.

These instruments will be found serviceable for all ordinary testing in which a greater degree of accuracy

than 1 per cent. is not desired.

			Range in Amperes		
Range in	5, 15, 25, 50,		- The state of the		
Volts	100 or 150	200 or 250	300	400	500
75	\$112.50	\$120.00	\$120.62	\$121.26	\$122.50
150	118.76	126.26	126.88	127.50	130.00
300	125.00	132.50	133.12	133.76	136.26
450	131.26	138.76	139.38	140.00	142.50
600	137.50	145.00	145.62	146.26	148.76
750	150.00	157.42	158.12	158.76	161. <b>2</b> 6

If the voltmeter is desired with a double range, add \$7.50 to the list price for higher range. Specify voltage desired in ordering.

Delivery: F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

TW.E. List

Volta

1300

†400

†500

1600

†750

80-8

100 - 10

150-15

30-3-1.5

30 - 6 - 3

30-15-3

15 - 3 - 1.5

Price

Each

\$31.26

 $31.26 \\ 31.26 \\ 31.26$ 

31.26

36.26 36.26 36.26

**\$**41.26

41.26

41.26

41,26

TW.E. List

Price Each

\$31.26

31.26

31.26 31.26

31.26

 $\$36.\overline{26} \ 36.26$ 

36.26

Volts

50

60

75

80

†100

20 - 220 - 8

25 - 2.5

5-2.5-0.25

15-3-0.150

10-1-0.1

10 - 1 - 0.510-2.5-1



### WESTON MINIATURE PRECISION INSTRUMENTS

For Direct Current

#### Model 280—Portable Instruments

These instruments are all the same size and can be carried in an ordinary They are made in a great many varieties of ranges and are admirably adapted to all kinds of commercial and experimental testing that falls within their limits of c. m. f. and current.

SINGLE RANGE MILLI-VOLTMETERS

Volts

†120

†130

†150

†200

1250

30-3

50 - 5

50 - 2.5

IW.E. List

Price

Each

\$31.26

31.26 31.26 31.26

31.26

\$36.26

36.26

 $36.\bar{26}$ 



Double	Range	Voltmeter

6	0	
		7
-		

	SINC	GLE RANGE	VOLTMETERS		
1	\$31.26	7.5	<b>\$</b> 31.26	50	\$31.26
1.2	31.26	8	31.26	60	31.26
1.5	31.26	10	31.26	<b>7</b> 5	31.26
2	31.26	12	31.26	80	31.26
2.5	31.26	15	31.26	100	31.26
3	31.26	20	31.26	120	31.26
4	31.26	25	31.26	130	31.26
5	31.26	30	31.26	150	31.26
6	31.26	40	31.26		
	DOU	BLE RANGE	VOLTMETERS	3	

Triple	Range	Voltmeter

TRIPLE	RANGE	VOLTMETERS	



25-10-2.5					
30-15-3 41.26 50-25-10 41.26 150-15-3 41.26	30- 3-1.5 41.26 30- 6-3 41.26	50- 5-2.5 50-25-5	$\frac{41.26}{41.26}$	100-25-2.5	$\frac{41.26}{41.26}$

SINGLE RANGE MIL-AMMETERS

* 50	\$31.26	*120	\$31.26	*300	\$31.26
* 60	31.26	*130	31.26	*400	31.26
* 75	31.26	*150	31.26	*500	31.26
* 80	31.26	*200	31.26	*600	31.26
*100	31.26	*250	31.26	∥ *750	31.26

Single Range Ammeter



Double Range Ammeter

SINGLE RANGE AMMETERS

	O				
1	\$31.26	4	\$31.26	12	\$31.26
1.2	31.26	5	31.26	15	31.26
1.5	31.26	6	31.26	20	31.26
2	31.26	7.5	31. <b>2</b> 6	25	31.26
2.5	31.26	8	31.26	30	31.26
3	31.26	10	31.26		l .

$\mathbf{D}$	OUB	LE	RAN	GE	AMN	1ET	ERS
oc.	П	Q	_9	- 1	<b>@</b> 26	26	- 11

	_				
1-0.1	\$36.26	8-2	\$36.26	25-2.5	\$36.26
2.5 – 0.25	36.26	10-1	36.26	25-5	36.26
5-0.1	36.26	15-1.5	36.26	30-3	36.26
5-0.5	36.26	20-2	36.26		

TRIPLE RANGE AMMETERS

20 - 4 - 2

20-8-2

25-2.5-0.5

25-5-2.5

25 - 10 - 5

25-10-2.5

\$41.26

41.26

 $41.\overline{2}6$ 

41.26

41.26

41.26



\* Milli-amperes. † Milli-volts.

\$41.26

41.26

41.26

41.26

41.26

†Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

Triple Range Ammeter

Dimensions.—Vertical, 4.6 inches; horizontal, 4.4 inches; depth, 1.5 inches.

### WESTON INSTRUMENTS Models 370 and 310 (Portable)



Model 370, Dimen.  $8 \times 10\% \times 5\%$  ins. Scale Length 5% ins.

#### A.C. AND D.C. AMMETERS

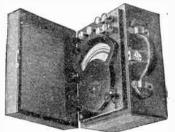
These instruments are electro-dynamometer ammeters, and may be used with equal accuracy on either direct current circuits or on alternating current circuits of any frequency up to 133 cycles per second and of any wave form.

They are contained in polished mahogany boxes, provided with carrying handles, locks and covers equipped with slip hinges. The weight is approximately 11 lbs., and the dimensions are 8 x 10½ x 5¾ inches over all.

They will be found particularly useful as transfer instruments from direct to alternating current and for checking electro-magnetic (movable iron) or induction type instruments, or for all measurements of current where very high accuracy is desired.

#### MODEL 370-MILLI-AMMETERS

Single Range Milli-amperes. 15 20 30 50 75	Approx. Res, in Ohms 1400 720 350 167 50	W. E. List Price Each \$168.76 168.76 168.76 168.76	Single Range Milli-amperes 100 150 200 300 500 750	Approx. Res. in Ohms 26.5 19.5 7.5 3.2 1.2 0.9	W. E. List Price Each \$168.76 168.76 168.76 168.76 168.76
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Model 310

Maximum Canacity

### MODEL 370—AMMETERS

Double Range	W. E. List		W. E. List
Amperes	Price Each		Price Each
2–1	\$187.50	$\begin{array}{c} 5-2\frac{1}{2} \\ 10-5 \end{array}$	\$187.50 187.50

# SPECIAL MODEL 310 WATTMETERS FOR VERY LOW POWER FACTORS

For measurements in circuits where the power factor is very low such as core losses in transformers, a special line of Weston wattmeters has been designed, giving full scale deflection for 20% power factor that is, the scale value in watts is 20% of the number of volt amperes applied.

	2,200111111011	ii Cupitorij				
		lmps.		Watt Ranges		
Maximum	Fields in	Fields in	Fields in	Fields in	Number of	W. E. List
Volts /	Series	Multiple	Series	Multiple	Scale Lines	Each Price
150/75	0.5	1	15/7.5	30/15	150	\$200.00
150/75	1	2	30/15	60/30	150	200.00
150/75	2.5	5	75/37.5	150/75	150	200.00
150/75	5	10	150/75	300/150	150	200.00
150/75	10	20	· 300/150	600/300	150	212.50
150/75	20	40	600/300	1200/600	150	212.50
150/75	50	100	1500/750	3000/1500	150	212.50

#### WESTON SINGLE PHASE PORTABLE A.C. AND D.C. WATTMETER MODEL 310

These instruments represent the latest development in electro-dynamometer wattmeters and embody many characteristics hitherto considered unattainable in instruments of this class.

They are contained in highly polished mahogany boxes, provided with carrying handles, locks and covers equipped with slip hinges. The weight is approximately 11 lbs., and the dimensions are  $8 \times 10\frac{1}{4} \times 5\frac{3}{4}$  inches over all.

#### Scales

The scales are 51/4 inches long, are uniform throughout their entire length, and are provided with mirrors to prevent parallax mirrors.

The pointers are of the Weston triangular truss type with knife edges, and are equipped with simple zero setting devices controlled from the outside of the case.

Ranges

Double ranges for both the current and voltage circuits are provided. The double current, range feature is obtained by connecting the two field coil sections either in series or in multiple by means of links and binding screws, conveniently located on the top of the instrument. These links are provided with handles to facilitate their manipulation, and are slotted, making it unnecessary to remove them entirely each time the range is changed. The double voltage ranges are controlled by means of independent binding posts.

As each instrument has a number of ranges, a scale cannot be made which is readable with equal facility for all ranges. In each case however, a scale is provided which gives 1, 2 or 5 units per division for the range marked, and simple multiplying factors for the other ranges.

Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

# Model 310 (Continued)

# Portable Wattmeters

# D.C. and A.C. Single Phase

		Amı	ere		*Watt l	Ranges	Number	Mfr	
Volts	No Series	rmal Multiple	Max Series	Multiple	Field Coils in Series	Field Coils in Multiple	Scale Lines	l.ist Price	W.E. List
Normal 100/50 Maximum 150/75	1 2,5 5 10 20 30 50	2 5 10 20 40 60 100	2 5 10 20 40 60 75	4 10 20 40 80 120 150	100/50 250/125 500/250 1/ .5 K.W. 2/1 K.W. 3/1.5 K.W. 5/2.5 K.W.	200/100 560/250 1000, 500 2/1 K.W. 4/2 K.W. 6/3 K.W. 10/5 K.W.	100 125 100 100 100 150 100	\$70.00 70.00 70.00 70.00 70.00 75.00 75.00 75.00	\$175.00 175.00 175.00 175.00 187.50 187.50 187.50
Normal 150/75 Maximum 250/125	1 2.5 5 10 20 30 50	2 5 10 20 40 60 100	2 5 10 20 40 60 75	4 10 20 40 80 120 150	150/75 375/187.5 750/375 1.5/.75 K.W. 3/1.5 K.W. 5/2.5 K.W. 7.5/3.75 K.W.	300/150 750/375 1500 750 3/1.5 K.W. 6/3 K.W. 10/5 K.W. 15/7.5 K.W.	150 150 150 150 150 150 100 150	70.00 70.00 70.00 70.00 75.00 75.00 75.00	175,00 175,00 175,00 175,00 187,50 187,50 187,50
Normal 200/100 Maximum 300/150	1 2.5 5 10 20 30 50	2 5 10 20 40 60 100	2 5 10 20 40 60 75	4 10 20 40 80 120 150	200/100 500/250 1/ .5 K.W. 2/1 K.W. 4/2 K.W. 6/3 K.W. 10/5 K.W.	400/200 1000 500 2/1 K.W. 4/2 K.W. 8/4 K.W 12/6 K.W 20/10 K.W.	100 100 100 100 100 100 120 100	75.00 75.00 75.00 75.00 75.00 80.00 80.00 80.00	187,50 187,50 187,50 187,50 200,00 200,00
Normal 300/150 Maximum 450/250	1 2.5 5 10 20 30 50	2 5 10 20 40 60 100	2 5 10 20 40 60 75	4 10 20 40 80 120 150	300/150 750-375 1.5/75 K.W. 3-1.5 K.W. 6/3 K.W. 10/5 K.W. 15/7.5 K.W.	600/300 1500 750 3/1.5 K.W. 6 3 K.W. 12/6 K.W. 20/10 K.W. 30/15 K.W.	150 150 150 150 150 120 100 150	75.00 75,00 75.00 75.00 75.00 80.00 80.00 80.00	187,50 187,50 187,50 187,50 200,00 200,00
Normal 500/100 Maximum 600/150	1 2.5 5 10 20 30 50	2 5 10 20 40 60 100	2 5 10 20 40 60 75	4 10 20 40 80 120 150	500/100 1250/250 2500/500 5/1 K.W. 10/2 K.W. 15/3 K.W. 25/5 K.W.	1000 200 2500 500 5000/1000 10/2 K.W. 20/4 K.W. 30/6 K.W. 50/10 K.W.	100 125 100 100 100 150 100	85.00 85.00 85.00 85.00 90.00 90.00 90.00	212.50 212.50 212.50 212.50 212.60 225.00 225.00
Normal 600/150 Maximum 675/250	1 2.5 5 10 20 30 50	2 5 10 20 40 60 100	2 5 10 20 40 60 75	4 10 20 40 80 120 150	600/150 1500/375 3/ 75 K.W. 6/1.5 K.W. 12/3 K.W. 20/5 K.W. 30/7.5 K.W.	1200/300 3000 750 6/1.5 K.W. 12/3 K.W. 24/6 K.W. 40/10 K.W.	150 150 150 150 120 100 150	87.50 87.50 87.50 87.50 87.50 92.50 92.50 92.50	218.76 218.76 218.76 218.76 231.26 231.26 231.26
Normal 600/300 Maximum 675/450	1 2.5 5 10 20 30 50	2 5 10 20 40 60 100	2 5 10 20 40 60 75	4 10 20 40 80 120 150	600/300 1.5/.75 K.W. 3/1.5 K.W. 6/3 K.W. 12/6 K.W. 20/10 K.W. 30/15 K.W.	1200/600 3/1.5 K.W. 6/3 K.W. 12/6 K.W. 24/12 K.W. 40/20 K.W. 60/30 K.W.	120 150 150 120 120 100 150	87.50 87.50 87.50 97.50 92.50 92.50 92.50	218.76 218.76 218.76 218.76 231.26 231.26 231.26
Normal 750/150  Maximum 750/250	1 2.5 5 10 20 30 50	2 5 10 20 40 60 100	2 5 10 20 40 60 75	4 10 20 40 80 120 150	750/150 1875/375 3750/750 7.5/1.5 K.W. 15/3 K.W. 25/5 K.W. 37.5/7.5 K.W.	1500/300 3750/750 7500/1500 15/3 K.W. 30/6 K.W. 50/10 K.W. 75/15 K.W.	150 150 150 150 150 100 150	90.00 90.00 90.00 90.00 95.00 95.00 95.00	225,00 225,00 225,00 225,00 237,50 237,50 237,50
Normal 750/300 Maximum 750/450	1 2.5 5 10 20 30 50	2 5 10 20 40 60 100	2 5 10 20 40 60 75	4 10 20 40 80 120 150	750/300 2000/800 3750/1500 7.5/3 K.W. 15/6 K.W. 25/10 K.W. 37.5/15 K.W.	1500/600 4000/1600 7500/3000 15/6 K.W. 30/12 K.W. 50/20 K.W. 75/30 K.W.	150 160 150 150 150 100 150	90,00 93,00 90,00 90,00 95,00 95,00 95,00	225.00 225.00 225.00 225.00 237.50 237.50 237.50

<sup>\*</sup>Ranges not marked K.W. read in watts.

Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

Model 329

# Model 329 Portable Polyphase Wattmeter

These instruments are contained in highly polished mahogany boxes, provided with carrying handles, locks and covers equipped with slip hinges.

This form of instrument really consists of two single phase wattmeters, electrically independent, but having their movable coils mounted on a common shaft, so that they rotate together. Each coil, however, moves in its own system of field coils.

#### Scales

These scales are uniform throughout their entire length, and are 51/4 inches long.

The pointers are equipped with simple zero setting devices, and are of the Weston triangular truss type with knife edges. To prevent parallax errors mirrors are provided.

# Portable Polyphase Wattmeter Model 329

List Prices of Model 329 Polyphase Wattmeters

The weight is approximately  $17\frac{1}{2}$  lbs. Dimensions are  $9\frac{1}{2} \times 10^{1} \times 8\frac{1}{16}$  inches overall.

			s of Mod eres——	el 329 Poly	*Watt Ranges	Field Coils	ber of	W. E.
Volts	Series	rmal Multiple	Max Series	imum Multiple	Field Coils in Series	in Multiples	Scale Lines	List Price
Normal 100/50 Maximum 150/75	$\begin{array}{c} 1 \\ 2.5 \\ 5 \\ 10 \end{array}$	2 5 10 20	$\begin{array}{c} 2 \\ 5 \\ 10 \\ 20 \end{array}$	4 10 20 40	200/100 500/250 1.5 K.W. 2/1 K.W.	400/260 1000/500 2/1 K.W. 4/2 K.W.	100 100 100 100	\$275.00 275.00 275.00 287.50
Normal 150/75 Maximum 250/125	$\frac{1}{2.5}$ $\frac{1}{5}$ $\frac{1}{10}$	$\begin{array}{c} 2 \\ 5 \\ 10 \\ 20 \end{array}$	2 5 10 20	4 10 20 40	300/150 750/375 1,5/,75 K,W, 3/1 5 K,W.	600/300 1500/750 3/1.5 K.W. 6/3 K.W.	150 150 150 150	$\begin{array}{c} 275.00 \\ 275.00 \\ 275.00 \\ 287.50 \end{array}$
Normal 200/100 Maximum 300/150	$\frac{1}{2.5}$ $\frac{1}{5}$	2 5 10 20	$\begin{array}{c} 2 \\ 5 \\ 10 \\ 20 \end{array}$	$\begin{array}{c} 4 \\ 10 \\ 20 \\ 40 \end{array}$	400/200 1/.5 K.W. 2/1 K.W. 4/2 K.W.	800/400 2/1 K.W. 4/2 K.W. 8/4 K.W.	100 100 100 100	$\begin{array}{c} 287.50 \\ 287.50 \\ 287.50 \\ 300.00 \end{array}$
Normal 300/150 Maximum 450/250	$\frac{1}{2.5}$ $\frac{1}{5}$	2 5 10 20	$\begin{array}{c} 2 \\ 5 \\ 10 \\ 20 \end{array}$	4 10 20 40	600/300 1.5/.75 K.W. 3/1.5 K.W. 6/3 K.W.	1200/600 3/1.5 K.W. 6/3 K.W. 12/6 K.W.	$\begin{array}{c} 120 \\ 150 \\ 150 \\ 120 \\ \end{array}$	287.50 287.50 287.50 300.00
Normal 500/100 Maximum 500/150	$\begin{array}{c} 1 \\ 2.5 \\ 5 \\ 10 \end{array}$	$\begin{array}{c} 2 \\ 5 \\ 10 \\ 20 \end{array}$	$\begin{array}{c} 2 \\ 5 \\ 10 \\ 20 \end{array}$	$\begin{array}{c} 4 \\ 10 \\ 20 \\ 40 \end{array}$	1000/200 2500/500 5/1 K.W. 10/2 K.W.	2000/400 5000/1000 10/2 K.W. 20/4 K.W.	100 100 100 100	312.50 $312.50$ $312.50$ $325.00$
Normal 600/150 Maximum 675/250	$\begin{array}{c} 1 \\ 2.5 \\ 5 \\ 10 \end{array}$	2 5 10 20	2 5 10 20	4 10 20 40	1200/300 3/.75 K.W. 6/1.5 K.W. 12/3 K.W.	2400/600 6/1.5 K.W. 12/3 K.W. 24/6 K.W.	120 150 150 120	318.76 318.76 318.76 331.26
Normal 600/300 Maximum 675/450	$\frac{1}{2.5}$ $\frac{1}{5}$	2 5 10 20	2 5 10 20	4 10 20 40	1.2/.6 K.W. 3/1.5 K.W. 6/3 K.W. 12/6 K.W.	$\begin{array}{ccc} 2.4/1.2 & \text{K.W.} \\ 6/3 & \text{K.W.} \\ 12/6 & \text{K.W.} \\ 24/13 & \text{K.W.} \end{array}$	120 150 120 120	318.76 318.76 318.76 331.26
Normal 750/150 Maximum 750/250	1 2.5 5 10	$\begin{array}{c} 2 \\ 5 \\ 10 \\ 20 \end{array}$	$\begin{array}{c} 2 \\ 5 \\ 10 \\ 20 \end{array}$	4 10 20 40	1500/300 3750/750 7.5/1.5 K.W. 15/3 K.W.	3000/600 7500/1500 15/3 K.W. 30/6 K.W.	150 150 150 150	325.00 $325.00$ $325.00$ $325.00$
Normal 750/300 Maximum 750/450	$\begin{array}{c} 1 \\ 2.5 \\ 5 \\ 10 \end{array}$	2 5 10 20	2 5 10 20	4 10 20 40	1500/600 3750/1500 7,5/3 K.W. 15/6 K.W.	3000/1200 7500/3000 15/6 K.W. 30/12 K.W.	150 150 150 150	325.00 325.00 325.00 337,50

<sup>\*</sup>Ranges not marked K.W. read in watts.

Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

# Western Electric

# WESTON INSTRUMENTS

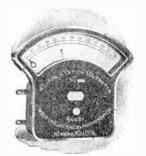
#### Models 155 and 11







Model 155 Ammeter



Model 11 Voltmeter

# Model 155 Portable—For Alternating Current

These instruments are of the Weston electro-magnetic type. The indications of these Weston instruments are accurate within ½ per cent independent of changes in temperature, frequency or wave form throughout the range of commercial practice. The scales are open and fairly uniform throughout about 4/5 of the total range of deflection; therefore, the accuracy of reading within the working range is greater than it would be with a uniform scale. The indications are also dead beat and will instantly and accurately followevery change in the value of the quantity being measured. Voltmeters are provided with contact keys.

Volt	meters	Am	meters	Mil-A	nmeters		Dou	ble Rar	nges		
Range		Range			List	Range	1	Range		-	List
in	List	in	List	Mil-	Price	in	List	in	List	Mil-	Price
Volts	Price	Amps.	Price	Amps.	Each	Volts	Price	Amps.	Price	Amps.	Each
30	\$46.26	1	\$44.38	75	\$44.38	300/150	\$68.76	100	\$43.76		
50	46.26	2	43.76	150	41.38	600/300	81.26	150	45.00		
75	46.26	3	42.50	250	44.38	600/150	81.26	200	46.26		
125	46.26	5	42.50	500	44.38	750/300	87.50	250	46.88		
150	46.26	10	42.50	600	44.38	750/150	87.50	300	47.50		
300	52.26	15	42.50	750	44.38						
500	66.26	25	42.50				Tri	ple Ra	nges		
600	68.76	50	43.76			600.300715	0   \$93.76	400	\$52.50		
750	75.00	75	43.76			750/300/150		500	57.50		

Leather carrying cases \$10.62 to \$13.12 extra.

# Illuminated Dial Station D. C. Voltmeters, Model 11

	Value			Value			Value			Value	
	of Each			of Each			of Each			of Each	
Range	Scale	List	Range	Scale	List	Range	Scale	List	Range	Scale	List
in	Division	Price	in	Division	Price	in	Division	Price	in	Divison	Price
Volts	in Volts	Each	Volts	in Volts	Each	in Volts	inVolts	Each	Volts	in Volts	Each
125	1	\$165.00	750	5	\$178.20	3250	25	\$308,00	6500	50	\$205.00
150	1	167.20	1000	10	220.00	3500	25	330.00	7000	50	210.00
180	2	169.40	1500	10	242.00	4000	50	352.00	7500	50	220.00
250	2	171.60	2000	20	264.00	4500	50	374.00	8000	100	230.00
300	2	173.80	2500	20	286.00	5000	50	396.00	9000	100	250.00
600	5	176.00	3000	25	297.00	6000	50	429.00	10000	100	275.00

Standard, finish, dead black japan, specify on order if flush or front mounting is required

# Illuminated Dial Station D. C. Ammeter, Model No. 11

#### ONE OF THE FOLLOWING SHUNTS SHOULD BE ORDERED FOR EACH AMMETER

Rating		Rating	List Price						
in	Shunts	in	Shunts	in -	Shunts	in	Shunts	in	Shunts
Amps.	Alone	Amperes	Alone	Amperes	Alone	Amperes	Alone	Amperes	Alone
200	\$6.60	500	\$9.90	1200	\$18.70	3000	\$49.50	5000	\$99.00
250	6.60	600	12.10	1500	31.36	3500	55.10	6000	115.50
300	7.16	750	14.30	2000	41.26	4000	65.00	7000	132.00
400	7.70	1000	18.50	2500	44.56	4500	82.50	8000	165.00
								10000	198.00

MODELS 57, 24 AND 252

#### Direct Current



Model 57 Voltmeter Diameter 9.5 inches



Model 24 Voltmeter Diameter 7½ inches

## Model 57 Station Ammeters and Voltmeters

These instruments are made in three patterns. Regular, for front of board connection. Back connection, in which the Inese instruments are made in three patients. Regular, to this type, in which a flange is provided for the front, allowing the entire body of the instrument to pass through for connection in the rear of the switchboard.

The cases of these instruments are regularly supplied in No. 11 dead black japan finish.

#### Model 57 D. C. Ammeters

in Division P	ist Range rice in ach Amperes	Each Scale Division in Ampercs	List Price Each	Range in Amperes	Each Scale Division in Volts	List Price Each
5 0.1 6: 10 0.2 6: 15 0.2 6: 25 0.5 6:	2.50 100 2.50 150 2.50 200 2.50 250 2.50 300 3.76 400 5.00 500	2 2 5 5 10 10	\$66.26 67.50 70.00 70.62 70.62 71.26 61.30	600 750 1000 1200 1500 2000 2500	10 10 20 20 20 50 50	\$76.26 78.76 81.26 83.76 98.12 109.36 113.12

The lower ranges up to 75 amperes are self-contained, the shunts being an integral part of the instrument. For ranges above 75 amperes the shunt is detachable, and substantially the same as that for the illuminated-dial instruments, excepting that when specially ordered these instruments will be furnished self-contained for ranges up to 200 amperes.

## Model 57 D. C. Voltmeters

Range in Volts	Value of Each Scale Division in Volts	W. E. List Price Each	Range in Volts	Value of Each Scale Division in Volts	W. E. List Price Each	Range in Volts	Value of Each Scale Division in Volts	W.E. List Price Each
3	0.05	\$62,50	50	1.0	\$66.26	250	5	\$78.76
6	0.01	62,50	75	1.0	68.12	300	5	81.26
15	0.2	62,50	130	2	70.62	600	10	87.50
25	0.5	65,00	150	2	73.76	750	10	92.50

#### Model 24 Station Ammeters and Voltmeters

	Model 24 Self-contained Value of Each	Ammeters W. E.	Me	odel 24 Voltmeters Value of Each	W. E.
Range in	Scale Division	List Price	Range in	Seale Division	List Price
Amperes	in Amperes	Each	Volts	in Amperes	Each
0 to 1	0.02	\$37.50	0 to 3	0.05	<b>\$38.7</b> 6
0 to 5	0.1	37.50	0 to 5	0.1	38.76
0 to 10	0.2	37.50	0 to 6	0.1	39.38
0 to 15	0.2	38.76	0 to 10	0.2	40.00
0 to 25	0.5	38.76	0 to 15	0.2	40.00
0 to 50	1	39.38	0 to 25	0.5	40.00
0 to 80	2	39.38	0 to 50	1	40.00
0 to 100	2	40.00	0 to 80	2	40.00
0 to 130	2	41.26	0 to 130	2	41.26
0 to 150	2	41.26	0 to 150	2	42.50
0 to 200	5	42.50	0 to 250	5	48.76
0 10 -00	*		0.10.300	5	51.26
			0 to 600	10	66.26

These ammeters are regularly furnished with internal shunts up to and including 200 amperes. They bowever will be furnished with internal shunts when specified on order.

#### Model 252 Voltmeter and Ammeters

Model No. 252 direct current voltmeter and ammeters are the same instruments as the model 24, except being mounted in a drawn steel case of the same size and design as the alternating current instruments. It has a case diameter of 7% inches, projection of 3% inches, and scale length of 5¼ inches

programme an ay	0	· · ·			
Voltmete			W.E. Amm		W. E.
Volts	List Price	Ampere	List Price	Ampere	List Price
130	\$41.26	250	\$45,00	500	\$48.76
150	43.76	300	45.62	600	51.26
250	48.76	400	46.26	750	53.76
300	51.26	l l		Į.	
600	66.26	, ,	J	I	

Note 1: Voltmeters are provided with external resistors for circuits in excess of 300 volts.

Note 2: All ammeters are furnished with a millivoluneter adjusted for use with external shunts only. Prices for lower or higher ranges will be quoted upon request.

Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

#### Models 159 and 160 Direct Current



Model 159
Diameter 7¼ inches.
Model 160
Diameter 9½ inches

#### ECLIPSE VOLTMETERS AND AMMETERS

These instruments were given the designation "Eclipse" to distinguish them from the well known moving coil Weston instruments. The designation is also very appropriate as these new instruments represent a distinct advance in the art of instrument design. They belong to the "soft-iron" or "electromagnetie" type, and yet they have none of the many disadvantages and errors commonly associated with instruments of this class. They possess a degree of accuracy and general electrical excellence hitherto wholly unknown, and here-tofore deemed impossible of attainment with this type of instrument, and are substantially unaffected by temperature changes, whether due to changes in the room temperature, or to the heating effect of the current through the instrument. Furthermore, the hysteresis or lag error is entirely negligible at the working part of the scale. This last attainment is unprecedented. Eclipse instruments are made in two models, namely: Model 160 and 159, the only difference being in the dimensions.

Model	Diameter	Depth	Length of Scale
	Inches	Inches	Inches
160	$\frac{9.56}{7.25}$	3.15	6.5
159		3.15	5.25

#### **ECLIPSE MODEL 159 AMMETERS**

#### .

#### ECLIPSE MODEL 160 AMMETERS

Note: This model does not indicate polarity.

Note: This model does not show polarity.

Range in	List Price	Range in	List Price
Amperes	Each	Amperes	Each
1	\$30.00	1	\$38.76
2	30.00	2	38.76
3	29.38	3	39.12
5	28.76	5	37 .50
10	28.76	10	37.50
15	28.76	15	37.50
25	28.76	25	37.50
50	31.26	50	40.00
75	31.26	75	40.00
100	30.50	100	41.26
150	30.50	150	41.26
200	33.76	200	42.50
250	35.00	250	43.76
300	36.26	300	45,00
400	37.50	400	46.26
500	40.00	500	48.76

#### **ECLIPSE MODEL 159 VOLTMETERS**

Note: This model does not indicate polarity.

#### ECLIPSE MODEL 160 VOLTMETERS

Note: This model does not show polarity.

Range in	List Price	Range in	List Price
Volts	Each	Volts	Each
75	\$30.00	75	\$40.00
135	30.00	125	40.00
150	30.00	150	40.00
300	36.26	300	45.00
500	40.00	500	51.26
600	42.50	600	53.76
750	45.00	750	56.26

Voltmeters with a range above 150 volts are provided with external resistances.

Voltmeters with a range above 300 volts are provided with external resistances.

Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.



No. 273 Ammeter

# WESTON INSTRUMENTS Models 273, 271 and 269





No. 269 Voltmeter



No. 271 Ammeter



No. 271 Voltmeter



No. 269 Ammeter

The Weston Direct Current Switchboard "Fan-shaped" Models 269, 271 and 273, herewith briefly described, differ radically in form and appearance from the preceding Weston Round Pattern Switchboard Models.

They possess many important features that will immediately commend them to switchboard and panel-

board manufacturers and to users in general.

Attention will first be directed to the fact that they constitute a group of instruments similar in shape but graded as to size, thus enabling a purchaser to easily select the model best suited to the requirements. Then it will be observed that:

(a) They have remarkably long, open and legible scales (the longest ever attained in instruments.

of their size);

They are unusually attractive in appearance;

They are compact in size; Their projection from the face of the switchboard is noticeably slight. (d)

But they likewise deserve special consideration from the standpoints of performance in service and mechanical and electrical workmanship and design.

Every detail of design and construction has been most carefully and conscientiously studied for the purpose of obtaining the highest possible desgree of precision consistent with durability and reliability.

All parts are made strictly to gauge, thus assuring a uniformly high standard of product.

#### No. 273 AMMETER

		- 1			Scale	1 W.E.
	Width	- 1	Height			List Price
			Inches		Inches	Each
Un to and including 250 amperes, external shunt.	9516	Ť	7 13 2	T	71/4	\$56.26
	05	-;	7 13	_	71/4	62.50
1 to and including 150 voits, scir-contained			713	1	712	70.00
Prom 1.00 voits to 300 voits, sen-contained		ł	713		712	82.50
From 300 voits to 500 voits (external resistance box used)		1	7 1 3		71/	87 50
From 600 volts to 750 volts (external resistance box used)	9716	_	139	1_	1.74	1 07 00
No. 271 AMMETER						
1 Up to and including 250 amperes, external shunt only. Size:		1		1		1
				1		37.50
No. 271 VOLTMETER						
1 Up to and including 150 volts, self-contained	$7\frac{7}{8}$	-	$6\frac{1}{4}$	1	$5\frac{3}{4}$	+40.00
From 150 volts to 300 volts, self-contained	$7\frac{7}{8}$	- }	$6\frac{1}{4}$		$5\frac{3}{4}$	+48.76
	77/8		61/4	1	$5\frac{3}{4}$	+61.26
From 600 to 750 volts (external resistance box used)	$7\frac{7}{8}$		61/4		$5\frac{3}{4}$	-66.26
No. 269 AMMETER						
L'n to 50 amperes, self-contained only.	55%	ı	476	ī	4	+32.50
	$55_{8}$	1	476		4	-36.26
No. 269 VOLTMETER						
Up to and including 150 volts, self-contained	55/8	- 1	476		4	33.76
- L. L. & TO SHO INCHIGHNY LOU VOUS, SPH-CORRAINCO						
	Up to and including 250 amperes, external shunt only. Size: width 7½ inches, height 6½ inches, length 5¾ inches	No. 273 VOLTMETER   Up to and including 150 volts, self-contained   95/16	$  \begin{tabular}{ l l l l l l l l l l l l l l l l l l l$			

These instruments can be furnished in higher ranges when used with external shunts. To obtain the price deduct the price of the shunt from the price of the instrument as listed above and add to this the price of the shunt of the range desired. For price of shunt see listing elsewhere.

Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

Model 267 Voltmeter Reant Clew





Model 267 Voltmeter Rear View



Model 267 Ammeter Front View



Model 267 Ammeter Rear View



Model 268 Volt-Ammeter Front View



Model 268 Volt-Am-Rear View

# WESTON MINIATURE PRECISION INSTRUMENTS

For Direct Current

# Model 267 Switchboard Voltmeters, Ammeters and Mil-Ammeters

This group of instruments consists of a variety of ranges of small switchboard ammeters and voltmeters suitable for use in small isolated lighting plants, small power plants, signal systems, battery charging panels and for all kinds of service where small switchboard indicating instruments are needed.

#### MODEL 267 SWITCHBOARD VOLTMETERS

Range	*List Price Each	Range	*List Price Each	Range	*List Price Each
1 1.2 1.5 2 2.5 3 · 4 5 6	\$24.16 24.16 24.16 24.16 24.16 24.16 24.16 24.16 24.16 24.16	7.5 8 10 12 15 20 25 30 40	\$24.16 24.16 24.16 24.16 24.16 24.16 24.16 24.16 24.16	50 60 75 80 100 120 130	\$24.16 24.16 24.16 24.16 24.16 24.16 24.16 24.16 24.16

## MODEL 267 SWITCHBOARD AMMETERS

1	\$24.16	4	\$24.16	12	\$24.16
$\hat{1}.2$	24.16	5	24.16	15	24,16
1.5	24.16	6	24,16	20	24,16
2	24.16	7.5	24,16	25	24.16
$\tilde{2}.5$	$\frac{51.16}{24.16}$	g '	24,16	30	24.16
ره. ت		10		""	
3	24.16	11 10	1 - 24.16 - 1		

#### MODEL 267 MIL-AMMETERS

Note: For higher ampere readings the Model 267 will be furnished as a milli-voltmeter adjusted to external shunts. Information and prices relative to such instruments will be supplied upon application.

Dimensions.—Vertical, 3.35 inches; horizontal, 4.1 inches; depth, 1.1 inches.

#### MODEL 268 SWITCHBOARD VOLT-AMMETERS

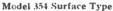
These instruments are adapted for use in electrolytic work, charging and discharging small storage batteries, and for service in connection with directcurrent ignition systems for gas and gasoline engines, and in all classes of work in which a single instrument is necessary for indicating either potential difference or current.

Ra	nge	*List Price	Rar	*List Price	
Volts	Amperes	Each	Volts	Amperes	Each
10-0-15 10-0-15 10-0-15 7.5-0-15 7.5-0-15 7.5-0-15 1.5-0-3 5-0-15	10-0-15 2-0-3 20-0-30 7.5-0-15 15-0-30 1.5-0-3 7.5-0-15 1-0-3	\$36.80 36.80 36.80 36.80 36.80 36.80 36.80 36.80	5-0-15 5-0-10 10-0-20 5-0-10 5-0-10 10-0-20 10-0-20 10-0-20	10-0-30) 5-0-10 2-0-4 1-0-2 10-0-20) 5-0-10 1-0-2 10-0-20	\$36.80 36.80 36.80 36.80 36.80 36.80 36.80 36.80

Dimensions.—Vertical, 4.25 inches; horizontal, 4.2 inches; depth, 1.35 inches. \*Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

MODELS 354, 301 AND 280







Model 354 Flush Type



Model 311 Zero-Left Ammeter

# Model 354 Direct Current Ammeter

These ammeters are furnished with three styles of cases, i.e., (1st.) flush type with wide flange to be screwed directly to the cowl or dash board. (2d) front projecting type with back connecting studs serving the dual function of providing a means of making electrical connections and securing the instrument in position (3d) flush type narrow flange which is secured in position by means of a special clamp.

1 1	• 1	**	•		TW. E.
List No.		Range Amperes		Mfrs. List Price Each	List Price
354		10-0-10		\$4.25	<b>\$</b> 6,38
354		15-0-15		4.25	6.38
354		20-0-20		4.25	6.38
354		30-0-30		4.25	6.38

#### Model 301 Miniature Voltmeters and Ammeters

These instruments are especially designed for installation in automobiles. They are reliable, accurate and serviceable for measuring the voltage and rate of charge or discharge of batteries.

Note: Made in two standard finishes, full nickel or dull black.

	Scale	Mfrs. List	List					
List No.	Mounting	Case	Depth	Length	Price Each	Price		
301 Ammeter or Voltmeter 301 Ammeter or Voltmeter		$\frac{2.750}{3.250}$	1.234 1.171	$2.35 \\ 2.35$	\$6.00 6.00	\$13.80 13.80		

Can be furnished in any of the ranges as follows:

	Am	meters		Voltmeters	
Zero-	Left	Zero-Centre		Zero-Le	ft
0-1.5 amperes 0-2 amperes 0-2.5 amperes 0-3 amperes 0-4 amperes	0–12 amperes	1-0-1 amperes 1.5-0-1.5 amperes 2-0-2 amperes 3-0-3 amperes 5-0-5 amperes 10-0-10 amperes 15-0-15 amperes 20-0-20 amperes	0-1.5 volts 0-2 volts 0-2.5 volts 0-3 volts 0-4 volts	0-5 volts 0-8 volts 0-10 volts 0-12 volts 0-15 volts 0-20 volts	0–25 volts 0–30 volts 0–40 volts 0–50 volts
		30-0-30 amperes 50-0-50 amperes		3-0-3 volts	

Zero ¼ Scale 10-0-30 amperes

# Weston Model 280 Garage Testing Instrument



Model 280 Garage Testing Instrument

This instrument is adjusted for ranges of 30 and 3 volts and 100 millivolts, and is provided with external shunts of 3, 30 and 300 ampere rating for use in current measurements.

			*W. E.
List		Mfrs. List	List
No.	·	Price Each	Price
280	Garage testing instrument	\$22.50	<b>\$56.26</b>
	Leather carrying case	2.75	6.88

\*Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

MODELS 167, 343, 216 AND 368



Model 167 Single Phase Wattmeter



Model 216, Full-Front Type, Polyphase Wattmeter



Model 216, Semi-FlushType, Polyphase Wattmeter

# Model 167 Direct Current and Single Phase Wattmeter

100 to 150 Volts 200 to			0 to 3()() \	to 300 Volts 400 to 600 Volts			Volts	600 to 750 Volts				
Am- pere		Scale	List Price		Scale	List Price		Scale	List Price		Scale	List Price
1	150	watts	\$110.00	300	watts	\$123.20	600	watts	\$134.20	750	watts	\$147.40
2	300	watts	110.00	600	watts	123.20	1.	5 kilowatts	134.20	1.	kilowatts	147.40
5	500	watts	110.00		kilowatt	123.20	2	kilowatts	134.20	2.4	i kilowatts	147.40
5	750	watts	110.00		kilowatts	123.20	3	kilowatts	134.20	4	kilowatts	147.40
10	1	kilowatt	[-110.00]	2	kilowatts	123.20	4	kilowatts	134.20	5	kilowatts	147.40
10	1.5	kilowatts:	110.00	3	kilowatts	123.20	- 6	kilowatts	134.20	7.5	kilowatts	147.40
20	2	kilowatts	[-110.00]		kilowatts	123.20	- 8	kilowatts	134.20	10	kilowatts	147.40
20	3	kilowatts	110.00		kilowatts	123.20	12	kilowatts	134.20	15	kilowatts	147.40
50	5	kilowatts	110.00	10	kilowatts	123.20	20	kilowatts	134.20	25	kilowatts	147.40
50	7.5	kilowatts	[ 110.00	15	kilowatts	123.20	30	kilowatts	134.20	40	kilowatts	147.40
100	10	kilowatts	123.20	20	kilowatts	134.20	40	kilowatts	147.40	50	kilowatts	165.00
100	15	kilowatts	123.20	30	kilowatts	134.20	60	kilowatts	147.40	75	kilowatts	165.00

The model No. 343 differs from model No. 167 only in the diameter of case, the length of pointer and scale. Its diameter is  $7\frac{11}{16}$  inches, projector is  $3\frac{7}{8}$  inches and scale length is  $5\frac{1}{4}$  inches. It can be furnished for the same potentials and current ranges as the model No. 167 at List price of \$16.50 less than corresponding model No. 167.

# Model 216 Polyphase Wattmeter

#### Semi-flush or Full Front Case

#### Two Phase or Three Phase

110 to 150 Volts			200 to 230 Volts			400 to 600 Volts			600 to 750 Volts		
Am- pere	Scale	List Price		Scale	List Price		Scale	List Price		Scale	List Price
5	1 kilowatts	\$154.00	2	kilowatts	\$165.00	4	kilowatts	\$176.00	-5	kilowatts	\$187.00
5	1.5 kilowatts	154,00	3	kilowatts	165.00	6	kilowatts		.,	5 kilowatts	187.00
10	2 kilowatts	154.00	4	kilowatts	165.00	- 8	kilowatts	176.00	10	kilowatts	
10	3 kilowatts	154.00	6	kilowatts	165.00	12	kilowatts	176.00	15	kilowatts	187.00
20	4 kilowatts	154.00									
20	6 kilowatts	154.00	8	kilowatts	165.00	20	kilowatts	176.00	20	kilowatts	187.00
20	7.5 kilowatts	154.00	12	kilowatts	165.00	30	kilowatts	176.00	30	kilowatts	187.00
50	10 kilowatts	154.00	20	kilowatts	165.00	40	kilowatts	176.00	50	kilowatts	187.00
50	15 kilowatts	154.00	30	kilowatts	165.00	60	kilowatts	176.00	75	kilowatts	187.00
100	20 kilowatts	165.00	4()	kilowatts	176.00	80	kilowatts	187.00	100	kilowatts	198.00
100	30 kilowatts	165.00	60	kilowatts	176.00	120	kilowatts	187.00	150	kilowatts	198.00

Model No. 368 polyphase indicating wattmeter (made in semi-flush type of case only), differs from model No. 216 only in the diameter of case, length of pointer and scale. It has a diameter of  $7\frac{11}{16}$  inches, a projection of  $3\frac{7}{8}$  inches, and a scale length of  $5\frac{1}{4}$  inches. It can be furnished for potentials up to 750 volts and currents up to 20 amperes at List prices \$16.50 less than the corresponding range of the model No. 216. External resistance is provided for all ranges.

Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

MODELS 215 AND 214



Model 215 Power-factor Meter



Model 214 Frequency Indicator

### Model 215 Power-factor Meter

By virtue of a novel mode of construction, the Weston power-factor meter has been rendered practically perfect in its operation. From 2/10 load to full load it indicates the true phase angle to within 1 per cent. independent of any variable conditions found on ordinary commercial circuits. Polyphase power-factor meters may be used on any commercial frequency. Single phase meters require a phase-splitting device and, therefore, must be calibrated for the frequency at which they are to operate. The following ranges are regularly carried in stock: 25, 40, 50, 60, 125 and 133 cycles per second. Polyphase power-factor meters are arranged for the following systems; two phase three wire, and three phase three wire for balanced loads. Meters above 150 volt range are equipped with external resistance box. All meters have the same kind of scale, reading from 0.50 lag to 0.50 lead. Special scales for power-factors as low as 0.30 may be had at slight extra cost. This instrument may also be arranged as a sine or cosine meter.

Two phase four wire meters are made for circuits up to 300 volts only. For circuits higher than 300

volts, use two phase three wire, 110 volt instrument with two potential transformers. Polyphase instruments are made for balanced load only.

#### 100 to 150 Volts Self-contained

#### 200 to 300 Volts with External Resistance

Amperes	List Price Polyphase	List Price Single Phase	Amperes	List Price Polyphase	List Price Single Phase
5	\$121.00	\$143.00	5	\$132.00	\$154.00
10	121.00	143.00	10	132.00	154.00
20	132.00	154.00	20	143.00	165.00
50	132.00	154.00	50	143.00	165.00
100	143.00	165.00	100	154.00	176.00
400 to 60	0 Volts with Extern	nal Resistance	600 to 750 \	olts with Externa	l Resistance
5	\$154.00	\$176.00	5	\$165.00	\$187.00
10	154.00	176.00	10	165.00	187.00
20	165.00	187.00	20	176.00	198.00
50	165.00	187.00	50	176.00	198.00
100	176.00	198.00	100	187.00	209.00

Model No. 356 Power-factor meter differs from Model No. 215 only in the dimensions of case, length of pointer and scale. It has a diameter of  $7\frac{11}{16}$  inches, projection is  $3\frac{7}{8}$  inches, and scale length  $5\frac{1}{4}$  inches. It is furnished in the same capacities as the Model No. 215 at a list price of \$16.50 less than the corresponding range in the No. 215 model.

# Model 214 Frequency Meters

These instruments are of a new type. Their indications are practically independent of changes of temperature, voltage and wave form, such as may be encountered in the commercial circuits of to-day. Standard meters are made for one voltage, 100 to 125 volts. For 220 volt service add \$11.00, and for voltage ranges outside of this potential transformers must be used. Every frequency meter is provided with an external box which contains reactors and resistors.

20	\$132.00
25	132.00
40	132.00
60	132.00
125	132.00
133	132.00

Model No. 355 frequency meter differs only from Model No. 214 in the diameter of case, length of pointer and the scale. It has a diameter of 7½ inches, projection of 3½ inches, and a length of 5½ inches. It is furnished in the same capacity as the Model No. 214 at a list price of \$16.50 less than the corresponding range in the Model No. 214. It can be furnished for a 220 volt circuit at \$11.00 list.

Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

#### WESTON INSTRUMENTS MODELS 226, 151, 156



Model 226 Synchroscope



Model 151



Model 156

Depth, Inches

# Model 226 Synchroscope

This synchroscope is of a distinctly new type. It consists of a phase angle indicator mounted with its pointer behind a ground glass scale and illuminated by a small synchronizing lamp installed behind the pointer and connected to synchronized light. A difference in frequency between two machines causes the pointer to swing back and forth, but owing to the fact that the lamp is lighted only half the time, the pointer is seen only during every other swing, and thus appears to rotate continuously in one direction. When the is seen only during every other swing, and thus appears to rotate continuously in one direction. machines have the same frequency, but are out of phase, the pointer comes to rest at one side or the other of the middle of the scale. Perfect synchronism is indicated by the pointer remaining at rest in the middle of the scale with the lamp lighted.

The pointer is only visible when the synchronizing lamp is lighted. The indications of the instrument

are absolutely infallible.

Model

Every synchroscope includes a lamp transformer, a condenser and a resistor mounted in a separate box. These instruments are made only for one voltage (100 to 125 volts), and when used for other voltages they must be operated with potential transformers. The instruments can be calibrated for any frequency.

Description

Made for 110 to 125 volts and any commercial frequency up to 150 cycles. Specify the voltage and frequency in every case.....

## Models 151 and 156 Voltmeters and Ammeters

Voltmeters with a range above 300 volts are provided with external resistance coil.

Every ammeter is tested before shipment for insulation with 4,600 volts for one minute. The case of each ammeter is provided with a "ground terminal," which must (in order to insure safety to the user) be connected to earth when the potential difference of circuits execeds 200 volts. When properly erected, the ammeters are perfectly safe for use on circuits operating on a potential difference of 2,300 volts, but must be used with transformers on circuits of higher potential difference.

Transformers must be used on all circuits carrying over 500 amperes, and we recommend a value of 5 amperes for the secondary, and will calibrate the instrument so that it will be direct reading. These instru-

Model

Diameter, Inches

ments are made in two models. which differ only in dimensions. Depth, Inches

Voltmeters above 150 volts provided with external resistances.

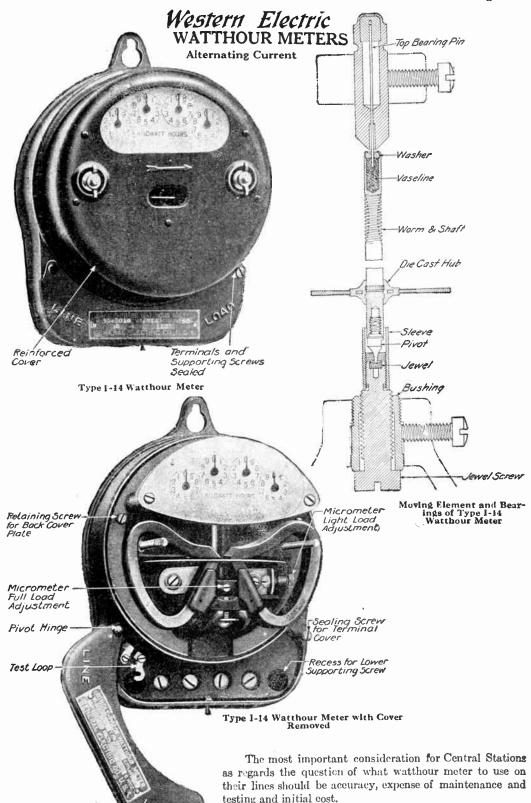
Diameter, Inches

3 3 2 156 9 9  $7\frac{1}{4}$ 151 Model 156 A.C. Voltmeters Model 151 A.C. Voltmeters List Price Range List Price Range List Price List Price Range in Volts Each in Volts in Volts in Volts Each Each Each \$48.76 \$66.26 68.76 75 500 \$36.26 75 \$46.26 500 36.26600 52.5046.26600 125 125 58.76 75046.88 75.00150 36.88 750 150 46.2656.26300 300

	5 1 1 4 m s 1	0 1	1	- N.	Todel 156 A.C.	Ammatare	
·	Model 151 A	A. C. Ammete	ers	IV			
Range	List Price	Range	List Price	Range	List Price	Range	List Price
in Amperes	Each	in Amperes	Each	in Amperes	Each	in Amperes	<u>Each</u>
1	\$44.38	50	\$43.76	1	\$35.00	50	\$34.38
$\tilde{2}$	43.76	75	43.76	2	34.38	75	34.38
$\bar{3}$	42.50	100	43.76	3	33.74	100	34.38
5	42.50	150	45.00	5	33.74	150	35.62
10	42.50	200	46.26	10	33.74	200	36.88
15	42.50	250	46.88	15	33.74	250	37.50
20	42.50	300	47.50	20	33.74	300	38.76
$\frac{25}{25}$	42.50	400	47.50	25	33.74	400	41.26
30	42.50	500	50.00	30	33.74	500	43.76
40	43.76			40	34.38	I	_

Model 260 Alternating Current Voltmeters and Ammeters differ from Model 151 only in the diameter of ease, in length of pointer and scale. It has a case diameter of 711 inches, projection of 378 inches, and scale of 5½ inches. Ammeters are intended for use with current transformers and are furnished in the 5 ampere size only.

Ammeters are intended for use with current transformers and are furnished in the 5 Delivery F.O.B. Factory, Newark, N.J. For warehouse deliveries write nearest house.



World Radio History

The line of meters herein described has been developed

and perfected with these points in view.

# Western Electric Western Electric WATTHOUR METERS

Alternating Current

#### SINGLE PHASE—HOUSE TYPE

#### TYPE I-14

The Type I-14 single phase watthour meter operates on the induction principle, so that there are no moving electrical contacts. It is built in self-contained sizes of from 5 to 300 amperes, 2 wire, 5 to 150 amperes, 3 wire, 100 to 600 volts, and for all standard frequencies. The adoption of this meter as standard by many of the largest central stations indicates a universal appreciation of the superiority of this type.

Mechanical Construction. The base, including the terminal chamber, is formed by a central iron casting which also serves as a housing for the meter and supports the complete motor element, damping magnets, bearings and registering mechanism. This construction gives a compact meter with all parts readily accessible and practically eliminates the possibility of getting out of alignment during shipment.

Terminals. 5 to 75 amperes. Four brass terminals are permanently moulded in a non-combustible insulating compound, thus providing excellent insulation and preventing accidental short circuits across the terminals. The leads enter from the bottom. In two-wire meters, both sides of the line pass through the meter, while in three-wire meters both "outers" pass through, and the potential coil is connected across these "outers." The cover of the terminal chamber is of punched drawn steel, hinged at the upper left hand corner, so that it swings down out of the way when connections are being made, but cannot become detached from the meter. It is held in the closed position by a screw through the upper right hand corner and sealed by a wire through the screw and a projecting lug on the cover. The terminal chamber contains, in addition to the terminals, two holes for the lower supporting screws, so that when the meter is in place, the lower screws are always under scal. A testing loop is also contained in the chamber. By means of this test loop, the potential circuit of the meter may be opened, and any number of meters may be tested in scries.

100 to 300 amperes. The larger currents dealt with in the 100 to 300 ampere sizes necessitate a somewhat different construction of terminal chamber, although these larger sizes all possess the notable features mentioned under 5 to 75 amperes, i.e., separately scaled terminal chamber, lower supporting screws under scal and test loop. See dimensions page elsewhere.

Covers. The Type I-14 meter may be furnished with metal or glass covers; the metal cover is, however, the most popular type. This is of drawn sheet metal and cylindrical in shape, with glass covered openings for reading the register and observing the rotation of the disc. Every precaution is taken to render the cover absolutely dust-proof, a gasket being used where the cover rests on the frame, and the glass is deeply embedded in putty and held by a punched frame. The cover is held in place by two seal pins and wing nuts and sealed by passing a seal wire through the wing nuts and pins. A heavy iron back plate is held in place by two screws in the 5 to 75 ampere meters entering from the front of the central casting. Access to these screws may be had only when the cover is removed.

# Western Electric WATTHOUR METERS (Continued)

#### Alternating Current

Register. The register is of the four dial type and consists essentially of two parts rigidly fastened together. The entire mechanism is fastened to the base by two screws and can be removed or replaced very readily. A micrometer adjustment is provided for the mesh of the worm on the disk shaft with the worm wheel. This mesh, and in fact the entire register mechanism, is visible when cover is removed. The small number of moving parts contained in the register reduces friction to a minimum. All registers read direct in kilowatt-hours. When necessary, however, a dial face multiplier of 10 or a multiple of 10 may be used.

Rotating Element and Bearings. The rotating element is an aluminum disk rigidly fastened to a vertical shaft by means of a die-cast hub. A worm is machined in the upper part of the shaft, which transmits the shaft motion to the register mechanism.

The lower bearing is of high grade selected sapphire, cupped and polished and mounted in a brass screw which is readily accessible for removing, permitting a close examination. No adjustment is required to replace this bearing when once removed.

The pivot used is standard for all watthour meters, and is made from a high grade hardened steel wire.

The top bearing is formed by a flexible steel wire mounted in a removable or adjustable brass plug. The wire extends down into a thin washer mounted in a recess in the top of the shaft.

Electrical Element. The magnetic circuit is in two sections, rigidly fastened together by two punched iron reinforcing plates. There are two current poles and one potential pole. The entire element is held in position inside the base by three screws, and is readily accessible. The removal of the back plate exposes the complete electrical element to view without any adjustments.

Finish. All meters are finished in dull black japan.

#### Damping Magnets and Full Load Adjustment.

The permanent magnet, which regulates the speed of the disk, consists of two individual magnets mounted in a brass shoe, which is supported by a shelf on the main casting and clamped to it by two serews. The full load adjustment is obtained by means of a micrometer screw having right and left hand threads. One end of this screw threads into a boss on the main casting and the other into the magnet shoe projecting through the latter just below the jaws of the magnet. Turning the screw one way draws the magnets in and thereby decreases the speed of the disk, and vice versa.

Light Load Adjustment. The light load adjustment is obtained by moving a metal punching laterally under the potential pole across the path of the potential flux. This lateral movement is accomplished by means of a knurled slotted thumbscrew at the right hand side facing the meter, giving micrometer adjustment. The plate is clamped to the base by two screws, which can be reached from the front of meter after cover is removed.

Performance Characteristics. The characteristic curve of the Type I-14 meter, between light and full load, approaches very nearly a straight line.

Overload. The series coils are very liberally rated, so that meters of from 5 to 25 ampere capacity will carry for any length of time 200 to 250 per cent. of their normal rating, without affecting their calibration. The larger meters can be operated safely on loads  $u_{\rm P}$  to 50 per cent. above normal.

# Western Electric

## WATTHOUR METERS (Continued)

#### Alternating Current

Voltage. The Type I-14 meter is practically unaffected by variation in voltage of 10 per cent.

above or below the marked voltage.

Frequency and Wave Form. The small changes in frequencies ordinarily experienced on light in circuits have practically no effect on the accuracy of the meter, nor does the difference in wave form of standard generators.

Temperature. Installations where meter will be subjected to wide variations in temperature should be avoided, but under ordinary conditions, meters are very little affected. All meters are adjusted at the factory for 20° C.

Power Factor. All I-14 meters are corrected for low power factor, so that variations in power factor

have no appreciable effect on the accuracy of the meter.

Creeping. Two holes punched in the disk at diametrically opposite points eliminate creeping under

all ordinary conditions.

Stray Fields and Short Circuits. The inherent design of the I-14 meter renders it capable of withstanding the effects of heavy short circuits without injury or impairment of accuracy.

# Single-phase Watthour Meters

#### TYPE I-14 Front Connected, Metal Cover, Dull Black Finish Self Contained

Dell' Collegation											
		40-	-133 Cycle	9			25	-30 Cycle	g		27.1
A marrie	110 V	olts	220 Volts		110 V	110 Volts		220 V		Net Weight	
Amps.		List	List No.	List No.			List	List No. 2 Wire	List No.		Lbs.
	List No.	Price	2 Wire	3 Wire	Price	List No.	Price		3 Wire	Price	
5	151942	\$16.25	151952	151962	\$18.25	152860	\$17.25	152870	152880	\$19.25	8.7
10	151943		151953	151963	21.00	152861	20.00	152871	152881	22.00	8.7
15	151944	21.50	151954	151964	23.50	152862	22.50	152872	152882	24.50	8.7
25	151945		151955		28.50	152863	27.00	152873	152883	29.50	8.7
50	151946		151956		38.50	152864	36,50	152874	152884	39.50	10.4
75	151947		151957	151967	44.00	152865	42.00	152875	152885	45.00	10.4
100	151948	45.00			48.00	152866	46.00	152876	152886	49.00	14.75
150	151949		151959		52.00	152867	49.50	152877	152887	53.00	
*200	151950		151960		54.00	152868	51.00	152878		55.00	16.
*300	151951		151961		55.00	152869	52.00	152879		56.00	16.

<sup>\*</sup>Three wire not furnished in these sizes.

# Meters for Use With Instrument Transformers

	TATOCOTO TO				
List No.	Amperes	· Volts	Cycles	Wire	List Price Each
188640	5	110	25-30	2	<b>\$22.00</b>
188641	5	110	40-133	2	21.00
188642	5	220	25-3() 40-13 <b>3</b>	2 and 3† 2 and 3†	24.00 23.00
188643	5	$\frac{220}{220}$	40-133 25-30	2 and 31	24.00
188644 188645	5 5	220	40-133	3†	23.00
100040				•	

#### APPROXIMATE SHIPPING WEIGHTS IN POUNDS

•	5 to 25	50 to 75	100 to 150	200 to 300
	Amperes	Amperes	Amperes	Amperes
Packed one in a box	15	17	32	35
Packed two in a box		30	65	67
Packed four in a box	44	55	95	
Packed eight in a box	84			

Delivery F. O. B. Factory, Lynn, Mass. For warehouse deliveries write nearest house.

#### **IMPORTANT**

Always specify the frequency of the circuit on which the meter is to be used.

All meters listed above may be used on circuits the voltage of which is not more than 10 above or below the rated voltage of the meter. When ordering meters for voltages outside of these limits the normal operating voltage must be specified.

All meters listed above under "Self Contained" require no transformers.

When the current to be metered exceeds the maximum listed above current transformers are necessary, or when the voltage of the circuit is more than 600 both current and potential transformers are necessary. In such cases meters for use on the secondary of transformers should be ordered by List No. and rating as listed under "Meters for use with Transformers." These List Nos. cover the meter only and do not include transformers. Transformers should be ordered separately by List No. and rating.

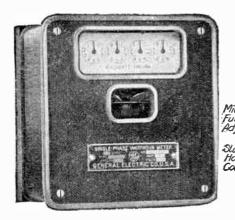
tfor 3-wire transformer rated circuits for use with double primary single secondary current transformers, the 2-wire meter List No. 188642 or 188643 is used. For 3-wire transformer rated circuits for use

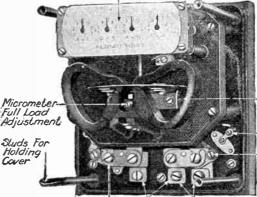
with two single primary current transformers, the 3-wire meter List No. 188644 or 188645 is used.

# Western Electric WATTHOUR METERS—Switchboard Types

**Alternating Current** 







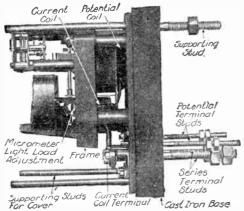
Vicrometet Light Load Adjustment

Potential Test Loop Current Coil Terminal

Link Terminals Terminals for for Jumper Testing Instruments

Meter with Cover Removed

Single-phase, Watthour Meter, Type IS-4



Side View of Meter, Cover Removed

The Type IS-4 Switchboard Watthour Meter is a modification of the I-14, the difference being principally in the mechanical construction.

Base. A cast iron base supports the frame, which carries all the component parts of the meter. It is supported and held to the board by three bolts, the lower ones being the terminal studs for the series winding.

Terminals. There are four terminal studs, two current and two potential. The terminals are so arranged that a test meter can be connected in series with the current coil, or the meter can be entirely isolated from the circuit and separate excitation provided, without interrupting the circuit or going back of the board.

Adjustments. The full load and light load adjustments are identical with those of the Type I-14 meter.

Cover and Finish. The cover is of cast iron and is finished in dull black and copper. The front surface of the cover is pebbled and the raised portions around the edge and openings are of polished copper.

Type IS-4 BACK CONNECTED, METAL COVER, DULL BLACK FINISH, SELF-CONTAINED 25-133 Cycles Two-Wire 440 and

	110	Volts	220	Volts	440 Volts	550 Volts	550 Volts
Amperes	List No.	List Price	List No.	List Price	List No.	List No.	List Price
5	187698	\$50.00	187706	\$52,00	187714	187722	\$62,00
10	187699	53.00	187707	55.00	187715	187723	65.00
15	187700	56.00	187708	58.00	187716	187724	68.00
25	187701	60.00	187709	62.00	187717	187725	72.00
50	187702	68.00	187710	70.00	187718	187726	79.50
75	187703	72.50	187711	74.50	187719	187727	84.50
100	187704	75.50	187712	77.50	187720	187728	88.00
150	187705	79.00	187713	81 00	187721	187729	91.00
		METERS	FOR USE W	ITH TRANSP	ORMERS		
5	187730	\$50.00	187731	\$52.00	187732	187733	\$62.00

Always state frequency of circuit when ordering.

Meters listed above may be used on circuits, the voltage of which is not more than 10 per cent. above When ordering meters for voltages outside of these limits, the or below the rated voltage of the meter. normal operating voltage must be specified.

Meters listed above as Self-Contained Meters do not require transformers. When the currents to be metered exceed 150 amperes, current transformers are necessary. When the voltage of the circuit is more than 600 both current and potential transformers are necessary. In such cases meters for use on the secondthan 600 both current and potential transformers are necessary. In such cases meters for use on the secondary of transformers should be ordered, and should be designated by list number and rating as listed under "Meters For Use With Transformers." These list numbers cover the meter only and do not include transformers. Transformers should be ordered separately by list number and rating.

Packed Two in a Box 110 Lbs.

Approximate Net Wt. 20 Lbs. Packed One in a Box 60 Lbs. Packed Two in a Delivery F. O. B. Factory, Lynn, Mass. For warehouse deliveries write nearest house.

# Western Electric

# WATTHOUR METERS

# Alternating Current

TYPE DS-6-POLYPHASE WATTHOUR METERS FOR THREE-PHASE THREE-WIRE, TWO-PHASE THREE- AND FOUR-WIRE CIRCUITS 25-133 CYCLES BACK CONNECTED, METAL COVER, DULL BLACK FINISH

	110	Volts			220 Volta		440	Volta	550	Volts	
Amperes	List No.	K W. Capacity Non-Ind Loads Motor H.P. Rating 2 and 3 Phase	List Price	List No.	K.W. Capacity Non-Ind Loads Motor H.P. Rating 2 and 3 Phase	List Price	List No.	K.W. Capacity Non-Ind Loads Motor H.P. Rating 2 and 3 Phase	List No.	K.W. Capacity Non-Ind Loads Motor H.P. Rating 2 and 3 Phase	List Price 440 or 550 Volts
5 10 15 25 50 75 100 150	187734 187735 187736 187737 187738 187739 187740 187741	1 2 3 5 10 15 20 30	\$72.50 77.00 81.50 88.50 102.00 112.00 120.00 136.50	187742 187743 187744 187745 187746 187747 187748 187749	2 4 6 10 20 30 40 60	\$79.50 84.00 88.00 95.00 108.50 119.00 128.00 144.00	187750 187751 187752 187753 187754 187755 187756 187757	4 8 12 20 40 60 80 120	187758 187759 187760 187761 187762 187763 187764 187765	5 10 15 25 50 75 100 150	\$89.50 94.50 99.00 106.50 121.50 132.50 142.00 160.00

#### METERS FOR USE WITH INSTRUMENT TRANSFORMERS

5   187766	\$72.50    187767	\$79.50    187768	187769 ,   \$89.50

## Type DS-6

#### FOR FOUR-WIRE THREE-PHASE CIRCUITS ONLY 25-133 Cycles BACK CONNECTED, METAL COVER, DULL BLACK FINISH

	220 \	olts Delta 127 V	olts Y	440 V	olts Delta, 254 Vo	lta Y
Amperes	List No.	K.W. Capacity Non-Inductive Load or or Motor H.P. Rating	List Price	List No.	K.W. Capacity Non-Inductive Load or Motor H.P. Rating	List Price
5	188344	2	\$79.50	188350	4	\$89.50
10	188345	4	84.00	188351	8	94.50
15	188346	6	88.00	188352	12	99.00
25	188347	10	95,00	188353	20	106.50
50	188348	20	108.50	188354	40	121.0
75	188349	30	119.00	188355	60	132.50
	METERS FO	OR USE WITH O	CURRENT AND	POTENTIAL TH	RANSFORMERS	
5	188358	1 190 Volts Delta	a 110 Volts Y			<b>\$7</b> 9.50
	METE	ERS FOR USE W	ITH CURRENT	TRANSFORME	RS ONLY	
5 1	188356	1 220 Volts Delta	a 127 Volts Y			\$79.50
5	188357	440 Volts Delta	a 254 Volts Y			89.50

# Direct Current Watthour Meters

Types C-6 and C-7 FRONT CONNECTED, METAL COVER, JAPAN FINISH Type C-6

10	Type C-6 106 to 120 Volts		212 to	Type C-6 212 to 240 Volts, 3 Wire			Type C-6 212 to 240 Volts, 2 Wire			Type C-7 500 to 600 Volts, 2 Wire			
List No.	Amperes	List Price	List No.	Amperes	List Price	List No.	H.P. Capa- city	Am-	List Price	List No.	H.P. Capa- city	Am-	List Price
37594 37595 37596 37597 37598 37599 37600 37601 37602 37603	5 10 15 25 50 75 100 150 300 600	\$34.10 36.36 40.40 48.40 63.80 79.20 93.50 108.90 138.60 198.00	37604 37605 37606 37607 37608 37609 37610 37611 37612	5 10 15 25 50 75 100 150 300	\$38.50 44.00 51.70 59.40 78.10 86.90 103.40 133.10 182.60	37614 37615 37616 37617 37618 37619 37620 37621 37622 37623	11/4 2 31/2 7 15 20 25 40 80 160	5 10 15 25 50 75 100 150 300 600	\$38.50 44.00 51.70 59.40 75.36 81.40 95.70 123.20 158.40 220.00	37624 37625 37626 37627 37628 37629 37630 37631 37632 37633	2½ 5 7½ 15 30 50 60 100 200 400	<u> </u>	\$49.50 57.20 66.00 77.00 93.50 110.00 126.50 159.50 209.00 286.00

Note: Always state normal voltage of circuit when ordering.

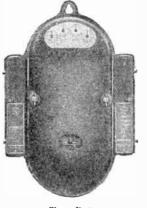
Thomson direct current watthour meters, Types C-6 and C-7 will be furnished with moulded glass covers for an additional pet price of \$1.00.

Delivery F. O. B. Factory, Lynn, Mass. For warehouse deliveries write nearest house.

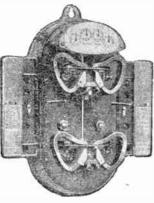
# Western Electric Western Electric WATTHOUR METERS

Type D-6 For Three and Two-phase Circuits 25 to 133 Cycles

FRONT CONNECTED, METAL OR GLASS COVER, DULL BLACK FINISH



Type D-6 Polyphase Watthour Meter



150

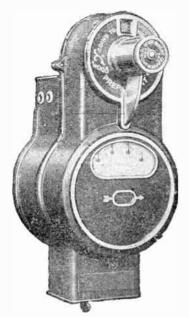
172288

172330

188639

120

Type D-6
Meter With Cover Removed



Type IP-5 Singlephase Prepayment Watthour

110 Volts 220 Volte K.W K.W List No. List No Capacity Capacity Non-Ind Non-Ind Amperes Loads or Motor H.P. Loads or 3-Wire 3-Wire List Motor H.P. List 3-Phase 3-Wire 3-Phase 4-Wire 4-Wire Price Price 3-Wire 2-Phase Rating 2-Phase Rating -Phase 2-Phase 2 and 3 2 and 3 Phase Phase 172255 172307 356,00 172268 172315 2 \$62.00 172316 172317 17231810  $\frac{172256}{172257}$ 172305 172309 23 58.00 60.00  $\frac{172269}{172270}$ 64.00 66.00 69.00 78.00 15 6 172258 172310 63,00 172271 10  $\begin{array}{c} 50 \\ 75 \end{array}$  $\frac{172259}{172260}$  $\frac{172311}{172312}$ 10  $71.00 \\ 78.00$  $\frac{172272}{172273}$  $\frac{172319}{172320}$ 20 30 15 85.00 90.00172261 172313 20 83,00 172274 172321 40 60 150 17226217231430 92.00172275 172322 99,00 440 Volts Volts 550  $\frac{172331}{172332}$ \$76.00 78.00 172281\$76,00 172294 5 10 172282 172324 78.00 172295 10  $\frac{15}{25}$ 172325 172333 17228319 80,00 172296 80.00 172284 172326 84.00 92.00  $\frac{172297}{172298}$  $\frac{172334}{172335}$ 20 25 84.0092.0050 172285 172327 40 50 172299  $\frac{172336}{172337}$ 75 100 75 17228617232869 99.00 99.00 172300 172301 172287 172329  $105.00 \\ 112.00$ 80

 $105.00 \\ 112.00$ METERS FOR USE WITH INSTRUMENT TRANSFORMERS List List List List No Volts Price Amperes Price No. Amperes Volts 188633 \$56,00 188635 \$76.00 188634 220 62.00188636 5 550 76.00

172338

150

76.00

TYPE D-6 FOR FOUR-WIRE THREE-PHASE CIRCUITS ONLY

	220 Volts	Delta, 127	Volts Y	440 Volts D	Delta, 254 V	olts Y
Amperes	List No.	K.W. Capacity Non-Ind. Load or Motor H.P. Rating	List Price	List No.	K.W. Capacity Non-Ind. Load or Motor H.P. Rating	List Price
5	172625	2	\$62.00	172631	4	\$76,00
10	172626	4	64.00	172632	8	78.00
15	172627	6	66,00	172633	12	80.00
25	172628	10	69.00	172634	20	84.00
50	172629	20	78.00	172635	40	92.00
75	172630	30	85,00	172636	60	99.00

FOR USE WITH CURRENT AND POTENTIAL TRANSFORMERS
REPRESENTED TO THE PROPERTY OF List No. 188637 Amperes List Price 5 190 110 \$62.00 METERS FOR USE WITH CURRENT TRANSFORMERS ONLY  $\frac{220}{440}$  $\frac{127}{254}$ 

Single-phase Prepayment Watthour Meters

The Type IP-15 Prepayment Meter contains the standard electrical element of the Type IP-14 Meter with a prepayment nechanism. The crediting and switching mechnisms are mounted at the top of the meter and the coin box is a compartment at the bottom. The terminals are in a separately scaled compartment at the top, the line wires entering and leaving at the sides. The supporting screws are scaled. A back cover plate, similar to that in the standard I-14 Meter, closes the element chamber. A coin chute conducts the coin from the slot down through the meter chamber into a receptacle. Removing the meter cover provides access to the meter only and does not open the coin receptacle. The rate gearing is very simple and may be easily changed when it is desired to make a change in the rate of charge.

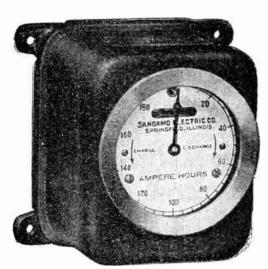
make a change in the rate of charge. Quarter dollars are used in the device and advance payment can be made to the extent of twenty coins.

40--133 CYCLES FRONT CONNECTED, METAL COVER, DULL BLACK FINISH TWO WIRE THREE WIRE 110 Volts 220 Volts 220 Volta List List List List List List Price Price Price No. No. No. \$51.25 \$53,25 102813 5 192840 192848 \$53,25

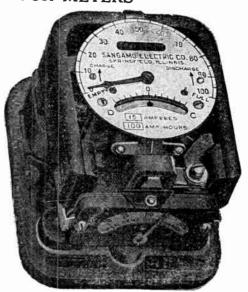
54.00 192845 192849 10 192841 56.00 56.00 56.50 192846 58,50 58.50 15 192842 192850 These meters may be used on circuits the voltage of which is not more than 10 per cent, above or below the rated voltage of the meter. When ordering meters for voltages outside of these limits, the normal operating voltage must be When ordering specified.

Always state frequency of the circuit and the rate of charge per kilowatt-hour for which the meter is to be adjusted. Delivery F. O. B. Factory, Lvnn, Mass. For warehouse deliveries write nearest house.

# SANGAMO AMPERE-HOUR METERS



Standard Type MS Ampere-Hour Meter



Type MS Ampere-Hour Meter with Current Indicator

## Type MS Ampere-Hour Meter For Use with Storage Batteries in Every Service

With one of these meters installed, the storage battery user can determine instantly the condition of the battery, and it is of vital importance that an instrument of this type be used, as it results in: Increased life of battery, higher operating efficiency of battery, insurance against absolute discharge of battery, protection against short circuits on battery, insurance against overcharging battery.

Construction. Among the principal features of the type MS ampere hour meter are its compactness and light weight, so that it can be mounted on the dashboard of an automobile, taking up no more room than a clock or a speedometer. It is not injured by the severe shocks or jars incident to operation in automobiles.

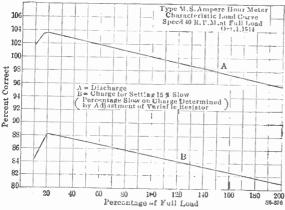
All meters in capacity from 15 to 60 amperes inclusive have internal shunts, except those for use on gasoline cars with self-starter systems, in which case a 40 ampere meter, having a small external shunt, is employed. This permits the removal of the meter at any time without interrupting the battery circuit.

All meters of 80 and 100 smpere capacity have external shunts.

Meters may be furnished with back connecting studs or bottom connecting straps.

Application. The regular type MS meter is to be recommended for electric vehicles, isolated plants, signal batteries, etc., where separate ammeters are available for measuring the charging or discharging cur-The meter is furnished with a red hand stamped "Empty," which can be set at any desired point as a guide by the user. It also has an insulated contact point at zero, or full charge point, which is closed by a platinum tip on the indicating hand, thus operating a circuit breaker or signal device when the battery is fully charged. Similar contacts may be located by the user to signal certain points in the discharge.

The type MS meter with the current indicator is especially for self-starting systems where no ammeter is The current indicator shows whether the battery is charging, discharging or floating, the ampere hour dial indicating the condition of the battery. If accurate current measurement is desired, a standard Weston type 354 auto meter is recommended to be used



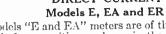
Characteristic Load Curve of the MS Ampere-Hour

	List	List Price
	Price	With Current
Amperes	Itegular	Indicator
<b>15</b>	\$26.50	\$29.00
30	28.50	31.00
40	30.00	32.50
60	32,00	34.25
80	35,00	39.00
100	36.50	42.50
		List
		Price
One addition	al fixed contact	\$1.00
Compensation	n for high discharge	rates
(any capac	ity)	2 . 50
External shur	nts, $30$ to $60$ amperes	s with
2 ft. leads.		2.50
Thermo coup	le, 110 volts or less	1.50
Special dials	to cover cost of engi	revine\
Net		\$10.00
		****** #********

with the regular type MS ampere hour meter.

# **DUNCAN WATTHOUR METERS**

# DIRECT CURRENT





Model E

Models "E and EA" meters are of the series type and are made for capacities as shown in the price list. develop a driving torque or power of not less than 150 millimeter grams, thus continued accuracy is assured. The model "E" meters are also made with a tatic field coils and armature in sizes including 25 amperes and larger and when

this feature is wanted, please specify model "EA."

Model "ER" is of the shunted type and is provided with a shunt that is connected in series in the main feeder or line and having flexible cables that connect it with the field coils of the meter. This arrangement allows only a portion of the main current from the circuit to pass through the field coils of the model "ER" and for this reason it adapts itself most admirably for heavy currents and we are prepared to furnish it for any capacity up to and including 30,000 amperes at either 110, 220 or 500 volts. The armature in the model "ER" is slightly different from the armature employed in the other series type models. Its form resembles that of a squirrel case instead of the coils being wound around the armature the same as is practiced in the building of a form wound armature for dynamos, and for this reason repairs to the armature are easily taken care of and made at small expense.

#### MODELS E AND EA

			1410					
		†110 to 125 volts 2 Wire		†220 to 250 Volts 2 Wire		600 Volts Vire	†220 to 250 Volts 3 Wire	
Amperes	*List Price		*List Price		*List Price		*List Price	
	Model E	Model EA	Model E	Model EA	Model E	Model EA	Model E	Model EA
5	\$31.25		\$36.25		\$46.25		\$36.25	
10	34.00		40.00		51.50		40.00	
15	38.50		47.25	,	60.50		47.25	
25	45.00	\$51.00	56.00	\$62.00	71.50	\$79.00	56.00	\$62.00
50	58.25	65.00	69.25	77.00	88.00	96.00	71.50	79.00
75	75.00	84.00	88.00	97.00	104.50	115.00	93.50	103.00
100	90.00	101.00	192.50	113.00	120.00	132.00	110.00	121.00
150	102.50	114.00	i 118.00	130.00	132.50	146.00	126.00	139.00
200	115.00	128.00	135.00	149.00	155.00	171.00	-150.00	165.00
300	130.00	144.00	150.00	166.00	180.00	199.00	175.00	193.00
400 400	150.00	168.00	170.00	187.00	195.00	215.00		
500	170.00	190.00	190.00	210.00	205.00	226.00		
500 500	190.00	215.00	210.00	231.00	220.00	243.00	<u>                                     </u>	1
				MODEL E	R			
100	\$17	5.00		5.00		0.00		5.00
100	10	0.00	II 10e	n nn	20	$5.00 - \parallel$	25	0.00

100	\$175.00	\$185.00	\$200.00	\$235.00
	180.00	190.00	205.00	250.00
150	185.00	200.00	215.00	265.00
200		215.00	225.00	295.00
300	195.00	225.00	235.00	315.00
400	205.00		245.00	325.00
500	215.00	230.00	250.00	345.00
600	225.00	235.00		360.00
800	230.00	245.00	255.00	•
1000	235.00	250.00	265.00	370.00
1200	245.00	255.00	275.00	390.00
1500	250.00	265.00	280.00	400.00
2000	265,00	280.00	295.00	430.00
2500	280.00	295.00	310.00	460.00
	295.00	315.00	325.00	490.00
3000	325.00	345.00	360.00	550.00
4000	370.00	390.00	400.00	635.00
5000	370.00	0,00.00		

The Model ER Watthour Meter is of the shunted type.

The prices listed include, for each meter, one set of 5-foot shunt cables, one shunt for the 2-wire, and two shunts for the 3-wire meter.

When cables in excess of 5 feet are required and specified, the following net extra prices will be charged.

TOTAL LENGTH—SHUNT TO METER:

	1017	AL I	LENGIA-SHONI	IO MILL	LIC.	
6 ft				@10 OO	10 64	\$31 00
0.01	\$2.50	-124	H	\$10.UU	10 10	dbear reach
() 16	⊕.00			00.00	00.64	-37 - 00
	$e$ $e\alpha$	1114	F#	2011	- 4V 10	01,00
8 11	0.00	11.		0.5	OF B	55 00
8 ft	10 00	1/1/	Ft .	25.00	20 H	00.00
- 10 Harragan and a contract to the contract t	10.00	7.1				
10 100	e :		lana andanina			

†Specify normal voltage of circuit when ordering.

<sup>\*</sup>Delivery F. O. B. Factory, Lafayette, Ind. For warehouse deliveries write nearest house.

# **DUNCAN WATTHOUR METERS**

#### DIRECT CURRENT



Model FR

## Models FR and R

Model "FR" meters are of the shunted type and include sizes from 100 to 20,000 amperes. They have their internal metal parts finished in frosted nickel and are provided with a sheet metal cover having an all glass window in the front only. The cover is given three coats of white enamel on the inside, but the back support and internal mechanism are finished similar to the house type meters. The outside of the case and back support are enameled in plain black which is next and durable

enameled in plain black which is neat and durable.

All model "R" watthour meters are of the shunted type. They are provided with a neat all plate glass cover, the front of the back support and the magnet shelf are finished in white enamel; the field coils and magnets are finished in hard rubber black and the rest of the mechanism will be finished in polished copper, polished nickel or hard rubber black and nickel combination. The latter finish will be furnished unless otherwise advised.

Both the model "FR and R" meters are provided with 5-foot cables as a standard length, for additional lengths see prices below.

Am-	†110 to 125 Volts 2 Wire  *List Price		Wire 2 Wire		†500 to 600 Volts 2 Wire  *List Price		†220 to 250 Volts 3 Wire *List Price		†440 to 500 Volts 3 Wire	
peres										
	Model FR	Model R	Model FR	Model R	Mcdel FR	Model R	Model FR	Model R	Model FR	Model R
100	\$144.00	\$152.00	\$152.00	\$160.00	\$160.00	\$168.00	\$196.00	6201.00	C20.1 00	2212
150	148.00	156.00	156.00	164.00	164.00	172.00	268.00	\$204.00 216.00	\$201.00	\$212.00
200	152.00	160.00	164.C0	172.00	172.00	180.00	220.00	228.00	216.00	224.00
300	160.00	168.00	176.00	184.00	184 00	192.00	244.00	252.00	228.00	236.00
400	168.00	176.00	184.00	192.00	192.00	200.00	260.00	268.00	$\begin{bmatrix} 252.00 \\ 268.00 \end{bmatrix}$	260.00
500	176.00	184.00	188 00	196.00	196.00	201.00	268.00	275.00		276.00
600	184.00	-192.00	192.00	200.00	200.00	208.00	284.00	292.00	$\begin{bmatrix} 276.00 \\ 292.00 \end{bmatrix}$	284.00
800	192.00	200.00	200.00	208.00	208.00	216.00	295.00	301.00	304.00	300.00
1000	200.00	208.00	201-00	212.00	212.00	220.00	304.00	312.00	312.00	312.00
1200	204.00	212.00	208 00	216.00	216.00	224.00	320.00	328.00	$\begin{bmatrix} 312.00 \\ 328.00 \end{bmatrix}$	320.00
1500	212.00	-220.00	216.00	224.00	224.00	232.00	328.00	336.00	336.00	336.00
2000	228.00	236.00	232 00	240.00	240.00	248.00	352.00	360.00	360.00	344.00
2500	236.00	244.00	240 00	248.00	248.00	256.00	376.00	381.00	384.00	368.00
3000	252.00	260.00	$-256.00$ $\}$	264.00	264,00	272.00	400.00	408.00	408.00	$\frac{392.00}{416.00}$
4000	276.00	284.00	280.00	288.00	288.00	296.00	448.00	456.00	456.00	
5000	312.00	320.00	316.00	324.00	324.00	332.00	516.00	524.00	524.00	-464.00 $-532.00$
6000	314.00	-352.00	-352.00	360.00	360,00	368.00	588.00	596.00	596.00	604.00
8000	384.00	392.00	392.00	400.00	400,00	408.00	664.00	672.00	672.00	
0000	424.00	432.00	432.00	440.00	440.00	448.00	740.00	744.00	748.00	$-680.00 \\ -756.00$
2000	464.00	476.00	$472.00^{\pm}$	488.00	480.00	496.00	816.00	840.00	824.00	852.00
5000	520.00	532.00	$528.00 \mid$	544.00	536,00	556,00	896.00	984.00	901.00	996.00
300 <b>0</b> 0	568.00	712.00	-580.00	720.00	588.00	736.00	1000.00	1160.00	1008.00	1172.00

# Net Extra Cost of Shunt Cables

(In excess of 5 feet)

#### For Models "FR" and "R" Meters

Length	Net Extra	Length 12 14	Net Extra	Length	Net Extra
6	\$1.25		\$8.00	18	\$15.80
8	3.30		10.00	20	18.50
10	5.00	16	12.50	$\begin{vmatrix} 20 \\ 25 \end{vmatrix}$	18.50 27.50

Specify normal voltage of circuit when ordering.

<sup>\*</sup>Delivery F. O. B. Factory Lafayette, Ind. For warehouse deliveries write nearest house.

# **DUNCAN WATTHOUR METERS**

DIRECT CURRENT

#### Models F and HC

Model F meters are of the series type and include sizes from 100 amperes to 600 amperes 2 wire, and from 100 amperes to 300 amperes, 3 wire.

#### MODEL F

Amperes	†110 to 125	†220 to 250	†500 to 600	†220 to 250	†440 to 500
	Volts	Volts	Volts	Volts	Volts
	2 Wire	2 Wire	2 Wire	3 Wire	3 Wire
	*List Price	*List Price	*List Price	*List Price	*List Price
100	\$101.60	\$112.00	\$124.60	\$144.00	\$152.90
150	112.00	123.20	134.40	160.00	168.00
200	120.00	134.40	148.00	172.00	180.00
300 400 500 600	132.00 144.00 156.00 166.40	146.40 156.00 166.40 178.40	162.40 172.00 182.40 188.00	192.00 216.00 236.00	188.00 200.00 224.00

†Specify normal voltage or circuit when ordering.

#### Model HC

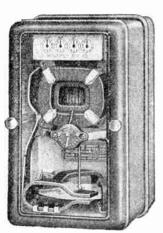
This meter involves the same theory of operation as all Dunean commutator type direct current watthour meters. The current upon entering the meter is controlled by the cylindrical switch at the rear, and the spring contacts resting against it operate to arrange the windings of the series field coils for the different loads. At the top of the meter and immediately behind the dial is situated the series binding posts, and the handle for the controller switch. Attached to this handle is a marked index which shows the capacity in amperes, and the setting of this index for any desired load is the simplest operation possible. There is also provided a knife switch arrangement for short-circuiting the series field coils of the meter, and is used when changing the load so as to avoid opening the work circuit. The dial is the "fly-back" type as is found in stop watches which allows the meter man to start off from zero with every test.

A heat switch is provided by the use of which much time is saved and the instrument rendered more accurate. By pressing down this switch and giving it a slight turn to hold it in place, the armature of the standard is quickly brought up to operating temperature, thus eliminating errors due to the temperature coefficient of copper.

Shipping weight 45 pounds.

Amperes	Volts	*List Price
1-2-5-10-25-50	110	\$170.00
1-2-5-10-25-50	220	180.00
1-2-5-10-25-50	500	190.00
1-2-5-10-25-50	110-220	200.00
1-2-5-10-25-50	110-500	206.00
1-2-5-10-25-50	220-500	210.00
1-2-5-10-25-50	110-220-500	220.00
5-10-25-50-100	110	206.00
5-10-25-50-100	220	200.00
5-10-25-50-100	500	210.00
5-10-25-50-100	110-220	220.00
5-10-25-50-100	110-500	226.00
5-10-25-50-100	220-500	230.00
5=10-25-50-100	110-220-500	240.00

<sup>\*</sup>Delivery F. O. B. Lafayette, Ind. For warehouse deliveries write nearest house.



Model F



Model HC

#### ELECTRICAL TESTING INSTRUMENTS







Portable Plug Set

## Government Standard Testing Set

Government Standard Testing Set, made in strict accordance with the rigid requirements of the United States Navy Specifications 17-T-2. A high-grade type of "Plug-In" set.

Battery consists of 6 silver chloride cells.

Bridge values in the A and B arms, 1, 10, 100, 1000, and coils are accurate to 1/20 of 4 per cent.

Rheostat on the decade plan, with 10 coils in each decade, of the values of units, tens, hundreds and thousands.

List		*List Price
No.		Each
T-2070	Peerless G. S. decade portable testing set	\$238.00
T-2085	Carrying case of sole leather, with shoulder strap	25.50

# Peerless Portable Plug Set

Bridge coils in A arm of the values of 1, 10, 100, accurate to 1/20 of 1 per cent. Bridge coils in B arm of the values of 10, 100 and 1000, accurate to 1/20 of 1 per cent. Bridge arms reversible.

Rheostat coils are of units, tens, hundreds and thousands, and are of the multiples of 1, 2, 2, 5 of each denomination, a total of 11,000 ohms, and by using the 1 to 1000 ratio on the bridge, gives a range of 11 megohns in single ohm steps. Accuracy of the rheostat coils 1/10 of 1 per cent.

Provision for outside battery, in ease higher E. M. F. is required than that furnished in the cells in the set.

This set is especially designed for ease in reading. The bridge is at the top, out of the way of the tester, and the plugs are in vertical columns, beginning with the thousands at the left hand side and followed by the hundreds, tens and units, so that when balance is obtained one reads the value of the resistance plugged out, the same as reading a column of figures.

The finish of this set is the same as the Peerless Switch Dial Set. Weight, 7½ pounds. Size, 8½ inches x 5½ inches x 6 inches.

List		*List Price
No.		Each
	Peerless plug type testing set	\$144.00
T-2016	Sole leather carrying case for T-2010	19.20
	Folding tripod for supporting T-2010 in street.	

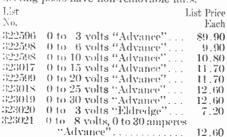
<sup>\*</sup>Delivery F. O. B. Factory, Philadelphia, Pa. For warehouse deliveries write nearest house.

## BATTERY METERS

# Pocket Voltmeters and Volt-

These instruments can be used on either primary or storage batteries.

The case is heavily niekeled and the connecting posts have non-removable nuts.





These meters have the smallest possible number of working parts and are therefor teast liable to get out of order. The hand comes to an instant and positive stop without vibration, giving a quick reading and saving the battery. Will work in either direction of current.

List No.	Туре	Range		Dia- meter	List Price Each
	Ammeter Volt-ammeter	0 to 35 amps.		2 ins.	\$2.00
		0 to 35 amps 0 11 volts	to	2 ins.	2.60
1005		0 to 10 volts		2 ins.	2.20
1008	Coil tester   [	0 to 1.5 amps, 0 to 30 amps,	١	2 ins.	
	and ammeter )	0 to 1.5 amps.	1	2 ins.	3.40



Advance Volt-ammeter

No. 1003-Volt-ammeter



Eldredge Voltmeter

Advance Voltmeter

No. 1005-Voltmeter

# Automobile Type Instruments

With the rapidly increasing use of electric starting and lighting equipments in connection with automobiles and motor boats, it is evident that an indicating ammeter of a size and type suitable for dashboard mounting is an absolute necessity for determining the proper operation of the generator, storage battery, etc.

Designed primarily for this purpose, the outstanding features are simplicity, ruggedness and accuracy.

Automobile supply jobbers, dealers, garges, etc., will find this line highly profitable as every automobile or motor boat owner is a prospective customer. The demand is already large and steadily increasing.



No. 1002-Ammeter



Model 1012-Flush Type

# DIMENSIONS Model 1012—Flush Type diameter, 21g inches.

Case diameter,  $2\frac{1}{8}$  inches. Flange diameter,  $2\frac{3}{4}$  inches.

optional.

Model 1013—Front Type Case diameter, 21% inches.

List No.	Туре	Std. Pkg.	Unit Pkg.	Mfrs. List	W. E. List Price
$\frac{1012}{1013}$	Ammeter Ammeter		10 10	\$3.50	\$4.68
	ndard finis		,		

Model 1013-Front Type

World Radio History

List

No.

2521

2537

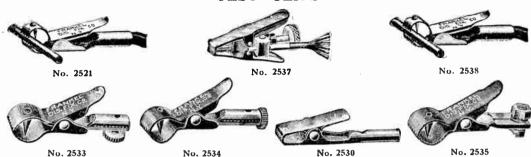
2538

2533

2534

2530

#### TEST CLIPS



 Frankel's Test Clips

 List Price
 Each

 The Standard Test Clip.
 \$0.70

 The Switchboard Test Clip.
 3.00

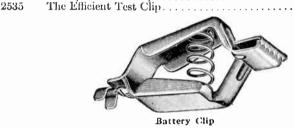
 The German Silver Test Clip.
 .70

 The Helpful Test Clip.
 .70

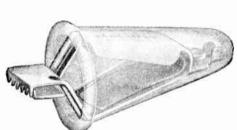
 The Reliable Test Clip.
 .70

 The Special Test Clip.
 .32

 The Efficient Test Clip.
 .90



15 Ampere Clip, Actual Size



20 Ampere Clip, Actual Size, Showing Rubber Insulator

# Universal Test Clips

Time savers in any electrical work requiring quick temporary connections.

May be used over and over again. Suggested for use with test sets, with voltmeters, on shop testing devices, by telephone linemen as a helix clip, by meter departments, by railway signal inspectors, in college and commercial laboratories, on motor and transformer test floors and in motion picture projection work.

List	Description	List Price Each
140.	i.	
8	Clip only, 10 ampere soldered connection; spread of jaws 16 in	. \$0.30
9	Clip with insulator, 10 ampere soldered connection; spread of jaws 16 in	40
4	Insulator only, for 10 ampere size	. , 15
13	Clip only, 20 ampere, screw connection; spread of jaws 34-in	
14	Clip with insulator, 20 ampere screw connection spread of jaws 34-in	40
15	Insulator only, for 20 ampere size	
21	Clip only, 50 ampere screw connection; spread of jaws 1½-ins	70
22	Clip with insulator. 50 ampere screw connection; spread of jaws	90
23	Insulator only for 50 ampere size.	
11	Clip only, 100 ampere cleat connection; spread of jaws 1 in	. 1.10
12	Clip with insulator, 100 ampere cleat connection; spread of jaws 1 in	. 1.30
7	Insulator only for 100 ampere size.	
•	Nos. 8 and 9 are especially intended for telephone and signal work.	

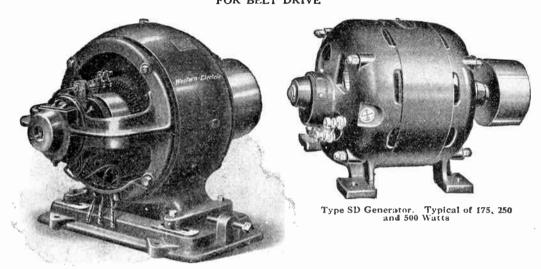
The 20, 50 and 100 ampere sizes are intended for work requiring currect earrying capacity.

BATTERY CLIPS

Battery Clips are for use as a quick and ready means of connecting portable storage batteries for charging. They are lead-plated to resist acid fumes.

# Western Electric LOW VOLTAGE DIRECT CURRENT GENERATORS

32 TO 42 VOLTS—NORMAL RATING 35 VOLTS
FOR BELT DRIVE



Type B Generator. Typical of 700 Watt to 2000 Watt Sizes

### Western Electric Generators

The Western Electric Types SD and B generators are especially designed for use with farm lighting plant outfits. They are used to charge the storage batteries of the lighting plant, and are furnished with a rheostat to control a charging current so that the storage batteries will be charged at the correct charging rate. The generators are furnished with a pulley for belting to a gas, gasoline or kerosene engine and a sliding base for adjusting the belt tension.

Although these generators are designed particularly for this class of service, they have incorporated in their design and construction the same mechanical and electrical principles that characterize Western Electric generators of all sizes. The amount of copper and iron used in their construction is carefully gauged with the idea of obtaining a maximum of power with a minimum of heat.

Every recent improvement has been incorporated in their design. Their construction is exceedingly simple; they are easy to operate and require very little attention while in service.

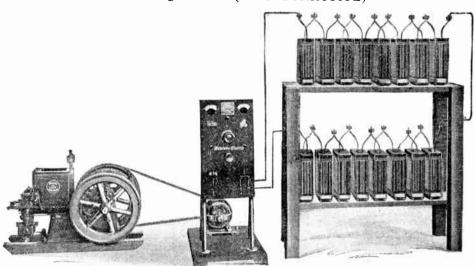
The parts that require any attention, such as the commutator, the brushes and the bearings are readily accessible for inspection.

		List Prices		Ship. Amp		Efficiency	Pulley Dimensions Inches			
Watts	Speed R.P.M.	Generator with Pulley Base	Allow	ances	Wgt.	Full	Full	l ———	Belt	Type and Frame
		and Rheostat	Base	Pulley	Lbs.	Load	Load	Diameter	Width	
175	1800	\$88.00	\$2.20	\$1.10	42	5.0	69.0	$2\frac{1}{2}$	11/4	SD-254
250	1800	99.00	2.20	1.10	50	7.14	70.0	$2\frac{1}{2}$	$1\frac{1}{4}$	SD-256
500	1800	121.00	2.20	1,10	100	14.3	70.0	$3\frac{1}{2}$	$1^{3}4$	SD-266
700	2000	154.00	2.20	1.10	100	20.0	73.5	3	$1\frac{3}{4}$	B-A
1050	2000	165,00	2.20	1.10	110	30.0	74.5	312	2	B-B
1250	2000	176.00	2.20	1.10	110	35.7	74.5	312	$^2$	B-B
1500	2000	231.00	3.30	1.10	200	42.8	76.0	4	$2\frac{1}{2}$	B-C
2000	2006	242.00	3,30	1.10	200	57.2	-78.0	1 1	$2^{1}\bar{2}$	B-C

Generators will carry full rated load continuously with a temperature rise on any part not to exceed 45 degrees Centigrade.

500, 700 and 1050 watt generators can be shipped from stock.

Delivery F. O. B. Ft. Wayne, Ind.



# Typical "B" Type 32 Volt Western Electric Power and Light Outfit

These outfits consist of a generator, power board and a storage battery. The above illustration shows in addition a gas engine, belt and battery rack.

The generator is a shunt wound machine giving a voltage of 35 to 40 volts. They come in three sizes,

of 500 watt, 700 watt and 1050 watt capacities.

The power board is equipped with a voltmeter, ammeter, rheostat, circuit breaker, a line and starting switch and also fuses. They come in two sizes. The small size, known as an "A" type power board, is used with the 500 watt generator. The large size known as a "B" type power board, is used with the 700 watt and 1050 watt generators.

The storage battery consists of sixteen scaled glass jar cells. They are shipped fully charged and are therefore very easy to install. There are three sizes of batteries used, viz., 50 ampere hour, 90 ampere

hour, and 180 ampere hour.

The 50 ampere hour battery is used in very small homes where it is desired to burn only a few lights. This size battery is also used in demonstrating outfits, in which case it is mounted in rubber jars instead of

The 90 ampere hour battery is used in the average farm and is large enough to light the house and barns. The 180 ampere hour battery is used on the larger farms and will light the house and barns, will run

small motor devices and will operate an electric iron.

Our batteries are all rated on the standard '8 hour normal' charge and discharge rate which has been the accepted standard of all prominent battery manufacturers for the past twenty years.

Any good engine will operate these outfits. We can furnish an air cooled or water cooled gasoline or kerosene engine. A  $1\frac{1}{2}$  horse power engine is needed to drive the 500 watt generator and a 3 horse power engine is needed to drive the 700 watt or 1000 watt generators.

# COMPLETE LIST OF "A AND B" TYPE OUTFITS

***	Normal 8 I	Normal 8 Hour Rating		ing Weights				
*Type	Charging	Capacity	Outfit	Outfit	East of	Rockies	West	of Rockies
and	Rate	16 Cells	Only	Complete	Outfit	Outfit	Outrit	Outfit
Size	Amperes	Watt Hours	Pounds	Pounds	Only	Complete	Only	Complete
5A-50	6	1500	500	850	\$490	\$670	\$550	\$730
5A-90	11	2700	925	1300	590	770	670	850
7B-90	11	2700	1000	1600	690	1000	810	1130
7B-180	22	5400	1250	1900	880	1190	1010	1330
10B-90	11	2700	1000	1600	720	1030	840	1160
10B-180	22	5400	1250	1900	910	1220	1040	1360

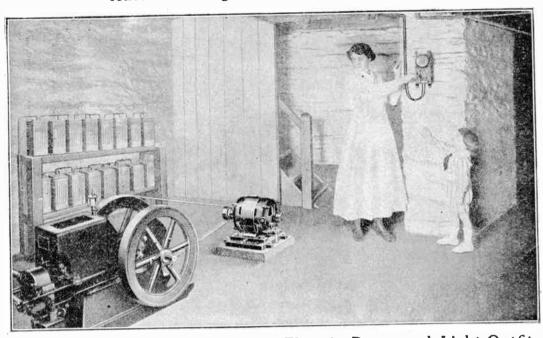
F. O. B. Western Electric Warehouses

Note.—An Outfit Only consists of a generator with pulley, power board and storage battery; and Out-

fit Complete includes also engine, belt and lattery rack.

\* Explanation of code numbers: The first figure expresses capacity of generator in hundreds of watts. The letter indicates the type of power board. The last figure expresses the capacity of the battery in ampere hours (8 hour rating). Thus "5A-90" means a 500 watt generator, an "A" type power board, and a 90 ampere hour battery.

# 32 Volt Power and Light Outfits Automatic Regulator (Belt Connected)



# Typical "R" Type 32 Volt Western Electric Power and Light Outfit

These outfits consist of a generator, automatic regulator and a storage battery. The above illustration shows in addition a gas engine, belt and battery rack.

The generator is a special split field machine giving a voltage of 35 to 40 volts. They come in three

sizes of 500 watts, 700 watts and 1000 watts capacity.

The automatic regulator is a device which serves the same purpose as the power board described on the previous page. It automatically controls the rate at which the generator charges the storage battery. When operating on a full discharged battery, it allows the entire output of the generator to pass into the battery as the battery becomes charged, the automatic regulator gradually reduces the amount of electricity passing from the generator into the battery, and when the battery is fully charged, only a small amount of current is passing from the generator into the battery. This automatic regulator gives the battery what is known as "a tapering charge."

The storage battery consists of sixteen sealed glass jar cells. They are shipped fully charged and are therefore very easy to install. There are three sizes of batteries used, viz.: 50 ampere hour, 90 ampere

hour and 180 ampere hour.

The 50 ampere hour battery is used in very small homes where it is desired to burn only a few lights. This size of battery is also used in demonstrating outfits in which case it is mounted in rubber jars instead of giass jars.

The 90 ampere hour battery is used in the average farm and is large enough to light the house and barns. The 180 ampere hour battery is used on the larger farms and will light the house and barns, will run

small motor devices and will operate an electric iron.

Our batteries are all rated on the standard "8 hour normal" charge and discharge rate which has been

the accepted standard of all prominent battery manufacturers for the past twenty years.

Any good engine will operate these outfits. We can furnish an air cooled or water cooled gasoline or kerosene engine. A 114 horse power engine is needed to drive the 500 watt generator and a 3 horse power engine is needed to drive the 700 watt or 1000 watt generators.

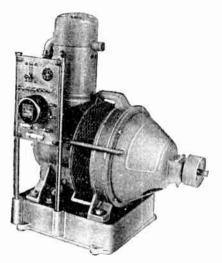
#### COMPLETE LIST OF "R" TYPE OUTFITS

	CO	TARK THEY WAS			_		
		App. Ship	ping Weight		. 7. 1.	77"	f Rockies
Tuno	Capacity	Outfit	Outfit	East o	f Rockies		
Туре	16 Cells	Only	Complete	Outfit	Outfit	Outfit	Outfit
and		Lbs.	Lbs.	Only	Complete	Only	Complete
Size	Watt Hours				8700	8580	8760
5R-50	1500	4()()	800	\$520		4	850
5R-90	2700	850	1250	620	800	700	
	2700	850	1500	720	1030	840	1160
7R-90			1800	910	1220	1040	1360
7R-180	5400	1150				-	1190
10R-90	2700	850	1500	750	1060	870	
10R-30	5400	1150	1800	940	1250	1070	1390
1017-190	()1()()	- ****	menal CLCOT	DIC WAR	PEHOLISES		

F. O. B. WESTERN ELECTRIC WAREHOUSES

Note: An Outfit Only consists of a generator with pulley, automatic regulator panel and storage battery; an Outfit Complete includes also engine, helt and battery rack.

# 32 VOLT POWER AND LIGHT OUTFITS Direct Connected



# Direct Connected 32 Volt Western Electric Power and Light Set

These outfits consist of the above set and a storage battery. A battery rack can also be supplied if desired.

The engine operates on kerosene or gosoline, is throttle governed and produces 3.2 horse power. It runs at a speed of approximately 1000 revolutions,

To start the set it is simply necessary to press down the switch mounted in the upper left hand corner of the panel. When the battery is fully charged, the set is automatically stopped. The set is somranged that the battery can be given an overcharge whenever desired.

The fuel supply tank is mounted in the base of the set.

By throwing a switch on the panel, the electric circuit can be entirely opened. The engine can then be run simply to produce power to drive some other device, such as a line shaft, pump, etc. Such a connection is made to the set by means of a belt applied to the pulley mounted on the generator end of the main shaft.

The storage battery consists of 16 scaled glass jar cells. They are shipped fully charged, and are therefore very easy to install. There are two sizes of batteries used, viz., 90 ampere hour and 180 ampere hour.

The 90 ampere hour battery is used in the average farm, and is large enough to light the house and barns.

The 180 ampere hour battery is used on the larger farms and will light the house and barns, will run small motor devices, and will operate an electric iron.

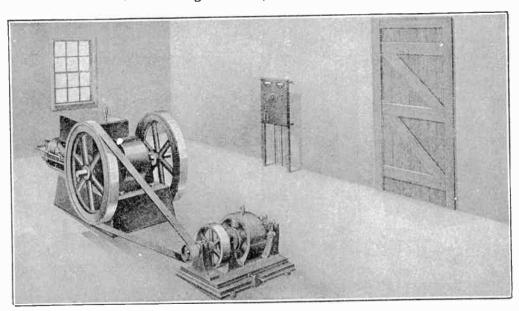
Our batteries are all rated on the standard "8 hour normal" charge and discharge rate—which has been the accepted standard of all prominent battery manufacturers for the past twenty years.

# DATA ON "D.C." TYPE OUTFITS

		THE COLLIES	
Type and Size	Capacity 16 Cells Watt Hours	Shipping Weight Complete	Price Set F. O. B. Madison, Wis.
*15DC= 90 15DC=180	2700 5400	1400 1700	Battery F. O. B. Newark, N. J. \$1100.00
3.4	"	1.400	1290.00

Note: The set consists of the engine, generator and panel, all mounted together on sub-base as shown above, the outfit includes also the storage battery.

\*Explanation of Code Number: The first figure indicates the capacity of the generator in hundreds of watts. The letter designates the combination of engine, generator and power panel. The last figure represents the capacity of the storage battery.



# Typical "D" Type 110 Volt Western Electric Power and Light Outfit

This outfit is very simple, as it involves only a standard three bearing fly wheel generator and a simple power board. The above picture also shows a gasoline engine and a belt.

In the smaller sizes these are the logical outfits to install in the summer cottage or camp where light is wanted only for a few hours a day, or to use where there is available a source of cheap and constant power such as a waterfall.

In the larger sizes this type of outfit admirably meets the requirements of mills, factories or institutions having a source of constant power such as a steam or gas engine or a waterfall.

The advantages of the "D" type outfit are its low cost, and its simplicity. Not being equipped with a storage battery, current is available only when the generator is operating. This is not an objectionable feature where 24 hour service is not required or where the outfit is not in use the year round. Where water or other constant power is used, the generator may be run continuously, thus giving 24 hour service.

The generator used in outfits furnished without battery is the Western Electric Type ML direct current generator. It has three bearings, and is provided with a heavy fly wheel, which reduces the variations in speed, due to irregular action of the gas engine to a point where there is no interference with the constancy of the illumination. This generator is also compound wound. The compound winding helps to maintain a steady voltage when the demand for power and light varies.

The power board is equipped with voltmeter, ammeter, rheostat and service switch. A complete instruction book for installing and operating the plant is included with the power board.

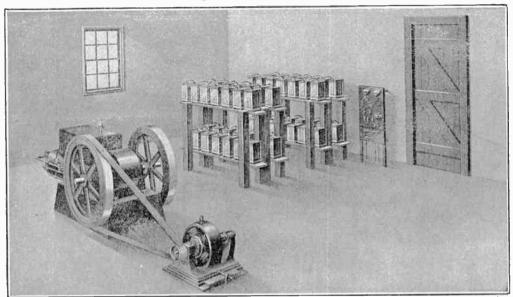
## COMPLETE LIST OF "D" TYPE OUTFITS

*Type and Size	Capacity of Generator in K.W.	Size of Power Board	Size of Engine 11.P.	Outfit Only	Weights————————————————————————————————————	Outfit Only	Outfit Complete
15D	$ \begin{array}{c} 1^{1} \frac{2}{2} \\ 2 \frac{1}{2} \\ 6 \\ 10 \\ 16 \end{array} $	D-30	3	410	985	\$384.00	\$660.00
25D		D-30	5	600	1420	464.00	870.00
60D		D-60	12	900	3250	596.00	1730.00
100D		D-100	20	1770	6170	980.00	2994.00
160D		D-160	25	2530	7530	1254.00	3628.00

F. O. B. points of manufacture.

Note: An outfit only consists of a generator and power board. An outfit complete includes also a gasoline engine and a belt.

\*Explanation of Code No: The first figure expresses capacity of generator in hundreds of watts, and the letter indicates the type of power board. Thus a 60D means a 6000 watt (i.e. 6 K.W.) generator, and a D type power board.



# Typical "CF" Type 110 Volt Western Electric Power and Light Outfit

This outfit consists of a standard two bearing generator, a power board with charging resistance panel

and a 56 cell sealed glass jar battery.

This outfit meets all the conditions desired by almost every consumer of electric current, being especially designed to fit the requirements of progressive farmers, the up-to-date country estate or the store, theatre or home in towns not served by a central station.

By running the engine for only a few hours a day, continuous service may be had because the energy

of the generator is stored up in the battery ready for instant use whether or not the generator itself is running. Plenty of brilliant light is available at all times to illuminate the homes, outbuildings and grounds, and current to run fans, vacuum cleaners, washing machines, electric irons, cream separators, etc., is ready at the touch of a finger to serve the owner.

The generator used in outfits furnished with storage battery is a Western Electric Type M L direct current generator. It is a two bearing generator, as the variations in speed will not show on the lights when a storage battery is used. It is also shunt wound, as the battery steadies the voltage when the demand for power and light varies.

The power board is equipped with voltmeter, ammeter, rheostat, contactor, necessary fuses and switches, also a battery charging resistance. A complete instruction book for installing and operating the plant is

included with the power board.

A storage battery consisting of 56 sealed glass jar cells is used with this outfit. These batteries come fully charged ready for use.

The capacity of the storage battery for a given installation will depend upon the service required and the method of operating the plant.

Where it is desired to be able to operate only one or two lights for a few minutes at a time when the engine is not running, the smallest size of battery will be sufficient. By calculating the number of lamps or other devices which may be operated and the aggregate length of time which they must be supplied from the battery without giving it a fresh charge, a battery of suitable capacity can be sleected from the sizes listed.

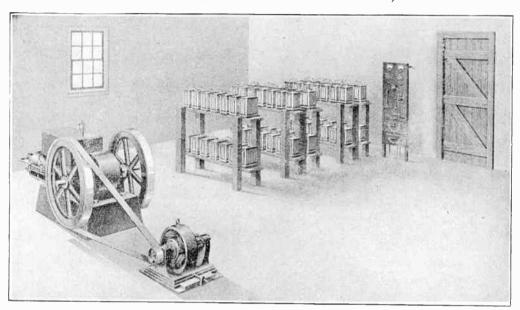
The Western Electric Company rates its batteries on the standard "8 hour normal" charge and discharge rate which has been the standard accepted by all prominent battery manufacturers for the past twenty years. COMPLETE LIST OF "CE" TYPE OUTFITS

		COMILTE	TE FIST O	r Cr	TIFE OU	ILIIS		
*Type	Capacity	Size of	Size of	Size of	Shippin	ng Weight-	Lia	t Price
and	of Generator	Power	Battery	Engine	Outfit	Outfit	Outfit	Outfit
Size	in K. W.	Board	56 Cells	H.P.	Only, lbs.	Complete, lbs.	Only	Complete
15CF-50	11/2	CF30	WEG50	3	2125	2850	\$1140	\$1470
25CF-90	$2\frac{1}{2}$	CF30	WEG90	5	3100	4100	1488	1940
60CF-180	6	CF60	WEG180	12	4300	6875	2200	3400
100CF-270	10	CF100	WEG270	20	6100	10700	3290	5350
160CF-360	16	CF200	WEG360	25	7550	12800	4280	6700

F. O. B. Points of Manufacture.

Note: An Outfit Only consists of a generator, power board and 56 cells sealed battery; an Outfit Complete includes also a gasoline engine, belt and battery rack as shown above.

\*Explanation of code number: The first figure indicates the capacity of the generator in hundreds of watts. The letters "CF" designate the type of power board. The last figure represents the capacity of the storage batteries. Thus "60CF-180" means a 6000 watt (i.e., 6 K.W.) generator, CF power board and 180 ampere hour battery.



# Typical "CFE" Type 110 Volt Western Electric Power and Light Outfit

This outfit consists of a standard two bearing generator, a power board with charging resistance panel

and counter cell switch, and also a 62 cell scaled glass jar battery and 8 scaled jar counter cells.

This outfit differs from the "CP" type only in that it has a 62 cell battery with 8 counter cells and a "CFE" power board. This equipment insures a practically constant voltage at all times, giving lamps a uniform brilliancy and a somewhat longer life. For moving picture theatres, hotels and institutions this outfit is all that could be desired.

The generator used in this outfit is a Western Electric type M L direct current generator. It is a twobearing generator as the variations in speed will not show on the lights when a storage battery is used. It is also shunt wound as the battery steadies the voltage when the demand for power and light varies.

The power board is equipped with voltmeter ammeter, rheostat, contactor, necessary fuses and switches,

also a battery charging resistance panel, and a counter cell switch panel.

The counter cell switch consists of a radial arm equipped with a trailing resistance which rotates in an arc on 9 live contacts and 8 dead contacts. The connections are so arranged that there is no interruption in the lighting circuit when passing from one contact to the next contact,

A complete instruction book for installing and operating the plant is included with the power board. A storage battery consisting of 62 sealed glass jar cells and 8 sealed glass jar counter cells is used with

this outfit. These batteries come fully charged ready for use.

The capacity of the storage battery for a given installation will depend upon the service required and the

method of operating the plant.

Where it is desired to be able to operate only one or two lights for a few minutes at a time when the engine is not running, the smallest size of battery will be sufficient. By calculating the number of lamps or other devices which may be operated and the aggregate length of time which they must be supplied from the battery without giving it a fresh charge, a battery of suitable capacity can be selected from the sizes

The Western Electric Company rates its batteries on the standard "8 hour normal" charge and discharge rate which has been the standard accepted by all prominent battery manufacturers for the past twenty years.

Complete List of "CFE" TYPE OUTFITS

Capacity

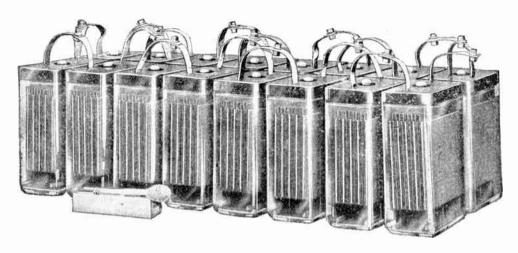
Size of Battery

	Сараену		oize of Battery					
*Type	of	Size of	62 Cells	Size of	Shipping	Weight		-Price
and	Generator	Power	and 8 counter	Engine	Outfit	Gutfit	Outfit	Outfit
Size	K. W.	Board	Cells	_H. P.	Only	Complete	Only	Complete
15CFE-50	$1^{1}_{2}$	CFE30	WEG50	3	2600 lbs.	3350 lbs.	\$1320	\$1650
$25\mathrm{CFE}$ -90	$2\frac{1}{2}$	CFE30	WEG90	5	3800 lbs.	4750 lbs.	1700	2160
60CFE-180	6	CFE60	WEG180	12	5200 lbs.	7750 lbs.	2530	3740
100CFE-270	10	-CFE100	WEG270	20	7200 lbs.	11850 lbs.	3770	5860
160CFE-360	16	-CFE200	WEG360	25	8900 lbs.	14200 lbs.	4880	7350
F. O. B.	points of man	ufacture.						*000

Note: An Outfit Only consists of a generator, power beard and a battery of 62 scaled cells and 8 sealed counter cells. An Outfit Complete includes also a gasoline engine, belt and battery racks as shown above.

\*Explanation of Code Number: The first figure indicates the capacity of the generator in hundreds of watts. The letters "CFE" designate the type of power board. The last figure represents the capacity of the storage batteries. Thus "60CFE-180" means a 6000 watt (i.e., 6 K.W.) generator, a "CF" power board with "E" counter cell panel and a 180 ampere hour battery.

# STORAGE BATTERIES FOR POWER AND LIGHT OUTFITS



# Assembled Storage Battery (16 Cells)

These Western Electric batteries are of the pasted plate type, mounted in glass jars. They are of the scaled-in type, that is, the tops of the cells are scaled and then fully charged at the factory and shipped out with the electrolyte in the cells ready for service.

These batteries are designed mechanically and chemically to give long life and be free from trouble. The ingredients employed are as pure as it is possible to obtain them, and the supply of raw material is

constantly being inspected and tested to detect any deviation from this high standard.

In the nuke-up of the grid, which is the skeleton of the positive and negative plates, there are numerous features which are peculiar to our type of construction. In the first place, the grid is cast with a solid framework on all four sides, and at the same time has crossed members which, instead of following the usual practice of being horizontal, are diagonal in position. This gives the grid a greatly increased power for resisting any tendency to buckle.

This design of grid makes it possible to so proportion the vertical members as to get more active material in a given grid. The construction of the diagonal and vertical members of the grid are such that the active material locks itself around the two sides of the fins which are east in the grid for the purpose. This is a very great advantage on both the positive and negative plates in that it keeps the active material where it should be, and on the negative plates prevents bulging, and thereby preserves the life of the battery. Throughout the entire design "ruggedness" has been the watchword.

#### COMPLETE LIST OF SEALED GLASS JAR BATTERIES

Type and Size	Normal 8 I Charging Rate Amperes	Hour Ratings Capacity 16 Cells Watt Hrs.	Capacity 56 Cells Watt Hrs.	— Single Weight Lbs.	e Cell — List Price	—16 C Weight Lbs.	ells— List Price	——56 C Weight Lbs.	'ells—— List Price		ells and nter Cells List Price
*WER-50	6	•1500			\$14.00	258	\$220				
WEG-50 WEG-75 WEG-90	6 9 11	$\begin{array}{c} 1500 \\ 2250 \\ 2700 \end{array}$	5500 8250 9900	23 25 32	$14.40 \\ 17.40 \\ 20.80$	470 520 717	230 278 332	1700 1800 2500	\$714 898 994	2100 2300 3100	\$876 1092 1206
WEG-135 WEG-180 WEG-225	16 22 28	4050 5400 6750	$\begin{array}{c} 14850 \\ 19800 \\ 24750 \end{array}$	36 49 53	$25.80 \\ 32.40 \\ 37.40$	788 995 1085	412 518 600	2800 3500 3700	$\begin{array}{c} 1380 \\ 1620 \\ 2010 \end{array}$	3400 4300 4600	1658 1948 2390
WEG-270 WEG-315 WEG-360	35 39 45	8100 9450 10800	29700 34650 <b>3</b> 96 <b>00</b>	$\frac{67}{72}$ 84	54.00 62.00 68.00	1310 1380 1565	864 992 1088	4600 4800 5500	$\begin{array}{c} 2358 \\ 2652 \\ 2984 \end{array}$	5600 5900 6700	2820 3178 3582

<sup>\*</sup>In rubber jars 4 cells to a unit.

A Syringe Hydrometer supplied with every set of 16 cells.

Delivery F. O. B. Newark, N. J.

## SMALL BATTERY CHARGING RECTIFIERS



The 2 Ampere Type Western Electric Tungar Rectifier



Interior View of 2 Ampere Tungar Rectifier

# Tungar Rectifier

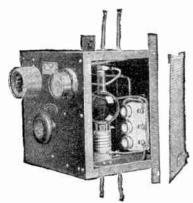
The Western Electric Tungar Rectifier offers one of the most satisfactory and efficient means for charging storage batteries from an alternating current circuit. The simplicity of the rectifier is one of its prominent features. It requires no auxiliary starting device—simply screw the Edison plug provided into any lighting socket, connect the batteries to the battery leads and the operation of charging automatically There are no moving parts, nothing to keep oiled, so that the rectifier is absolutely clean and free from grease and oil.

The light weight of the rectifier is another of its advantages. The smaller sets may be hung on a nail,

and all sizes can be mounted on a small shelf, so that they do not require any floor or bench space.

The Two and Six Ampere Size. (7½ to 15 Volts.) The two ampere size will charge, from a 115 volt 60 cycle circuit, 3 lead battery cells at 2 amperes; 6 cells at about 1 ampere, and 8 cells at about 0.75 amperes, and an intermediate number of cells in proportion. The cost of charging a 3 cell battery at 10 cents a K.W. hour for current, including the slight cost for tube renewals, is about 1 cent per hour, or 15: cents for an ordinarily complete charge.

They are the only type of rectifier to recommend and to use for charging batteries used for:



The Western Electric 6 Ampere, 75 Volts Tungar Rectifier

Lighting Systems Used On: Motorcycles Bicycles Motorboats Carriages

Ignition Systems On: Automobiles Stationary gas engines Tractors

Batteries for: Miners' lamps Dentists' lamps Exit lights Burglar alarm systems Railroad signals

Fire gongs, call bells, buzzers, telephones, experimental apparatus in public schools, factories, offices, hospitals, laboratories, etc.

The Six Ampere Size. (75 volts.) The six ampere size possesses the same important characteristics as the smaller type, but is particularly designed for commercial use in garages where automobile starting and lighting batteries are to be charged. The watt capacity of this set is 450 watts. No bulb life is guaranteed, but experience has shown that a bulb will last at least 500 to 600 hours.

## 105/125 VOLTS, 60 CYCLE ALTERNATING CURRENT CIRCUITS Complete Portable Rectifiers

								List
List	D. C.	D. C.		No. Lead	~₩	/eight	Retail	Price Each
No.	Amperes	Volts	Frequency	Cells	Net	Shipping	Price Each	In Lots of 6
195529	1-2	7 1/2 to 15	60	3 to 6	8	12	\$16.00	\$28.80
198646	1-2	7 1/2 to 15	40-50	3 to 6	10	15	19.00	34.20
195530	6	715 to 15	60	3 to 6	15	18	24.00	43.20
198647	6	7½ to 15	40-50	3 to 6	18	25	30.00	54.00
179492	6	75	60	3 to 30	50	70	115.00	‡207.00
198648	6	75	40-50	3 to 30	60	80	125.00	‡225.00
			R	enewal Bulk	08			
*195528					3 oz.	1 lb.	\$3.00	\$5.40
**189048				1	8 oz.	2 lbs	7.00	‡12.60
***189049					6 oz.	2 lbs.	8.00	‡14.4 <b>0</b>

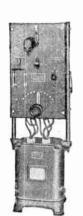
\*This bulb to be used with Nos. 195529 and 198646 only. \*\*This bulb to be used with Nos. 195530 and 198647 only. \*\*\*This bulo to be used with Nos. 179492 and 198648 only. ‡In lots of one. Delivery F. O. B. Schenectady, N. Y. For warehouse deliveries write nearest house.

# MULTIPLE MERCURY RECTIFIERS

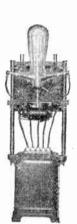












With Instruments Without Instruments Front Rear Runabout Type Rectifier Rectifier for Moving Picture Machines Front Rear Stan 'ard Battery-Charging Rectifier

Standard Battery-charging Set, 60-140 Cycles WITH INSTRUMENTS

	WITH INSTRUMENTS										
	Th Cl	Range	A.C.	List No.	Volt	Am-	Cells	Cells	Approx.	List l'rice	
List	D.C.	D.C.		Rectifier	Meter	meter	Lead	Edison	Ship.	One Tube	
No.	Amp.	Volts	Volts	Tube	Scale	Scale	Battery	Battery	Weight	Only	
148216	10	J 10-75	110 )	40949	75	15	5-30	7-40 t	530	\$467.50	
140210	10	₹ 20-75	220 [	10010		10	(10-30	14-40 /	000	2201.00	
148218	30	{ 10-75 20-75	$\{ \begin{array}{c} 110 \\ 220 \end{array} \}$	40955	75	40	{ 5-30 10-30	$\left\{ \begin{array}{c} 7-40 \\ 14-40 \end{array} \right\}$	590	691.90	
		(10-75	110)				f 5-30	7-40)			
148220	50	20-75	220	47409	75	60	10-30	14-40	660	861.90	
148221	10	10-100	110 )	40949	120	15	5-38	7-54 \	530	467.50	
148221	10	1 20-120	220 1	40343	120	10	10-46	14-65 }	1,7,7,	104.00	
148223	30	<b>₹10-100</b>	110 }	40955	120	40	{ 5-38	7-54	590	691.90	
110221		120-120	220 ∫			1	10-46 5-38	14-65 (			
148225	50	{ 10-100	110 \	47409	120	60	10-46	$\left\{ \begin{array}{c} 7-54 \\ 14-65 \end{array} \right\}$	660	861.90	
	10	120-120	220 j	40950	175	15	32-68	54-95	530	523.60	
148226	10	75-175	$\frac{220}{220}$		175	40	32-68	54-95	590	727.60	
148228	30	75-175		40956	175		32-68	54-95	660	894.20	
148230	50	75-175	220	119431		60		94-99	1 000	894.20	
WITHOUT INSTRUMENTS											
1.40000	10	(10-100	110 }	40949		i	f 5-38	7-54)	530	\$421.60	
148231	10	20-150	220 }	40949			10-56	14-80 }	330	⊕4±1.00	
1.400000	940	10-100	110 )	40955		1	f 5–38	7-54)	590	646.00	
148233	30	1 20-150	220 ∫	40000			10-56	14-80 i	9:00	040.00	
* 1000 #	F0	(10-100	110)	17.100			f 5-38	7-54)	660	816.00	
148235	50	1 20-150	220 }	47409			₹ 10–56	14-80 }			
148236	10	75-175	220	40950			32-68	54-95	530	477.70	
148238	30	75-175	220	40956			32-68	54-95	590	681.70	
148240	50	75-150	220	119431		t	32-68	54-95	660	848.30	
		B	atterv-	chargi	ng Se	ts. 2	5-60 Cy	cles			
	1	(15-45	110)		1	4	( 8–17	9-25)	T		
115683	8-30	15-45	$\{ \begin{array}{c} 110 \\ 220 \end{array} \}$	40955	75	40	$\begin{cases} 22-28 \end{cases}$	38-40	640	\$865.30	
117007	0.00	15-45	110)	40055	120	40	1 8-17	9-25)	640	865.30	
115685	8-30	45-120	220 }	40955	120	40	1 22-46	38–64 ∫	040	390.00	
115691	15-50	∫ 15–45	110)	47409	75	60	1 8-17	9-25 \	720	1072.70	
110091	10-00	₹ 45–75	220 /	41.300	10	1,77	22-28	38–40 j		30.2.10	
115693	15-50	<b>∫ 15-45</b>	110)	47409	120	60	1 8-17	9-25	720	1072,70	
22000	1	1 45-120	220 (		1		1 22-46	38-64 /			

For Moving Picture Machines
VOLTAGE: 45, 70 DIRECT CURRENT AND 110, 220 ALTERNATING CURRENT

List No.	D.C. Amps.	List No. Rect. Tube	Am- meter Scale	Shpg. Weight	List Price Each	List No.	D.C. Amps.	List No. Rect. Tabe	Am- meter Scale	Shpg. Weight	List Price Each
$\overline{172698}$	30	40958	*	425	\$552.50	172704	30	40958	*	425	\$690.20
172699	30	40958	60	425	576.30	172705	30	40958	-60	425	714.00
195669	50	47409	*	550	816.00	195673	50	47409	*	550	1020.00
195670	50	47409	60	550	839.80	195674	50	47409	60	550	1043.80

<sup>\*</sup>List prices include one tube only.

# PACKARD AUTOMOBILE CABLES For High and Low Tension Ignition

Packard Cable is constructed so as to withstand the continuous presence of heat, grease and oils. These are the arch-enemies of rubber in all forms. These cables are hermetically sealed from every deteriorating influence.



Combination High Tension Cable

This cable is suitable for all forms of severe high tension service. Color is Packard brown with double red striping.

Combination High Tension Magneto Cable

This cable is designed for magnetos with small terminal. Color is Packard brown with double red striping.



Plain High Tension Cable

This cable has four (4) layers highest grade rubber. Made for those who desire a plain, unprotected cable. Color, natural rubber gray.

Combination Low Tension Cable, 1-Strand

This cable is standard for all kinds of low tension service. Color is Packard brown with double red striping.



Combination Low Tension Cable 2-Strand

This cable is round in form and is particularly adapted to single and two cylinder engines. Replaces two single cables. Colors of conductors are red and black; completed cable is Packard brown with double red striping.

Combination Low Tension Cable, 3-Strand

This is an excellent cable for two cylinder engines; also for wiring a double set of batteries. with filler so as to be round in form. Colors of conductors are red, black, green; completed cable is Packard brown with double red striping.

For Electric Lighting and Starting Systems

While good ignition cable is important and necessary to the successful working of any car, yet the wiring of electric lighting and starting systems is even more important. The reasons are as follows: 1st. The cables are concealed and in inaccessible places. 2d. They are subjected to more abrasion and vibration. 3d. They are exposed to more dust, water and mud. 4th. Possible damage to storage batteries. 5th. Danger by fire due to short-circuits.

Packard Lighting Cables are made after the general style and of the same construction that characterizes Packard Ignition Cables. Each single conductor is protected by a double braid and the usual Packard finish. These single conductors are then stranded and made round in cross-sections by filling material. The assembly is then covered by a double braid of characteristic brown with double red striping and finished in the usual manner. These cables are as small in diameter as is consistent with absolute reliability.



Combination Lighting Cable No. 14, 1-Strand
This cable is recommended for wiring tail-lamps. Color is Packard brown, with double red striping.

Combination Lighting Cable No. 14, 2-Strand

This is a round form cable and is recommended for wiring tail-lamps. Color of conductors is red and black. Completed cable is Packard brown with double red striping.

Combination Lighting Cable No. 12, 1-Strand

This cable is recommended for wiring side and head-lamps. Color is Packard brown with double red striping.



Combination Lighting Cable No. 12, 2-Strand

This cable is recommended for wiring side and head-lamps. Made with filler so as to be round form. It is a popular style and size. Color of conductors is red and black. Completed cable is Packard brown with double red striping.

Combination Lighting Cable No. 10, 1-Strand

This cable is recommended for wiring from generator to battery and from battery to switches. Also viring large head lamps. Color is Packard brown with double red striping. for wiring large head lamps.

Combination Lighting Cable No. 10, 2-Strand This is a round form cable and is recommended for wiring from generator to battery and from battery to switches. Also used to wire head-lamps which are of large size. Color of conductors is red and black. Completed cable is Packard brown with double red striping.

Prices on application.

# CHAMPION SPARK PLUGS



A-15 32 in.

CHAMPION "X"

Adopted by the Ford Motor Co. as standard

cquipment on Ford cars since 1911.

The following is quoted from the in-struction book in each

struction book in each Ford car:
 "There is nothing to be gained by experimenting with different makes of plugs. The make of plugs with which Ford engines are equipped when they leave the factory are best adapted to the requirements of our motor. motor.

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1

# CHAMPION

"Studebaker" for Studebaker Cars

Recommended

Allen Liberty Auburn Mitchell Dort. Paige-Detroit Elgin Saxon Spanlding Grant Stewart Jordan.

AA-13, ½in. A-43, ½:18

And tractors, farm, stationary and marine engines where a standard  $^{7}8-18$  plug is used.

		-	-	
Mfrs.	List			 \$1.00
W E	List			1.09



#### CHAMPION "O" For Overland Cars

The Overland factory equipment plug.
Especially recommended to meet the requirements of the Overland motor. Also recommended for tractors, farm, stationary, marine engines, and all automobiles where a standard 1/2 inch plug is used.

J-13in, "O" N		List List	
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#### **CHAMPION** "Maxwell" for Maxwell Cars

The Maxwell factory

equipment plug. Has the well known patented copper asbestos gasket construction which does not allow any metal to touch the shoulders of the porce-

_	Mfrs.	List	\$1,00
<b>1-44</b> , 7%-18			



#### **CHAMPION** One Piece "Heavy Stone"

Recommended for Murray Owen Willys-Knight Moline-Knight

Stearns-Knight Willys-Six and all Knight motors. Mfrs. List . . . . \$1.00 W. E. List . . . . 1.22



#### **CHAMPION** Two Piece

"Heavy Stone '

Recommended for use in:

Locomobile Fiat. White Case

Marmon and heavy service trucks and tractors.

B-13, ½ in. B-43, ½-18 Mfrs. List . . . . 81.00 B-63, Metric W. E. List . . . . 1.22



J-63. Metric

#### CHAMPION "Heavy Duty" Dodge Cars

Recommended use in:

Hupmobile Apperson. Briscoe Jackson King Crow-Elkhart McFarlan Elear Monroe

Franklin  $\begin{array}{lll} \mathbf{Mfrs}, \ List \dots & \$1.00 \\ \mathbf{W}, \ E, \ List \dots & 1.02 \end{array}$ 



# **CHAMPION** "Heavy Duty" for Packard Cars

Recommended for 1:3e in:

Packard Marmon Pierce-Dorris Arrow Haynes eerless Mercer Oldsmobile Cadillac Hudson Kissel-Kar Chalmers Chandler Velie

Mfrs. List.... \$1.00 JA-43, 3/8-18 W. E. List.... 1.02



# CHAMPION "Long" for Reo Cars

Recommended the Reo car, and other automobiles and engines requiring a long type of plug. Extra long extension for the Motz our

A-23, Long 14 in. A-34, Extra long 1/2 in.

Mfrs. List.... 1.00 W. E. List.... 1. 2



#### CHAMPION "Priming"

Will start any motor on the first quarter

Brings gasoline right to the sparking point. A good winter seller.

Mfrs. List..... \$1.25 H-13, ½ In. W. E. List..... 1.60 H-43, 36-18 H-43, 38-18 H-63, Metric



J. IS-63. Metric

#### CHAMPION "Aeroplane"

Specially constructed for all types of aeroplanes and motoreyeles.

Not affected by heat or oil conditions.

Mfrs. List..... \$1.00 W. E. List. . . . 1.22

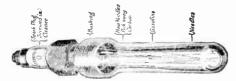


A-53, Long

#### CHAMPION "Buick" fer Buick and Chevrolet Cars Has long shell, con-

ical porcelain. The long shell allows the spark to ignite within the cylinder instead of in a pocket as occurs when the ordinary type of plug is used.

Mfrs. List.... \$1.00 W. E. List.... 1.02



Champion Minute Spark Plug Cleaner

Mire

W. E. List List Champion X Porcelain..... \$0.40 \$0.60 A-105X B-103 A-103 .66

CHAMPION PORCELAIN

#### CHAMPION MINUTE SPARK PLUG CLEANER

Champion minute spark plug cleaner... \$0.75 \$1.10

Cleaner. The quick and easy way to clean spark plugs, simply fill glass tube half full of gasoline, screw the plug into bushing and shake vigorously.

#### KLAXON

#### "THE PUBLIC SAFETY SIGNAL"



The Klaxon line is the only absolutely complete line of automobile warning signals on the market. There is a genuine Klaxon for every purpose, every preference and every purse. The Klaxon quality, the Klaxon note, the Klaxon guarantee and the Klaxon dependability permanently insure Klaxon of its position as leader in the field of safety signals.

All standard Klaxons are finished in the durable "Klaxon black enamel.

This smart finish requires no polishing or attention what-



#### Display Stand

#### Advertising Frame

Electric Klaxons can be operated from dry cells or storage batteries. They are regularly wound for 6 volts. For special voltages up to 21 volts no extra charge is made.

Display stands, frames, signs, printed matter or other valuable sales helps furnished free of charge with

small orders for Klaxons.



Klaxon 3

A hand-operated safety signal of the same quality and efficiency as the electrically-operated instruments. Horizontal push rod.

Mfr. List Price \$4,20. W. E. List Price \$6.30



Klaxon 3 V

Vertical push rod. In every other respect the same as Klaxon 3.

Mfr. List Price \$4.20. W. E. List Price \$6.30.



Klaxon 3 M.C.

Same as Klaxon 3 but constructed with short projector for motorcycle use. Furnished with handle bar, frame or tank brackets.

Mfr. List Price \$3.94. W. E. List Price \$5.91.



Klaxon 3 V-M.C.

Same as Klaxon 3 V, but constructed with short projector for motorcycle use. Furnished with handlebar, frame or tank brackets.

Mfr. List Price \$3.94. W. E. List Price \$5.91.



Klaxon 20 L

The finest automobile warning signal made. Penetrating tone, remarkable construction. Needs practically no attention whatever.

Mfr. List Price \$26.25. W. E. List Price \$39.38.



Klaxon 20 S

Same mechanical construction throughout as the Klaxon 20 L. The short projector makes practically no difference in tone.

Mfr. List Price \$26.25. W. E. List Price \$39.38.



Klaxon 20 Deck

20 L with swivel Klaxon bracket. Constructed for installation on automobile running boards or for yachts and motorboats.

Mfr. List Price \$28.88. W. E. List Price \$43.32.



Klaxon 6

Slightly smaller in size than the Klaxon 12. Its construction is the crowning result of years of experience in building quality signals.

Mfr. List Price \$7.35. W. E. List Price \$11.03.



Klaxon 6 Deck

Klaxon 6 with swivel bracket. Constructed for installation on automatic running boards or for yachts and motorboats.

Mfr. List Price \$8.93. W. E. List Price \$13.40.



Klaxon 12 L

As efficient as the Klaxon 20. Constructed for underhood installation.

Mfr. List Price \$14.70. W. E. List Price \$22.05.



#### Klaxon 12 S

Same mechanical construction throughout as the Klaxon 12 L. The short projector makes practically no difference in tone.

Mfr. List Price \$17.00. W. E. List Price \$25.50.

# INDUSTRIAL KLAXONS



Type "S"
(Short Projector)



Industrial Klaxon Type "L" (Long Projector



Industrial Klaxon Type "W" Type ''W'' Veatherproof Model)



Industrial Klason Type "WS" Type "WS" (Weatherproof Short Projector)



Industrial Klaxon Type "WL" Type "WL" (Weatherproof Long Projector)

The Klaxon must not be considered merely as an automobile horn. Its field as a signal for industria uses is practically unlimited. Thousands are in service. The demand is constantly growing.

1. In Factories the Klaxon is the most efficient signal that can be procured. Its powerful penetrating note cuts through all machinery noises—no matter how loud—even where the old-fashioned gong cannot be heard more than a few feet away. Under less noisy conditions, one Klaxon can do the work of a number of gongs, thus cutting the cost of both apparatus and wiring.

The Klaxon note is different. It cannot be confused with any other sound. It always gets instant

attention. Klaxons can be used to meet requirements:

As Fire Alarms in connection with any fire alarm system—not only in factories, but in hotels,

schools, apartment houses and public buildings. b. As Code Signals to call employees to nearest telephone or office, operated manually by switch or by automatic calling device.

c. As Time Signals for starting and stopping work. (It is often possible to use one Klaxon installation for all above purposes.)

d. As Power House and Engine Room Signal.

On Cranes, Derricks and other moving machinery. To Replace Telephone Bells (using relay across bell cutting in Klaxon on power circuit or

local battery).

In Mines and Quarries for time signals, blast signals, elevator signals, etc.

On Street Corners for Fire department traffic warning of approach of fire apparatus and also in connection with police call systems. Now in successful use in a number of cities.

4. On Railroads at signal towers and on drawbridges.

5. As Burglar Alarms in houses, banks and stores.

Important. Klaxons are not designed for continuous operation in one blast for long periods of time nor can they be depended upon to carry more than a quarter of a mile out of doors under the most adverse weather conditions. Under all circumstances they must be operated by a spring or switch or contact maker.

Orders. In order to guarantee perfectly satisfactory service it is necessary to report the conditions under which the instrument is to be operated. Therefore on all orders note the following: (1) voltage the instrument will receive (if A.C. the number of cycles). (2) Conditions under which operated, i. e., approximate length of each blast, length of silent period between blasts, number of blasts per day. (3) Purpose for which used.

Installation. Klaxons are usually installed on circuits in multiple. Special instruments can be furnished for series operation if desired voltage at instrument must be within 5 per cent, of normal rating of instrument. Industrial Klaxons conform to the requirements of the National Board of Five Underwriters. They are enameled standard fire red, have special brackets and are fitted with screw terminals.

The W or weatherproof instruments are designed for outdoor use and all connections are enclosed The bottoms of the instruments are bell-tipped, for conduit, and the instruments are absolutely weather proof. Standard windings are for 6 volts D.C. Additional list charge is made for windings above 21 volts.

#### W. E. List

Up to 21 volts, inclusive	\$2.00 3.00 4.00 5.00 6.00	From 100 to 110 volts, A.C	10.00 10.00 5.00
		Mfr. Li	st Price

	Mfr.	List Price
	List	Each
Type 82	22.00	\$33,00
"S" Industrial Klaxon (short projector)\$2	22.00	33.00
"L" Industrial Klaxon (long projector)	22.00	33.00
"W" Industrial Klaxon (weatherproof)	22.00	00.0
WS" Industrial Klaxon (weatherproof short projector)	29.00	0.5
"WL" Industrial Klaxon (weatherproof long projector)	00,00	00.00

# BENJAMIN INDUSTRIAL SIGNALS

National Electrical Code Standard

Benjamin Industrial Signals have a peculiar, penetrating tone pitch, which make them by far the most effective form of Audible Signal for Industrial use. The following is a partial list of places where they should be used.



No. 8326H

# SPECIFIC USES FOR BENJAMIN INDUSTRIAL SIGNALS

1. Factory signals; superintendent's and foreman's calls, 2. Signaling the opening and closing hours of labor, 3. Tell-tale or warning; for water tank levels, steam or gas pressures, sprinkler systems, etc. 4. Telephone signals in engine rooms, 5. Fire alarms, 6. Audible signals in connection with police systems, 7. Burglar alarms, 8. For Central Stations, 9. Traffic warnings for street crossings, 10. Railroad crossing signals, 11. Mine signals, 12. Street car signals, 13. Marine signals.



1. Code signaling is more readily obtained. 2. They have greater volume of tone. 3. Tone is distinguishable over all other sounds. 4. They are more durably constructed. 5. First cost is less than that of good bell. 6. Maintenance is less than that for any other form of signal.



These D. C. signals are intended for use on multiple arrangement only, but may, under certain special conditions, be furnished for series operation. They may be employed successfully on circuits carrying a voltage as high as 250 volts, D. C. When six or eight signals are to be used on one system no lower voltage than 30 volts, D. C. should be used.

No. 8326-H is arranged with east back cover for ½-inch pipe connection, using a one-piece drawn brass projector. It should be mounted securely on a firm foundation in order to obtain the best

results.

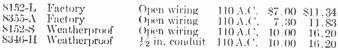


Signal No. 8326-A is the same as No. 8326-H, except that it is intended for interior use only, and is not weatherproof. This signal will be equipped with special 14-inch conical projector for extra volume and depth of tone, at an advance of \$2.44 in list price.

8326-A Heavy service Open wiring 110 D.C. \$10.00 \$16.20

# ALTERNATING CURRENT SIGNALS

These signals may be operated successfully under practically all commercial conditions on multiple or series circuits, or in connection with vibrator or signal stroke gongs or other electrical signal equipment. When this signal is used in connection with other electrical devices, special windings are used to allow passage of sufficient current to operate the other devices on the same line. A 20 per cent. or 25 per cent. variation in voltage will in no wise affect the working of the signals. Weatherproof casings are recommended when signal is to be used outside.

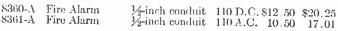


Signals Nos. 8152-L and 8346-H will be equipped with special 14-inch projector for extra volume and depth of tone, at \$2.44 advance in list price.

Signals for special voltage, up to and including 250 volts, A. C., furnished at no advance in price.

# INDUSTRIAL SIGNALS FOR FIRE ALARMS

Nos. 8460-A and 8361-A are same style as illustration No. 8346-H finished red. These signals operate with A. C. and D. C. current as shown in the listings below:







No. 8152L



No. 8355A



No. 8152S



No. 8346H

# BENJAMIN INDUSTRIAL SIGNALS

#### National Electrical Code Standard TELECODE RELAY

In factories, mines, quarries, foundries, boat works, or wherever the noises necessary in industry rise to great volume, the ordinary telephone bell is ineffective. Here the Telecode Relay and Industrial Signal is a necessity.

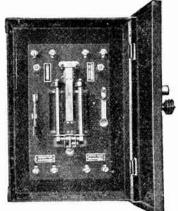
The Telecode Relay makes it possible to greatly increase the efficiency of the telephone system by sub-

stituting for an ineffective bell the distinctive, powerful tone of the Industrial Signal.

The Telecode Relay may be equipped for operation on telephone circuits, utilizing either A.C. or D.C., as their ringing energy. If for operation on standard telephone circuits, the relay is wound by resistance as is standard practice in the telephone industry, and in ordering kindly specify the resistance of the telephone bells on the telephone system where the relay is to be installed. If the relay is to be used in conjunction with an intercommunicating telephone system, utilizing D.C. for its ringing energy, specify the voltage of the ringing current. Signals when the latter are energized from a 110-volt lighting circuit current.



No. 8311R



No. 8301G



No. 8299M



8296D

List No.	Description	List Price List Price
	Telecode Relay, complete with pressed stee	
8311WI	Cover  Telecode Relay, weatherproof	

#### MASTER RELAY PANELS

Master Relay Panels are arranged for use with the Benjamin Industrial Signals as a circuit-closing means, controlling the high voltage current to the industrial signals. The relay is of earbon contact type, arranged with primary opening switch, test button and four sets of binding posts for distribution of the various incoming circuits. equipment is mounted on a substantial slate base, encased in a sheet steel box equipped with lock.

			MITS. W. Pa-
List No.	Type	Magnet Winding	List Price List Price
8301C	D.C. only	2, 4 or 6 volts	\$20.00 \$32.40
8301-D	D.C. only	Special	21.00 34.02
Minutum		and for operation from	A.C. circuits will be

Master relay panels arranged for operation from A.C. circuits will be furnished at the same list price.

#### MINE BUZZERS

Heavy Duty Mine Buzzers are weatherproof signals for use under severe conditions of service where great volume of tone is not desired. The tone, however, has a peculiar pitch, making them extremely effective as audible signals. These signals are furnished arranged with two types of easing, one for conduit installations and the other for use with open This type is same as illustration 8296-D, but with lead wires.

			Standard		W. E.
List No.	Type	Connection	Voltage L	ist Price L	ist Price
829SD	Ď.C.	Open wiring	11Ŏ		\$9.72
8299A	A.C.	Open wiring	110	5.00	-8.10
8347M	D.C.	→ ½-inch conduit	; 110	9.00	14.58
8299M	A.C.	½-inch eondui	t 110	9.00	14.58

#### MARINE BUZZERS

The Special Marine Type Buzzer is designed with the idea in view of supplying an audible signal which will withstand the action of the sea atmosphere and produce a strong volume of tone of distinctive tone pitch. This signal is arranged for ½-inch pipe connection, bulkhead mounting. Construction is such as to make this device durable under most severe operating conditions.

				Mfrs.	W. E.
List No.	Type	Connection	Voltage I	ist Price I	ist Price
8299M	Marine A.C.	½-inch conduit	110	\$9.00	\$14.58
8347M	Marine D.C.	½-inch condiut	110	9.00	14.58

#### OFFICE AND FACTORY BUZZERS

These signals are effective for offices, stock rooms, shipping rooms, etc. The mechanisms are the same as those used in the standard Mine Signals, but are not arranged with weatherproof casing.

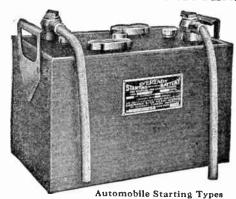
			Mits.	W. E.
List No.	Type	Standard Voltage	List Price Li	ist Price
8296D	Ď.Č.	110	\$5.00	\$8.10
8297A	A.C.	110	4.00	6.48
8297C	A.C.	*	5.00	8.10

\*For higher voltages to and including 260 volts A.C.

NOTE: All Alternating Current Buzzers may be wound for voltages as high as 260 volts A.C.

Direct Current Buzzers are not intended for use on circuits over 130 volts D.C. unless used in series with external resistance

# **EVEREADY STORAGE BATTERIES**



Automobile Starting Types

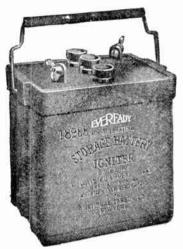
						Ba	Battery Capacity (per Single Full Charge)				Momen- tary		
List No.	Volts	Wt. Lbs.	Outride	l*imensi	ens, Ins.		re Hours Is Dischs		Burr	urs Contin ling With amp Load	Total	Starting Rate— Ampere	List Price Each
			Long	Wide	High	3 Amp. Rate	5 Amp. Rate	10Amp. Rate	18 C.P.	30 C.P.	60 C.P.	Dis- charge	Each
6S-60R 6S-60H	6	48	93/8	7 16 5 1/8	878 1038 878	81	70	60	27	14	6	200	\$50.25 50.25
6S-80R 6S-80H	6	56	10 11	7574477578787878787878787878787878787878	10 00 1	105	95	80	35	19	8	250	55.44 55.44
6HS-80R 6HS-80RL	6	58 56	10 11	7 1 4 1/4	938	10	95	80	35	19	8	250	55.44 55.44
6S-80RL 6GD-80S	6	63	2018 938	41/4 7 I	878	105 120	95 105	80 90	35	19 21	8 9	250 290	55.44 65.84
6S-100R 6S-100H	6	63	{ 12 12 12	7 17	878 1112 878 1033 878 1038 1038	126	110	100	40 42	Rate 22	Rate 10	300	62.37
68-120R 68-120H	6	72	145/8	7 15	878	160	140	120	d 53	d 28	d 12	350	62.37 69.30
6GD-120S	6	74	1458	718	11 12	175	150	130	1 7		Ar.	380	69.30 72.77
6GD-120SE 6S-140R	6	80	1114	8½ 7¼	876					1	-		72.77 77.97
6S-14011 6S-160R	6	SB	1714	5% 7 1	11 ½ 11 ½ 11 ½ 8 % 10 ¾ 8 %	180	160 185	140 160	60 65	32	14 16	400 450	77.97 86.63
12S35R	12	64	123/8		87:1	13	35	25	37	18.5	7	100	67.58
12S-35H 12-S50R	12 12	77	123/8	7.57.57.57.57.57.57.57.57.57.57.57.57.57	87	60	30	40			10		67.58 77.97
12S-50H 12S-60R	12 12	94	15 175/8	57%	10%		-		Amp. Rate 62 93	5 26.5	10 14	150	77.97
12S-60H 12S-80R	12		175%	5%	1037	81	70	60	62 å	e 35.5	当 14 計 19	200	90.09
12S-80H 12S-100R	12	108	2014	51/3	10%	10	95	80	120	¥ 46.5	月 19	250	98.76 98.76
12S-100H	12	122	23	578	10%	126	110	100	=112	हो 55.5	'° 22	300	107.42 107.42
12S-35RF	12	64	123/8	7 16	8½	42	35	25	37	18.5	7	100	67.58
12S-50RF 12S-50HF	12 12	77	{ 15 15	7 1 6 5 7/8	87s 103s}	60	50	40	Rate 23	हैं 26.5	.Rate	150	77.97
12S-80RF	12	108	201/4	7 16	876	105	9.5	80	3 Amp.	-dшу 46.5	10 Amp.	250	98.76
16S-35R 16S-35H	16 16	83	{ 16 ½ 8 16 ½ 8 10 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	7 14 5 1/8	8 7/8 10 3/8	42	35	25	Rate 53	Rate 28	§ 10.5	100	86.63 86.63
16S-50R 16S-50H	16 16	102	195/8 195/8	7 18	878 1038	60	50	40	₹ 76	¥ 35	A. Rat	150	98.76 98.76
16S-60R 16S-60H	16 16	123	23 1/8 23 1/8	57/8 7/8 7/8 7/8 7/8	878	81	70	60	₹ 39	₹ 50	20.5	200	110.88 110.88
16S-35RF	16	83	161%	7 178	87/8	42	35	25	21/4 A. Rate	33% A. Rate 85	71/2 A. Rate	100	86.83
18S-35R 18S-35H	18 18	90	$   \left\{     \begin{array}{c}       20 \frac{1}{8} \\       15 \frac{5}{8}     \end{array}   \right. $	634 634	8 7/9 10 3/8	42	35	25	e 65	Rate 34	Rate 12	100	95.30
18S-50R 18S-50H	18 18	112	155%	81%	878	60	50	40	A. Rate	F 42	8H 17	150	95.30 108.29
18S-60R 18S-60H	18 18	140	2018	958 958	878 1038 878 1038	81	70	60	± 105	× 58	23.5	200	108.29 121.29 121.29
24S-20R 24S-20H	24 24	93	{ 19 3/4   19 3/4	7 12 5 7/8	10%	25	20	13	Rate 64	₩ 27	Rate 13	75	97.89
24S-20RL 24S-20HL	24 24	94	13 11 105%	103/8 95/8	878 1038	25	20	13	₹ 49	₹ 27	₹ 13	<b>7</b> 5	97.89 97.89
24S-35R	24	127	orv. Long	7 🕆	81/6	42	35	25	<sup>2</sup> 4 50	₹ 45 5	5 1S.5	100	97.89 116.09

Delivery F. O. B. Factory, Long Island City, N. Y. For warehouse deliveries write nearest house.

# **EVEREADY STORAGE BATTERIES**







Ignition Type

# Automobile Lighting Type

6 VOLT

		Bat	tery Cap	acity (p	er Single	Full Ch	arge)			Outside			
	Ampera Hours, Continuous Discharge at				rs Conti 1 Total I			Dimensions Ins.					
List No.	Ampere Dis- charge Rate	3 Ampere Dis- charge Rate	5 Ampere Dis- charge Rate	10 Ampere Dis- charge Rate	1	18 C.P.  3 Ampere Dis- charge Rate	5	10	Length	Width	H. ight	Wt. Lbs.	List Price Each
6L-40R 6L-40H	70	50	40		70:	17	8		{ 63/4 63/4	718 516	87/8	30	<b>\$32 0</b> 5
6L-50R 6L-50H	90	60	50	40	90	20	10	4	814	7 18 57/8	878 1088	33	<b>38.</b> 99
6160R 6L-60II	110	81	70	60	110	27	14	6	93/8	7 78 576	878 1088	43	39.86
6L-80R 6L-80H	130	111	90	80	130	37	18	8	10 th	7 18 5 7/8	87/8 \ 108/8 \	53	46.79
6L-100R }	150	125	110	100	150	42	22	10	{ 12 12	7 18 5 1/8	87/8 103/8	<b>6</b> 0	53.72
6L-120R }	180	150	135	120	180	50	27	12	145/8 145/8	7 18 57%	103%	71	60,65

# Ignition Types

This type of battery is made especially for gas engine ignition and for use with Magneto Dual Starting Systems.

# FURNISHED IN WOODEN BOXES WITH INTERIOR RUBBER JARS

List		Ampere Hour Capacity At		wt	0	Y :		
No.	Volts	5 Ampere Discharge Rate	Ampere I Ampere Lbs. ischarge Discharge	Lbs.	Length	Width	Height	List Price Each
4IG-60 6IG-40 6IG-60 6IG-80 8IG-60	4 6 6 6 8	35 20 35 45 35	60 40 60 80 60	14 16 26 30 32	4 14 4 16 5 1/2 6 3/4 6 18	7 15 7 15 7 15 7 15 7 15 7 15 7 15	37/8 87/8 87/8 87/8 87/8	\$20.79 24.26 27.72 32.06 34.65

The difference between the IG and V Type Ignition Batteries lies only in the method of assembly, the capacities being equal. Instead of a one-piece compartment jar as used in the V Type, the IG contains individual jars incased in wooden box, similar to construction of the regular Lighting and Starting Types, including "feet construction" of the plates, not used in V Type batteries.

On account of difference in dimensions, be sure to specify whether IG or V type should be supplied. Delivery F. O. B. Factory Long Island City, N. Y. For warehouse deliveries write nearest house.

# DRY BATTERIES

For Intermittent Service



Blue Label Regular



Blue Label Combination Screw Top



Blue Label Straight Screw Top

# Blue Bell Cells

This battery is particularly recommended for telephone transmitter work, to meet the needs of a reliable, highly efficient and long-lived cell.—It is furnished in three styles of tops: standard binding post top, combination screw top and binding post and straight screw top.—The two latter types are for use in Patterson Battery Sets.

List	*Sizes of		Wt. per	Std.	Std. Pkg.	List	Price-
No.	Zinc Cans	Description	Cell	Pkg.	Lbs.		Per Bbl.‡
3403831	$2\frac{1}{2} \times 6$ ins.	Standard binding post top	2 lbs.		300 lbs.		\$60.00
340384	215 x 6 ins.	Combination serew top and binding post	2 lbs.	125	300 lbs.	.78	70.00
340385	$2\frac{1}{2} \times 6$ ins.	Screw top, (no binding posts)	2 lbs.	125	300 lbs.	.76	67.50



Red Label Regular Round Carton



Red Label Regular Square Carton



Red Label Combination Screw Top



Straight Screw Top

# Red Label Blue Bell Cells RED LABEL

This cell is designed for a wide range of service; it is a general purpose battery that may be successfully used for all classes of intermittent service, such as door bell annunciators, railway train dispatching, ignition, etc. The two latter types are for use in Patterson Battery Sets.

T tok	Cines of		Wt. per	5+3	Std. Pkg.	Tiet	Price-
List	Sizes of						
No.	Zinc Cans	Description	Cell	Pkg.	Lbs.	Each	Per Bbl.
340386	$2\frac{1}{2} \times 6$ ins.	Standard binding post top(round carton)	2 lbs.	125	300 lbs.	\$0.70	<b>\$</b> 62.50
340380	$2\frac{1}{2} \times 6$ ins.	Standard binding post (square carton)	2 lbs.	125	300 lbs.	.70	62.50
340387	$2\frac{1}{2} \times 6$ ins.	Combination screw top and binding post	2 lbs.	125	300 lbs.		72.50
340388	$2\frac{1}{2} \times 6$ ins.	Screw top (no binding posts)	2 lbs.	125	300 lbs.	.76	70.00
* A	dd 1 inch to th	e height of cells having extended carbon pl	ugs, and	1/2 inc	h for other	styles of	connec-
tion.							

†Note: Fahnestock clips will be furnished when specified without extra charge. †Delivery F. O. B. Cleveland, Cincinnati, Brooklyn and New York. For warehouse deliveries write nearest house.

# DRY BATTERIES

For Intermittent Service



Rectangular



Duplex Battery



Oval Type

#### Columbia Cells RECTANGULAR TYPES

List	Over-all Dimensions	Weight	Weight Lbs.	Std. Pkg.	Std. Pkg.	4T :- 4 Th +
No.	*Not Including Connections	per Cell	per 100 Packed	Bbl.	Wt.	List Price
R-1	$1 - x  1_{2}  x  3_{4}  ins,$	7 oz.	55	400		Each
R-2	$1 \times 134 \times 314 \text{ ins.}$	814 oz.	62		210	\$0.60
R-3	114 x 112 x 314 ins.	814 oz.		400	230	, 60
R-5	$114 \times 214 \times 4$ ins.		62	400	230	.60
R-6	$138 \times 134 \times 418 \text{ ins.}$	1412 oz.	115	300	295	.70
R-7	$1\frac{1}{2} \times 2 \times 4\frac{3}{4} \text{ ins.}$	$12^{3}4$ oz.	100	300	265	. 70
		1 lb. 3 oz.	145	250	290	.70
R-8	15/8 x 21/2 x 47/8 ins.	1 lb. 10 oz.	197	200	350	.80
R-10	$1\frac{3}{4} \times 2\frac{1}{4} \times 5\frac{3}{8}$ ins.	$1\frac{3}{4}$ lbs.	207	150	450	.80
R-11	$2 \times 2^{\frac{1}{2}} \times 6$ ins.	2½ lbs.	288	125	340	.90
R-12	$2\frac{1}{4} \times 2\frac{3}{4} \times 6\frac{1}{2} \text{ ins.}$	31/2 lbs.	390	100	375	1.10
R-347	$3 \times 4 \times 7$ ins.	$67\overline{8}$ lbs.	754	50	370	3.00
Duplex	$6\frac{3}{4} \times 5\frac{1}{8} \times 2\frac{5}{8} \text{ ins.}$	44 lbs.	480	50	240	
3k A 1.1	2/1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		200	517	2010	1.40

OVAL TYPE

Weight

per Cell

11¼ oz.

\*Add 34 inch to height for total height to include connections.

Types R-11 to R-347 will be furnished with Fahnestock connectors when so ordered.

Tilen	Paris of
No. O-4	Zinc Cans 1¼ x 2¼ x 4 ins.
( )-1	1)4 x 2)4 x 4 ms.
2 2	-
REDIT	THE STATE OF THE S
COLUM	No.6.
DRY C	OLUMBIA
No.	IGNITOR DRY CELL
	RY CELL
No. of	
attended by the	
and and	CHERAL IGNITION
ATIONAL CA	REON STREET CARRION COMP
CIN GENERAL DE	Wasten Field

List



Size of



1900



Rapid Fire



Weight Lbs.

per 100 Packed

80

Red Seal



List Price

Each

**\$**0.60

Eveready

REGULAR TYPES										
List	Size of			Wt. per	Std.	Std. Pkg.	ttList	t Price——		
No.	Zinc Cans	Descrip	tion	Cell	Pkg.	Lbs.	Each	per Bbl.		
G	$2^{1}\frac{1}{2} \times 6$ ins.	— Columbia Ř		2 !bs.	125	300	\$0.60	\$60.00		
б	$2^{1}$ ½ x 6 ins.	— Columbia 1;	gnitor	2 lbs.	125	300	.70	62.50		
8	$3\frac{1}{2} \times 8 \text{ ins.}$	— Columbia R	ed Label	5 lbs.	50	315	1.40	62.50		
8	$3\frac{1}{2} \times 8 \text{ ins.}$	— Columbia Ig	gnitor	5 lbs.	50	315	1.60	67.50		
	Miscellaneous Cells									
340413	$2\frac{1}{2} \times 6$ ins.	1900	Regular	2 lbs.	125	300	\$0.70	\$60.00		
340414	$2^{1}$ ½ x 6 ins.	Rapid Fire	Ignition	2 lbs.	125	300	.70	62 50		
340416	$212 \times 6 \text{ ins}$	Red Scal	Regular	2 lbs.	125	300	.70	60.00		
340584	$2\frac{1}{2} \times 6 \text{ ins}$	Hi-up	lguition	2 lbs.	125	300	.70	62.50		
340418	$2^{1}\frac{1}{2} \times 6 \text{ ins.}$	Everendy	_lgnition	2 lbs.	125	300	70	69 50		
IDel	ivery F. O. B. Cle	veland. ††De	divery F. O.	. B. Clevelar	ы, Cincin	nati, Brookl	yn and Nev	v York.		



"Hot Shot" Battery

# COLUMBIA "HOT SHOT" BATTERY

The Columbia "Hot Shot" is a unit battery containing from 3 to 10 specially made cells connected in combinations to meet all

requirements from 415 volts to 9 volts.

The battery is designed especially for automobile ignition, for electric horns, for motor boat and gas engine ignition, for operating carriage electric lamps, for mine signals, for household service, and for electric toys—in fact, for every place where a reliable dry battery is needed. The List No. designates the number of cells and method of connecting them. The first figure designates the number of sets of cells and if more than one, these sets are connected in multiple; the second number, the number of cells in series; the third number, the size of the cells, and the last number shows whether cells are arranged in one or two rows, Not. 2462 means two sets of cells in multiple, four cells in series in each set, and number 6 cells, two rows.

List No. Voltage Length Width Height Each Pkg. Lbs. Ea	List rice ach .222 .96 .96 .96 .000 .96 .70 .444 .444 .444 .492 .400 .888 .888 .888
--	---

Multiple Battery

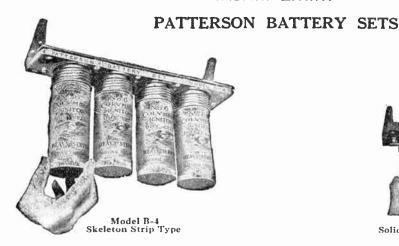
# ††Multiple Batteries

The Columbia multiple battery is a unit proposition. Only two connections have to be made. Inside the hermetically sealed box the cells are separated by wooden pieces and then are held in place and entirely covered by a solid, waterproof insulating compound, which absolutely prevents any motion of the separate cells. The connections are not temporarily made to the binding posts by light wires, but are permanently soldered copper strip, so that the resistance between each pair of cells is practically nothing. This battery represents the latest developments in primary battery manufacture, and combines maximum efficiency and reliability with simplicity.

List		——————————————————————————————————————	ons	Weight I	.hs., Each	
No.	Voltage	Metal Case	Wood Case	Metal Case	Wood Case	Each
146	6	11 x 3 x 834	$11^{5} \% \times 3^{3} \% \times 8$	16	14	\$3,20
$\frac{140}{226}$	3	11 x 3 x 8 3 4	$11^{5}\% \times 3^{3}\% \times 8$	16	14	3.20
246	6	11 × 51 2 × 834	$115\% \times 61\% \times 8$	25	22	6.40
426	2	$11 \times 5^{1} \times 8^{3} \times$	$11^{5}\% \times 6^{1}\% \times 8$	25	22	6.40
	e e	$11 \times 8^{1} \times 8^{3} \times 8^{3} = 11$	$115\% \times 85\% \times 8$	37	31	9.60
346	ნ 412	11 ×8½×8¾	$11^{5}$ \( \times \) $8^{5}$ \( \times \) $8$	37	31	9,60
436	4.5	$11 \times 8\frac{1}{8} \times 8\frac{3}{4}$	$115\% \times 85\% \times 8$	37	31	9.60
266	714	13¾ x 3 x 8¾	$14\frac{1}{4} \times 3\frac{3}{8} \times 8$	17	16	4.00
156		$13\frac{1}{4} \times 5^{1} \times 8\frac{1}{4}$	14½ x 6½ x 8	34	28	8.00
256	$\frac{712}{3}$	$13\frac{3}{4} \times 5^{1}\frac{2}{2} \times 8\frac{3}{4}$	14½ x 6½ x 8	31	28	8.00
526		$13\frac{1}{4} \times 8\frac{1}{8} \times 8\frac{1}{4}$	$14\frac{1}{14} \times 8\frac{5}{8} \times 8$	50	4.1	12,00
356	$\frac{712}{412}$	$13^{34} \times 8^{18} \times 8^{34}$	$11\% \times 85\% \times 8$	50	44	12.00
536	9	$8\frac{1}{8} \times 5\frac{1}{2} \times 8\frac{3}{4}$	$8\frac{5}{8} \times 6\frac{1}{8} \times 8$	20	18	4.80
166	9	$8\frac{1}{8} \times 5\frac{1}{2} \times 8\frac{3}{4}$	$85\% \times 61\% \times 8$	$\bar{20}$	18	4.80
326		$8\frac{1}{8} \times 5\frac{1}{2} \times 8\frac{3}{4}$	$85^{\circ}_{8} \times 61^{\circ}_{8} \times 8$	20	18	4.80
236	412		.1 in decimal			

†tkn ordering specify whether wood or metal case is desired.

<sup>\*</sup>Delivery F. O. B. Factory, Cleveland, O. For warehouse deliveries, write nearest house.





Model A-4 Solid Hard Rubber Strip Type

#### Series Strip Types—Models and B

Models A and B Strip Type Patterson Battery Sets are the simplest and lowest price outfits made. Strip Type Outfits are used in large quantity, but admittedly are not as desirable as steel box and steel cabinet outfits, for up-to-date battery installations should be enclosed.

Strip Type Outfits are regularly furnished with strap hinges, so that the same may be conveniently mounted on a side wall; by removing hinges they may be mounted solid on ceiling or on under side of a shelf.

Strip Type Outfits have automatic bridges in receptacles, which permit renewal of battery without opening of circuit or interrupting service during the operation.

Circuit wires after once being connected to terminals of the holder never have to be disconnected or reconnected.

Loose connections and broken wires are absolutely impossible.

Contacts are positive and of ample carrying capacity.

Installation or renewal of battery is foolproof; no technical knowledge is required, for batteries when screwed into the receptacles automatically make all connections.

Model B Strip Type Outfits are sectional, so that at any time an additional unit or units may be inserted,

if at any time a higher voltage outfit is desired.

Model A Strip Type Outfits are similar to Model B, but are not sectional; they are made of solid hard

rubber in place of skeleton type like the Model B.

In both Model A and B Patterson Battery Sets screw cups are renewable, so in case of injury to a cup a new cup can be readily inserted at the expense of a few cents.

If Strip Type Sets are ordered for multiple work it should be so specified at the time of ordering, so that automatic bridging device may be omitted, as automatic bridges are not desirable for multiple work.

A and B Holders are regularly made in all sizes from 2 cell up to 12 cell. Larger sizes to order at proportionate advance.

Strip Type Patterson Battery Sets are packed in individual corrugated cartons, neatly labeled, for

shell sto			
List	MODEL B STRIP TYPE, SKELETON	Size,	Price Each.
No.	No. Cells Capacity	Inches	No Batteries
	• •		
B-2	2 in row	$8\frac{1}{2} \times 3 \times 2$	<b>\$</b> 4.08
B-3	3 in row	$11\frac{1}{2} \times 3 \times 2$	6.12
B-4		$14\frac{1}{2} \times 3 \times 2$	8.16
BS-4		816 x 6 x 2	8.16
B-5	5 in row	1716 x 3 x 2	10.20
B-6			
	6 in row		12.24
BS-6		$11^{1}$ $\leq$ x 6 x 2	12.24
B-8		$26\frac{1}{2} \times 3 \times 2$	16.32
BS-8	8 in 2 rows of 4	$14\frac{1}{2} \times 6 \times 2$	16.32
	Sectional Units		
BM	Middle section battery holder unit		\$2.04
BZ	Zinc terminal end section		2.04
BC	Carbon terminal end section.		2.04
DC	Carbon terminar end section		2.04
	MODEL A STRIP TYPE, SOLID HARD RUBBEI	R	
A-2	2 in row	$81.6 \times 3 \times 2$	\$7.34
A-3	3 in row	$11^{15} \times 3 \times 2$	11.02
A-4	4 in row		14.68
			,
AS-4	4 in 2 rows of 2	$8^{1}$ $\stackrel{.}{_{2}}$ $\times$ $6$ $\times$ $2$	14.68
A-5		$17^{+}_{-2} \times 3 \times 2$	18.36
A-6	6 in row	$20\frac{1}{2} \times 3 \times 2$	22.04
AS-6	6 in 2 rows of 3	$11^{\frac{1}{2}}$ x 6 x 2	22.04
			3=:02

No battery cells are included in the above prices; Patterson-Columbia Cells extra. Delivery F. O. B. New York City. For warehouse deliveries write nearest house.

\*List Price

# PATTERSON BATTERY SETS

#### SERIES STEEL BOX TYPE-MODEL BB



Model BB-4. Open Front Dropped, Top Raised to Screw in Cells

Model BB outfits consist of the standard Model B series type strip, mounted in a pressed steel case, finished in black japan, with substantial padlock and two keys. These outfits are suitable for all installation where the current requirements are not so heavy as to make desirable the use of the multiple service outfits.

Model BB outfits have self-locking cases in addition to the padlock, the front automatically locking under the top flange when pushed up into position.

Stationary binding post terminals for circuit wires are mounted on backboard of box; on same base are mounted the knife switch jaws with which copper blades, carried by holders, make contact when cells are serewed into holder, automatically dropping into place. Insulated bushings are set in back for introduction of circuit wires. Metal cleats hold box 1/2 inch from wall, giving ample space for running of circuit wires.

BB battery sets are regularly made in all sizes from 2 cell up

to 12 cell; special sizes to order.

List No.	Battery Holder No.	Operative Voltage	Initial Amp. Capacity	Oı Height	itside Dimensi Width	ons————————————————————————————————————	Each Without Batteries
BB-2 BB-3 BB-4 BB-5 BB-6 BB-8 BB-10	B-2 B-3 B-4 B-5 B-6 B-8 B-10	2 3 4 5 6 8	25 25 25 25 25 25 25 25	8 ins. 8 ins. 8 ins. 8 ins. 8 ins. 8 ins. 8 ins.	10½ ins. 13½ ins. 16½ ins. 19½ ins. 22½ ins. 28½ ins. 34½ ins.	612 ins. 612 ins. 612 ins. 612 ins. 612 ins. 612 ins. 613 ins.	\$9.60 12.48 15.36 18.72 22.08 28.48 34.88
BB-12	B-12	12	$\frac{25}{25}$	8 ins.	$\frac{4012}{2}$ ins.	$6\frac{1}{2}$ ins.	41.28

# SERIES SIDE WALL TYPE-MODEL BR



Model BR-4

Model BR outfits are designed for side wall installations. They consist of a standard Model B series type strip with the addition of a metal faced backboard on which stationary binding post terminals for circuit wires are mounted. On the same base are mounted the knife switch jaws with which copper blades, carried by holders, make contact when cells are screwed in, and holder is dropped into place.

Automatic bridge in each cell receptacle permits the removal of one or more cells from the set without opening the circuit, and also provides a quick test for a weak cell without ammeter.

Model BR battery holders are regularly made in all sizes from 2 cell up

to 12 cell; special sizes to order.

If a "split-up" of either of the above battery sets is desired, provision can be made for this if specified in advance. For every "split" 3 inches extra width is required. For example, 3 cells may be required for "talking" circuit of an interior telephone system, 6 cells for "ringing" circuit or for annunciators, bells, etc., or a total of 9 cells in the battery set. When so specified, this or any "split-circuit" arrangement can be furnished.

List No.	Battery Holder No.	Operative Voltage	Initial Amp. Capacity		side Dimensie Width		*List Price Each
BR-2	B-2	2	25	6 ins.	814 ins.	$3^34$ ins.	\$7.20
BR-3	B-3	3	25	6 ins.	$11\frac{1}{2}$ ins.		9.76
BR-4	B-4	4	25	6 ins.	14½ ins.		12.32
BR-5	B-5	5	25	6 ins.	$17\frac{1}{2}$ ins.	33% ins.	15.04
BR-6	B-6	6	25	6 ins.	$20\frac{1}{2}$ ins.		17.60
BR-8	B-8	8	25	6 ins.	$26^{15}$ ins.	$3^{3}$ ins.	22.72
BR-10	B-10	10	25	6 ins.	$32^{15}$ ins.	$3\frac{3}{4}$ ins.	27.84
BR-12	B-12	12	25	6 ins.	$38\frac{1}{2}$ ins.		32.96

No battery cells are included in above prices. Patterson Columbia Cells, extra.

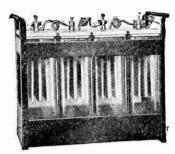
Solid hard rubber Model A strips in place of skeleton will be furnished, when ordered, at an advance of \$1.80 list per cell-unit.

<sup>\*</sup>Delivery F. O. B. New York City. For warehouse deliveries write nearest house.

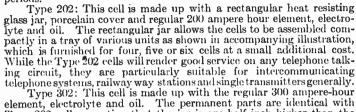
#### EDISON PRIMARY BATTERIES

# Their Use in Telephone Service

periods.



Typical of EDISON TYPE 202 or 302 Four Cell Battery in Tray Side View



element, electrolyte and oil. The permanent parts are identical with Type 202 cell, excepting that the jar is one-half inch higher than the Type 202 jar. This is the lowest priced 300 ampere-hour cell in glass jar. It is recommended for intercommunicating telephone systems,

EDISON primary cells are made up in capacities from 150 to 600 ampere hours. They are suitable for circuits in which the flow of current is either continuous or intermittent; there is no deterioration while the battery is idle and no attention required between renewal

small private branch exchanges, etc.

The Type 403 cell has a capacity of 400 ampere hours; the jar is porcelain, cylindrical in shape and is furnished with Type 400 element electrolyte and oil. This is the lowest priced 400 ampere hour cell, the jar being less expensive than those furnished with other cells of same capacity, but the current producing material is identical. For telephone transmitter circuits or similar service requiring a comparatively low discharge rate, and where the battery is not exposed to low temperatures the Type 403 is equal in efficiency to any of the 400 ampere hour cells.

The Type 403 cell is recommended for transmitter service in Local

The Type 403 cell is recommended for transmitter service in Local Battery Telephone Exchanges, Small Common Battery Telephone Systems, Private Branch Exchanges, Train Dispatchers' Offices, etc., also for Telephone Interrupters or Pole Changers, Supervisory Lamps,

Trunk Line Relays, etc.

The Type 502 cell has a capacity of 500 ampere hours; it has a rectangular heat resisting glass jar and Type 500 element, electrolyte and oil. This cell is suitable for the same purposes for which the Type 403 is recommended. The shape of the cell is an item of importance when space is limited. The glass jar makes easy the task of inspecting, and as the approach of exhaustion is indicated by holes appearing in

the zincs a convenient method for examining the plates is desirable.

The Type 505 cell has a capacity of 500 ampere hours; it has a round heat resisting glass jar and round cover, but in other respects is identical with the Type 502 cell.

 $6\frac{1}{2} \times 11\frac{1}{2} \times 12$ 

 $6\frac{1}{2} \times 11\frac{1}{2} \times 23$ 

 $6\frac{1}{2} \times 11\frac{1}{2} \times 15\frac{1}{2}$  ins.

 $6\frac{1}{2} \times 11\frac{1}{2} \times 19\frac{1}{4}$  ins.

ins.

ins.

4.86

5.40

5.94

6.48



EDISON' TYPE 202 or 302 Four Cell Battery in Tray End View

# Primary Batteries and Renewals

#### **EDISON TYPE 202**

#### Capacity 200 Ampere-hours



Type 202 Cell

10536

340379

340380

340381

No. Description 340371 Complete cell with rectangular heat resisting glass far \$	Price Each
340371 Complete cell with rectangular heat resisting glass jar \$	
010012 Complete Colorisati	7.30 4.06
Renewal Parts	
010010 Mile Okkiej askaliste	3.78
340374 Can Caustic Soda. 340375 Bottle Special Battery Oil.	.48 18
Separate Parts	
3 40376 Heat resisting glass jar, rectangular	2.80
340377 Porcelain cover	.90
340378 Set wing nuts and washerper cell	.50
	4.32

Tray for three cells.....

Tray for five cells.....

Tray for six cells.....

Tray for four eells.....

# EDISON PRIMARY BATTERIES AND RENEWALS

#### 200 HOUR-AMPERE TYPES-CONTINUED

#### **TYPE 206**



Type No. 206

Size over all, 53/4 x 9 inches.	Jar only, inside dimension 5 x 71/2 inches.
---------------------------------	---

No.	The state of the s	List Price
2.00	Description	Each
340000 340001	Complete Cell with Porcelain Jar and Hollow Rubber Gasket Ring Complete Renewal	. \$6.30 4.06
	Renewal Parts	
340002 340003	Zinc-Oxide, assembled. One Can Caustic Soda.	. \$3.70 48

**TYPE 208** 

Size over all, 6 x 9 inches. Jar only, inside dimension 5 x 7½ inches.

List No. Description Each
340007 Complete Cell with Porcelain Jar. \$5.94
340008 Complete Renewal. 4.06



340002	Zinc-Oxide, assembled	\$2,38
340003	One Can Caustic Soda	48
340004	One Bottle Special Battery Oil	.18

Adapted for stationary gas or gasoline engines, small motors, burglar alarms, bell systems, program and self-winding clocks, annunciators, electric time stamps, mine signals, intercommunicating telephone systems, talking circuits for way station telephones in railway train dispatching systems, etc.

Use five cells for stationary engines having make-and-break ignition. Use eight cells for stationary engines having jump-spark ignition.

# 300 Ampere-Hour Types



Type No. 208

Type No. 252

# TYPE 252

# Size over all, 31/4 x 6 x 121/2 inches. Jar only, inside dimension 27/8 x 51/4 x 10 inches.

List		List Price
No.	Description	Each
340539	Complete cell, with heat resisting glass jar	. \$7.66
340540	Complete renewal	. 4.42

#### Renewal Parts

340012	Zinc-oxide, assembled	<b>\$</b> 4.14
340013	One can Caustic Soda	. 54
340014	One bottle Special Battery Oil	.18
	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

For stationary gas or gasoline engines, burglar alarms, bell systems, program and self-winding clocks, intercommunicating telephone systems, fire alarms, etc.

#### TYPE 255



Type No. 255

512	te over all, by x 10 /4 inches. Jar only, inside dimension o x 8 inches.	
	Complete cell, with heat resisting glass jar	
340011	Complete renewar	4.42

#### Renewal Parts

340013	Zinc-oxide, assembled. One can Caustic Soda. One bottle Special Battery Oil.	. 54
--------	--	------

Adapted for stationary gas or gasoline engines, burglar alarms, bell systems, program and self-winding clocks, intercommunicating telephone systems, auxiliary fire alarm circuits, etc.

W. E. List

# EDISON PRIMARY BATTERIES AND RENEWALS

# 400 Ampere-hour Types



Type No. 401

talking eircuits, etc.

#### **TYPE 401**

Size over all 634 x 121/2 inches. Jar only, inside dimensions 6 x 101/2 inches.

List No. 340018 340019	Description  Complete cell, with heat resisting glass jar	Price Each \$10.26 5.68
	Renewal Parts	
340020	Zinc-oxide, assembled	\$5.40
340262	One can Caustic Soda	.72 $.18$
340263	One bottle Special Battery Oil	
For	railway signals, crossing bells, battery motors, telephone train disp	atcher's

#### **TYPE 402**

Size over all 53% x 63% x 1234 inches. Jar only, inside dimension 5 x 6 x 101/2 inches.

	W.	. E. List
List No.	Description	Price Each
340265 340019	Complete cell, with heat resisting glass jar	\$10.26 5.68
	Renewal Parts	
$\frac{340020}{340262}$	Zinc-oxide, assembled. One can Caustic Soda.	
340263	One bottle Special Battery Oil	.10

#### Type No. 402

**TYPE 403** Size over all  $7\frac{1}{2} \times 10\frac{3}{4}$  inches. Jar only, inside dimension  $6\frac{5}{8} \times 8\frac{3}{4}$  inches.



Type No. 403

	W	. E. List
List		Price
No.	· Description	Each
	Complete cell, with porcelain jar	\$9.72
340019	Complete renewal	5.68

#### Renewal Parts

340020	Zine-oxide, assembled	\$5.40
240020	One can Caustic Soda	.72
310202	One bottle Special Battery Oil	.18
340263	One bottle Special Dattery Ou.	

For railway crossing signals, mine signals, fire alarms, burglar alarms, program and self-winding clocks, small common battery telephone exchanges, private branch exchanges, intercommunicating telephones, pole changers, supervisory lamps, trunk line relays, telephone train dispatchers' talking circuits, etc.

#### **TYPE 404**

Size over all 7 x 111/2 inches.



Type No. 404

List No.	Description	Each
3 10268 3 10019	Complete cell, with barrel shape heat resisting glass jar	\$10.00 5.68
	Renewal Parts	
*, 1000 0	Zinc-oxide	\$5.40 .72
340262 340263	One can Caustic Soda	

Suitable for all purposes for which Types 401 and 403 are recommended. It is more efficient than Type 403 because of better location of plates, and when not exposed to extreme cold is fully as good as Type 401. The jar has greater mechanical strength than glass jars with straight sides.

# EDISON PRIMARY BATTERIES AND RENEWALS

# 500 Ampere-hour Types

#### **TYPE 501**



Type 501-Glass

Size over all 6% x 12½ inches. Jar only, inside dimensions 6 x 10½ inches.

W. E. L.
Pr.

List No.	Description	W. E. List Price Each				
340542 $340543$	Complete cell, with heat resisting glass jar.  Complete renewal					
		6.48				
	Renewal Parts					
340544 340545	Zinc-Oxide, assembled. One can caustic soda.	\$6.22				
340546	One bottle special battery oil.	.84				
	of court rations off.	10				

For railway signals, crossing bells, battery motors, telephone train dispatchers' talking circuits, etc.

#### **TYPE 502**

Size over all,  $5\frac{3}{8}$  x  $6\frac{3}{8}$  x  $12\frac{1}{4}$  inches. Jar only, inside  $5 \times 6 \times 10\frac{1}{2}$  inches.

List No.	Description					
340547 340548	Complete cell, with rectangular heat resisting glass jar	\$11.08				
		6.48				
	Renewal Parts					
340544 340545	and the discernification of the second of th	\$6.22				
	One can caustic soda One bottle special battery oil	.84				
	The special partery of the second sec	.18				

Recommended for railway signals, crossing bells, battery motors, and especially for talking circuits in dispatchers' offices, for electro-mechanical interlocking plants and for automatic signals.

The advantage of the rectangular jar is that a greater number of cells may be housed in a given space than is possible with round jars.



Type 502

# TYPE 504

Size over all 7 x 111/2 inches.

List No. 340549 340550	Description Complete cell, with barrel shape heat resisting glass jar.	V. E. List Price Each \$10.80 6.48
	Renewal Parts	
$340544 \\ 340545$	Zine-Oxide One can caustic soda.	\$6.22 .84
340546 Sui	One bottle special battery oil	.18



**Type 504** 

Suitable for all purposes for which type 501 is recommended. It is more efficient because of better location of plates, and when not exposed to extreme cold is fully as good as type 501. The jar has greater mechanical strength than glass jars with straight sides.

# R. S. A. SIGNAL CELL

Types 501 and 504 conform to Railway Signal Association Specifications for copper-oxide, zinc and soda primary battery, known as RSA Signal Cell.

# PRIMARY BATTERIES AND RENEWALS Edison Cells—Old Types

# TYPE O

Size over all, 6 x 9 inches. Jar only, inside dimension 5 x 7½ inches.



Type Q

Capacity, 150 Ampere-hours Light List Price No. Description Each 340289 Complete Cell with Porcelain Jar..... \$5.94 340290 Complete Renewal....

Renewal Parts							
340291	1 Copper-Oxide Plate	\$1.50					
	2 Zinc Plates (each \$0.60)						
	1 can Caustic Soda						
340294	1 bottle Special Battery Oil	. 18					

Adapted for stationary gas and gasoline engines, small motors, burglar alarms,

National Type 208 Cell is recommended in preference to Type Q because of higher efficiency, greater capacity, lower maintenance cost, and better construction.

Type Q Cells, when exhausted, may be converted into Type 208 Cells by securing Type 200 renewals with Type 208 covers and nuts, and discarding the old Type Q covers and frames with the exhausted elements.

Size over all, 7½ x 10¾ inches. Jar only, inside dimension 65% x 8¾ inches



Type RR

** 4	Capacity, 300 Ampere-hours	List Price
List No.	Description	Each
	Complete Cell, with Porcelain Jar Complete Renewal.	\$8.92 4.60
	Renewal Parts	

# 340297 1 Copper-Oxide Flates. 340298 2 Zinc Plates (each \$1.05). 340299 1 can Caustic Soda. 340300 1 bottle Special Battery Oil. 2.10

Adapted for stationary gas engines, railroad crossing signals, mine signals, electroplating, fire alarms, burglar alarms, small common battery and private branch telephone exchanges, intercommunicating telephone systems, telephone interrupters, supervisory lamps, trunk line relays, etc.

Note: Types 403, 302 or 305 are recommended in preference to Type RR, because of

higher efficiency, greater capacity, lower maintenance cost and better construction.

Type RR Cells, when exhausted, may be converted into Type 403 Cells by securing Type 400 renewals with Type 403 covers and nuts and discarding the old type RR covers and frames with exhausted elements.

#### TYPE VP



Type VP

List Capacity 150 Ampere-hours Price List Description Each No. Complete cell, with porcelain jar..... \$6.48 340287 Complete renewal.... 3,30 340288 Renewal Parts One Copper-Oxide Plate.... \$1.50 340283 One double Zinc Plate.
One can Caustic Soda.
One bottle Special Battery Oil. 1,50 340284 .48 340285 340286

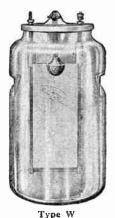
Adapted for marine motor ignition. Note: Type 206 is recommended in preference to Type VP because of higher

efficiency, greater capacity, lower maintenance cost, and better construction.

Type VP Cell may be converted into Type 206 by securing Type 200 renewals

with Type 206 covers and nuts.

# PRIMARY BATTERIES AND RENEWALS



# Edison Cells-Old Types

TYPE W

Size over all 7¾ x 15 inches. Jar only, inside dimension 7 x 13½ inches.

	capacity ood Ampere-mours	Dige
List	• • •	Price
No.		Each
340310	Complete Cell with Heat Resisting Glass Jar	\$17.56
340311	Complete Renewal	
	Renewal Parts	
340312	Two Copper-Oxide Plates (each \$2.25)	\$4.50
340313	Two Zinc Plates (each \$1.50)	3.00
340314	One can Caustic Soda	1.20
340315	One bottle Special Battery Oil	.24

Adapted for battery motors, dental engines, light electro-cautery work, X-Ray, wireless telegraph coils, telephone interrupters, small common battery and private branch exchange telephone switchboards, supervisory lights, trunk line relays, talking circuits, etc.

#### Complete Summary of Edison Primary Batteries, Renewals and Plates

				1	One Charge		1 .	1 .	1	1	Rect-
	Ampere	!	· '		Copper-	Charge	One	Опе		Round	angular
Type	Hour	Com-	Com-	Zinc-	Oxide	_ Zinc	Can	Bottle	Round	_ Heat	Heat Re-
of	Capa-	plete	plete	Oxide	Plate or	Plate or	Caustic	Special	Porc.	Resisting	
Cell	city	Cell	Renewal	Assembled	Plates	_Plates_	_Soda_	Oil	_Jar	Glass Jar	Glass Jar
202 Glass	200	\$7.30	\$4.06	\$3.78			\$0.48	\$0.18			\$2.80
206 Porc.	200	6.30	4.06	3.78			.48	.18	\$1.80		
207 Steel	200	9.18	4.06	3.78			.48	.18			
208 Porc.	200	5.94	4.06	3.78			.48	.18	1.80		
252 Glass	300	7.66	4.06	4.14			. 54	.18			3.00
255 Glass	300	7.66	4.06	4.14			.54	.18		\$3.00	
401 Glass	400	10,26	5.94	5.40			.72	.18		4.50	* * * * * *
402 Glass	400	10.26	5.94	5.40			.72	.18			4.32
403 Porc.	400	9.72	5.94	5.40			.72	.18	3.60		
404 Glass	400	10.00	5.94	5.40			.72	.18			
501 Glass	500	11.08	6.22	6.22			.84	.18		4.50	
502 Glass	500	11.08	6.22	6.22			.84	.18			4.32
504 Glass	500	10.80	6.22	6.22			. 84	.18			
BB Porc.	100	*	2.70		\$1.20	\$1.20	.42	.18			
Q Porc.	150	5.94	3.00		1.50	1.50	.48	.18	1.80		
V-P Porc.	150	6.48	3.30		1.50	1.50	.48	.18	1.80		
V Steel	150	9.18	3.30		1.50	1.50	,48	.18			
RR Porc.	300	8.92	4.60		2.10	1.89	.72	.18	3.00		
S Porc.	300		5.04		3.00	2.40	. 54	.18			
W	600	17.56	8.10		4.50	3.50	1,20	. 24	<u> </u>	l 8.10 l	

Туре	Ampere	Barrel Shaped Heat	_		Copper Frames With	Long Brass Bolts and	Copper Frame Sides	Copper Frame Bolts	Brass Air Vents
of	Hour	Resisting	Porc.	Rubber	Insulators	Nuts for	2 Per	and	nnd
Cell	Capacity	Glass Jar	Cover	Gasket	Complete	Zincs	Cell	Nuts	Nuts
202 Glass	200		\$0.90	45744					
206 Porc	200		1.20	\$0.70					
207 Steel	200		1.20	.70					
208 Porc	200		1.00						
252 Glass	300		.90						
255 Glass	300		1.20						
401 Glass	400		1.20						
402 Glass	400		1.00						
403 Porc	400	40.40	1.50						
404 Glass	400	\$3.78	1.20						
501 Glass	500		1.20						
502 Glass	500		1.00						
504 Glass	500	3.78	1.20		1::::		11111	11111	
BB Porc	100		,70		\$1,30	11111	\$0.60	\$0.30	
Q Porc	150		1.00		1.30	\$0.70	,60	.30	
V-P Porc	150		1.00	.70	1.30		,60	,30	\$0.30
V Steel	150		1.00	.70	1.30		.60	,30	.30
RR Porc	300		1.50		1.30	.70	.60	,30	
S Porc	300	1	1.00		1.80	.70	.90	,60	
w	600	·	1.00		2.00	.70	1.10	,60	

<sup>\*</sup> Complete cells and jars for same not now supplied all other parts can be supplied.

Terminal Nuts and Washers, per cell	\$0.50
Large Wing Nuts, each	. 20
Hexagon Jamb Nuts, each	.10
Nuts, other sizes	
Brass Washers, each	
Double Connectors, each	.30
Hard Rubber Insulators (used with lettered types only), each.	.15

# STANDARD BATTERIES







No.[3 Battery



Standard Carbon Cell Round Jar



National No. 2 Carbon



Gravity Battery

# No. 2 Samson Battery

Size Over All 8 x 43/4 x 43/4 Inches

This is regular or circular zinc form of battery. The cell has a voltage of from 1.40 to 1.47, and an amperage on short circuit of from 12 to 16 amperes. This cell is adapted for gas lighting, telephone, gas engines, railway signals, and all special work requiring a battery having great intial strength and capable of quick recovery after hard work.

List Prices and Data									
List		Std.	**List			Std.	**List		
No.	Description	Pkg.	Price	No.	Description	Pkg.	Price		
340476	Complete regular	50	\$3,30	340482	Jar (square)	50	\$0.40		
	Carbon		1.80	340483	Sal ammoniac	200	. 30		
	Cover		.30	340484	Zinc regular	100	1.20		
			- 1	340487	Star Fender No. 2	200	.20		

# No. 3 Samson Battery

Size Over All 7 x 51/4 Inches

This style battery has much greater strength and larger current output than the No. 2. It is desirable, therefore, for all purposes where great endurance is needed. The zinc is of very heavy gauge, hand-amalgamated and reinforced. The cover is of polished rubberoid. It is especially adapted for use in telephone installations, switchboard or long distance work. Also recommended for gas engines, railway signals and all extra heavy intermittent battery service.

List Frices and Data							
List No.	Description	Std. Pkg.	**List Price		Description	Std. Pkg.	**List Price
	Complete	50	2.40	340492	Jar (square)	200	\$0.70 .32 1.50

CARBON CYLINDER BATTERY						
No. 1 With Round Jar		No. 7 With Square Jar				
	*List		*List			
	Price		Price			
Description	Each	Description	Each			
Cell, complete		Cell, complete				
Carbon cylinder, with bushings		Carbon eylinder, with bushings				
Glass jar, round	.20	Glass jar, square	. 20			
Peneils, zine	, 30	Pencils, zinc	, 20			
Sal ammoniac charge	, 20	Sal ammoniae eharge	. 10			

#### NATIONAL NO. 2 CARBON BATTERIES

I ne No. 2 has round glass jar with hip or pour-or	16.		
Description	*List Price Each	Description	*List Price Each
Cell. complete	\$1.90	Depolarizer, per charge	\$6.24
Carbon element, complete	1.00	Sal ammoniac, per charge	, 20
Empty earbon cup	.36	No. 1 round jar	. 20
Cover and bushing	,30	No. 7 square jar	. 20
Zinc		Cup rubbers, two	, 16

#### GRAVITY BATTERY

Size 5 x 7 Inches		Size 6 x 8 Inches	
	*List		*List
	Price		Price
Description	Each		Each
Cell, complete	. \$3.60	Cell, complete	\$4.00
Glass jar, 5 x 7 ins	90	Glass jar, 6 x 8 ins	.70
ZincOn app	lication	Zine, 2¾ lbsOn appli	cation
CopperOn app	lication	CopperOn appli	cation
Blue vitriol not included in prices.		Blue vitriol not included in prices	

Blue vitriol not included in prices.

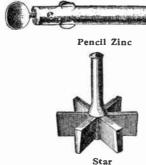
\*Delivery F. O. B. New York City.

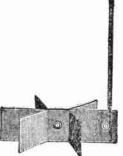
\*\*Delivery F. O. B. Boston, Mass.

For warehouse deliveries write nearest house.

# BATTERY SUPPLIES







Battery Copper

**Battery Zincs** 

Description Crowfoot zinc—for 5 x 7 in. jar. Crowfoot zinc—for 6 x 8 in. jar. Crowfoot zinc—for 6 x 8 in. jar. Star zinc—for 6 x 8 in. jar.	Std. Pkg. 100 100 100 100	Lbs. per 100 175 300 325 300	Price
R. S. A. Standard—for 6 x 8 in. jar. Gamwell zinc—for 6 x 8 in. jar. Gamwell zinc—for 5 x 7 in jar.	100 100 50 50	200 400 200 150	On application
BATTERY COPPERS			
Description Battery copper—for 5 x 7 in. jar. Battery copper—for 6 x 8 in. jar.	Std. Pkg. 500 500	Wt. per Pkg. Lbs. $50$ $62$	Price On application
Square pencil zinc with copper binding screw	500 500	85 } 85 }	Price On application



Fahnestock Connector

\$0.14

\$4.60

# **Bull Dog Connectors**

List No. 1026 1025	Bull Dog connector, phosphor bronze terminals, nickel plated Bull Dog connector, spring brass terminals, brass dipped	Carton 10 10	Each \$0.20 .20	List Price per 100 \$9.00 8.00	
	Fahnestock Connector				
List No. 155	No. 155 connector	• • • • • • • •	List Price Each \$0.20	List Price per 100 \$6.50	
0		m what	and Wash		

Plain Connector

Link Connector

# Plain Battery Connector

Consists of 5 inches of lamp cord, composed of several strands of copper wire, with copper terminals on each end.

No.	Plain battery connector	Each	per 100
16357		\$0.20	\$6.00
	Link Battery Connector		

340424 Quick-action battery connector.....

## BATTERY SUPPLIES



# Western Electric

#### INTER-PHONES

"Inter-phones" is a trade name adopted by the Western Electric Company for what are generally known as intercommunicating telephones. They are special telephones designed to meet the requirements of service from room to room in a building or possibly from house to barn or garage. They have been designed by skilled telephone engineers especially for such use and are not adapted for outside telephone service.

## For the Information of Customers

Operating telephone companies, as a rule, do not permit connections with their wires, switchboards or telephones, of any apparatus or attachments not owned or maintained by them.

# Application

Inter-phones are intended to provide telephonic communication between various points in the home, factory or plant, as for example:

In the home—between

Living-room Bedroom

Library Nursery

Servants' quarters

Kitchen

Stable or garage

Etc.

In a business organization—between

President's office

General manager Superintendent

Bookkeeper

Shipping clerk Foreman

Cashier

Etc.

# Operation

A combination formed by connecting together a number of Inter-phones is called an Inter-phone system. Each system may be considered as a small private telephone exchange requiring neither switchboard nor operator. Communication—that is, ringing the station desired and conversing with the person answering—can be established by merely depressing a push button for a few seconds, holding the receiver to the ear and talking into the transmitter.

# Inter-phone Systems

To meet the different conditions in home and business, various Inter-phone systems have been designed, which differ in the number of instruments that can be connected, the kind of service they will give, the appearance of the sets—and the price. The quality of the apparatus for each system is of the highest and the difference in price is due to the fact that the service rendered by the various systems necessitates Inter-phones that differ in structure.

# Apparatus Required

All Western Electric Inter-phone systems are simple and consist primarily of the following apparatus:

- 1. Inter-phones.
- 2 Batteries to furnish current for ringing and talking.
- 3. Wire or cable to connect Inter-phones and batteries.
- 4. Installing material (usually furnished by the installer) for connecting and fastening Inter-phones cable (or wire) and batteries.

# Types of Inter-phones

Three different types of Inter-phones to suit different conditions and tastes can be furnished: Wall Inter-phones, desk Inter-phones and hand set Inter-phones, which can be used interchangeably in the same system except when otherwise stated.

#### **INTER-PHONE SYSTEMS**

In order to assist our customers in selecting a system best adapted to their requirements the following list has been compiled:

Inter-phone System Adapted to Business Organizations, Factories, Stores, Institutions, Large Residences, etc. The Following Requirements Will Be Met.

- 1. More than one conversation can take place simultaneously.
- 2. Any station can ring selectively any other station in the system instantaneously.
- 3. Quality of apparatus, operation, and appearance, the highest grade obtainable.

 Page

 System No. 1. 3 up to 24 stations.
 171

From any station it is possible to select, ring, and talk individually to any other station. As many separate conversations can be carried on simultaneously as there are pairs of Inter-phones connected.

Inter-phone Systems for Residences, Banks, Institutions, Warehouses, Stores, or Other Mercantile Establishments Where Conversations Are Less Frequent. The Systems Are Reliable in Operation, the Apparatus Pleasing in Appearance and Moderate in Cost. Each System is Limited to One Conversation at a Time.

Systems No. 12 and No. 16 consist of one centrally located Inter-phone called the "Master Station" to which are connected a number of other Inter-phones called "Outlying Stations."

It is possible to ring from the master station any one of the outlying stations selectively, or the master station from each of the outlying stations. One conversation can be carried on at a time.

A simple system. The bells of all stations will ring simultaneously whenever a call is made from any one of the stations. The various stations are called by signaling each one with a different code.

Primarily recommended for connecting two points separated by a mile or less. Only two wires are required for connecting the two stations, either of which can ring and converse with the other.

# Inter-phone Systems for Apartment Houses

7 up to 25 stations	179
• 9 up to 70 stations	179
	7 up to 25 stations 8 up to 26 stations 9 up to 27 stations 9 up to 70 stations

These systems provide service for any combination of suite, vestibule, janitor's and tradesmen's Inter-

phones. They differ from each other in their capacities and combinations.

From the vestibule, janitor and tradesmen stations it is possible to select, ring and talk individually to any of the other stations in the system (except between vestibule and tradesmen and vice versa).

This system provides service for any combination of a number of suite Inter-phones, a vestibule Inter-phone, a janitor Inter-phone and a laundry Inter-phone. From the vestibule, janitor, and laundry stations any one of the suite stations can be selected and rung individually, and vice versa. One conversation can be carried on at a time in the system.

# INTER-PHONE SYSTEMS

# Inter-phone Annunciator System

Consists of one centrally located annunciator with Inter-phone, called the "Master Station," connected to which are a number of other Inter-phones called "Outlying Stations."

From the master station any one of the outlying stations can be rung selectively or the master station from any one of the outlying stations. Communication can be established between any two outlying stations through the medium of one or two connecting cords which can be used with the switchboard annunciator. Where many interconnections are required a private exchange switchboard of the No. 1801 type should be installed.

# Inter-phone Outfits

Complete Inter-phone systems of small capacities (2 or more) put up in standard packages containing Inter-phones, all necessary installing material, and complete instructions for mounting and wiring. Page 183

# Mechanical Code Signaling Systems

A call bell system making use of a number of mechanically revolving keys which, when turned, ring a number of bells simultaneously in accordance with a prearranged code. This calls to the telephone or central point persons to whom the code has been assigned. Fully described hereinafter.

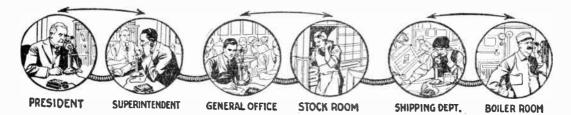


No. 1355 Type Wall Inter-phone

# Inter-phone System No. 1

The No. 1 Inter-phone System is recommended for use in business organizations, factories, stores, institutions, large residences, etc., where frequently more than one conversation will take place at the same time; where prompt connections without loss of time are necessary and the highest grade of transmission is required.

Operation. From any station one can select and ring any other station without disturbing the rest of the stations in the system. That is only the station wanted will be signaled and no other. This is done by means of push button keys which are mounted in the face plates of the wall Interphones or in the key boxes used with desk stands or hand sets. For each station in the system, one push button key is required in each Inter-phone. Associated with the buttons are card holder frames to hold the cards which designate the names or station numbers of the buttons



To make a call the button marked with the name or number of the station wanted is pressed (thereby ringing the bell of that station.)

Neither switchboard nor operator is required. The user makes his own connections, and is certain to get them right and without delay.

As many separate conversations can be carried on simultaneously as there are pairs of Inter-phones in the system. For example, in a system consisting of six Inter-phones, three separate conversations, as shown above, can be carried on at the same time without interfering with each other.

The class of service as described above is known as "Selective Ringing and Selective Talking" or "Non-interfering Service."

NO. 1324

NO. 1349

WALL TYPE

WALL TYPE

NO. 1325

WALL TYPE

# **INTER-PHONES**

# System No. 1 (Continued)

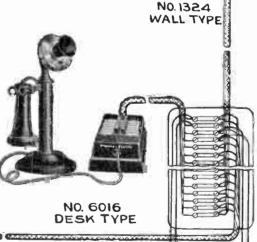
'Capacity. Inter-phones for System No. 1 are available in standard capacities of 6, 12, 16, 20 or 24 buttons. There can be as many Inter-phones stations in a system as there are buttons in the Interphones.

Types of Instruments. Wall, desk and hand set Inter-phones can be used interchangeably in the same system.

1324	Non-flush	6 and 12	Metal
1325	Semi-flush	6 and 12	Metal
1349	Non-flush	6, 12, 16, 20, 24	Wood
1355	Flush	16, 20, 24	Metal
6016*	Non-flush	6, 12, 16, 20, 24	Metal

\*Either desk or hand set type.

Write our nearest distributing house for particulars and prices.



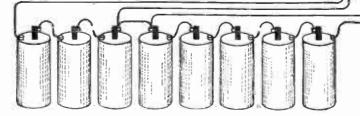
CABLE

TERMINAL



LAYOUT OF TYPICALTIZESTATION INTER-PHONE INSTALLATION (6 STATIONS SHOWN)

NO. 6016



# **INTER-PHONES**

# System No. 11

The No. 11 Inter-phone system is recommended for use in residences, banks, institutions, warehouses, stores, or other mercantile establishments where conversations can be limited to one at a time.

The system is reliable in operation and the apparatus is pleasing in appearance and moderate in cost.

Operation. Each Inter-phone in the system is equipped with a number of push buttons for signaling the other stations. Associated with the buttons are card holder frames to hold cards designating the name or station number of the buttons. By depressing the button marked with the name or number of the station wanted, the bell of that station will be rung. No other station in the system will be signaled but the one desired.

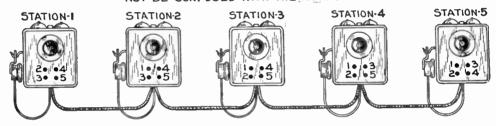
Summarizing the service:

From any one station in the system any other station in the system can be selected and rung without disturbing those stations that are not wanted, and

Only one conversation can be carried on at a time.

Each No. 11 system requires one battery station, which should be located near the battery. The other stations in the system should be of the non-battery station type. For example, in a system consisting of five stations, there should be one battery station and four non-battery stations.

THIS DIAGRAM IS INTENDED TO SHOW THE RINGING SERVICE PROVIDED BY 5-FOUR BUTTON SETS OF SYSTEM NO. II AND SHOULD NOT BE CONFUSED WITH THE WIRING DIAGRAM



EACH SET REQUIRES ONE BUTTON FOR EACH OTHER STATION IN THE SYSTEM, THUS-4 BUTTON SETS WILL PROVIDE FOR A 5 STATION SYSTEM, STATION 1 CAN RING STATIONS 2,3,4 &5; STATION 2 CAN RING STATIONS 1,3,4 AND 5 \_\_ ETC. \_ SEE MARKING ON PUSH BUTTONS IN DIA GRAM ABOVE.

The class of service described under this system is known as Selective Ringing and Common Talking.

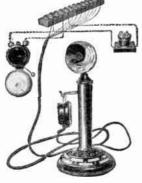
Capacity. The standard Inter-phones are equipped with 4, 8 and 12 buttons, accommodating the following number of stations in a system:

4 button	5 stations
8 button	9 stations
12 button	3 stations

Types of Instruments. Wall, desk and hand set Inter-phones can be used interchangeably in the same system.



No. 1327 Type Wall Interphone



No. 6034 Type Desk Inter-



No. 6016 Type Desk Interphone



No. 1339 Type Wall Inter-phone



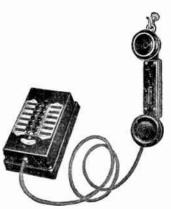
No. 6034 Type Hand Set Inter-phone

# INTER-PHONES System No. 11 (Cont'd.)

		,	
	No. of	Illusti	ated
Type	Buttons	on.	Page
1327	4 and 8	Wood	172
1339	4 and 8	Metal	172
1324	12	Metal	171
1325	12	Metal	171
6034*	4 and 8	Metal	172
		and	173
6016*	12	Metal	171
		and	173
# IT 14	.1	1	1

\*Either desk or hand set type.

Write our nearest distributing house for particulars and prices.



No. 6016 Type Hand Set Inter-phone

# System No. 12

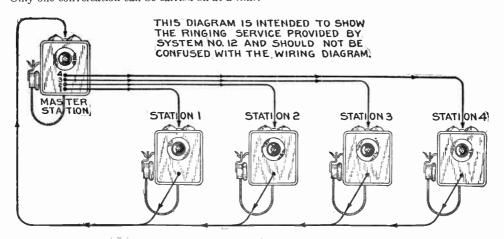
The No. 12 Inter-phone system consists of one centrally located Inter-phone called the "Master Station," to which a number of other Inter-phones, known as "Outlying Stations," are connected. This system is adopted for the same class of service as outlined under the No. 16 system, and provides communication from a central point to different rooms, and vice versa. It differs from the No. 16 system in that wall, desk or hand set Inter-phones can be used interchangeably in the same system, whereas the No. 16 system makes use of hand sets only.

Operation. The master station is equipped with a number of push buttons, one for each outlying station in the system. Associated with the buttons are card holder frames to hold cards designating the name or station number of the buttons. By depressing the button marked with the name or number of the outlying station wanted, the bell of that station will be rung. No other Inter-phone in the system will be signaled but the one desired.

The outlying stations are equipped with only one button, which will signal the master station when depressed.

Service. The service provided by Inter-phone System No. 12 is called two-way service, which signifies that it is possible to select and ring individually any one of the outlying stations from the master station, and vice versa, any one of the outlying stations can call the master station. No provision is made for having the outlying stations call one another. If this feature is desired, systems No. 1, 11 or 15 should be used.

Only one conversation can be carried on at a time.



I MASTER STATION AND 4 OUTLYING STATIONS

Capacity. One master station and from two to twelve outlying stations can be connected.

Types of Instruments. Wall, desk and hand set type Inter-phones can be used interchangeably in the same system.

# INTER-PHONES System No. 12 (Continued) MASTER STATIONS



No. 1339 Type Wall Inter-phone Outlying Station

		Illustrated
	Number of	on
Types	Buttons ·	Page
1327	4 and 8, wood	 172
1339	4 and 8, metal	 172
1324	12, metal	 171
1325	12, metal	 171
6034*	4 and 8, metal	 172 and 173
6016*	12, metal	 172 and 173
*Eitl	her desk or hand set type.	

OUTLAING STATIO

	OUTLYING STATIONS	
1327	1, wood	174
1339	1, metal	174
6015	1, wood	178
6034	1, metal	178
6042	1, metal	174
6043	1, metal	174
	. 10 . 40 . 4	

Write our nearest distributing house for particulars and prices.



No. 1327 Type Wall Inter-phone Outlying Station

# System No. 16 GENERAL

The No. 16 Inter-phone system consists of one centrally located Inter-phone called the "Master Station" connected to a number of other Inter-phones called "Outlying Stations." This system is particularly adapted to residences, country places, hotels, hospitals, schools, etc., where it is desired to communicate from a central point to various rooms, and vice versa; for example:

In residences for calling a central point, such as the kitchen or pantry, from the living-room, bedroom garage, laundry, vestibule, attic, etc.;

In apartment houses for dumb-waiter service, where telephonic communication is desired between the tradesmen at the foot of the dumb-waiter shaft and the apartments;

In stores, offices, banks, where a number of people must frequently consult with the department heads, and vice versa;

In schools where the principal desires to call the teachers individually and the teachers to call him, but not to call each other;

In hospitals where the house doctor or head nurse may be wanted in a hurry;

In prisons or asylums where the superintendent, warden or other officials are likely to be summoned suddenly.

Capacity. One master station and any number of outlying stations, up to 24, can be installed. Additional outlying stations can be provided if desired.



No. 6042 Type Master or Outlying Station

# Types of Instruments

Hand Sets. Only the hand set type of Inter-phone can be used with System No. 16. This represents one of the most convenient types of talking equipment. The transmitter and receiver are a part of the hand set, which can be held and operated with one hand, leaving the other free. A bar marked Press to Talk is mounted on the hand set handle and is held down by the natural position of the hand while talking. When not in use, the hand set can be hung on a hook or laid down in any position. The hand set is finished in black.

Apparatus Boxes. In connection with the hand set it is necessary to use apparatus boxes containing terminals and other accessories. Two types of apparatus boxes can be furnished.

- 1. Round boxes arranged for non-flush mounting and equipped with an insulated base, black finished metal cover and nickel hook.
- 2. Metal boxes arranged for flush mounting, intended to be set in wall and equipped with a brush brass finished face plate.



No. 6043 Type Master or Outlying Station

## **INTER-PHONES**

# System No. 16 (Continued)

#### **FLEXIBILITY**



With the non-flush apparatus box, the hand set cord is permanently attached to the hand set and box. With the flush mounted apparatus box the hand set cord is not permanently attached to the box, but terminates in a plug (except with No. 6042L and G, System No. 16B). This plug can be inserted into a receptacle located in the center of the face plate just below the push button, thereby connecting the hand set to the system. This feature makes it possible to discontinue telephone service at any point by simply removing the plug and the hand set. A hand set can be carried around from room to room to serve as an outlying station at any place where a flush apparatus box is located. The plug is equipped with a hook on which the hand set can be hung when not in use.

Three kinds of ringing service are possible with System No. 16. They are designated as Nos. 16A, 16B and 16C. Any one can be obtained by specifying appropriate equipment.

No. 16A: One-way Service, Master Station Can Call Outlying Stations. Any one of the outlying stations can be called from the master station. No other Inter-phone in the system will be signaled but the one desired. The outlying stations cannot ring the master station.

No. 16B: One-way Service, Outlying Stations Can Call Master Station. Any one of the outlying stations can ring the master station, but the master station cannot ring the outlying stations.

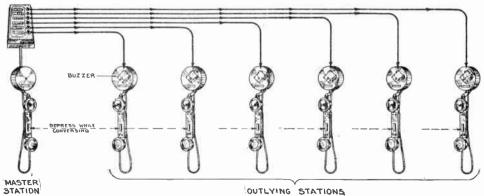
No. 16C: Two-way Service. This is a combination of No. 16A and 16B in which any one of the outlying stations can ring the master station and the master station can ring any one of the outlying stations. No other Inter-phone in the system will be signaled but the one desired.

Only One Conversation Can Be Carried on at a Time, no matter what class of ringing service is to be used. No provision is made for having the outlying stations call one another. If this feature is desired Systems Nos. 1, 11 or 15 should be used.

# System No. 16A PROVIDING ONE-WAY SERVICE Master Station Can Call Outlying Stations

The master station may consist of a hand set with either a flush or a non-flush mounted apparatus box, and a push button block, with as many push buttons as there are outlying stations to be called. Associated with the buttons are card holder frames for holding cards to designate the name or station number of each button. The blocks come in capacities of 4, 6, 8, 10, 12, 14, 16 and 20 buttons.

THIS DIAGRAM IS INTENDED TO SHOW THE RINGING SERVICE PROVIDED BY SYSTEM NOIGA AND SHOULD NOT BE CONFUSED WITH THE WIRING DIAGRAM



To call an outlying station from the master station, the button marked with the name or number of the station wanted must be depressed. This will operate the buzzer at the outlying station. No other Interphone in the system will be signaled but the one desired. Conversation can be carried on by depressing the talking bar in the hand set handle. In this system the outlying stations cannot call the master station nor can the outlying stations call one another.

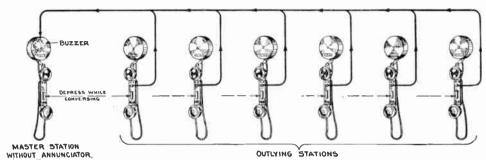
# Western Electric

# INTER-PHONES System No. 16B

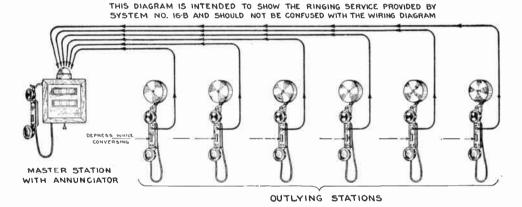
#### PROVIDING ONE-WAY SERVICE

Outlying Stations Can Call Master Station

THIS DIAGRAM IS INTENDED TO SHOW THE RINGING SERVICE PROVIDED BY SYSTEM NO.16-B AND SHOULD NOT BE CONFUSED WITH THE WIRING DIAGRAM



The master station may consist of a hand set with either a flush or non-flush mounted apparatus box, or a hand set and an aumuneiator. The outlying stations may consist of a hand set with either a flush or a non-flush mounted apparatus box.



Each outlying station is provided with a push button, which when depressed will signal the master station. If the master station consists of a hand set and apparatus box, there will be nothing to indicate which outlying station originated the call. If such an indicating arrangement is desired, an annunciator, equipped with as many drops as there are outlying stations, is required in place of the apparatus box. Each call from the outlying stations will then be registered by the operation of one of the drops, thereby indicating what outlying station signaled. Conversation can be carried on by depressing the talking bar in the hand set handle.

The master station cannot call the outlying stations, nor can the outlying stations signal each other. Write our nearest distributing house for particulars and prices.

# System No. 16C

#### PROVIDING TWO-WAY SERVICE

# Master Station Can Call Outlying Stations and Vice Versa

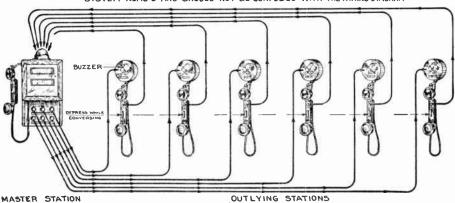
In the No. 16C system the master station consists of a hand set and an annunciator equipped with a bell, a number of drops and a corresponding number of push buttons, one for each outlying station. Associated with these buttons are eard holder frames for holding cards to designate the name or station number of each button. The outlying stations may consist of a hand set and apparatus box arranged for either flush or non-flush mounting.

Each outlying station is provided with a push button to ring the bell of the master station annunciator, and at the same time operate one of the annunciator drops.

#### INTER-PHONES

SYSTEM NO. 16C (Continued)

THIS DIAGRAM IS INTENDED TO SHOW THE RINGING SERVICE PROVIDED BY SYSTEM NO. 16-C AND SHOULD NOT BE CONFUSED WITH THE WIRING DIAGRAM



To signal an outlying station from the master station, the annunciator push button corresponding to the station wanted must be depressed, thereby operating the buzzer at the outlying station. No other Interphone will be signaled but the one desired.

Conversation can be carried on by depressing the talking bar in the hand set handle.

#### **EXTENSION CORDS**

The standard hand set cord is three feet long. Longer cords are often needed, as in case of illness or for other reasons, so that the hand sets can be used in bed or any other point some distance from the apparatus box. In such cases hand sets for outlying stations can be furnished provided for or equipped with an extension cord in addition to the standard three-foot hand set cord. Each extension cord is eight feet long and as many extension cords can be connected as desired.

Write our nearest distributing house for particulars and prices.

# System No. 15

The No. 15 Inter-phone system is a simple and inexpensive system for smaller residences, warehouses, stores or other mercantile establishments, where only a few stations are required and the number of calls between the stations are few.

Operation. Each station is equipped with one push button for signaling the other Inter-phones in the system. Whenever the push button at any one station is depressed the bells at all the other stations will ring simultaneously.

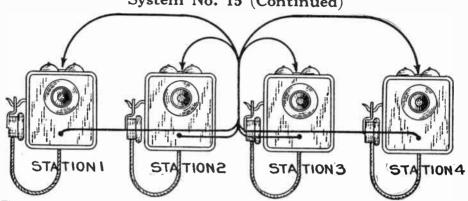
When there are more than two stations in the system, it becomes necessary to provide some means whereby it is possible to indicate to the various stations which one of them is wanted to respond to the ring of the bell. This can be arranged by a code of signals made up of various numbers of rings; for instance: One ring for station No. 1, two rings for station No. 2, three rings for station No. 3, etc. Thus a certain number of rings originated at any one of the stations will indicate the station desired, and none of the others, to whom the signal will also be audible, will respond.

If more than six stations are in service, the signaling code becomes cumbersome and mistakes are likely to occur, due to the possibility of misunderstood signals.

Only one conversation can be carried on at a time.

This system requires one battery station, which should be located near the battery. The other Interphones in the system should be of the non-battery station type. In a system consisting of five stations, for example, there should be one battery station and four non-battery stations.

# INTER-PHONES System No. 15 (Continued)



This Diagram Is Intended to Show the Ringing Service Provided by System No. 15 and Should Not Be Confused with the Wiring Diagram

The class of service described is known as Code Ringing and Common Talking.

No. 6034 Type Desk Inter-phone

Capacity. Two to six stations are recommended for this system. More stations can be added, though at the expense of ease and certainty in signaling.

Types of Instruments. Wall, desk and hand

set Inter-phones can be used interchangeably in the same system. Illustrated Wood.. Metal.... Metal.... Metal....

System No. 14

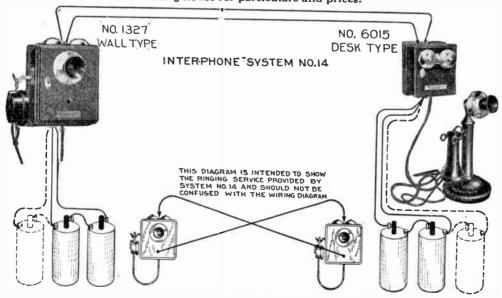
The No. 14 Inter-phone System is intended for use where only two stations will be required, and located a considerable distance apart. A feature of this system is that only two wires are required to connect the Inter-phones.

Operation. Either station can ring and talk to the other.



This is done by depressing the push button with which each set is equipped, thereby ringing the bell at the other station, holding the receiver to the ear and talking into the transmitter.

Types of Instruments. No. 1327 wall and No. 6015 desk type Inter-phones can be used interchangeably in this system.



#### **INTER-PHONES**

# Systems for Apartment Houses

Apartment House Inter-phones are for use in place of the old-time speaking tube for effecting communication between the vestibule, apartments, janitor and tradesmen.

Apartment House Inter-phone Systems may be divided primarily into two classes, in accordance with the service they will furnish;

- 1. Systems Nos. 7, 8, 9 and 10 will furnish selective ringing and selective talking or non-interfering service, making it possible for a number of conversations to take place simultaneously.
- 2. System No. 20 will furnish selective ringing and common talking service, making possible only one conversation at one time.

#### SYSTEMS NOS. 7, 8, 9 AND 10

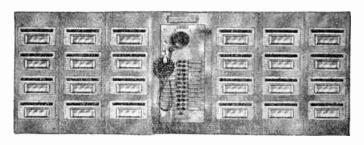
These systems are planned throughout with the utmost care to insure satisfaction under all service conditions. The telephone instruments themselves are neat and attractive in design. Systems Nos. 7, 8, 9 and 10 differ from one another in the variety of points in the apartment house that can be connected for intercommunicating service. They are, however, so arranged that one system may be expanded into another by merely supplying additional apparatus.

Operation. The systems may consist of one, two, three or more central or master Inter-phones located in the vestibule, janitor's or tradesmen's entrance. These sets may be connected to (from 3 to 24) Interphones located in the apartments.

The vestibule, janitor's and tradesmen's Inter-phones are equipped with a number of push button keys one for each apartment station. Associated with these push button keys are eard holder frames to hold cards designating the name or apartment number of the buttons. By simply depressing the button marked with the name or the number of the apartment desired, the bell of the Inter-phone installed in that apartment will be rung. No other station in the system will be signaled but the one desired.

The suite Inter-phones can be provided with one or two buttons which, when depressed, will ring the janitor's station or operate an electric door opener.

Separate conversations may take place simultaneously between each of the vestibule, janitor's and tradesmen's sets, and three different apartments. This is manifestly impossible with a single speaking tube system.



No. 1362 Vestibule Inter-phone with Letter Boxes

Types of Instruments. Wall or hand set type Inter-phones may be used interchangeably in the same system for suite service. The vestibule, janitor's and tradesmen's Inter-phones are of the wall type only. The vestibule letter boxes are equipped with either two or four separate compartments.



No. 1327 Type Suite Inter-phone

#### SYSTEM NO. 7

Service. Vestibule can call apartments. Apartments can open door, if desired.

Capacity. One vestibule Inter-phone and any number of suite Inter-phones up to 24.

#### SYSTEM NO. 8

Service. Vestibule can call apartments and janitor.

Apartments can call janitor and open door, if desired.

Janitor can call apartments.

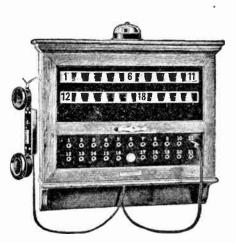
Capacity. One vestibule Inter-phone, one janitor's Inter-phone and any number of suite Inter-phones up to 24.



No. 1337 Type Suite Inter-phone

#### INTER-PHONES

# Systems for Apartment Houses (Continued)



Janitor's Annunciator Switchboard for System No. 10

# SYSTEM NO. 9

Service. Vestibule can call apartments and janitor.

Apartments can call janitor and open door, if desired.

Janitor and tradesmen can call apartments.

Capacity. One vestibule Inter-phone, one janitor's Interphone, one tradesmen's Interphone and any number of suite Inter-phones up to 24.

#### SYSTEM NO. 10

Service. This system provides the same service as outlined under System No. 9, but on a larger scale. It is intended for use where several vestibules in the same or adjoining apartment houses are to be served by one janitor. In this case, the janitor's equipment consists of a switchboard which combines the functions of a wall type Interphone and annunciator.



No. 1350 Type Janitor's and Tradesmen's Inter-phone

Illustrated

Capacity. One janitor's switchboard, two or more vestibule and tradesmen's Inter-phones and any number of suite Inter-phones up to 70.

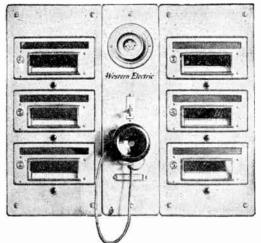
		Number of	musurated
Type		Buttons	on Page
Vestibule Inter-phones	1362	*7, 13, 17, 21, 25, metal	
Suite Inter-phones	1327	1, 2, wood	
r title zitteit prisition	1339	1, 2, metal	179
	6042		174
	6043	1, 2, metal	
Janitor's and trades- men's Inter-phones	1350	+7, 13, 25, wood	

\*The odd button is for calling the janitor.

+The odd button is for conversing with vestibule. Disregard button in tradesmen's Inter-phones.

#### SYSTEM NO. 20

The No. 20 Inter-phone System has been designed to provide an inexpensive and reliable means of communication between vestibule, apartments, janitor's quarters, laundry and tradesmen's entrance. There are eight different combinations of the No. 20 System, differing from each other in the variety of points in the apartment house that can be connected for intercommunicating service. The operation of each of these combinations, however, is the same.

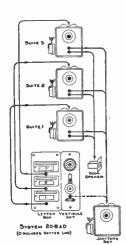


Vestibule Equipment for Six Apartments

Operation. The vestibule equipment consists of one vestibule Inter-phone and any number of letter boxes.

The vestibule Inter-phone is provided with necessary talking equipment and one push button, the latter to be used for calling the janitor. Each letter box is provided with three compartments. A push button is mounted below each compartment. When depressed this button will ring the bell of the Inter-phone in the apartment to which the letter box compartment has been assigned. No other Inter-phone in the system will be signaled but the one selected. Each letter box compartment is also equipped with a card holder for indicating the name or apartment number.

The suite sets can be provided with a number of push buttons, depending upon the combination selected. These push buttons when depressed will operate the door opener, call the janitor, laundry or any other combination desired.



# BUTE 1 BUTE 1



Vestibule Inter-phone No. 3 Letter Box

## **INTER-PHONES**

# Systems for Apartment Houses (Continued)

SYSTEM NO. 20 (CONTINUED)

The janitor's, laundry and tradesmen's Inter-phones can be arranged either for receiving calls from the other stations without being able to signal back, or for receiving calls and for signaling any one of the suite sets. In the latter case a separate push button block must be used, which can be mounted conveniently beside the instrument.

Only one conversation can be carried on at a time over this system.

The class of service as described under this system is known as "Selective Ringing and Common Talking."

There are eight combinations of the No. 20 System available. The diagrams associated with this description are intended to show the ringing service provided and should not be confused 'with the wiring diagram.

#### SYSTEM NO. 20A

Service. Vestibule can call apartments, apartments can open door.

#### SYSTEM NO. 20B

Service. Vestibule can call a partments, a partments can open door and call janitor.

#### SYSTEM NO. 20C

Service. Vestibule can call apartments and janitor, apartments can open door.

#### SYSTEM NO. 20D

Service. Vestibule can call apartments and janitor, apartments can open door and call janitor.

#### SYSTEM NO. 20E

Service. Vestibule can call apartments and janitor, apartments can open door and call janitor and laundry.

#### SYSTEM NO. 20F

Service. Vestibule can call apartments, apartments can open door and call janitor or laundry, and laundry or janitor can call apartments.

#### SYSTEM NO. 20G

Service. Vestibule can call apartments and janitor, apartments can open door and call janitor, and janitor can call apartments.

#### SYSTEM NO. 20H

Service. Vestibule can call apartments and janitor, apartments can open door and call janitor and laundry. Janitor and laundry can call apartments.

		Mumber of	mustrated
	Types	Buttons	on Page
Vestibule Inter-phones	1520	1 metal	181
Suite Inter-phones	· 1327	1, 2, 4 wood	174 and 172
•	1339	1, 2, 4 metal	174 and 172
* * 1 1 1 1			

Number of Illustrated

174

Janitor's, laundry and tradesmen's Inter-phones 1327 wood

Capacity. One vestibule set and any number of letter boxes can be used. One letter box will take care of 3 suite Inter-phones.

# **INTER-PHONES**

# Annunciator System No. 18

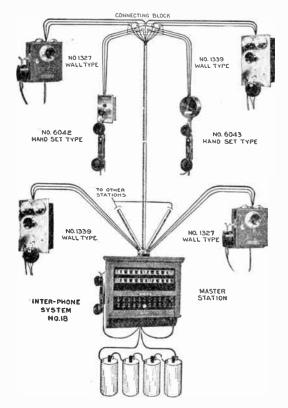
The No. 18 Inter-phone Annunciator System is designed to provide the service required in hotels, clubs, Y. M. C. A. buildings, schools, hospitals, asylums, prisons, and in fact wherever it is found desirable to establish communication between a central point and a large number of points in one or several buildings. No connection can be made between this system and a public telephone system.

The system consists of one centrally located Inter-phone equipment called the "Master Station" to which are connected a number of other Inter-phones called "Outlying Stations."

Operation. The master station equipment is a combination of an annunciator and a hand set type Inter-phone. The annunciator consists of a number of drops and jacks (one of each for every outlying station in the system), a cord and plug and a hand set Inter-phone. The associated drops and jacks are provided with corresponding numbers. From the master station it is possible to select and ring any one of the outlying stations in order to carry on conversation. This is done by inserting the plug into the jack bearing the number of the outlying station wanted and depressing a push button mounted on the front of the annunciator.

Each outlying station is provided with one push button which, when depressed, will ring the bell of the master station, and at the same time operate an annunciator drop bearing a number corresponding to that of the station calling. In response to this signal, the plug of the annunciator cord at the master station should be inserted in the jack corresponding to the operated drop. This connects the calling outlying station to the master station Inter-phone.

Capacity. This system provides for one master station and 10 to 70 or more outlying stations.



Types of Instruments

Wall or hand set type Inter-phones can be used interchangeably in the same system. The master station equipment consists of an annunciator and a hand set type Inter-phone. The outlying stations of either 1327 wooden or 1339 metal wall Inter-phones or 6042 or 6043 metal hand Inter-phones.

## INTER-PHONES Outfit No. 14

This consists of two wall type Inter-phones suitable for a private telephone line between house and barn or garage, or for a line that is wholly within a house. It may also be used in offices or shops



between two buildings or in one building. Either station can ring and talk to the other.

The Inter-phones are the same as those used for Inter-phone System No. 15. The instruments are of wood, arranged for non-flush mounting and finished in golden oak. Concise and fully illustrated instructions for installing are included in every

Outi	t No. Description	Retail	List Price
14	Includes two wall type Inter-phones in one box but no installing or wiring	Price	Each
	material	@15 OF	\$30.10
14A	FOR use where the wiring is to be run entirely under cover and not exposed to		<b>4</b> 00.10
	moisture or weather. Includes one No. 14 outfit in one boy, and another		
	Dox containing 75 feet of insulated 3 conductor conner wire two buttons		
	connectors, insulated nails for fastening wires, and illustrated installing		
14B	instructions.	17.00	34.00
14D	For use where the wiring is to be run in the open between or outside of build.		
	ings, and exposed to weather and moisture. Includes one No. 14 outfit		
	in one box, and another box containing 150 feet of outside 3 conductor		
	copper wire, two brackets with screws, hooks and knobs to attach wires		
	to building, two porcelain tubes to insulate wires when entering building,		
	two battery connectors, 25 insulated nails for fastening wires inside build-		
	ing, and illustrated installing instructions	20.85	41.70
	Outft No 15		

## Outfit No. 15

This consists of two hand set type Inter-phones suitable for the same class of service for which the No. 14 type outfit is intended. The Inter-phones are identical with the non-flush type hand sets used in Inter-phone System No. 15.

Either station can ring and talk to the other.

The instruments are finished in black with transmitter and receiver on one handle, and equipped with a small non-flush apparatus box. Complete in-

	Outfit No. 15-A	tructions for installing are inclu-	ded in each	n package
Outfit N	0. Description		Retail	List Price
15	Includes two hand set type Inter-phones in one material.	box but no installing or wiring	Price	Each
15A	moisture or weather. Includes one No. 15 box containing 75 feet of insulated 3 condu connectors, insulated nails for fastening w	nder cover and not exposed to outfit in one box, and another copper wire, two battery ires, and illustrated installing	\$19,40	\$38.80
15B	instructions.  For use where the wiring is to be run in the ope ings, and thus exposed to weather and me outfit in one box, and another box containing copper wire, two brackets with screws, how to buildings, two porcelain tubes to insulate two battery connectors, 25 insulated nails for	n between or outside of build- posture. Includes one No. 15 ag 150 feet outside 3 conductor bks and knobs to attach wires be wires when entering building, or fastening wires inside build-	21.35	42.70
	ing, and illustrated installing instructions.		25. 20	50.70

## Outfit No. 16



Outfit No. 16-A

16A

Two hand set type Inter-phones are furnished with this outfit, which is intended to be used for converting any existing bell, buzzer or annunciator circuit into a practical working telephone system. This can be done by using the existing wires, bell and batteries, replacing the push button with one hand set and connecting the other hand set to the wire near the bell. As only one bell is used, calls can be made in one direction only. An outfit of this type placed in the office makes it unnecessary for the elerk or office boy to run back and forth when file information is required by the executive.

Description For use with any existing circuit consisting of one bell or buzzer and one push button. Includes two hand set type Inter-phones, two connecting blocks with mounting screws, 25 feet of insulated twisted pair copper wire (to connect the Inter-phones to the existing wiring), 20 insulated nails for fastening wires, two hooks for holding hand sets and illustrated installing

Retail List Price Price Each

\$27,60

#### INTER-PHONES

# Outfit No. 16 (Continued)

If the existing bell, buzzer or annunciator circuit consists of two or more push buttons, a No. 16A outfit should be used—one hand set for the bell, buzzer or annunciator station, the other to replace one of the push buttons—and one No. 16B Inter-phone outfit for each additional push button.

Outfit No.	Description	Retail Price Each	List Price Each	
110.	•			
16B	To be used in addition to No. 16A outfit if existing bell, buzzer or annunciator	•		
	circuit has two or more push buttons. Includes one hand set type Inter-	•		
	phone, one connecting block with mounting screws, 12 feet of insulated	l		
	twisted pair copper wire, 10 insulated nails for fastening wires, one hook for			
	holding hand set, and illustrated installing instructions	\$7.50	\$15.00	



No. 17 Outfit ;

#### Outfit No. 17

This consists of two Hand Set Type Inter-phones with all the material required to install a simple intercommunicating system between two points not over 80 feet apart, and where the wire will be wholly indoors and not exposed to weather conditions or moisture.

When installed in accordance with the directions furnished with each outfit, either station can call or talk to the other. Although intended primarily for business use, the No. 17 outfit can be used equally well in the home.

Outfit No.	Description	Retail Price Each	List Price Each
17	Includes two hand set type Inter-phones, two connecting blocks with mounting	•	
	screws, 80 feet of insulated twisted pair copper wire, 60 insulated nails for	•	
	fastening wire, two hooks for holding hand sets, two bells, two battery con-		
	nectors, and illustrated installing instructions	\$18.10	\$36.20



Code No. 11B

1A

2B

No. 11B Extension Bell

# INTER-PHONE ACCESSORIES

#### Extension Bell

Description	List Price Each
This bell is wound to 10 ohms, and may be used as an	
extension bell for any Inter-phone system. It should	
also be used for any separate signaling circuit, such as a	
door bell operating from the Inter-phone batteries	\$1.80

Battery Boxes	
Black japanned sheet metal box lined with an insulating material. Holds 3 Blue Bell dry cells. Size of box,	
$8\frac{3}{4}$ inches long by $3\frac{7}{4}$ inches wide by $7\frac{3}{8}$ inches high. Similar to the No. 1A. Holds 9 Blue Bell dry cells. Size of box, $14\frac{5}{4}$ inches long by $5\frac{3}{4}$ inches wide by $7\frac{5}{8}$	
inches high	

## Push Button

1396	Wood push	button	\$0.30
------	-----------	--------	--------

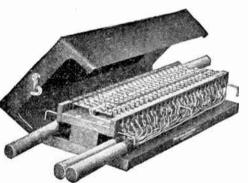
# No. 19 Type Cable Terminals

The No. 19 Type cable terminal is admirably suited for interior distributing work. It was designed after a great deal of study, and is thought to be the best of its kind on the market. Made of hard wood, numbered and shellacked, and equipped with a japanned sheet metal cover.



Western Electri

No. 1396 Push Button



No. 19B. Cable Terminal



No. 6B Connecting Block



No. 11A Connecting Block

	Capacity				List
Code	in	Din	ensions, Inc	hes—	Price
No.	Pairs	Length	Width	Depth	Each
$19\Lambda$	1 ‡	8	51/8	21/2	\$8,60
19B	26	14	5½	$2\frac{1}{2}$	11.00

# Connecting Blocks

#### No. 6 TYPE

These consist of brass studs embedded in a hard composition base. Studs fitted with two nuts (one a split cheek nut) and two washers.

Code No.	Capacity in Pairs	Lengt <b>h</b>	Width	List Price Each
6A 6B	7 11	$5\frac{5}{8}$ ins. $8\frac{5}{8}$ ins.	$1\frac{7}{8}$ ins.	\$1.70
6C	16	$12\frac{3}{8}$ ins.	$\frac{1}{2}$ ins. $\frac{1}{2}$ ins.	$\frac{2.10}{2.70}$
6D 6E	21 26	$16\frac{1}{8}$ ins. $19\frac{7}{8}$ ins.	1 % ins. 1 % ins.	$\frac{3.50}{4.20}$

#### Nos. 11 AND 12 TYPES

These consist of a composition base in which the screw terminals are imbedded. Each terminal consists of two screw bushings electrically connected by means of a metal strip, and provided with screws and washers.

Code		Size	List Price
No.	Terminals	Inches	Each
11A	2	$1\frac{1}{8} \times 1\frac{5}{32}$	\$0.40
11B	Same as No. 11A	except equipped	with a cover50
12A	3	$1_{16}^{11} \times 1_{33}^{5}$	.50
12B	Same as No. 12A	except equipped	with a cover 70

World Radio History

#### INTER-PHONE ACCESSORIES

#### Inter-phone Cable







Cable for Outside

The conductors are provided with double silk and single cotton insulation, which is colored in such a way that each pair and each single wire can be identified. The cable is then impregnated with a wax compound and is covered with scrvings of paper and a heavy braiding, which is given a heavy coat of fireproofing paint.

The impregnation with wax prevents the insulation from fraying when the cables are installed. It also serves to protect the formed ends against moisture.

Three general types of cable are provided. Each type has its particular use, and care should be taken to order the proper cable for any desired purpose. These types are as follows:

- 1. Interior cable with outside braiding treated with gray fire-proofing paint. Use only in dry places.
- 2. Interior cable with green glazed cotton outside braiding. Use only in dry places where exposed to view.
- 3. Outside cable, lead covered. Always use this cable outside, and inside in every case where there is apt to be moisture even in a small degree.

Lead-covered cables are not listed with separate Code Nos. Any fireproofed type of cable may be ordered with a lead sheath.

All cables are provided with a standard color scheme, so that each pair can be distinguished from any other. The pairs are properly twisted to prevent inductive disturbances.

	,		Approx.	List Price
Code	Conductors		Outside	per 100
No.	B. & S. Gauge	Covering	Diameter	Feet
185	4 singles No. 22	Fireproofed braid	14 in.	
161	8 singles No. 22.	Fireproofed braid	$\frac{5}{16}$ in.	
161 (Lead)	8 singles No. 22	Lead sheath	$\frac{5}{16}$ in.	
142	8 singles No. 22	Green cotton braid	$\frac{5}{16}$ in.	
162	12 singles No. 22	Fireproofed braid	$\frac{11}{32}$ in.	
162 (Lead)	12 singles No. 22	Lead sheath	3% in.	
163	12 singles No. 22	Green eotton braid	25 in.	
164	6 singles No. 22, 2 pair No. 16	Fireproofed braid	$\frac{13}{32}$ in.	
164 (Lead)	6 singles No. 22, 2 pair No. 16	Lead sheath	13 in.	
165	6 singles No. 22, 2 pair No. 16	Green cotton braid	3/8 in.	
134	6 pair No. 22, 2 pair No. 16	Fireproofed braid	13 in.	On request
134 (Lead)	6 pair No. 22, 2 pair No. 16	Lead sheath	$\frac{7}{16}$ in.	
155	6 pair No. 22, 2 pair No. 16	Green cotton braid	13 in.	
141	12 pair No. 22, 2 pair No. 16	Fireproofed braid	7. in.	
141 (Lead)	12 pair No. 22, 2 pair No. 16	Lead sheath	½ in.	
156	12 pair No. 22, 2 pair No. 16	Green cotton braid	$\frac{7}{16}$ in	
157	16 pair No. 22, 2 pair No. 16	Fireproofed braid	$\frac{17}{32}$ in.	
157 (Lead)	16 pair No. 22, 2 pair No. 16	Lead sheath	9 in.	
159	16 pair No. 22, 2 pair No. 16	Green cotton braid	17 in.	
158	20 pair No. 22, 2 pair No. 16	Fireproofed braid	9 in.	
158 (Lead)	20 pair No. 22, 2 pair No. 16	Lead sheath	19 in.	
160	20 pair No. 22, 2 pair No. 16	Green cotton braid	9 in.	
136	24 pair No. 22, 2 pair No. 16	Fireproofed braid	19 in.	
136 (Lead)	24 pair No. 22, 2 pair No. 16	Lead sheath	5/8 in.	
150	24 pair No. 22, 2 pair No. 16	Green cotton braid	9 in.	
140	31 pair No. 22, 2 pair No. 16	Fireproofed braid	5 in,	
	, ,		/8 ****	

# MECHANICAL CODE SIGNALING; SYSTEMS



#### General

APPLICATION. In every mercantile establishment it is often necessary to communicate immediately with the manager, superintendent or other executive who is not at his desk or within hearing range of his telephone bell at the moment.

In schools the principal, his assistant or the janitor are frequently wanted when they may be in any one of several places about the building.

The same is true of hotels and Y.M.C.A. buildings where the presence of the janitor, engineer or manager may be urgently needed at the office.

In hospitals the house doctor or head nurse may be wanted in a hurry when they are on their rounds.

In prisons or asylums the superintendent, warden, head keeper, or other official is apt to be suddenly wanted on an important matter.

No. 1A. Signaling Set To call different telephones (if such equipment is part of the building) one at a time, or to send a messenger in order to locate the desired person, frequently takes a considerable period of time, but with a mechanical code signaling system installed, the operator, clerk or other employee in the office or other central point gives a turn to a revolving key marked with the name of the individual wanted, which instantly signals the person desired wherever he may be.

**DESCRIPTION.** The equipment consists of a centrally located wooden cabinet equipped with revolving contact keys. A number of bells are mounted in different parts of the building which, when actuated from the central key cabinet, will ring simultaneously.

OPERATION. The key cabinet is equipped with a number of revolving keys. When the handle of a key is turned one-half revolution it slowly moves back to its original position, making and breaking an electrical contact a number of times at different intervals, thus forming a combination which is repeated four times before the key comes to a final stop. Each key produces a combination different from any of the other keys.

By placing the bells in such locations that, no matter where a person may be, he will always be within hearing distance of one of them, and by installing at a central point a key cabinet equipped with as many keys as there are persons in the organization who are apt to be frequently wanted on important matters, a call can be sent out for any one of them just by turning the key assigned to him. All bells will immediately sound the proper combination, and on hearing his call the person wanted steps to the nearest telephone and is in communication with the office immediately.

In addition to the regular signals described above, a special signal giving a continuous series of impulses to attract attention above all other signals can be furnished if desired. This special signal is intended to be used for emergency, fire, etc.

CAPACITY. The system can be furnished with keys for sending out 4, 6, 8, 10, 12, 14 and 16 different signals, thus producing maximum calling facilities for sixteen persons, which is usually all that average conditions require. When the special signal mentioned above is furnished this reduces by one the capacity for regular signals.

BELLS. It has been found that single stroke bells with 6 inch gongs will give satisfactory service under ordinary conditions. Any number and various sizes of bells can be combined to form one system.

INSTALLATION. The signaling system can be used alone or in connection with an Inter-phone System.

- 1. Independently. The signaling system can be installed and operated entirely separate and apart from any other system, and requires only two wires for its operation. As many bells as desired can be connected and made to simultaneously sound any desired code by turning the proper key in the key cabinet.
- 2. With Intercommunicating Telephone Systems. These signal sets can be connected directly to our inter-phones of System No. 1 without any change in the wiring of the instruments, or special bells. In this case, the bells on the instruments sound the code signals simultaneously whenever any one of the calling keys in the key cabinet is set in motion.

In case, however, loud ringing bells are required, or bells in locations where telephones are not installed, it will be found more satisfactory to install this code signaling system independently of any other equipment.

3. With Private Exchange or Private Branch Exchange Telephone Systems. A mechanical signaling system, when installed in connection with telephone systems of this class, should be put in as a separate system without special regard for the location of the various telephone instruments, the object being rather to so locate the bells that they will be best heard from every nook and corner of the plant.

# MECHANICAL CODE SIGNALING SYSTEMS

## General—(Continued)

CONNECTION DIAGRAMS. No connection diagrams are given for the reason that there are many different signaling systems in which the code signaling sets can be used. We furnish, upon application, detail information covering the connection of these sets with inter-phones and with large and small bells and buzzers. If you will advise us as to your requirements, we will be very glad to work up a suitable signaling system and make you a quotation.

**REQUIREMENTS.** The following apparatus and accessories are usually required: The key cabinet (state capacity) with 4 (or less) up to 16 keys.

Any number and size of bells.

One resistance coil and condenser box (to prevent sparking at contacts).

One or more relay boxes, depending upon the number and size of bells and the length and size of

Necessary wire to connect the apparatus.

One or more batteries consisting of four or more cells, depending upon the number and size of bells and the length and size of wire.



No. 2A Code Signaling Set



Model "ASS" Single-stroke Enclosed Type



No. 262F Coll and Condenser Box

# Code Signaling Sets

The cabinets are made of golden oak, quarter-sawed. The metal face is finished in dull black with nickel trimmings. The sets are made only in 4 and 6 key sizes (each key providing a different signal), but they can be mounted side by side when 8, 10, 12, 14 or 16 signals are required.

Code No.	No. of Signals	Description	List Price Each
1A 1B 1C 1E 1F 1D	4 4 4 4 4	Used for 4 signals	On request
2A 2B 2C 2E 2D	6 6 6 6	Used for 6 signals. Used with 1A for 10 signals. Used with 2A for 12 signals. Used with 1A and 1B for 14 signals. Used with 2A and 1C for 16 signals.	On 1

Each of the above key cabinets may be ordered partially equipped.

If a special signal is desired one set should be ordered equipped with signal wheel No. 17.

# Bells and Horns

Bells of the enclosed type, either single stroke or vibrating, with 4, 6 or 8 inch gongs, can be furnished, the particular type and size depending on the local conditions.

#### **HORNS**

Factory signaling horns can be furnished when a signal of this type for extremely noisy places is necessary.

# Coil, Condenser and Relay Boxes

With each code signaling set a resistance coil and condenser box, No. 262F, is required to prevent excessive sparking at the contacts. This box is made of quarter-sawed oak to match the set.

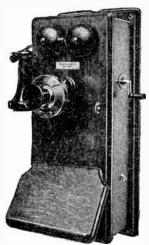
A relay box is necessary under certain conditions, depending upon the number and size of bells and the length and size of wire. This box contains a resistance coil and a condenser in addition to the relay. It is similar in appearance to the No. 262F, and is known as the No. 262G Relay Box.

Code		List Price
No.	Description	Each
262F	Coil and condenser box. Used to prevent spark-	
	ing at contacts	On
262G	Relay box	

## MAGNETO TELEPHONES

## No. 1317 Type

General. The No. 1317 wall telephones listed below are equipped with our standard long distance transmitter, concealed binding post hand receiver, induction coil and cords.



No. 1317C Type (2 Cell) Magneto Telephone

All of these telephones are wired for a condenser to be inserted in the receiver circuit. If condensers are desired, however, it should be so stated in the order excepting in the case of the No. 1317R, S, CR and CS telephones, which are furnished equipped with a condenser as standard. This should not be confused with the telephones for harmonic ringing service, which are always furnished equipped with a condenser wired in the ringer circuit.

Bridging code ringing telephones can be arranged for "central office selective signaling," by ordering a No. 465D key for each telephone to be so equipped. These keys are intended for mounting on the side of the telephones and can be easily wired into the circuit to perform the same function as telephones equipped with No. 1006A push buttons.

#### Two Blue Bell Batteries and One No. 60A Protector Are Furnished With Each Telephone and Are Included in the Price

Note: If batteries are not desired, deduct 60 cents from the list price. If protector is not desired, deduct 50 cents from the list price.

# No. 1317C (2 Cell) Type

The No. 1317C type magneto telephone is the result of a demand by many of our customers for a more compact type of telephone. It has been designed with a battery compartment only large enough to accommodate 2 cells, thus making possible a smaller and neater cabinet.

# RINGERS OPERATED BY ALTERNATING CURRENT

Code Kinging						
	Ringer		_	_		†List
Code	Resistance		Push	Con-		Price
No.	Ohms	Generator			α .	
		Generator	Button	denser	Service	$\mathbf{E}$ ach
1317CN	1600	50 type (3 bar A.C.)			Medium loaded lines	\$28.50
1317CR	1600	50 type (3 bar A.C.)		21 type	Medium loaded lines	29.70
1317CP	2500	50 type (3 bar A.C.)			Heavy loaded lines	28.80
1317CS	2500	50 type (3 bar A.C.)		21 type	Heavy loaded lines	30.00
1317CH	1000	22 type (3 bar A.C.)			Light loaded lines	27.70
1317CG	1000	50 type (3 bar A.C.)			Light loaded lines	28.20
1317CA	1600	50 type (3 bar A.C.)	-1006A		Central office selective signaling	29.10
1317CB	2500	50 type (3 bar A.C.)	-1006A		Central office selective signaling	
1317CE	1600	50 type (3 bar A.C.)	-1002A		Central office selective signaling	
1317CT	1600 (biased)		-1004A		Signaling central secretly	30.00
		pulsating)				
1317CU	2500 (biased)	22 type (3 bar pulsating)			Center checking	29.20
1317CK	2500 (biased)	50 type (3 bar pulsating)			Center checking	29.70
	2005 (5102007)	oo type (o mai pandating)			Center checking	49.70

#### RINGERS OPERATED BY PULSATING CURRENT

#### Four-party Selective Signaling

1317CJ 2500 (biased) 22 type (3 bar A.C.) Any one of four parties \$28.30

#### RINGERS OPERATED BY HARMONIC CURRENT

#### Four or Eight-party Selective, Sixteen-party Semi-selective Signaling

Code No.	Ringer	Frequency (Cycles)	Generator	Condenser	Service	List Price Each
1317CHA 1317CHB 1317CHC 1317CHD	41 type 41 type 41 type 41 type	$16\frac{2}{3}$ $33\frac{1}{3}$ $50$ $66\frac{2}{3}$	22 type (3 bar *) 22 type (3 bar *) 22 type (3 bar *) 22 type (3 bar *)	21 type 21 type 21 type 21 type	Harmonic selective signaling lines only	\$29.70 29.70 29.70 29.70

\*Arranged to give alternating current, but contact springs are arranged so that approximately one impulse of current out of four is sent over the line.

†These prices include furnishing a No. 143AW composition shell receiver. If the No. 144AW hard rubber shell receiver is required add 50 cents to the list price of each telephone to be so equipped.

\$23,30

20

534A

The Western Electric Company manufactures two general types of central battery telephones:

(b) Series Type)

6054A

(a) Induction Coil Type

(b) Series 1 ype)

Series telephones are very satisfactory on short subscriber lines (one or two miles), but on long lines (over two or three miles) the transmission efficiency is somewhat less than our induction coil apparatus.

## Induction Coil Telephones

Equipped with transmitter, receiver, induction coil, condenser and ringer.

#### Ringers Operated by Alternating Current Individual, 2 Party Selective or 4 Party Semi-selective Signaling

Code No. 1533A	Ringer 1000 ohms (biased	Each
	DESK TELEPHON	IES
Code No.	Ringer Desk St	and Desk Set Box

1000 ohm (biased)

# Ringers Operated by Harmonic Current 4 or 8 Party Selective or 16 Party Semi-selective Signaling WALL TELEPHONES

1020AL

Code No. 1533E 1533F 1533G 1533H	Ringer 33½ cycles 50 cycles 66¾ cycles 16⅔ cycles	\$21.00 21.00 21.00 21.00

#### DESK TELEPHONES

Code No.	Ringer	Desk Stands	Desk Set Box	
6054E	33½ cycles	$1020\mathrm{AL}$	534E	\$25.00
6054F	50 cycles	1020AL	534F	25.00
6054G	66% cycles	1020AL	534G	25.00
		1020AL	534H	25.00
6054H	162/3 cycles	102031	1 4	

Central battery telephones for 4 party selective ringing with ringers operated by pulsating or superimposed current can also be furnished. Write for particulars.



Equipped with transmitter, receiver, condenser and ringer.

# Ringers Operated by Alternating Current Individual, 2 Party Selective, or 4 Party Semi-selective

Signaling WALL TELEPHONES

	WALL TELEPHONES	
Code No.	Ringer	
1533K	1000 ohm (biased)	<b>\$</b> 18.50

	DESK IEL	LEPHUNE		
Code No.	Ringer	Desk Stand	Desk Set Box	\$22.
3054K	1000 ohm (biased)	1020AH	534K	

# No. 1320 Police Telephone

C



No. 5054 Telephone

No. 1533 Telephone

No. 1320-Closed



No. 1320-Outer Door Open

A weatherproof central battery telephone, inclosed in a cast iron box and specially adapted for polic patrol service. All apparatus is mounted on a frame which can be removed as a unit from case. Equipped with unbiased 1000 ohm ringers and intended for straight alternating ringing only.

Equipped with unbiased 1000 onth ringers and intended for straight afternating ringing only.

Code No.

List Price Eac

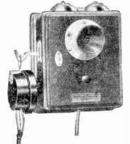
\*List prices include furnishing a No. 143AW composition shell receiver. If the No. 144AW hard rubbe shell receiver is required, add 50 cents to the list price of each telephone to be so equipped.

#### CENTRAL BATTERY TELEPHONES

# Telephones for Use with No. 1801 Switchboards Systems A, B and C

# Series Telephones

These telephones are recommended for use with No. 1801 switchboard systems A, B and C in local service only, that is, in connection with switchboards which do not have connection with an outside exchange. They are equipped with a direct current 140 ohm vibrating bell or buzzer, transmitter and receiver.



No. 1327H

#### WALL TELEPHONES

Code				List Price
No.	Case and Finish	Mounting	Receiver	Each
1327H	Wood—Golden oak*	Non-flush	Watch case type	\$13.50
1339NM	Metal—Brush brass	Flush	Watch case type	20.10
1533N	Metal—Black enamel	Non-flush	Hand receiver	20.10
*Furn	ished in ebony finish at s	ame price as o	oak finish.	

#### DESK TELEPHONES

	DESK TELETIONES	
Code		List Price
No.	Description	Each
6034AU	Consists of a No. 1020BJ black desk stand equipped with a watch case receiver. Has a buzzer in the base	\$29.00
6034AT	Consists of a No. 1020BH black desk stand equipped with a watch case receiver. Has a separate direct current	
	vibrating bell	29.00

## Induction Coil Telephones

These telephones are recommended for use with No. 1801 switchboard systems "C," which have lines connecting the system or switchboard with an outside exchange. They are equipped with a direct current 140 ohm vibrating bell, induction coil, standard long distance transmitter and a bipolar hand receiver.



No. 1339 Type

#### WALL TELEPHONES

	WALLIN		
Code			List Price
No.	Case and Finish	Mounting	Each
1293AR	Wood-Golden oak	Non-flush	\$21.80
1533M	Metal—Black enamel	Non-flush	25.70

#### DECK TELEBUONES

	DESK IEL	ELHONES	
Code			List Price
No.	Desk Stand	Desk Set Box	Each
6000AE	No. 1120CN (Black finish)	No. 295AU Non-flush	
	, , ,	(Golden oak finish)	<b>\$32.60</b>

# System D

Any standard central battery telephone with ringers operated by alternating current either induction coil or series type can be used with System D. However, induction coil apparatus, such as the No. 1533B wall telephones or No. 6054A desk telephones, are recommended where connection is made to an outside exchange.



No. 6034AU



No. 1533



No. 6000AE

#### TELEPHONE SWITCHBOARDS AND SYSTEMS

#### General

The line of non-multiple type switchboards is complete and includes designs that will satisfy every demand for telephone exchange equipment.

Magneto switchboards are offered in capacities varying from 4 to 330 lines.

Private Exchange (P.X.) and Private Branch Exchange (P.B.X.) switchboards, such as our sectional unit type, range in capacities from 20 to 80 lines and over. P.X. and P.B.X. boards are also made up in either desk or cabinet style, ranging in eapacity from 60 to 600 lines.

Toll switchboards are offered in either desk or cabinet style and have capacities from 40 lines upward.

Common battery non-multiple switchboards are of the cabinet type and range from 260 to 520 lines in

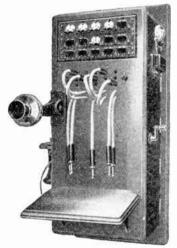
capacity.

Multiple type equipments are also manufactured for regular exchange use, for private branch exchanges and for toll offices. These equipments range in capacity from 300 lines to 10.500 lines.

Due to the varied requirements existing for multiple type equipments, those are not standardized to the

same extent as are the non-multiple line of switchboards.

We will, upon request, gladly make studies, recommend equipments and furnish engineering data and prices applying to any type of switchboard.



No. 106B Switchboard Wall Type

# No. 106B MAGNETO WALL SWITCHBOARD Drop Type

The No. 106B switchboard is intended for exchanges where the total number of lines will not exceed 10.

The cabinet is of walnut.

The equipment for each line consists of a 500 ohm drop, bridged

across the line, and a jack.

The equipment for answering, originating and supervising calls consists of four cord circuits with supervisory drop signals, listening jacks and a listening cord.

Equipment for one toll line is also supplied with this switchboard. The operator's telephone set, furnished with the switchboard, consists of a long distance transmitter and receiver. Other equipment consists of a night alarm circuit, a five-bar hand generator, and a night alarm key.

In operating the switchboard, the operator answers and listens in with either one of the two duplicate listening cords provided for the purpose. Connections are made by means of the other cords without the use of keys. Ringing is done over the listening cord with the hand generator.

# No. 1012 MAGNETO WALL SWITCHBOARD Ringer Type

The No. 1012 switchboard is intended primarily for small telephone systems of ten lines or less where it is not feasible to have a regular switchboard operator in attendance.

The cabinet is made of a light finish quarter-sawed oak, having a door

hinged in front to facilitate inspection of apparatus and wiring.

Equipment for each line consists of a 1000 ohm ringer. 1600 or 2500 ohm ringers can be furnished if required. Ringer indicators are supplied with each ringer so that the operator, if not in attendance when a bell rings, can tell which line has called.

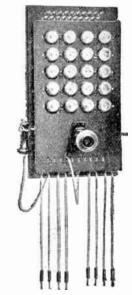
The equipment for answering and originating calls consists of four cord circuits, listening jacks, and a listening cord. No supervisory or ring-off signals are provided.

The operator's telephone set, furnished with the switehboard, consists of a long distance transmitter and receiver. Other equipment consists of a powerful five-bar hand generator.

In operating the switchboard, the operator answers and listens in with the

listening cord and plug provided for the purpose. Connections are made with the other cords without the use of keys. Subscribers are called by ringing with the hand generator through the listening cord.

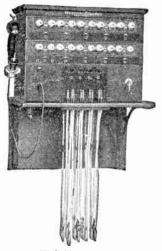
Write our nearest house for particulars.



No. 1012 Switchboard Wall Type

## No. 1800 MAGNETO SWITCHBOARD

# Sectional Unit Type



Wall Type-20 Lines

This type of switchboard corresponds in general design to the familiar sectional unit bookease, and is offered for installations that are comparatively small at the start but are expected to grow rapidly, and where the needs for the future are indefinite. An ultimate capacity of 50 lines has been set arbitrarily as the maximum that should be used with this type of switchboard. With a low calling rate, however, it is safe to assume that as many as 70 or 80 lines can be accommodated.

To meet various requirements, there are different types of base or supporting units, cord units, line units and top units. To assemble a board it is then necessary to select, first, a base unit; second, a cord unit; third, one or more line units, and finally a top unit. These assemble readily in the order given, and provide a perfectly practical switchboard to which additional line units may be added at any time.

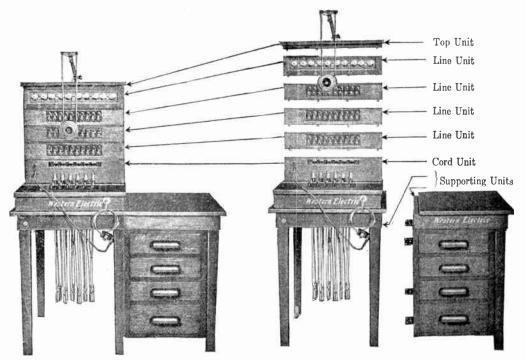
Easy to assemble a switchbeard for any line or operation condition.

Necessary to buy only as much equipment as needed, switchboard capacity readily increased (by adding line units) as business grows, no investment lying idle.

All terminals and apparatus instantly accessible.

Apparatus, material, construction and finished product are standard Western Electric Quality Products, the best that can be produced.

Write our nearest house for particulars.



Method of Enlarging No. 1800 Switchboard-Capacity up to 50 lines

# No. 1200 TYPE MAGNETO SWITCHBOARDS

# Non-multiple—Automatically Restored Line Signals

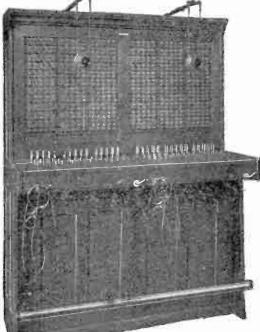


The No. 1200 type switchboard series (Code Nos. 1220 to 1259) is designed for the medium size magneto exchange. The switchboards range in capacity from 105 lines to 330 lines. Additional capacity may be obtained by lining up two or more sections and making use of transfer trunks.

For exchanges where the ultimate capacity will exceed 330 lines non-multiple magneto switchboards are not recommended because of the resulting lower operating efficiency and lower grade of service. In such cases central battery or multiple type magneto switchboards should be installed.



No. 1240D Switchboard



No. 1250D Switchboard

Switchboard Code No. (See Note 1)	No. of Positions	Line Capacity	Cord Capacity (See Note 2)	Line Cable Pairs
1220	1	105	15	105
1230	$2\begin{cases} \text{left} \\ \text{right} \end{cases}$	105	15	105
1240	(right	105 16 <b>5</b>	15 15	105 165
	of left	165	15	165
1200	2 { right	165	15	165

Note 1. The No. 1200 type magneto switch-boards may be equipped with either No. 2 ball type combined jacks and signals and No. 10 ball type push button restored supervisory signals or No. 22 shutter type combined jacks and signals and No. 34 shutter type supervisory signals. Boards equipped with ball type signals are described by adding the suffix "C" to the switchboard Code Nos.; as for example, No. 1240C switchboard. Boards equipped with shutter type signals are described by suffixing the letter "D" to the switchboard. Code No.; as for example, No. 1230D switchboard.

Note 2. The No. 1200 non-multiple magneto switchboard is furnished with either single or double supervision cord circuits. Single supervision hoards may, if desired, be equipped with five cord circuits having toroidal repeating coils and switching keys. Double supervision boards may be equipped with either the condenser type "non-hang-up" cord circuits, or the condenser repeating coil type "non-hang-up," "non-ring-through" cord circuits. The present No. 1200 types of switchboard, if arranged for single supervision, may be changed to a double supervision board simply by installing the necessary additional apparatus.

Write our nearest house for particulars.

# No. 1801 CENTRAL BATTERY PRIVATE EXCHANGE SWITCHBOARDS

## Sectional Unit Type



No. 1801 Switchboard Desk Type Systems B, C or D

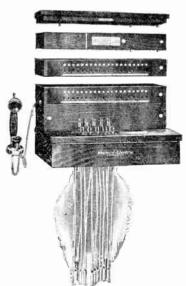


No. 1801 Switchboard Wall Type System A

The No. 1801 sectional unit type switchboards have been designed for small private exchanges or private branch exchanges, serving from 20 to 60 lines. Equipments having capacities up to 120 lines can also be furnished if required.

This type of board is constructed along the same lines as the No. 1800 sectional unit type magneto board. (See preceding pages.) They differ in that the No. 1801 has lamps for the line and supervisory signals.

The units of the No. 1801 switchboard are finished in birch, mahogany or light oak. Inside of switchboard units are shellacked to prevent warping. The frameworks are carefully and rigidly assembled. The apparatus is of the same quality as that used in the larger central battery equipments. Wiring is in cable form.



No. 1801 Switchboard Showing Method of Enlarging

#### FOR THE INFORMATION OF CUSTOMERS

Operating telephone companies, as a rule, do not permit connections with their wires, switchboards or telephones, of any apparatus or attachments not owned or maintained by them.

Four different systems—A, B, C and D—have been devised to meet the various classes of service required in this type of switchboard. Telephones which can be used with these systems are listed on preceding pages under heading: Central Battery Telephones.

\*System A. Provides for communication from any telephone to switchboard only. No means are available for connecting two telephones together and none for connections to the public telephone system.

\*System B. Same as System A but also arranged for connecting any two telephones together.

\*System C. Same as System B but also provides for connections to a central battery or a magneto central office.

\*Note: Direct current is used for ringing the telephone bells in Systems A, B and C.

System D. Provides the same service as System C, except that alternating current is used for ringing the telephone bells. This makes it possible to use standard central battery telephones with polarized ringers and induction coils.

Write our nearest house for particulars. State which system is best suited for your requirements.

## Nos. 1262-1350 CENTRAL BATTERY P.B.X. SWITCHBOARDS

These switchboards are designed for use as branch exchange equipments connecting with a public They are of the central battery type, making use of lamp line signals and lamp This makes possible rapid and reliable operation. The line signal is associated directly telephone system. supervisory signals. with the corresponding jack so that the operator can plug in directly above the lighted lamp.

Supervision is positive as the signal is closely associated with the corresponding cord.

The current supply may consist of a storage battery at the private branch exchange, charged either over separate conductors or trunks from the central office or from charging equipment at the private branch exchange. It may also be furnished direct from the central office storage battery over a trunk line.

The trunks from the central office terminate in cords and plugs. These plug-ended trunk circuits reduce

the number of connecting cords required with the board. The use of one cord instead of two makes for ease in handling and does not tie up the connecting cord circuits. Incoming calls from the central office are completed directly by operator without the use of local cord circuits. This results in increased transmission efficiency

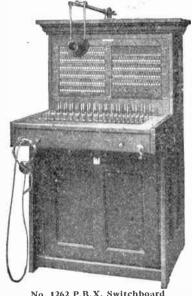
Holding jack circuits up to the number of five are also provided for each trunk circuit equipped to hold an exchange trunk without tying up a local line. This feature is valuable when the called-for line happens to

Those private branch exchange switchboards are furnished in one and two-position cabinet or desk types in either birch, mahogany or oak finish.

Write our nearest house for particulars.



No. 1302 P.B.X. Switchboard Desk Type



No. 1262 P.B.X. Switchboard Cabinet Type

			Capacity			Cord		
			Wired Including			Circuit	Plug	
		Number	Number	Li	ne	Capacity	Ende	
Code		of	Arranged	Rel	ay	Number	Trunk	
No.	Type	Positions	for Relays	Capacity	Wired	Wired	Capacity	Wired
1262	Cabinet	1	200	40	20	10	10	5
1272	Cabinet	2	f L. pos. 200	40	20	10	10	5
1242		2	R. pos. 200	40	20	10	10 →	5
1280	Cabinet	1	300	40	20	10	10	5
1000	Cabinet	2	f L. pos. 300	40	20	10	10	5
1290	Cabinet	4	R. pos. 300	40	20	10 .	10	5
1302	Desk	1	200	30	15	10	10	5
1320	Desk	1	60	30	15	10	10	5
1321	Desk	1	100	30	15	10	10	5
1322	Desk	1	200	30	15	10	10	5
1330	Desk	1	300	30	15	10	10	5
	Dogle	2	f L. pos. 200	30	15	10	10	5
1342	Desk	4	R. pos. 200	30	15	10	10	5
1950	Dogle	2	J. L. pos. 300	30	15	10	10	5
1350	Desk	2	R. pos. 300	30	15	10	10	5

Total Line

FOR THE INFORMATION OF CUSTOMERS

Operating telephone companies, as a rule, do not permit connections with their wires, switchboards or telephones, of any apparatus or attachments not owned or maintained by them.

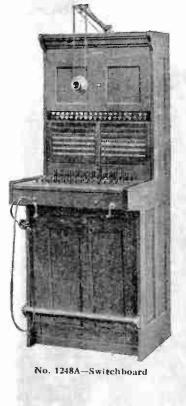
# No. 1248A AND No. 1258A CENTRAL BATTERY NON-MULTIPLE SWITCHBOARDS

These central battery non-multiple switchboards are designed for serving central battery telephone lines and a small number of magneto lines. With the exception of central battery boards of the multiple type they are the largest made.

The No. 1248A one-position board is best adapted for use where the number of central battery lines will not exceed 240; the No. 1258A two-position board where the maximum will be 480 lines.

Central battery lines are arranged with lamp signals and relays for controlling the lamps as in the large multiple type boards,

Magneto lines terminate in combined jacks and signals.



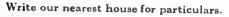
Code		Central Battery Line	Magneto Line	Cord Circuit
No.	Positions	Capacity	Capacity	Capacity
1248A	1	210	20	15
1258A	2   left	240	20	15
12001	= { right	240	20	15

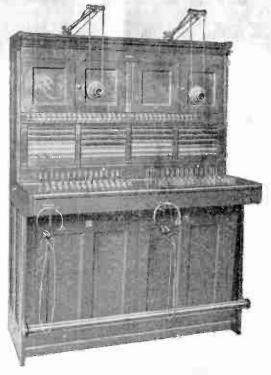
Cord circuits are arranged with lamp supervisory signals, giving positive supervision. Any or all cord circuits can be arranged to operate as straight central battery, combination central battery and magneto, or full universal.

In the universal circuits, toroidal type repeating eoils will be furnished if specified. When these are furnished, a cut-out key is used so that if two magneto lines are connected, the repeating coil may be either cut in or out of circuit. When a magneto and central battery line are connected, the repeating coil equipment will serve to climinate noise.

Various ringing combinations are available. To provide for any of these, universal wiring is installed to connect the different types of cord circuit keys.

Suspended type transmitters are usually furnished, but chest type transmitters will be supplied, if ordered.





No. 1258A Switchboard

No. 1336 Mine Telephone

# MINE TELEPHONE SYSTEMS

Mine telephone systems usually consist of several instruments connected to one pair of wires, forming a

party line. Local battery magneto telephones are used and signaling is done by code rings.

The severe conditions encountered under ground, due to moisture, gases, acidulated water, etc., make it necessary to provide unusually well protected telephone instruments for this service. For use above ground, such as in the engine room, superintendent's office, etc., in conjunction with the mine system, standard wall or desk type telephone instruments can be used unless it is proposed to place them in exposed locations. In that event the metal case telephones should be used, the same as used below ground.

When the mine system requires more lines than one, they should be terminated in a switchboard located

at some central point, such as the superintendent's office or engine house.

Switchboards suited to every requirement or condition are described elsewhere in this catalog under the heading of Switchboards.

Write for a copy of booklet, "Mine Telephone Systems and How to Install Them," sent you on request.

# No. 1336 Type

The No. 1336 type metal mine telephone is fireproofed, moisture proofed and rust proofed. Its iron case is curved at the top so that water and falling

objects will easily slide off.

The apparatus inside the case is doubly protected from moisture, acid fumes and gases by two iron doors, and special treatment given each part to resist the action of such disturbing elements. When the inner door is closed only the metal transmitter mouthpiece, receiver, cord (impregnated with a moisture resisting compound; and the generator handle are exposed. When the outer door is closed even these parts are protected. In using the set it is evident that only the outer door need be opened.

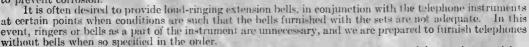
Ringers or Bells. The instrument is equipped with a high-efficiency

ringer which is so designed that it is nearly impossible to get out of

adjustment.

The gongs emit a very loud, distinct ring and are given a special finish

to prevent corrosion.



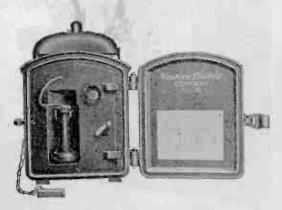
Generator. The telephones are equipped with a 5 bar hand generator powerful enough to satisfactorily ring 40 telephones connected across the same line. All exposed parts are heavily galvanized and the

armature winding is impregnated with moisture proofing compound.

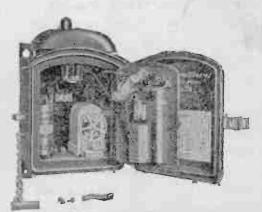
Moisture proofed Parts. The receiver cord, windings of the receiver, ringer coils and induction coils are impregnated with a compound to protect them from moisture and gaseous fumes and all permanent terminal connectors are also imbedded in the same compound. All interior wiring is done with heavy copper wire insulated with a high grade of rubber. These wires are formed and laced together into cables, which protect them from injury and also present a neat and compact arrangement.

Batteries. Two cells of standard dry battery are required for each telephone to furnish the talking current. In ordering batteries for telephones in use in underground or in damp locations, specify that they be furnished with "special impregnated cartons."

Code		List Price
No.	De cription (	Each
1336A	Metal case mine telephone, without ringer	\$67.20
1336E	Metal case mine telephone, equipped with 2500 ohm ringer	71.70



No. 1336 Mine Telephone (Outer Door Open)



No. 1336 Mine Telephone (Outer and Inner Doors Open)

# MINE TELEPHONES Telephones for Above Ground Service

In the superintendent's office, engine house and other dry and protected parts of the plant which should have communication with each other and the mine, the No. 1317 standard wooden ease magneto telephone and No. 6004 desk stand magneto telephone. listed in the proceeding pages, can be used and are recommended. These telephones have been designed to meet the most exacting requirements of telephone service, and are standard with the largest telephone companies for heavy duty magneto service.

## Mine Telephone Extension Bells

It is often desired to place a bell at some point distant from the telephone thus permitting the instrument to be located in a more or less sheltered position and still make it possible for the signals to be heard over quite an area. For this use two types of bells can be furnished. The No. 127 and the Nos. 392 and 342 types. These are listed under the heading Extension Bells elsewhere in this catalog.

Bells having ringer coils wound to either 1000 or 2500 ohms resistance can be furnished. In using these bells on lines in connection with telephones of other manufacture, the 1000 ohm type is recommended.

No. 127 Type. The No. 127 type is recommended for use above ground in dry, protected locations where a bell having the same sound volume as the bell furnished with the telephone instrument is satisfactory. Where a loud-ringing bell is required the No. 392 or No. 342 types are recommended.

Where a loud-ringing bell is required, the No. 392 or No. 342 types are recommended.

Nos. 392 and 342 Types. These extension bells are thoroughly protected against moisture, having impregnated coils and all exposed metal parts galvanized. They are so designed and constructed that it is almost impossible for them to get out of adjustment. However, they can be quickly and easily adjusted, if necessary.

The No. 392 is furnished equipped with 6 inch gongs. The No. 342 is also regularly equipped with 6 inch gongs and is mounted on a wooden backboard with canopy, as a protection against falling material; in case 8 inch gongs are required they can also be furnished.

#### Mine Telephone Protectors

It is customary to protect mine telephone instruments against lightning discharges and accidental crosses with lightning or power circuits. It is generally recognized by telephone authorities that a protector should be placed as near as possible to where the line wires enter the building, as by this method protection is afforded the inside wiring, the instrument and the building itself.

We manufacture several different types of protectors for use with telephone apparatus. The No. 60A protector is intended for protection against lightning only in locations where there is no chance of contact with electric light or power wires, and the No. 12A protector for protection both from lightning and foreign electric currents. This apparatus is listed under the heading "Protectors."



No, 343A Mine Signaling Set

## Mine Signaling Sets

To provide a reliable system for electrical signaling in mines we have designed the No. 343A signal set which consists of a strong iron case containing a 5-bar No. 481D hand generator and two terminals. The line wires are brought into the set through a hole in the bottom.

On the front of the outer door a small box having a glass window is provided in which is hung the padlock key. In case of emergency this window must be broken in order to open the set and turn the generator crank.

No. 48D Generator. The No. 48D generator furnished with this signaling set will ring 30 No. 342, 2500 ohms signal bells connected on a 7½ mile full metallic line of No. 12 B.W.G. iron wire or a 28½ mile line of No. 12 B.&S. hard drawn copper wire.

It has all exposed metal parts galvanized to make them rustproof and the armature winding is impregnated with a moisture proof compound.

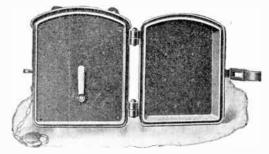
It is mounted inside the metal case and is made proof against dust and dirt by the iron plate which is held firmly against an iron shoulder with large screws. The generator handle only protrudes through the plate, and all other mechanism and wiring is entirely encased even when the outer door is open.

 Code No.
 Description
 List Price Each Each On request

 343A
 Mine signaling set.
 On request

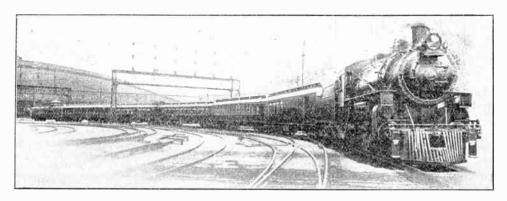
# Signal Bells

For receiving the signals either the No. 392 or No. 342 type loud-ringing bells can be used. These bells are alike in design and construction only the No. 342 type is mounted on a wooden backboard with a canopy for extra protection from falling rocks or other objects. (See above description of mine telephone extension bells.)



No. 343A Mine Signaling Set (Outer Door Open)

#### RAILROAD TRAIN DISPATCHING SYSTEMS



We have not attempted to list here detailed information with regard to railroad train dispatching telephones and selective apparatus, but only wish to call attention to the fact that we are prepared to furnish complete equipments, especially adapted to any service requirement.

Write our nearest distributing house for detailed information.

Street Railway Telephone Systems

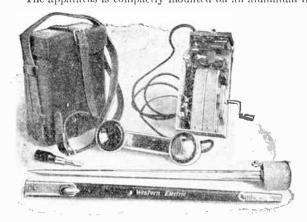
City and suburban electric railways are finding the use of telephone dispatching a profitable method of controlling the movement of their cars. In general an 1800 switchboard is used at the office. Connected to the board are a number of telephones along the line at terminals, short-line points, important traffic centers and intersections, railroad crossings, canal or river crossings and company buildings. For protected places, standard magneto telephones of the 1317 type are used. For unprotected places the 1278 type telephone is better suited.

Im some cases it is advisable to equip the cars with portable sets of the No. 1330 or 1331 types, which can be connected to the line by means of No. 186 type jacks mounted on poles along the tracks.

#### Portable Magneto Telephone of No. 1375 Type

This is a complete portable magneto telephone for connecting to metallic or grounded lines and capable of ringing the bells on a heavily loaded circuit.

nging the bells on a heavily loaded circuit. The apparatus is compactly mounted on an aluminum frame which can be easily removed as a unit



No. 1375B

ne which can be easily removed as a unit from the case for inspection or adjustment when necessary. The line and ground terminals are conveniently mounted on a terminal plate directly under the cover. The equipment consists of a standard No. 1001 type hand set, induction coil, generator, 2150 ohm buzzer for receiving signals and a No. 703 Eveready dry battery.

and a No. 703 Eveready dry battery.

This portable telephone is especially adapted for line patrolinen and others who are frequently out of reach of a permanent telephone station and who must carry a light and compact telephone for communicating to headquarters quickly in an emergency.

The following equipment is intended for use with these sets, but will not be furnished unless specified in the order:

One bayonet type ground rod per Spec. D-313 provided with a brass scabbard and a 10 foot connecting wire for attaching to set.

One line connection wire per Spec. D-311 consisting of a 40 foot length of No. 11 B. & S. flexible rubber covered and braided copper wire, equipped with tips at each end and having a 4 inch bared space at the middle.

The usual method of connecting this telephone to the line is either by means of a line pole or by means of the line connecting wire. This wire is thrown over the line and held in such a position that the bared wire is in contact with the line wire, and either one or both ends of the wire being connected to one terminal of the telephone, the other terminal being connected either to the ground by means of a bayonet ground rod or other ground connection, or to the other line wire by means of another line connecting wire in the case of a metallic circuit.

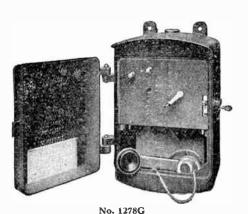
Code	Hand					List Price
No.	Set	Generator	Buzzer	Battery	Weight	Each
1375B	1001H	No. 29E	2150 ohms	No. 703 Eveready	$10^{1}_{2}$ lbs.	<b>\$74.40</b>
			LINE CONNEC	TING WIRE		
Spec. D-31	11		(As describ	ed above)		\$1.20

Spec. D-313 BAYONET GROUND ROD
(As described above)

\$6.00

#### STREET RAILWAY TELEPHONES

## No. 1278 Type



This is a weatherproof iron box telephone designed to be fastened to poles along a street railway line. The following apparatus is mounted on a removable base:

No. 48 type (5 bar A.C.) generator, ringer, induction coil, two fuses, two open space carbon cutouts, and automatic door switch which is operated by the opening and closing of the door, and a No. 25 type repeating coil. The repeating coil insulates all metallic connection between the line and telephone instruments. The ringing current and talking currents are both transformed through this coil either out over the line or into the instrument, as the case may be. Closing the door operates the door switch and disconnects the repeating coil from the line, and also breaks the local transmitter battery circuit. This prevents current from passing through the repeating coil except when the telephone is in use, and also prevents any unnecessary drain on the battery.

The lower part of the case is arranged to hold two dry cells and the No. 1001 type hand set and cord when not in use. The cord used is weatherproof and of sufficient length to enable the user to stand in a comfortable position while talking.

The No. 1278G telephone is provided with a lock so constructed that after the key has been inserted and the door opened the key is held tightly in place and cannot be removed until the door has been properly closed again. This serves to insure the closing of the door before the user returns to his car.

Code			Hand	Door		*List Price
No.	Generator	Ringer	Set	Lock	Fuses	Each
1278G	48C (5 bar A.C.)	51A (1000 ohms)	1001F	5B	Two 500 volt, 1 ampere	\$100.00
1278H	Same as No. 1278G	except that a hasp a	and staple	are subst	ituted for the 5B lock thus	On
	permitting stand	lard switch locks to	be used			request

\*The above prices do not include batteries; these should be ordered separately as desired.

# Portable Magneto Telephones in Wooden Cases



No. 1331E

These portable telephones are intended for connecting to regular bridging magneto lines, and are equipped with a standard local battery circuit.

They are contained in substantial wooden cases made of hard maple, having the corners reinforced with aluminum brackets. Cases are regularly furnished with a substantial leather suitcase handle. If so specified on the order, however, a broad leather shoulder strap can be furnished in place of the handle or in addition to it.

The Nos. 1330F and 1331F are equipped with a six foot cord and No. 146 plug for connecting with the line through a No. 186 pole jack.

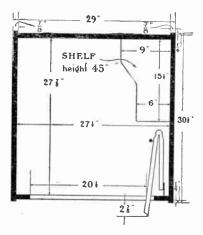
Condensers are not furnished unless so specified on order.



No. 1331E

	and cord	Ringers 32BG (2500 ohms) 3B buzzer		Service Heavy loaded lines		Approx. Weight Complete 28 lbs.	\$79.80
1331F		3B buzzer (2500 ohms)	22A (3 bar)	Light loaded lines	1 No. 792 Eveready	17 lbs.	On request

# Western Electric TELEPHONE APPARATUS



No. 2 Type (French)

the threshold is protected with safety tread.

# Telephone Booth

No. 2 Type Folding Door Telephone Booths (French)

This type booth makes use of a folding door which can be elesed and opened by pulling the handle. It remains in any position and will stay closed without the use of catches. There are no tracks upon the floor to gather dirt and become clogged. The ventilation is perfect. door, when operated, extends only four inches beyond the face of the booth. The interior sides, back and ceiling are lined with sheet metal The floor is of hard-wood and The booths can be furnished



No. 2 Type (French)

with five glass panels (two panels in upper part ofdoor, two panels in left hand side and one panel in right hand side, facing booth) or they can be furnished with two glass panels in upper part of door only. With each booth a shelf is furnished, intended as an elbow rest. The door is always hinged on the right hand side (facing booth). The booths are properly crated for shipping without additional charge. Booths will be shipped set up, unless order specifically reads "ship knocked down." In such cases an extra charge is made.

List			Lis	t Pr	ice Each
No.	Material	Finish			1 to 24
$2\Lambda$	Oak	Plain oak (2 glass panels in door)		)	
$^{2B}$	Birch	Dark mahogany (2 glass panels in left side )		- 1	
2C	Birch	Light mahogany (1 glass panel in right side)		. 1	
2G	Oak	Plain oak (2 glass panels in door only)		ĺ	On
2H	Birch	Dark mahogany (2 glass panels in door only)		Î	reguest
2.	Birch	Light mahogany (2 glass panels in door only)			request
Booth	seats (extra)				
Charg	ge for knockin	g down booths.			

#### FOLDING DOOR BOOTHS (SEAMAN)

These booths are made so as to occupy the smallest space possible, but roomy enough for the comfort of the user. By the folding door device no space outside of the booth is needed for closing and opening the door. The booths are substantially built and a shelf is furnished in every booth.

28	Folding door	Plain oak	\$120.00
28	Folding door		128.00
	SWI	INGING DOOR TELEPHONE BOOTHS (SEAMAN)	

These booths are sound proof and have double interchangeable walls forming a complete interior shell, surrounded by a complete exterior one with an air space between, thereby excluding outside noises. booths are equipped with a double door. Each door swings on its own set of hinges. Only one knob is used with the door. If not specified otherwise, the booths will be supplied with doors swinging to the right. Sides of glass of panels are made interchangeable so that when one glass side is ordered it may be placed either to right or left of the door at the option of the user.

List	Size-				List Price
No.	Outside	Inside	Finish	Glass	Each
20	$*32 \times 39 \text{ ins.}$		Plain oak	In door only	\$124.90
20		$32 \times 26$ ins.	Plain oak	In door and one side	135.00
21		$37 \times 32 \text{ ins.}$	Plain oak	In door only	145.10
21		$37 \times 32$ ins.	Plain oak	In door and one side	156.20
25	*31 $\times$ 37 ins.	$26 \times 32$ ins.	Plain oak	In door only	94 50
25	*31 x 37 ins.	26 x 32 ins.	Plain oak	In door and one side	101.30
20A		$26 \times 32 \text{ ins.}$	Plain oak	In door only	124.90
20A	*32 x 39 ins.	$26 \times 32 \text{ ins.}$	Plain oak	In door and one side	135.00
	*Not including shelf.	Shelf extra.			

Delivery F. O. B. Factory, Milwaukce, Wis. For warehouse deliveries write nearest house. All booths have the door on the wide side except when List No. is followed by capital "A," which indicates a booth with the door on the narrow end. Standard finish of the booth is plain oak. Prices for quartered oak, mahogany or cherry finish on request,

# TELEPHONE APPARATUS



# Lead Covered Telephone Cable

Cable for aerial and underground telephone use is composed of copper conductors, insulated with either one or two wrappings of paper, twisted into pairs and enclosed in a lead sheath. In general, cable with single wrapped conductors is recommended, since its electrical and mechanical characteristics are perfectly satisfactory for most conditions, and the cost is less than of cable with double wrapped conductors. Cable intended for interior construction usually has the conductors insulated with two servings of silk and one of cotton.

The insulated conductors may be enclosed in a sheath composed of commercially pure lead, an alloy of lead and tin, or an alloy of lead and antimony. Lead antimony sheath is recommended for aerial and underground construction. Lead-tin sheath can also be furnished if desired. Pure lead sheath is recommended for use only within buildings or in similar unexposed places. It is furnished, however, on cable intended for aerial or underground use where a cheap cable is desired.

# Extra Pairs

Extra pairs are placed in all cables containing conductors smaller than No. 16 gauge, to take care of any pairs which may become defective in manufacture. In the majority of cables, all or part of the extra pairs are good and may be used for additional circuits. All pairs of No. 16 gauge and larger, except in submarine cable, are guaranteed to meet the specification requirements when the cable leaves our factory.

#### **Prices**

Owing to the fluctuations of the market price of raw material, it is impracticable to list prices on cable in a catalog. We will be pleased, however, to furnish full information and prices on request.

# Special Cables

Special conditions often require cables with different characteristics from those which have been standardized and coded. There is a Western Electric cable to meet every requirement. If your condition necessitates special cable write our nearest house giving full details and information and price will be furnished. A brief description of some of the most important of special cables is given below:

# Submarine Cables

Paper insulated submarine telephone cable may be divided into three general classes, depending upon the use for which they are intended.

1. High dielectric strength, tight core cable, designed for use in rather long lengths, that is, in lengths such that the cost of repairing a break in the cable will be less than the cost of an entirely new cable.

2. High dielectric strength, loose core cable, designed for use in rather short lengths where high transmission efficiency and high dielectric strength are of importance; for example, a short river crossing cable connecting important open wire lines.

3. Single paper insulated loose core cable designed for use in rather short lengths where so high a dielectric strength is not necessary; for example, a short river crossing cable connecting land cables.

Either single or double armored cable can be furnished. In most cases, the single armored cable is

Either single or double armored cable can be furnished. In most cases, the single armored cable is sufficient mechanical protection. The double armored cable is used only in cases of extremely severe mechanical requirements. In still water with a mud bottom, a single armor will be sufficient. With a rocky and uneven bottom with strong tides and currents, double armor should be considered.

# Composite Cables

Composite cable, or cable composed of conductors of two or more gauges can be furnished. The combinations of pairs which will utilize the space within the lead sheath most economically are somewhat limited and our cable engineers will make recommendations along this line upon receipt of detail information as to the conditions to be met.

# 1200 Pair Cables

A 1200 pair No. 24 gauge cable has been developed for underground use with a mean outside diameter of  $2\frac{5}{8}$  inches. This type of cable is designed for short cables in congested districts.

# High Dielectric Strength Cables

Paper insulated cable designed to withstand potentials up to 1500 volts A.C. is manufactured for use where telegraph or signal circuits are to be carried through the cable.

**World Radio History** 

List Price Each

with 6 Ft.

\$14.50 18, 10 25.30

No. 22 B.&S.

Gauge Cable Attached

# TELEPHONE APPARATUS Cable Terminals No. 8 Type

WITHOUT PROTECTORS

This terminal is for open wire distribution from lead-covered aerial cable, and is arranged for attaching to poles. No arrangement is made for protective devices. A six-foot No. 22 B.&S. gauge cable stub is standard, and will be furnished attached to assembled List Price Each terminal, unless otherwise ordered. with 6 Ft.

Prices	are F. O. B. Hawth	norne, Ill.		with 6 lt.
Code No. 8A 8B 8C 8D 8E	Capacity Pairs 10 16 26 31	Overall Height (Less Cable Stub)  15 \frac{3}{16} 15 \frac{1}{16} 19 \frac{1}{16} 28 \frac{1}{16}	Diameter of Hood Inches 614 614 614 614 614	No 22 B.&S. Gauge Cable Attached \$12,50 13,70 18,30 20,90 28,60

# No. 14 Type WITHOUT PROTECTORS

This is for open wire distribution from lead-covered aerial cable, and is intended to be mounted on poles or buildings. No arrangement is made for protective devices. A six-foot No. 22 B.&S. gauge cable stub is standard, and will be furnished attached to assembled terminal, unless otherwise ordered.

Prices are F. O. B. Hawthorne, Ill.



No. 8 Type-

Cable Terminal

Open

Open Terminal No. 14C-Cable

Length Including Nipples $10\frac{3}{22}$ $12\frac{2}{3}$ $17\frac{2}{3}$	Width of Cover Inches $7\frac{7}{16}$ $7\frac{7}{16}$ $7\frac{7}{16}$
	Including Nipples 10 32 12 32

No. 18 Type

WITH PROTECTORS

This is a protected terminal for open wire distribution from leadcovered aerial and underground cable. Inclosed in a black finished galvanized iron cover approximately 8 % inches in diameter, provided with a safety chain fastened to the mounting base.

Arranged for mounting on poles. Equipped with:

No. 7A fuses (7 ampere unless otherwise specified).

No. 1 protector blocks. No. 2 protector blocks.

No. 3 protector micas.

A six-foot No. 22 B.&S. gauge cable stub is standard, and will be furnished attached to assembled terminal unless otherwise ordered.

Prices are F. O. B. Hawthorne, Ill.



Open Closed No. 18E Cable Terminal

# COIN COLLECTORS

# Electrically Operated—for Central Battery Service Only







No. 14 Mounted with a No. 1020 Desk Stand

## Coin Collector

#### NO. 7 TYPE

These are arranged so that a coin placed in the coin chute remains under control of the central office operator, who may refund or deposit it in the coin box. The coin collector is ordinarily connected to the telephone line so that it is necessary to drop a coin of the proper denomination into the box to signal central office. This saves considerable time on the part of the operator. It may be wired so that the coin need not be deposited until the operator requests it. The switchboard cord circuits must be arranged for operation in connection with these coin collectors.

All electrical circuits are insulated from the case. The case has a heavy black japanned finish.

Code		Ar	prox. Dimensions, Incl.	1)0	Tink Dates
No.	Arranged for	Length	Width	Depth	List Price Each
7J 7K	Nickels	$8\frac{3}{16}$	$5\frac{5}{8}$	47%	\$15.50
/ IX	Nickels	$11\frac{9}{16}$	$5_{16}^{13}$	4 5 0	15.90

The No. 7K has a larger coin box than the No. 7J.

# The Gray Automatic Pay Station

These coin collectors may be used on either local battery or central battery lines. The signals are given automatically on dropping the coin into the slot. No electrical connections are required.

Code No. 8A 11 13A .4	Type Wall Wall Desk Desk Desk	Coins Arranged for Nickel Nickel, Dime, Quarter Nickel Nickel, Dime, Quarter Nickel, Dime, Quarter	Approx. Size Inches $ 7  \times 3^3 \$ \times 3^1 \$ \\ 9  \times 4^1 \$ \times 3 \\ 9^1 \times 3^1 \$ \times 3^1 \$ \\ 11  \times 4^1 \$ \times 3^1 \$ \\ 10^3 \$ \times 4^1 \$ \times 3^1 \$ \\ 10^3 \$ \times 4^1 \$ \times 3^1 \$ \\ $	*List Price Each \$9.60 21.60 15.00 29.80 28.40
*17.0	D. II. of J. G.	trioner, sommy contrict	10/4 x 4/4 x 9/4	28,40

\*F. O. B. Hartford, Conn.

The above Code Nos. and prices cover the coin collector box only and do not include telephone nstrument.

#### Condensers

Used in telephones on party lines where ringing trouble often occurs, due to parties "listening in" or leaving their receivers off the hook.

Telephones equipped with one of these condensers wired in series with the receiver overcome this difficulty, and it is possible to ring satisfactorily on a line with several receivers of provided the telephones are so equipped.

List Price

Code No.

21W Magneto telephones, for wiring in series with receiver.

World Padio History

List Price Each

1 Mf. \$1.80



# TELEPHONE APPARATUS

#### Cords

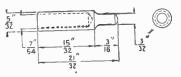
#### FOR TELEPHONE SETS

There is a Western Erectric cord to fit any telephone set or switchboard. If none of the cords described below meet your requirements, write us, sending if possible a sample cord (an old one will do) or a sketch, paying particular attention to the kind of tip required. Always specify length of cord when ordering.

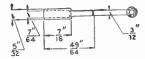
Wall Telephone Receiver Cords

Wall I Ciopilolio I to to the service of the servic						
Code No.	Description	Used with	Standard Length	Li Cord Tip	st Price Each	
	Two conductor tinsel cord, green silk covering.	Receiver on wall set	3 and 6 ft.	No. 29 (receiver end) No. 62 (set end)	\$0.60 1.10	
92	Two conductor tinsel cord, red and blue twisted covering	Receiver on wall set	2½ ft.	No. 62 (set end) No. 30 (receiver end)	.40	
454		Receiver on wall set.	3 ft.	No. 30 (both ends)	.40	
Desk Stand Cords						

	ering. Single conductor tin-	No. 1020 desk stand. Transmitter	 No. 62 (stand end) No. 29 (receiver end) No. 62 (stand end.)	.60
	covering.	1020 desk stand.	No. 56 (trans- mitter end)	, 22
550	Three conductor tin- sel cord, green silk covering.	No. 1020 desk stand to connect	No. 62 (both ends)	1,20

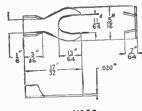


Nº61



N°29

Nº 30



Nº 62 Cord Tips

# DESK SET BOXES (Magneto)

desk

box.

For Use with Desk Stands, Telephone Arms, etc., on Magneto or Local Battery Lines

Used with No. 1020AL desk stand and Nos. 1020AC, 1048AA, AB and AC telephone arm.

# Nos. 300 and 315 Types

Oak boxes equipped with induction coil, and with ringer, generator and condenser as indicated below.

# RINGERS OPERATED BY ALTERNATING CURRENT Code Ringing

			-		
Code No.	Ringer Resist- ance Ohms	Type Generator	Con- denser	Service	List Price Each
315H 300K 300N 300L 300M 300AA 300AB	2500 2500 1600 1600 2500	No. 22 (3 bar A.C.) No. 48 (5 bar A.C.) No. 48 (5 bar A.C.) No. 48 (5 bar A.C.) No. 48 (5 bar A.C.) No. 50 (3 bar A.C.) No. 50 (3 bar A.C.)	1 Mf.	Light loaded lines Heavy loaded lines Heavy loaded lines Medium loaded lines Medium loaded lines Heavy loaded lines Medium loaded lines Medium loaded lines	\$18,80 20,60 21,90 20,20 21,60 20,00 19,70

# Desk Stands

Code No.

Description

Finish

Black

1020AL For regular bridging magneto service. Insulated transmitter. Includes 1 No. 20-AL desk stand, 1 No. 329 transmitter, 1 No. 143AW receiver and cords and page 1 No. 143AW receiver and cords are the cords and page 1 No. 143AW receiver and cords are the cords and page 1 No. 143AW receiver and cords are the cords and page 1 No. 143AW receiver and cords are the cords are t

List Price Each \$13.30

No. 1020 AL



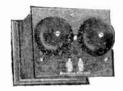
Nos. 300 and 315 Type Desk Set Boxes

# TELEPHONE APPARATUS

# Extension Bells

# FOR ALTERNATING CURRENTS

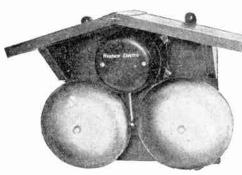
These extension bells are intended for auxiliary use in connection with wall, desk or telephone arm telephones. They consist of a ringer on a suitable mounting and two line terminals or binding posts.



No. 127 Type



No. 392 Туре



No. 342 Type



Mica Fuse, Western Union Style



Mica Fuse, Postal Style





No. 12A

They are suitable for magneto bridging non-selective service only.

Ringer mounted in an oak box. Approximate dimensions, width  $6\frac{1}{2}$  inches; height  $4\frac{1}{8}$  inches; depth  $4\frac{5}{8}$  inches.

menes.			T. L. D. L.
Code	Ringer	Resistance	List Price
	No.	Ohms	Each
No.		1000	\$7.10
127E	38AG	* 0	
127F	38BG	2500	7.80
127G	38FG	1600	7,40
12171	90. 0		1 11 1

No. 392 type moisture-proofed loud ringing bells having a black finish metal cover and base with galvanized finish gongs.

When the extension bell is to be used on a central battery line a condenser must be connected in series with the ringer coils.

Base is arranged for mounting a No. 21D condenser. Condenser is not furnished, however, unless so ordered. The connecting leads to the ringer coils are so arranged that the condenser can be easily connected in series with the ringer without disturbing the line wires when desired.

		-	
Code	Resistance	Diameter	List Price
No.	Ohms	Gongs	Each
392A	1000	6 ins.	<b>\$</b> 13.50
39213	2500	6 ins.	14.70
392E	1600	6 ins.	14.10
392G	1000	8 ins.	On request
392H	2500	8 ins.	On request
ジジーエエ			•

Biasing attachment for selective ringing can be added if desired.

No. 342 type loud ringing bells for use in mines and other places where a bell protected from weather is desired. Consists of a No. 392 type bell mounted on a No. No. 149A backboard having a sloping roof which protects the bell from falling water and other substances.

teetis une	1) (11 11 () 11 - 0			
Code	Bell	Resistance	Diameter	List Price
No.	Used	Ohnis	Gongs	Each
342G	392G	1000	8 ins. O	n request
34211	392H	2500	8 ins. ()	n request
342J	392A	1000	6 ins. O	n request
342K	392B	2500	6 ins. C	n request
OTHIL	000			_

#### Mica Fuses

These fuses are furnished either with copper or foil tips, and in either Western Union or Postal style. The fuse is mounted on a mica base, or inclosed between two strips of mica.

When ordering, always specify ampere capacity desired and it is best to send sample of fuse wanted (an old one will do). If this is not possible, be sure and give the following information:

Length.
Style (whether Western Union or Postal).
Kind of terminals or tips (copper or tin foil).
Use (whether for exchange or telephone protection).

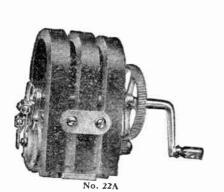
# Tubular Fuses With Fiber Shell

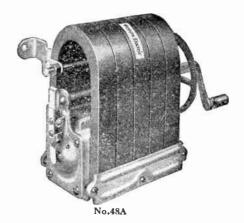
These fuses are regularly furnished in 7 amperes capacity unless otherwise specified, although fuses of from 1 to 8 amperes capacity can be furnished if so ordered. The No. 12 fuse contains a heat coil.

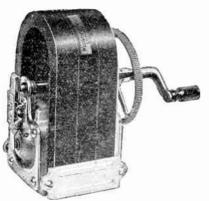
			List Price Each	
Code	Used with	Less	20	50
No.	Protectors Nos.	than 20	to 50	or More
11C	58A, 58B	\$0,40	\$0.30	\$0.28
12A	12A	.90	.70	.60

# Western Electric

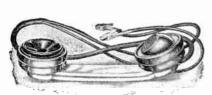
# TELEPHONE APPARATUS







No. 50F



No. 1901A



No. 1002AC

# Hand Generators

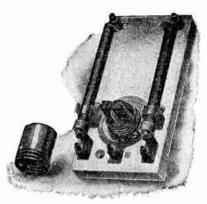
No.	No. or Bars	Current	Armatur Normally		List Price Each
22A	3	Alternating		Magneto tele phone sets an switchboards	d \$8.80
48A	5	Alternating	Closed	{ Magneto telephones	11.80
48B	5	Alternating and pulsating	Closed	{ Magneto telephones	13.20
50A	3	Alternating	Closed	Magneto telephones	10.00
50C	3	Pulsating	Closed	{ Magneto telephones	11.10
50E	3	Alternating and pulsating	Closed	( Magneto telephones	11.40
*50F	Same as	50A, but design	ed for 13	17C type tele-	
*5001	same as	50C, but design	ed for 13	17C type tele-	10.00
*50H	<ul> <li>phones</li> </ul>	50E, but design			11.10
	phones	3		······································	11.40

#### Hand Sets

	riand Sets	
Code		Tink Date.
No.	Description	List Price
1001A	For use as a lineman's test	Each
100111	For use as a lineman's test set on central bat-	
	tery lines. Equipped with No. 244W trans-	
	mitter, No. 131W receiver and 3 ft. No. 348	
	cord which has two amin a 1	
1000 171	cord which has two spring clips	\$15.90
1002.10	For use in place of a regular magneto	
	bridging or central battery desk stand or	
	transmittar ann E-in 1 11 37	
	transmitter arm. Equipped with No. 141W	
	receiver, No. 267W transmitter, 41/2 ft.	
	No. 318 cord	10.00
		18.20

# Induction Coils

Code	Dimensions	madetion Colls	
No.	Inches	Used In	List Price Each
13 1	$\times 1\frac{5}{32} \times 3\frac{1}{4}$	All standard bridging magneto tele-	Тасц
		phones	<b>A1</b> 00



No. 12A Protector

#### e e

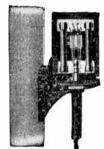
# TELEPHONE APPARATUS Weatherproof Jacks

#### No. 186 Jack—Open with Cast Iron Cover Removed

No. 186. Weatherproof jack designed for mounting poles; affords a means of connecting a portable telephone to the line. Contains protective apparatus.

List Price Each

Lock will be furnished if specified in order...... \$15.25



Weatherproof Jacks

# Was Inches

No. 58A Protector



No. 60A Protector



No. 1



No. 2



No. 19



No. 20

#### **Protectors**

#### FOR TELEPHONES

## No. 12 Type

Code No.	Protection against	Consists of	ist Price Each
12A	Lightning, crosses with electric circuits and sneak currents.	2 No. 12A 7 ampere fuse with heat coils, 2 carbon blocks and mountings.	

#### No. 58 Type

58.1	Lightning and erosses with electric circuits.	2 No. 11C 7 ampere fuses, 2 carbon blocks and mountings.	\$2.30
58B	Lightning and crosses with electric circuits.	2 No. 11C 7 ampere fuses, 2 copper blocks and mountings.	2.70

#### No. 60 Type

60A	Lightning.	2 carbon blocks and mountings.	\$1.10
60B	Lightning.	2 copper blocks and mountings.	1.70

Note: The No. 12A is recommended in all cases except where the entire telephone system is entirely removed from all other electric lines. In these cases the No. 60 can be used.

# Protector Blocks

			-Used v	with——	List	Price Each	
Cod No.		Protector Blocks	Protec	etor	Less than 20	20 to 50	50 to 200
1	Plain carbon block with fuse metal.	No.' 2	No. 3	3 Nos.12A,58A, 60A	\$0.30	\$0.10	\$0.06
2	Grooved carbon block without fuse metal.	No. 1	No.	3 Nos.12A,58A, 60A	, .30	.08	. 04
19	Plain copper block with two pins.	No. 20	No. 10	0 Nos.58B 60B	,30	.20	. 16
20	Grooved copper block with two bushings.	No. 19	No. 10	0 Nos.58B,60B	.30	.20	. 16

# TELEPHONE APPARATUS



No. 3 Protector Mica



No. 10 Protector Mica



No. 128W



Nos. 143AW and 144AW

# **Protector Micas**

		Used With————			
Code No. 3	Protector Blocks Nos. 1 and 2 Nos. 19, 20 and 21	Protectors Nos. 12A, 58A and 60A	Less than 20 \$0.30	—List Pr 20 to 50 \$0.10	ice Each— 50 to 200 \$0.07
10	Nos. 19, 20 and 21	Nos. 58B and 60B	.30	. 18	.12

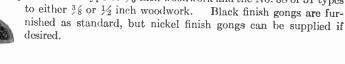
# Receivers

Code No. *143AW	Description Concealed binding post hand receiver,	Used With List Pric	
*144AW	composition case. Same as No. 143AW, excepting the case is	Telephone sets, desk stands, telephone arms, etc	С
*128W	hard rubber. Standard bipolar head receiver, hard rubber case.	operator's telephone set, all switch-	0
*Cord	not included must be endamed some state.	boards 5.30	0

<sup>\*</sup>Cord not included; must be ordered separately.

# Ringers

The ringers listed below have gong posts suitable for either ½ or 5% inch woodwork, as indicated; spacers can be furnished, however, to adapt the No. 53 type to 3% inch woodwork and the No. 38 or 51 types





No. 51 Type

	12 h 4 27			14 Ounts in		
	Rosst	Go	ngs	Wood~		List
Colo	ance	Code	Diam.	work		Price
No.	Ohms	No.	Ins.	Ins.	Use	Each
38AG	1000	26A	3	5/8		\$4.70
38BG	2500	26A	3	5/8		5.40
38FG	1600	26A	3	5/8		5.10
51AG	1000	25A	$2\frac{1}{2}$	5/8	Local	4.70
51BG	2500	25A	$2\frac{1}{2}$	5/8	battery	5.40
51FG	1600	25A	$\overline{2}\frac{1}{2}$	5/8	(magneto)	5.10
53AG	1000	25A	$2\frac{1}{2}$	1/2	telephones	4.70
53BG	2500	25A	$2\frac{1}{2}$	1/2	borchiones	5.40
53FG	1600	25A	$2\frac{1}{2}$	1/2		5.10



#### TELEPHONE APPARATUS

# Magneto Test Sets

NO. 1017 TYPE

A wooden box telephone test set equipped with a regular local battery talking circuit consisting of a No. 266W transmitter, No. 13 induction coil, No. 145W receiver and a special three-cell dry battery unit.



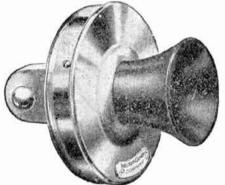
No. 1017B Test Set

#### MAGNETO TESTING SETS

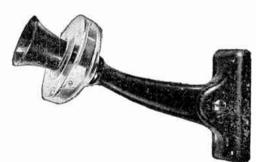
Each set consists of a hand generator and a ringer, wired in series, and inclosed in a wooden case,

1740	rach set consists of a name generator and a ringer, when in series, and melosod in a wooden case,					
Code				Size of Case		List Price
No.	Will Ring Through			Inches	Finish	Each
90530	$10000  \mathrm{ohms}$	1 No. 22 Type Generator				
		1 No. 18A Ringer		$5\frac{3}{4} \times 6\frac{5}{8} \times 5\frac{1}{4}$	Birch	\$16.50
90510	$35000 \mathrm{\ ohms}$	1 No. 22K Generator				
	W0000 1	1 Special No. 19 Type Ringer		$5\frac{3}{4} \times 6\frac{5}{8} \times 5\frac{1}{4}$	Birch	16.70
90511	$50000 \mathrm{\ ohms}$	1 No. 22N Generator			w	
00210	*00000 *	1 No. 19A Ringer		5% x 6% x 514	Birch	17.00
90512	$100000 \mathrm{~chms}$	1 No. 22N Generator		E9/ 05/ E1/	T): 1	1= 40
		1 No. 19B Ringer			Birch	17.60
Code				ing Size of Case		List Price
No.		Service		Inches	Finish	Each
1017B	For lightly loade	d lines—it will ring 15 2500 ohm bells	Š		∫ Birch	
		ile No. 12BB iron metallic line			l Mahogan	y \$36,50
1017C		oaded lines—it will ring 33 2500 ohm			Birch	
	bells over a 15	mile No. 12BB iron metallic line	8 lbs.	$4_{32}^{27} \times 6_{32}^{3} \times 7_{32}^{27}$	( Mahogan)	y = 43.50

Note: The No. 1017C test set differs from the No. 1017B only in that it is equipped with a specially designed high efficiency generator. The No. 1017B will, under ordinary conditions, be found entirely satisfactory, but in case a more powerful set is required to meet unusual conditions, the No. 1017C set has been developed.



No. 329W



No. 350W

# Transmitters for Telephones

Code No.	Description	Use	List Price Each
329W	High resistance, insulated transmitter. Provided with mounting hig and clamping bolt. Nickel-plated ease. Similar to No. 311W except provided with clamping bolt.	Magneto and central battery desk stands and telephonearms.	\$4.70
350W	High resistance, insulated, bracket type transmitter. Equipped with two cords. Nickel-plated case with black finished bracket and arm.	Magneto and central battery wall tele- phones, requiring a bracket type trans- mitter.	5,30
355W	High resistance, insulated transmitter. Arranged to mount on an iron bracket of the type which forms a part of the No. 350W transmitter. Not provided with mounting lug. Nickel-plated case.	Magneto and central battery wall type telephones.	4,10

147 AC or CC For Mounting on Top of Flat Top Desk

# ADJUSTABLE TELEPHONE BRACKETS Western Electric No. 147 Type Telephone

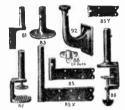
Designed and manufactured by the Western Electric Company to meet the most severe telephone bracket service. This bracket is made with precision, from special high-grade material, which results in a serviceable, durable and long-wearing bracket. The clamp will fit any desk telephone with a cylindrical stem 1 inch to 1¼ inch in diameter.

Code		-Lengtl	h, Inches-	<ul> <li>Price</li> </ul>
No.	Mounts on:		Extended	
147AA	Side of roll top desk	81/4	24	\$13,20
147AB	Wall or side of flat top desk	814	21	-13, 20
147AC	Top of flat top desk	81/4	24	13,20
147CA	Side of roll top desk	10	36	17,20
147CB	Wall or side of flat top desk	10	36	17.20
147CC	Top of flat top desk		36	17.20

# Western Electric "EZ" Type Telephone Bracket

Can be moved up and down; stops in Can be moved up and down; stops in any convenient position and revolves on its base. Finished in black. Desk stand cord supported and kept out of the way. Clamps for all types of cylindrical and convex stems. Furnished for mounting to any style desk or wall. When ordering specify type of desk stand used and mounting wanted.

E-Z Type Telephone Bracket, height 24 ins., weight 3 lbs. \$6.00 Prices are for bracket complete with No. 81, 83, 85, 85X,85Y, or 88 mounting and any style clamp.



"EZ" Type Mountings



Extra Features:

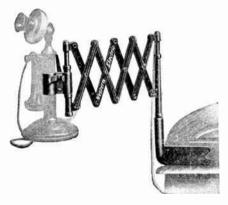
When the "EZ" telephone bracket is equipped with a No. 82 or No. 86 mounting add \$1.40 each to the above price; or, No. 96 extension attachment add \$0.90 each to the above price; or No. 93 twin attachment and \$0.90 each to the above price.

#### MOUNTINGS

No. 81 is used on wall or side of flat top desks.\*
No. 83 is used on top of flat desk.
No. 85 is used on either side of flat or roll top desk.
No. 85X is used on either side of flat or roll top desk.\*
No. 86 clamps on edge of flat top desk.\*
No. 94 is used on wall or partition.

**CLAMPS** Clamp fits desk telephones with convex shaped stem.\* Clamp fits desk telephones with cylindrical stem. Clamp fits desk telephones with tapering stem.\*

\*Not stocked. Furnished on order.



Type "S" Bracket

No. 1 No. 2 No. 3 For use on side of flat or roll top desk.

No. 1 For use on side of flat or roll top desk.
No. 2 For use on top of flat top desk.
No. 3 Clamps on edge of flat top desk.\*
No. 4 For use on wall or partition.
No. 5 For use on side of flat top desk.\*
No. 6 For use on side of roll top desk.\*
No. 6 For use on side of flat or roll top desk.\*
No. 7 For use on side of flat top desk.\*
No. 10 Attachments fits any mounting and holds two brackets.\*

CLAMPS

No. 20 Clamp fits telephones with a cylindrical stem. No. 21 Clamp fits telephones with convex shaped stems.\* \*Not stocked. Furnished on order only, Delivery F. O. B. Hawthorne, Ill.

# Western Electric "S" Type Telephone **Bracket**

This bracket is of the "folding gate" type, revolves on its own base. Furnished in 24 and 36 inch lengths. The stand swivels on the front rod. The bracket can be furnished for mounting on any style desk or wall. Desk stand cord supported and kept out of the way. Clamps for various types of cylindrical and convex stems. Black finish. When ordering specify type of desk stand used and mounting wanted. mounting wanted.



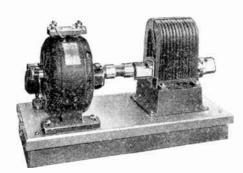
Type "S" Mountings

W. E.	Length of Bracket	Approximate	*List Price
Type	Extended	Shpg. Weight	Each
S-8	24 ins.	5 lbs.	\$7.00
S-14	36 ins,	6½ lbs.	10.00

"The above list prices cover the complete equipment for each bracket: One mounting, one receiver hook, one telephone clamp, one set of eyelets for holding eord, but do not include desk stand. MOUNTINGS

# Western Electric

#### RINGING MACHINES



# Motor Generator Ringing Sets

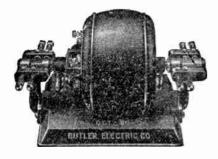
Western Electric motor generator ringing sets consist of direct current or single phase 60 cycle alternating current motors direct connected to magneto ringing generators. These sets furnish alternating ringing current only at 80 volts, 19 cycles. An attachment for obtaining positive and negative pulsating current is, however, available. These direct connected motor generator sets form a very compact, serviceable unit.

Code No.	Motor Volts	Output Watts	Code No.	Motor Volts	Output Watts
310077	115 D.C.	7	310087	110 A.C.	15
310078	230 D.C.	7	310088	220 A.C.	15
310079	115 D.C.	11			
310080	230 D.C.	11			
310081	115 D.C.	15			
310082	230 D.C.	15			
310083	110 A.C.	7			
310084	220 A.C.	7			
310085	110 A.C.	11			
310086	220 A.C.	11			

The above sets operate at a speed of 1150 R.P.M. Prices on application.

Orders should read:

No. . . . . Ringing Machine to give an output of . . . watts at 80 volts and to operate on . . . . volts . . . . eycles; equipped with pulsating current attachment (if desired).



# Rotary Pole Changers

These rotary pole changers are in reality rotating interrupters, consisting of a direct or alternating current motor with a commutator for interrupting the current. They are suitable for use in telephone central offices, serving a maximum of 1500 subscribers.

	Voltage Required	Power	Special Transformer	Kind of Current
Code No.	to Operate	Consumption	Required	Furnished
A-24	24 volts D.C.	8 watts	Yes	A.C. only
A-36	36 volts D.C.	8 watts	Yes	A.C. only
A-110 D.C.	110 volts D.C.	8 watts	No*	A.C. only
A-220 D.C.	220 volts D.C.	8 watts	Yes	A.C. only
S-24	24 volts D.C.	8 watts	Yes	A.C. and pos. and neg. puls.
S-36	36 volts D.C.	8 watts	Yes	A.C. and pos. and neg. puls.
S-110 D.C.	110 volts D.C.	8 watts	No*	A.C. and pos. and neg. puls.
S-220 D.C.	220 volts D.C.	8 watts	Yes	A.C. and pos. and neg. puls.
A.C. 110	110 volts $\Lambda$ .C.	8 watts	Yes	A.C. and pos. and neg. puls.
A.C. 220	220 volts A.C.	8 watts	Yes	A.C. and pos. and neg. puls.

<sup>\*</sup>Transformer required if one side of lighting circuit is grounded.

Ringing current for A.C. 110 and A.C. 220 must be taken from exchange batteries.

Prices upon application.

#### Orders should read:

No......rotary pole changer to operate from .... volts .... eyeles with special transformer for .... volts D.C.

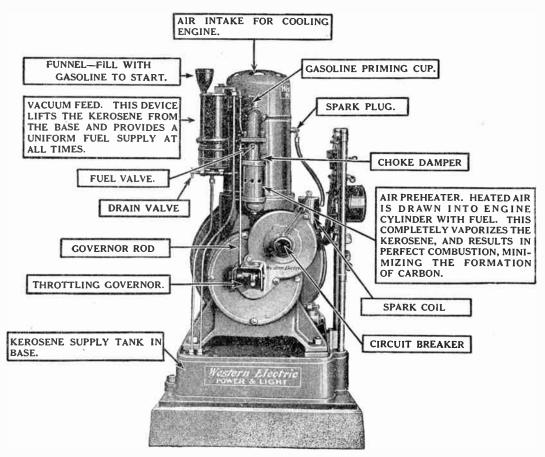
## Western Electric

#### CHARGING MACHINES

#### **Battery Charging Units**

AUTOMATIC REGULATED (DIRECT-CONNECTED)

Battery Charging Unit for Charging Telephone Storage Batteries



15 DCT. Set

This set consists of 3½ horsepower air cooled engine, directly connected to the generator and mounted together with control panel on one base.

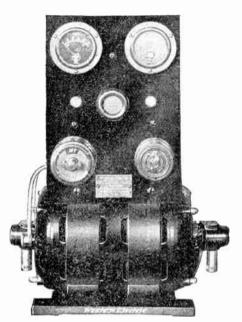
The engine will operate either on kerosene or gasoline. The supply tank is located in the base, pumping done by vacuum feed.

Splash system of oiling, perfect lubrication, no waste.

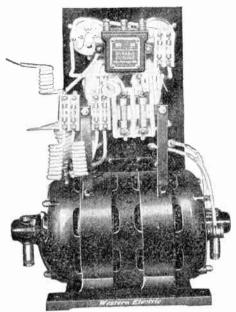
This set is ideal where it is desirable to have an auxiliary source of power for charging telephone storage batteries.

Tell us your requirements and let us quote.

# CHARGING MACHINES



Battery Charging Unit, Front View



Battery Charging Unit, Roar View

# Battery Charging Units

Western Electric MIC and MCC type two-bearing motor-generator sets have been combined with a switchboard panel, arranged for mounting directly on the machine framework, to form battery charging units.

#### SIZE AND CAPACITY DATA

-Storage Battery to Pe Chargerl-		——————————————————————————————————————				Fuses		
Туре	8 Hour Discharge Rate Amperes	Output of Charging Unit Amperes	A.C. 60 110 Volt Code No.	Cycle—— 220 Volt Code No.	D.C 110 Volt Code No.	220 Volt. Code Na.		Capacity uired Discharge
BT	0.75	5	1531	2531	3531	4531	3	1
CT	1.50	5	1532	2532	3532	4532	3	2
PT	3.0	5	1563	2563	3563	4563	(;	3
$\mathbf{ET}$	4.5	5	1565	2565	3565	4565	£'i	5
В	.625	5	1531	2531	3531	4531	3	1
C-3	1.25	5	1532	2532	3532	4532	3	2
C-5	2.5	5	1533	2533	3533	4533	3	3
C-7	3.75	5	1565	2565	3565	4565	G	5
D-3	2,5	5	1533	2533	3533	4533	3	3
D-5	5.0	5	1565	2565	3565	4565	G	5
D-7	7.5	10	1000	2000	3000	4000	10	10
D-9	10.0	10	1000	2000	3000	4000	10	10
E-5	10.0	10	1000	2000	3000	4000	10	10

The speed of all sets is 1750 R.P.M.

#### Prices on Application

Orders should read:

1—Code No. 1565 Telephone Battery Charging Unit.

**World Radio History** 

#### WIRELESS PRACTICE SETS

# FOR LEARNING THE MORSE AND CONTINENTAL CODES



The key, buzzer and three binding posts are mounted on the polished hardwood base and so connected that the set may be used for individual code practice or for the operation of a 2-party line, an excellent method of quickly learning the codes. Full directions with each outfit.

List No. 342	Wireless Practice Set, with dry battery and cord	Mfrs. List Price \$3.00	W. E. List Price \$4.20
344	Wireless Practice Set only, no battery or cord	2.75	3.86
$\frac{51}{251}$	Key only	1.60 ,80	$\frac{2.24}{.96}$



List No. 53

This set is similar to our No. 342 except that it has an induction coil mounted on its base, which allows the operator to use his standard radio head set. This set is particularly adapted for instruction purposes to classes of wireless students. Diagram of connections with each instrument.

		Mfrs.	W. E.
List		List	List
Xo.		Price	Price
53	Wireless Practice Set	\$4.50	\$6.30



List No. 52

Consists of a key, buzzer, socket, lamp, binding posts, switch and dry battery with four feet of green silk-covered, flexible cord. The efficiency of a wireless operator is gauged by his ability to read both sound and light signals, and this practice set offers the means of acquiring efficiency in both.

		Mfrs.	W. E.
List	•	List	List
No.		Price	Price
52	Wireless Praetice Set	\$4.00	\$5.60



List No. 54

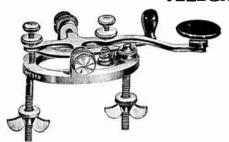
This outfit consists of a key, buzzer, lamp, socket, switch, binding posts, induction coil, dry battery and four feet of green silk double conducting cord.

The induction coil permits the operator to use standard radio head sets (any number in parallel) with maximum efficiency. This set enables the student to acquire both sound and sight signal instruction and is of special value to schools and colleges having a course in radio telegraphy on their curriculum. Diagram of connections with each instrument,

List No.		Mfrs. List Price	W. E. List Price
54	Wireless Praetice Set	\$5.00	7.00

#### TELEGRAPH APPARATUS

Western Electric





No. 103 With Legs

No. 108 Legless

# Steel Lever Keys

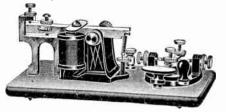
The lever and trunnion are made of one piece of fine wrought steel, polished and nickel plated, giving a perfect bearing and avoiding the loose trunnion trouble so common in other types. All other metal parts finely finished and lacquered.

Each key is fitted with improved adjustment spring holder.

Both knobs are of hard composition rubber.

The durability, lightness and quick action of the steel lever pattern are recognized by experts and operators. The Postal and Western Union Telegraph Companies have adopted this type as their standard.

List		Mfrs.	*W	. E. List
No.		List		Each
103	Key, with nicke-plated lever, brass frame, with legs	\$2.20		\$3.08
105	Key, with nickel-plated lever, and frame, with legs	2.60		3.64
106	Key, with silver-plated lever, and frame, with legs	3.50		4.90
108	Key, with nickel-plated lever, brass frame, legless	2.40		3.36
109	Key, with nickel-plated lever, and frame, legless	2.80		3.92



No. 178 Eureka Type



No. 180 Excelsior Type

## Eureka Learner's Instrument

The Eureka Instrument is a first-class, standard size telegraph set. All of the working parts—which includes key lever, sounder lever, sounder yoke or anvil, adjusting screws, etc.—are finely finished composition metal, such as is used in all high-grade instruments. Sounder base is japanned, striped with gilt. The base is mallogany and highly polished. The key is of the steel lever pattern, and sounder gives a loud, clear and distinct sound.

Key knob and circuit closer knob are of polished hard rubber composition.

This instrument will operate on a single standard dry cell. But key must be left open when not in use.

List

Mfrs. \*W. E. List

List		Mfrs.	*W	. E. List
No.		List		Each
178	Eureka Telegraph Instrument, 5 ohms	\$3.20		\$4.48
179	Eureka Telegraph Instrument, 20 ohms	3.50		4.90

#### Excelsior Learner's Instrument

The Excelsior Learner's Instrument is designed to fulfill all the requirements of a short line apparatus at the least possible cost.

The sounder magnets, lever, anvil and key lever are the same as used on the Eureka outfit.

The frames for holding sounder lever and key lever are stamped from wrought iron and heavily japanned. This method of assembling insures permanent adjustment of the side motion of both key and sounder lever as there are no screws to become loose.

The base is manogany finish highly polished.

This is a neat and compact learner's instrument and will give entire satisfaction on lines up to five miles length.

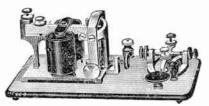
in length.		
List	Mfrs.	*W. E. List
No.	List	Each
180 Excelsior Telegraph Instrument, 5 ohms	\$2.70 .	\$3.78
181 Excelsior Telegraph Instrument, 20 ohms	3.00 .	4.20
771.7 0.7 1	**	. •

Either of the above sets can be furnished with key and sounder separate. Prices on application. A copy of "Philosophy and Practice of Morse Telegraphy" is furnished gratis with each set. \*Delivery F. O. B. Factory, New York City. For warchouse deliveries write nearest house.

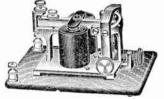
136

140

## TELEGRAPH APPARATUS



No. 135 Main Line Sounder with Key



No. 136 Main Line Sounder Only

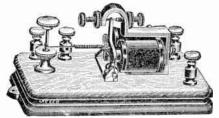
#### Main Line Sounders

This sounder is recommended for wrecking, testing, switchboard or temporary office use, and all places where it is desirable to dispense with local batteries.

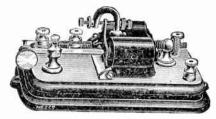
They are made with full size relay magnets of 150 ohms resistance having a special armature adjustment and are fully suited for doing in a greatly improved manner the work of regular main line box relays. They are sensitive to weak currents, giving a clear working sound on currents where, without them, a relay with local sounder and battery would be absolutely necessary.

	Main Line Sounder With Key			
List		Mfrs.	*7	7. E. List
No.		List		Each
135	150 ohms, with key	\$12.00		\$16.80
138	250 ohms, with key	12.70		17.78
	Special resistances to order.			2

# Main Line Sounder Without Key 150 ohms without key \$10.00 \$14.00 250 ohms without key 10.70 14.98



No. 115 Standard Pony Relay



No. 125 Commercial Standard Type

# Standard Pony Relay

## Mounted on Polished Mahogany Base, with Metallic Sub-Base

This relay will operate on lines up to 20 miles, with perfect ease, in cases where main line sounders fa to give satisfaction.

List		Mfrs.	*W.	E. List
No.		List		Each
114	5 ohms for burglar alarm work.	\$3.60		\$5.04
115	20 ohms for lines up to 10 miles	3.60		5 04
116	50 ohms for lines 10 to 30 miles.	3.90		5.46
118	75 ohms for lines 30 to 50 miles	4.20		5.98

# Commercial Standard Relay

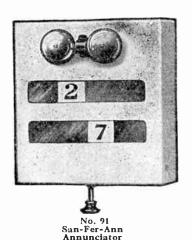
This instrument embodies all modern improvements.

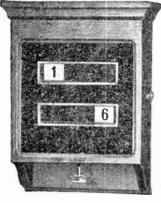
Polished rubber-covered coils, mahogany base, ornamental sub-base and extension adjustment.

125	150 ohms resistance	\$8.00	 \$11.20
145	250 ohms resistance	8.70	 2.18

<sup>\*</sup>Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

### LOCK GRAVITY DROP ANNUNCIATOR







Dixie No. 81 Lock Gravity Drop Type

Cadet No. 82 Lock Gravity Drop Type

# The San-Fer-Ann

### Sanitary Steel Annunciator No. 91

No. of	Arr of	1)rops——		Outside Dimensions-		W. E.
Drops	Across	Down	Width, Ins.	Height, Ins.	Depth, Ins.	List Price
2	2	1	678	43/4	$2\frac{1}{8}$	\$11.84
3	3	1	67/8	43/4	$2\frac{1}{8}$	13.40
4	4	1	67/8	43/4	$2\frac{1}{8}$	14.88
5	3	2	67/8	$7\frac{1}{4}$	$2\frac{1}{8}$	16.32
6	3	2	$6\frac{7}{8}$	$7\frac{1}{4}$	$2\frac{1}{8}$	17.60
8	4	2	67/8	$7\frac{1}{4}$	$2\frac{1}{8}$	20.74
10	5	2	81/4	$7\frac{1}{4}$	$2\frac{1}{8}$	23.60
12	4	3	$7\frac{1}{8}$	9	21/8	26,48

Dimensions do not include bell or reset rod, for which add 11/4 inches to height for reset rod and 1 inch to depth for bell. Finish: White enamel with nickel trimming. All other finishes special. 13 to 24 drops, add to list per drop. 25 drops and over add to 12 drop list for each additional drop.....

THE DIXIE No. 81

The Dixie Annunciator meets the requirements of all classes of services where a moderate priced annunciator is desired. Each is packed neatly in an individual pasteboard carton with the style and type of contents marked plainly on the label. The glass is enameled, the openings for drops edged with gilt. This annunciator is equipped with Dixie bell. Not furnished in any special finishes or in other arrangement of drops than given. Finish: Filled and varnished \*oak only.

### THE CADET No. 82

This annuncator is the same as the D.xie except that it is more elaborate in design and finish, and is equipped with Cadet Bell. Finish: Filled, varnished and oil-rubbed \*oak. For other finishes prices on Outside Dimensions Nos. 81and 82application.

No, of	———Arr. of D	rops	Width	Height	Depth	—W. E. Lis	t Prices—
Drops	Across	Down	Inches	Inches	Inches	No. 81	No. 82
<b>2</b>	2	1	8	85/8	3	\$8.96	\$10.24
3	3	1	8	85/8	3	10.40	11.68
4	4	1	8	85/8	3	11.84	13.12
5	3	2	8	101/4	3	13.60	14.72
6	3	2	8	$10\frac{1}{4}$	3	14.88	16.00
7	4	2	8	$10\frac{1}{4}$	3	16.32	17.60
8	4	2	8	$10\frac{1}{4}$	3	17.60	19.04
10	5	2	$9\frac{3}{4}$	$10\frac{1}{4}$	3	20.64	22.08
12	6	2	$11\frac{1}{4}$	$10\frac{1}{4}$	3	23.52	24.88
Lai	rger sizes: 13 to 55 dr	ops, add per di	rop list			7.00	2.16
	56 and ove	r, add per drop	list			2.56	2.72

## Special Finish, Lettering and Setback for No. 82 Only

For mahogany, add to list 25%. For white enamel finish, add to list:

2 to	10 drop	\$10,00	21 to 50 drop	\$18.80
11 to	20 drop	13.76	Over 50	23.76

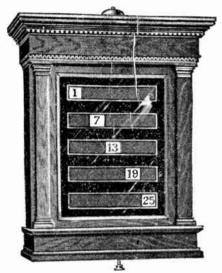
Lettering on glass, up to 10 letters, list, \$1.60; each additional letter, list, 11 cents. For electrical reset up to 20 drops, add \$18.80, over 20 drops add \$37.60. For automatic reset up to 20 drops, add \$20.00, over 20 drops add \$40.00.

### Lamp Signal Attachment Add to List \$11.20

Prices do not include lamp.
\*Delivery F.O.B. Factory, New York City. For warehouse deliveries write nearest house.

# GRAVITY DROP ANNUNCIATORS





Arrow No. 125

No. 213

# THE ARROW NOS. 125-WOOD CASE-AND 125M-METAL CASE

			(	Juliside Dimension	s	w.	E. List——
No. of	Arr. of I	Orops——	Width	Height	Depth	No. 125	No. 125M
Drops	Across	Down	Inches	Inches	Inches	Wood Case	Metal Case
$^2$	2	1	$6\frac{1}{4}$	$6\frac{1}{4}$	33/4	\$9.98	\$12.03
3	3	1	$7\frac{7}{8}$	$6\frac{1}{4}$	$3\frac{3}{4}$	12.03	14.98
4	4	1	$7\frac{7}{8}$	$6\frac{7}{4}$	33/4	16.00	19,97
6	3	<b>2</b>	$7\frac{7}{8}$	$7\frac{7}{8}$	33/4	21.57	27.01
8	4	$^2$	$7\frac{7}{8}$	77/8	334	28.80	35.97
10	5	2	97/8	$7\frac{7}{8}$	334	35.97	44,99
12	6	2	111/4	$7\frac{7}{8}$	33/4	41.92	54.02
15	5	3	$9\frac{7}{8}$	1034	33/4	52.48	64.51
18	6	3	111/4	1034	33/4	62.98	77.38
20	5	4	$9\frac{7}{8}$	1346	$3\frac{3}{4}$	70.02	85,95
24	6	4	111/4	$13\frac{1}{2}$	33/4	83.97	103.17
Over 24 d	rops, add per dr	op list			· · · · · · · · · · · · · · · ·	3.52	4.28

No. 125 Wood Finish: Filled, varnished and oil-rubbed oak, other finishes, price on application. No. 125 Metal Finish: Black Rubber Enamel. Wood finishes to match wood trim, add to list 25%. Note: When not otherwise specified wood case will be furnished.

NO. 213

		_	Outsi	de Dimens	sions	~ I				Outs	ide Dimens	ions—–	_
No. of	Arr. of	Drops	Width	Height	Depth	*List	No. of	Arr. of l	Drops	Width	Height	Depth	*List
Drops	Across	Down	Inches	Inches	Inches	T'rice	Drops	Across 1	Down	Inches	Inches	Inches	Price
6	3	<b>2</b>	161/2	$20 \frac{1}{2}$	6	\$48,00	36	9	4	24	2558	6	\$161.92
8	4	<b>2</b>	1612	$20^{1}_{-3}$	6	60.03	40	10	4	$25\frac{1}{2}$	2558	6	179.97
10	5	<b>2</b>	18	$20^{1}_{3}$	6	70.02	50	10	5	$25\frac{1}{2}$	$28\frac{5}{8}$	6	215.04
12	6	<b>2</b>	$19\frac{1}{2}$	2013	6	78.02	60	12	5	281/2	2858	6	257.92
15	8	<b>2</b>	$22\frac{1}{2}$	$20\frac{1}{3}$	6	89.98	80	16	5	341/2	285/8	6	303.80
20	5	4	18	$25^{5}$ s	6	120.00	100	20	5	$40\frac{1}{2}$	$28\frac{5}{8}$	6	379.90
24	6	4	$19\frac{1}{2}$	$25\frac{5}{8}$	6	131.97							

Dimensions do not include bell on top, nor reset knob on bottom, for which add 314 inches to height Extra Drops up to 250, add per drop. \$3.84
Intermediate Sizes: For intermediate trizes deduct \$2.05 per drop from the list price of the next larger size listed.

Finish: Filled, varnished and oil-rubbed oak, other finishes, price on application. For white enamel finish, add to list: No. 125 No. 213 Less than 10 drop.

11 to 20 drop.

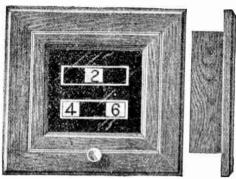
21 to 50 drop. \$8.00 \$12.03 11,00 14.08 15.04 19,97 19.00 24.00

Lettering on glass, up to 10 letters, list, \$1.60; each additional letter, list, \$1 cents. Electrical setback, up to 20 drops, add to !ist, \$18.80. Over 20 drops, add to list, \$37.60. Automatic setback, up to 20 drops, add to list, \$20.00; over 20 drops, add to list, \$40.00. With electrical or automatic setback, add to height of case 1½ inches. For Lamp Signal Attachment, listed elsev there, add to list \$11.20. Note: Heavy faced type indicates finish appropriate when not otherwise encoiled.

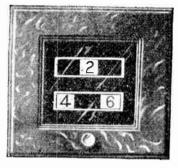
Note: Heavy faced type indicates finish: applied when not otherwise specified.
\*Delivery F. O. B. Factory, New York C ity. For warehouse deliveries write nearest house.

# GRAVITY DROP ANNUNCIATORS

# Standard House Types









# NO. 215 WOOD CASE FLUSH ANNUNCIATOR

			-*Outs	ide Dime	nsions-		1			-*Outs	ide Dime	ncione_	
No. of Drops 2 3 4	Arr. of Across 2 3 4	Drops Down 1 1 1	Width Inches 6 1/4 6 1/4 8 1/4	Height Inches $6\frac{1}{4}$ $6\frac{1}{4}$	Depth Inches 21/2 21/2 21/2	List Price \$10.82 13.18 17.60	No. of Drops 12 15 18	Arr. of Across 6 5 6		Width Inches 1158 1014 1158	Height Inches 75/8 101/8 101/8	Depth Inches 21/2 21/2 21/2	List Price \$48.00 58.50 70.21
6 8 10	3 4 5	2 2 2	$   \begin{array}{c}     8\frac{1}{4} \\     8\frac{1}{4} \\     10\frac{1}{4}   \end{array} $	$7\frac{5}{8}$ $7\frac{5}{8}$ $7\frac{5}{8}$	$2\frac{1}{2}$ $2\frac{1}{2}$ $2\frac{1}{2}$	24.00 32.00 40.00	20 24	<b>5</b> 6	4	$10\frac{1}{4}$ $11\frac{5}{8}$	$12\frac{3}{8}$ $12\frac{3}{8}$	$\frac{2\frac{1}{2}}{2\frac{1}{2}}$	78.02 93.53

\*Dimensions given are without trim. For trim, add 31/2 inches to height and width. Finish: Filled, varnished and oil-rubbed oak; other finishes, prices on application.
Bell or buzzer not supplied unless ordered, but is furnished without additional charge when specified. For over 24 drops, add per drop \$3.90.

# NO. 215-M METAL CASE FLUSH ANNUNCIATOR

				ide Dime	nsions—	1				-*Outs	side Dime:	ngione_	
No. of Drops 2 3 4		Drops Down 1 1	Width Inches 6 1/4 6 1/4 8 1/4	Height Inches 61/8 61/8 61/4	Depth Inches $2\frac{1}{2}$ $2\frac{1}{2}$ $2\frac{1}{2}$	List Price \$12.80 16.06 21.63	No. of Drops 12 15 18	Arr. of Across 6 5 6	Drops Down 2 3 3	Width Inches 1158 1014 1158	Height Inches 75/8 101/8	Depth Inches 21/2 21/2 21/2	List Price \$58.88 70.53 84.61
6 8 10	3 4 5	2 2 2	$8\frac{1}{4}$ $8\frac{1}{4}$ $10\frac{1}{4}$	7 <sup>5</sup> / <sub>8</sub> 7 <sup>5</sup> / <sub>8</sub> 7 <sup>5</sup> / <sub>8</sub>	$2\frac{1}{2}$ $2\frac{1}{2}$ $2\frac{1}{2}$	$\begin{array}{c c} 29.44 \\ 39.23 \\ 49.02 \end{array}$	20 24	5 6 For	4 4 larger	1014 1158 sizes ade	$12\frac{3}{3}\frac{4}{8}$	$\frac{2\frac{1}{2}}{2\frac{1}{2}}$	94.02 112.77 4.74

\*Dimensions given are without trim. For trim, add 2½ inches to height and width. Finish: Black; other finishes on application. For wood finishes, add to list 25%. Bell or buzzer not supplied unless ordered, but is furnished without additional charge when specified.

# Intermediate Sizes Either Style

For intermediate sizes, deduct for No. 215, \$3.39; for No. 215M, \$4.42 per drop from list price of the next larger size listed.

# Special Finish, Lettering, Setback and Lamp Signal Attachment

For white enamel finish, add to list:

2 to 10 drop. \$8.00 | 21 to 50 drop. \$15.04
11 to 20 drop. 11.00 | 51 drops and over 19.00

Lettering on glass up to 10 letters, list, \$1.60; each additional letter, list, 11 cents.

Electrical setback, up to 20 drops, add to list, \$18.80; over 20 drops, add to list, \$37.60.

Automatic setback up to 20 drops, add to list, \$20.00; over 20 drops, add to list, \$40.00.

With electrical or automatic setback, add to height of case, 1½ inches.

For Lamp Signal Attachment, listed elsewhere, add to list \$11.20.

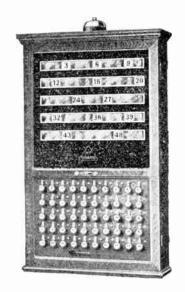
For special finishes—information on request.

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

# Western Electric

# GRAVITY DROP ANNUNCIATORS





No. 10

No. 114

### NO. 10 RETURN CALL ANNUNCIATOR

			—Outsi	de Dimen	isions—	1		Outside Dimensions					
No. of	Arr. of	Drops	Width	Height	Depth	*List	No. of	Arr. of	Drops	Width	Height	Depth	*List
Drops	Across		Inches	Inches	Inches	Price	Drops	Across	Down	Inches	Inches	Inches	Price
6	6	1	$13\frac{1}{4}$	123/4	43/4	\$23.42	24	8	3	16	$20\frac{1}{2}$	43/4	\$89.20
8	5	2	12	$16\frac{1}{2}$	43/4	31.24	36	12	3	23	$20\frac{1}{2}$	434	133.18
							40	10	4	20	25	43/4	147.96
10	5	2	12	$16\frac{1}{2}$	$4\frac{3}{4}$	38.02	50	10	5	20	283/4	434	184.96
12	6	2	$13\frac{1}{4}$	$16\frac{1}{2}$	43/4	45.64	60	12	5	23	$28\frac{3}{4}$	43/4	221.96
15	8	$^2$	16	$16\frac{1}{2}$	$4\frac{3}{4}$	56.96							295.94
							80	16	5	$29\frac{3}{4}$	2834	43/4	
20	7	3	$14\frac{3}{4}$	$20\frac{1}{2}$	$4\frac{3}{4}$	75.96	100	20	อี	$35\frac{3}{4}$	$28\frac{3}{4}$	$4\frac{3}{4}$	369.92

Dimensions do not include bell on top, for which add 2 inches to the height.

Finish: Filled, varnished and oil-rubbed oak; for other finishes prices on application.

Wiring diagram sent with each annunciator.

### Intermediate Sizes

For intermediate sizes, deduct \$3.00 per drop from the list price of the next larger size listed. For larger sizes, add per drop \$3.72.

### NO. 114 FIRE ALARM ANNUNCIATOR

			_Outsi	de Dimei	reions	1				-Outsi	de Dimer	sions-	
No. of	Arr. of	Drops	Width	Height	Depth	*List	No. of	Arr. of		Width	Height	Depth	*List
Drops	Across		Inches	Inches	Inches	Price	Drops	Across	Down	Inches	Inches	Inches	Price
6	6	1	1314	$12\frac{3}{5}$	43/4	\$22.52	36	12	9	23	$19\frac{1}{2}$	$4\frac{3}{4}$	\$131.40
8	5	2	12	$15\frac{3}{4}$	43/4	30.02	40	10	4	20	$23\frac{1}{4}$	$4\frac{3}{4}$	145.98
10	5	2	12	153/4	$4\frac{3}{4}$	37.50	50	10	5	20	$26\frac{3}{4}$	$4\frac{3}{4}$	182.46
12	6	$\overline{2}$	131/4	$15\frac{3}{4}$	43/4	45.00	60	12	5	23	$28\frac{3}{4}$	$4\frac{3}{4}$	218.94
i <del>5</del>	8	2	16	$15\frac{3}{4}$	43/4	56.32	80	16	5	$29\frac{3}{4}$	$26\frac{3}{4}$	$4\frac{3}{4}$	291,90
20	7	3	$14\frac{3}{4}$	191/5	$4\frac{3}{4}$	75.00	100	20	ã	$35\frac{3}{4}$	$30\frac{1}{4}$	$4\frac{3}{4}$	364.92
24	8	3	16	191/2	43/4	89.98							

Dimensions do not include bell on top, for which add 2 inches to height.

Finish: Filled, varnished and oil-rubbed oak; for other finishes prices on application.

### Intermediate Sizes

For intermediate sizes, deduct \$3.00 per drop from the list price of the next larger size listed. For larger sizes, add per drop, \$3.72.

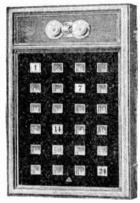
^	0. 10. 80.	Specia	Fin	ishe	e. La	tte	rin	or.	Set	bacl	c aı	ıd	Lam	n Si	gna	ΙA	ttac	hm	en	t	1	V. E. List
17	or white	onemel	finish	. add	l to l	ist:															Nos. J	Uand II4
2 +0	10 drop																					\$12.48
11 40	20 dron																					14.UT
21 +0	50 dron																					∪ش, انت
	-51 drop	s and ov	er																			27.60
T	attaring	on aloes	un f	o 10	lette	ra 1	ist	\$1.	60:	each	r ad-	diti	onal l	ette	r. lis	t, 1	l ce	nts.				

Lettering on glass, up to 10 letters, list. \$1.60; each additional letter, list, 11 cents. For Lamp Signal Attachment, listed elsewhere, add to list, \$11.20. Other sizes and finishes, special—information on request.

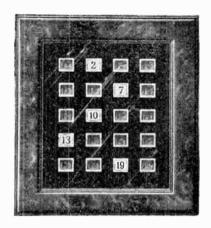
Note: Heavy face type indicates finish supplied when not otherwise specified.

\*Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

# SEMAPHORE DROP ANNUNCIATORS







No. 405 Metal Case

# Flush Types

NO. 401-NO. 407

No. of		nt of Drops-	Width	Outside Dinrension Height	s—————————————————————————————————————	—W. E. Lis	
Drops	Across	Down	Inches	Inches	Inches	No. 401	No. 407
2	2	1	734	734	21/2	\$11.01	\$12.99
3	3	1	95%	734	21/2	13.50	16.51
4	2	2	73%	9.87	21/2	17.98	22.02
6	3	2	95%	934	21/2	24.58	30.02
8	4	2	117/8	934	21/2	32.77	40.00
10	» 4	3	117%	1137	<u>9</u> 12	10.96	49.98
12	4	3	1178	1134	212	49.22	60.03
15	5	3	117%	1137	212	60.03	72.00
18	6	3	14½	113/4	212	72.00	86.40
20	5	4	1638	1337	21/2	30.00	90.00
24	6	4	1414	1334	214	96.30	115.20
Larger siz	zes, add per dro	р				4.03	4.80
Intermed	iate sizes, not li	sted, ceduct from	ı next larger siz	e per drop		3.52	4.48

### No. 401 Wood Case

Finish. Filled, varnished and oil-rubbed \*oak; other finishes, prices on application. Dimensions do not include bell for which add 34 inch to depth.

#### No. 407 Metal Case

Finish. Black; other finishes, prices on application. For imitation wood finishes add 25 per cent.

### NO. 406-NO. 405

No. of Drops	-Arrangemer	nt of Drops—	Width Inches	Outside Dimensions- Height Inches	Depth Inches		t Price
Diopa	2101050	1,01111	o arctica	534			
2	2	1		228	234	\$11.84	\$13.82
3	3	i	101/4	54 k	234	14.72	17.08
4	2	2	8	814	$2^{3}4$	19.58	23.62
6	3	2	104	814	234	27.00	32.38
8	4	2	1213	814	234	36.02	43.20
10	4	3	1212	1034	234	25.00	54.02
12	4	3	1513	103	234	54.02	64.76
15	3	5	1017	$15^{3}$	234	65.98	78.02
18	3	6	101/4	1817	284	79.16	93.56
20	4	5	1216	$15\frac{3}{4}$	237	87.80	104.00
24	4	6	1214	181/4	234	105,40	124.80
							5.24
Intermed	liate sizes, not li	isted, deduct from	n next larger siz	e per drop		3,90	4.92

### No. 406 Wood Case

Dimensions do not include trim; overlap of trim 1% inches all around.

Finish. Filled, varnished and oil-rubbed \*Oak, other finishes, prices on application.

Small bell or buzzer will be furnished if ordered.

### No. 405 Metal Case

Dimensions do not include trim; overlap of trim 114 inches all around. Finish. Black; other finishes, prices on application. For imitation wood finishes, add to list 25 per cent. Small bell or buzzer will be furnished if ordered.

Automatic Reset. Each indication resets the previous one. Up to 20 drops, add to list \$16.00, over 20 drops, add \$32.00. For white «namel, add to list: 2 to 10 drop.....

Lettering on glass up to 10 letters, list \$1.60, each additional letter, list \$0.11.
For arrangement of drops other than listed add to list 10 per cent.
Note: Heavy faced type indicates finish supplied when not specified.
\*Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

# DE VEAU HOSPITAL SIGNALING SYSTEM





No. 1500B



No. 1503B





No. 1501B



No. 1520A



No. 1522A

The most important feature of the De Veau Hospital Signaling System is its "absolute safety." All danger to hospital from fire by short circuit, or injury by shock is climinated. Another feature is the simplicity of the system. Its flexibility makes it adaptable to any building, regardless of size. The signals are silent and precise, and produce a definite though silent record which will last until the lamps are extinguished by the attendant. The finish of the apparatus is white.

Where desired, the system may include the Emergency Feature. Other optional features are: Supervisory Stations and Elapsed Time Recorders.

The current required may be produced by a motor generator, transformer or storage battery, depending entirely upon conditions.

Each system consists primarily of a number of push-button devices which, when depressed, light, simultaneously, a number of lamps located at various points, thereby notifying the nurse or doctor that their service is needed. The lamps, when lighted, can be extinguished only from the station where the call originated, thus making it necessary for extinguished only from the station where the call originated, thus making it necessary for the nurse to go to the patient's bed.

# Calling Stations

The Calling Stations are made in two types—Single, to take care of one bed; and Double, to take care of two adjoining beds. The Private Room Calling Station consists of a metal plate, from which extends a flexible cord, ending in a push button. The latter to be placed within convenient reach of the patient. The Ward Calling Station has, in addition, a small lamp, either exposed or with a bull's-eye. The Solarium or Bath Room Calling Station has the calling button mounted directly in the face plate. In addition, each calling station is equipped with a control button, which, when depressed, will extinguish the lamps. While the listing below covers stations with control buttons only, control keys can be furnished instead, if so desired. For each calling station a single switch box, with a minimum depth of 234 inches is required. a minimum depth of 234 inches is required.

FOR PRIVATE ROOMS		FOR SOLARIUM OR BATHROOM			
List No. 1500B	Type Single	List Price \$11.50	List No. 1503B	Type Single	List Price \$8.50
1500BB	Double	18.50			******
		FOR V	WARDS		

	WITH EXPOSED	LAMP	WITH	BULL'S-EYE	
List		List	List		List
No.	Type	Price	No.	Type	Price
1501B 1501BB	Single	\$13.50	1502B	Single	\$14.00
19011818	Double	20.50	1502BB	Double	21.00

### Pilot Stations

The Pilot Stations consist of a face plate, equipped with lamps, to be mounted over the doors of the rooms and wards, as well as in the duty room and diet kitchen. If more than 6 lamps are required in the two latter places, an annunciator should be used. Each duty room and diet kitchen pilot station is also equipped with a buzzer, which will sound momentarily when a call is made.

	FOR CORRIDOR	
List No.	Type	List Price
1520A	Single	\$6.00

# For Duty Room and Diet Kitchen

WITH EXPOSED LAMP

	AND BUZZER		A	ND BUZZER	
I.ist	Number of	List	List	Number of	List
No.	Lamps	Price	No.	Lamps	Price
1522A	1	\$19.00	1521A	1	\$18.50
1522B	2	21.00	1521B	2	20.10
1522C	3	25.50	1521C	3	24.30
1522D	4	27.50	1521D	-1	26.10
1522E	5	32.00	1521E	5	30.50
1522F	6	31.00	1521F	6	32,40

# Nurses' Lamp Annunciators

When six or more lamps are required in the duty room or diet kitchen, it is advisable to use an annunicator, which can be furnished in capacities from 3 to 20 lamps and more. These annunciators are equipped with small lamp units, about 1½ inches square, and a "Safeguard" Pilot Lamp, which insures the registering of every call, even should the individual lamp unit, by any chance, become burned out. The numbers or other markings over the individual lamp units can be changed at small expense. A buzzer forms part of the equipment. The finish of the annunciator is white.

	List No. 1550A	List No. 1550B	List No. 1550C	List No. 1550D
Number	Non-Flush	Non-Flush	Flush	Flush
of	Wood Case	Metal Case	Wood Case	Metal Case
Lamps	List Price	List Price	List Price	List Price
3	\$54.00	\$57.00	\$56,00	\$59.00
4	59,00	62.00	61,00	64.00
5	64,00	67.00	66,00	69,00
6	69.00	72,00	71,00	71.00
8	78.00	81.00	80.00	83.00
10	87.00	90,00	89.00	92.00
12	96.00	99.00	98.00	101.00
16	113.60	116.60	115.60	118.60
20	131.20	134.20	133.20	136.20
Each additional	5.00	5,00	5.00	5.00

Delivery F. O. B. Factory, New York, N. Y. For warehouse deliveries write nearest house.

WITH BULL'S-EYE COVER

# DE VEAU HOSPITAL SIGNALING SYSTEM

# Supervisory Lamp Annunciator (for Matron's, Superintendent's, Head Nurse's Room)

This equipment is optional. It can be furnished in capacities of 3 to 24 or more lamps, with wooden or metal case, for flush or non-flush mounting. The annunciator consists of small flush mounted lamps, with ¾ inch bull's-eyes. A designation strip is mounted underneath the lamps, so that each one of them may be given a name or reference number. The equipment is furnished complete with lamp mountings, lamps and bulls'-eyes. The terminals are mounted inside the case and provided with non-slip machine serews. The finish of the annunciator is white enamel. Prices will be furnished upon request.

# Elapsed Time Recorders

Elapsed Time Recorders are used to register graphically the time consumed between the sending and answering of a call. The patient pressing the button operates a pen which travels along a paper feed-roll in synchronism with a clockwork mechanism in the recorder-cabinet, making a graphic and permanent record of the time required to answer a call. Upon the call being answered, and the control button released by the nurse answering the call, the marking ceases. This equipment also is optional, and prices will be furnished upon request.

# **Emergency Feature**

Upon answering a call, the nurse sometimes finds the patient in such a critical condition that immediate assistance from the physician is needed. To take care of these cases the Emergency Feature has been provided, consisting of an emergency calling and an emergency control button in the Calling Station, as well as an emergency lamp in each Pilot Station, which should be of a contrasting color to the regular lamp. In addition, the Pilot Station in Duty Room or Dict Kitchen is equipped with an emergency bell.

# Calling Stations with Emergency Feature

FOR PRIVATE ROOMS

	0
1	•
9	

List No.	Туре	List Price	List No.	Type	List Price
1510B	Single	\$16.00		- J P c	21100
1510BB	Double	23.00	1513B	Single	\$12.50

FOR SOLARIUM OR BATHROOM

### For Wards



No. 1510 B

WITH EXPOSED	LAMP	WITH	BULL'S-EYE
		*****	DOLL S-LIE

List No.	Type	List Price	List No.	Туре	List Price
1511B	Single	$\frac{$20.00}{27.00}$	1512B	Single	\$20.50
1511BB	Double		1512BB	Double	27.50

Pilot Stations with Emergency Feature

	TOR CORRIDOR	
List		List
No.	Type	Price
1 FOOT	• 1	11106
1520B	Double	\$8, 40



No. 1520 B

# For Duty Room and Diet Kitchen WITH BULL'S-EYE, BUZZER AND WITH EXPOSED LAMP, BUZZER EMERGENCY BELL AND EMERGENCY BELL

List	Number of	List	List	Number of	List
No.	Lamps	Price	No.	Lamps	Price
1524B	2	\$25.00	1523B	2	\$24.10
1524D	4	31.50	1523D	4	30.10
1524F	6	38.00	1523F	6	36.40

Annunciators for Emergency Service require twice the number of lamp units; the regular set for patient's calls, and another set (in contrasting color) for emergency calls. When ordering annunciators for systems with emergency feature, do not fail to specify this in your order. Prices for lamp annunciators with emergency feature can be figured by doubling the above mentioned prices for regular annunciators.

# DE VEAU HOSPITAL DOCTOR'S CALL SYSTEM

This system has been designed to instantly locate any physician in any part of the hospital, and notify him that his immediate assistance is needed, thus avoiding the loss of time cutailed in trying to locate him by calling various telephone stations, or sending a messenger for him.

The following apparatus is required for a De Veau Hospital Doctor's Call Syste:... CALLING STATIONS:

Consist of a calling board with movable cams. A designation strip, bearing the doctor's reference number, is mounted reach cam. The board should be located at a central point, like office or duty room. near each cam.



No. 1505-A

List		Number of	List
No.	Туре	Cams	Price
1505A	Non-Flush	6	\$24,00
1505B	Flush	6	25.00
Each addition			3.00

#### PILOT STATIONS:

Consist of lamp annunciators (either single or double-face, as desired), provided with a number of lamp units. Upon the operation of a cam of the Calling Station, one of the units will light, illuminating the reference number of a doctor. The annunciators should be located where the doctors are most likely to see them-in wards, corridors, etc.

# Doctor's Single-face Lamp Annunciators

### WITH 11/4 INCH INDICATIONS

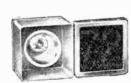
	List No. 1550AL	List No. 1550BL	List No. 1550CL	List No. 1550DL
Number of	Non-Flush	Non-Flush	Flush	Flush
Lamps	Wood Cabinet	Metal Cabinet	Wood Cabinet	Metal Cabinet
13811138	\$52.00	\$55.00	\$54.00	\$57.00
3	57.00	60.00	59.00	62.00
4	62.00	65.00	64.00	67.00
5		70.00	69.00	72.00
6	67.00	70.00	78.00	81.00
8	76.00			90.00
1()	85.00	88.00	87.00	
12	94.00	97.00	96.00	99.00
16	111.60	114.60	113.60	116.60
20	129.20	132.20	131.20	134.20
Each addition	5.00	5.00	. 5.00	5.00

#### WITH 214 INCH INDICATIONS

Number of Lamps 2 3 4 6 8 10 12 16 20 Each addition	List No. 1560AL Non-Flush Wood Cabinet \$55.00 61.00 67.00 73.00 83.00 93.00 103.00 121.00 139.00	List No. 1560BL Non-Flush Metal Cabinet \$58.00 64.00 70.00 76.00 86.00 96.00 106.00 124.00 42.00 6.00	List No. 1560CL Flush Wood Cabinet \$57.00 63.00 69.00 75.00 85.00 95.00 105.00 123.00 141.00 6.00	List No. 1560DL Flush Metal Calinet \$60,00 66,00 72,00 78,00 98,00 98,00 108,00 126,00 144,00 6,00
raen addition	0.00	0.00	0.00	0.0

# Doctor's Double-face Lamp Annunciators

### WITH 11/4 INCH INDICATIONS



No. 1550 AAL

3	
4	
5	
6	
8	
10	
12	
16	
20	
Each	addition

List No. 1550AAL Non-Flush	
Wood Cabinet	
\$65.00	
70.50	
76.00	
81.50	
92.50	
103,50 114,50	
133.50	
152.50	
5.50	

List No. 1550BBL Non-Flush Metal Cabinet \$69.00 74.50 80.00 85.50 96.50 107.50 118.50 137.50 156.50 Non-Flush 5.50

### WITH 214 INCH INDICATIONS



No. 1560 AAL

Number of
Lamps
3
4
5
6
8
10
12
16
20
Each addition

List No. 1560AAL
Non-Flush
Wood Case
\$68.00
74.50
81.00
87.50
99.50
111,50
123,50
143,50
163.50
6.50

List No. 1560BBL Non-Flush Non-Flush Metal Case \$72.00 78.50 85.00 91.50 103.50 115.50 127.50 147.50 167.50 6.50

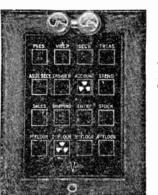
### CAPACITY:

Calling boards may be provided with any number of cams, and any number of annunciators may be used. Delivery F. O. B. Factory, New York. For warehouse deliveries write nearest house.

# DE VEAU ELECTRICAL RESET ANNUNCIATORS



Wall Type No. 23R



Flush Type No. 15RH



Desk Type No. 2R



Elevator Type No. 11RE

### Wall Type No. 25R

Type: Electrical reset. Style: Standard wall.

Finish: Golden oak and mahogany standard. Special finishes extra.

Golden oak will be shipped unless otherwise specified. Equipment: Complete with the necessary No. 1R drops, pivoted armature bell and reset button mounted in bottom of ease. Has hinged front, making all parts accessible.

Drop	List	Drop	List	Drop	List
Capacity	Prices	Capacity	Prices	Capacity	Prices
3	\$13.50	7	\$28.70	12	\$49.20
4	18.00	8	32.80	16	60.00
5	21.30	9	36.90	18	72.00
6	24.60	10	40.50	20	80.00
				24	96.00

Each additional drop over 20, list price, \$4.00.

For automatic reset add \$10.40 list per annunciator. No extra charge for straight multiple.

### Flush Type No. 15RH

Type: Electrical reset. Style: Flush.

Finish: Golden oak and mahogany standard. Special finishes extra. Golden oak will be shipped unless otherwise specified.

Equipment: Complete with the necessary No. 1R electrical resets and pivoted armsture buzzer. Price does not include outlet box. drops and pivoted armature buzzer.

cirops and	i pivoted	aimatme nuzzei.	THE HOE	s not include our	Act DOX.
Drop	List	Drop	List	Drop	List
Capacity	Prices	Capacity	Prices	C'apacity	Prices
3	\$14.70	7	\$31.50	12	\$54.00
4	19.60	8	36,00	16	66.00
5	23.20	9	40.50	18	79.20
6	27.00	10	45.00	20	88.00
				24	105 60

Each additional drop over 20, list, \$4.40.

For automatic reset add \$10.40 list per annunciator.

No extra charge for straight multiple work.

### Desk Type No. 2R

Type: Electrical reset. Style: Desk.

Finish: Golden oak and mahogany standard. Special finishes extra. Golden oak will be shipped unless otherwise specified.

Equipment: Complete with the necessary No. 1R reset drops and pivoted armature buzzer. All inside connections.

Drop	List	Drop	List	Drop	List
Capacity	Prices	Capacity	Prices	Capacity	Prices
3	\$22,40	6	\$34.20	12	\$66.00
4	26.30	8	32.00	16	84.00
5	30.20	10	54.00	18	102.00
				20	114.00
				24	138.00

Each additional drop over 20, list price, \$6.00.

Drop capacities not mentioned take list price of next highest capacity shown.

No extra charge for straight multiple work.

For automatic reset add \$10.40 list per annunciator

### Elevator Type No. 11RE

Type: Electrical reset. Style: Elevator.

Finish: Black ebony mounted with nickel trimmings standard. Special finishes extra.

Equipment: Complete with the necessary DeVeau No. 1R Electrical reset drops and pivoted armature bell.

### No. 11RE, Reset Drop

Drop	List	Drop	List	Drop	List
Capacity	Prices	Capacity	Prices	Capacity	Prices
3	<b>\$</b> 11.70	7	\$24.50	12	\$46.20
4	14.00	8	26.40	16	52.80
5	17.50	9	33.00	18	59.40
6	21.00	10	39.60	20	66.00
				0.1	EU 00

Each additional reset drop over 20, list, \$3.00.

Drop capacities not mentioned take list prices of next highest capacities shown.

For automatic reset on No. 11RE, add \$10.40 list per annunciator. No extra charge for straight multiple work.

### BRYANT SILENT CALL SIGNAL SYSTEM

The Bryant Silent Call Signal System is a simplified lamp signal system designed particularly for use in hospitals and having use also in offices, department stores, public buildings, etc.

It requires no relays, no batteries no motor generators, no transformers, and operates direct on 100 to

125 volts direct or alternating current.

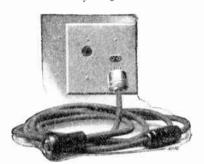
The slightest pressure on the button of a bed push indicates a desire for attendance, which is registered by means of incandescent lamps lighting simultaneously at various points—outside the room or ward door, at the nurse's desk, in the diet kitchen and elsewhere if desired.

The registration of a call may also be indicated to the patient by the means of an illuminated bulls-eye included as a part of the calling station at the bedside. All the signal lamps incident to a given call remain lighted and cannot be changed until reset by the attendant at the calling station by the bedside where the call originated.

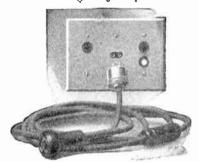
A calling station may be confined to the receptacle and cord extension with bed push and control switch, or may include the bulls-eye and one or more outlets for examination light, reading lamp, fan, heating pad, etc.

The system is permanent positive with minimum maintenance.

For convenience each section of the various stations has been given a letter designation, as shown above the illustration.

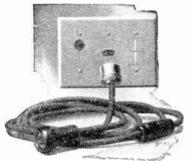


No. 10 Calling Station



No. 11 Calling Station

*List No.			alling Stat			ist Price Each
push, 1 bed	ns "Q," "J" include push button with 8 fo	et of special sig	rnal cord and plug		tension to bed	<b>\$</b> 18,56
1t requires a sta 11 Calling Statio	indard two gang out n "Q," "J," "P" in bed push button witl	let box not less cludes: 1 contr	s than 2¾ inches ol switch. 1 recen	deep. stacle for cor	d extension to	
button eme	rgency switch undard three-gang or				bie pote push	\$20,16
"Q" "J"	"D"			"Q" "J"	"P" "D"	



No. 12 Calling Station

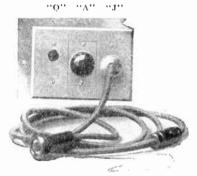


No. 13 Calling Station

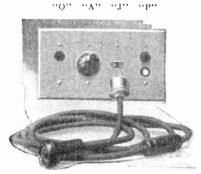
*List	Private Room Calling Stations	ist Price
No.	Trivate Room Caning Stations	Each
12	Calling Station "Q," "J," "D" includes: 1 control switch, 1 receptacle for cord extension to	434011
	bed push, 1 bed push button with 8 feet of special signal cord and plug, 1 recentacle for plug	
	extension to examination light, fan, heating pad, etc	\$20.80
	It requires a standard three-gang outlet box not less than 23/ inches deep	
13	Calling Station "Q," "J," "P," "D" includes: 1 control switch, 1 receptacle for cord exten-	
	sion to bed push, 1 bed push with 8 feet of special signal cord and plug, 1 double pole push button emergency switch, 1 receptacle for plug extension to examination light, fan, heating	
	button emergency switch, I receptacle for plug extension to examination light, fan, heating	
	pad, etc.  It requires a standard four-gang outlet box not less than 23/4 inches deep.	\$22,40
	It requires a standard four-gang outlet box not less than 2¾ inches deep.	
	*The outlet box is not included with the stations.	
	†Delivery F. O. B. Factory, Bridgeport, Conn. For warehouse deliveries write nearest house	
		-

# BRYANT SILENT CALL SIGNAL SYSTEM

Ward Calling Stations. The ward calling stations are designed for use in rooms where several beds are placed. They are similar to private room calling stations, except that a bulls-eye signai lamp has been added to enable the responding attendant to locate the exact origin of the call. They may also be used in private rooms when it is desired that registration of the call be indicated to the patient. The equipment includes a two candle lamp behind each bulls-eye.



No. 14 Ward Calling Station



No. 15 Ward Calling Station

# Ward Calling Station

\*List No.

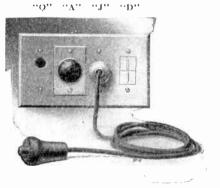
14 Outfit "Q," "A," "J" includes: 1 control switch, 1 receptacle for cord extension to bed push,

1 bed push button with 8 feet of special signal cord and plug. 1 bulls-eye signal. \$22.06

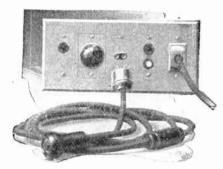
It requires a standard four gang outlet not less than 2¾ inches deep.

15 Outfit "Q," "A," "J," "P" includes: 1 control switch, 1 receptacle for cord extension to bed push, 1 bed push button with 8 feet of special signal cord and plug, 1 bulls-eye signal, 1 double pole emergency push button switch. \$23.66

It requires a standard four gang outlet box not less than 2¾ inches deep.



No. 16 Ward Calling Station

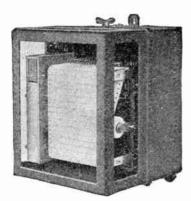


No. 17 Ward Calling Station

# Ward Calling Station

List

### MISCELLANEOUS APPARATUS



Automatic Recorder



Lamp Annunciator

# Elapsed Time Recorder

List Price List Price List Price List Price List Price 5 stations... \$448.00 10 stations... \$490.00 15 stations... \$532.00 20 stations... \$560.00 Black is standard finish, but white will be furnished when specified without additional charge. Extra charts, \$1.26.

# Candelabra Base Lamp Annunciator

No.	Size of Box	Size of Trim	List Price	No.	Size of Box	Size of Trim	List Price
Signal	Inches	Inches	Each	Signal	Inches	Inches	Each
$\overset{\circ}{2}$	61/4 x 43/4 x 41/4	814 x 634	\$17.50	44	$14\frac{1}{2} \times 25 \times 4\frac{1}{4}$	16½ x 27	\$213.50
4	61/4 x 61/4 x 41/4	$8\frac{1}{4} \times 8\frac{1}{4}$	31.50	48	$14\frac{1}{2} \times 26\frac{1}{2} \times 4\frac{1}{4}$	$16\frac{12}{2} \times 28\frac{1}{2}$	234.50
6	61/4 x 73/4 x 41/4	$8\frac{1}{4} \times 9\frac{3}{4}$	42.00	52	$14\frac{1}{2} \times 28 \times 4\frac{1}{4}$	16½ x 30	254.80
8	61/4 x 91/4 x 41/4	$8\frac{1}{4} \times 11\frac{1}{4}$	52.50	54	$17\frac{1}{2} \times 22 \times 4\frac{1}{4}$	19½ x 24	264.60
10	61/4 x 10°4 x 41/4	$8\frac{1}{4} \times 12\frac{3}{4}$	70.00	60	$17\frac{1}{2} \times 23\frac{1}{2} \times 4\frac{1}{4}$	19½ x 25½	294.00
12	61/4 x 121/4 x 41/4	8½ x 14¼	73.50	66	$17\frac{1}{2} \times 25 \times 4\frac{1}{4}$	$19\frac{1}{2} \times 27$	323.40
16	$9\frac{1}{4} \times 9\frac{1}{4} \times 4\frac{1}{4}$	11¼ x 11¼	87.50	72	$17\frac{1}{2} \times 26 \times 4\frac{1}{4}$	$19\frac{1}{2} \times 28\frac{1}{2}$	366.80
20	$9\frac{1}{4} \times 10\frac{1}{4} \times 4\frac{1}{4}$	$11\frac{1}{14} \times 12\frac{3}{4}$	101.50	78	$17\frac{1}{2} \times 28 \times 4\frac{1}{4}$	19½ x 30	382.20
24	9¼ x 12¼ x 4¼	11¼ x 14¼	119.00	80	$20\frac{1}{2} \times 23\frac{1}{2} \times 4\frac{1}{2}$	$22\frac{1}{2} \times 25\frac{1}{2}$	392.00
28	9½ x 13¾ x 4¼	$11\frac{1}{4} \le 15\frac{3}{4}$	140.00	88	$20\frac{1}{2} \times 25 \times 4\frac{1}{2}$	$22\frac{1}{2} \times 27$	431.20
32	$9\frac{1}{4} \times 15\frac{1}{4} \times 4\frac{1}{4}$	$11\frac{1}{4} \times 17\frac{1}{4}$	161.00	96	$20\frac{1}{2} \times 26\frac{1}{2} \times 4\frac{1}{2}$	$22\frac{1}{2} \times 28\frac{1}{2}$	470.40
36	$9\frac{1}{4} \times 16\frac{3}{4} \times 4\frac{1}{4}$	$11\frac{1}{4} \times 18\frac{3}{4}$	175.00	100	$23\frac{1}{2} \times 23\frac{1}{2} \times 4\frac{1}{2}$	$25\frac{1}{2} \times 25\frac{1}{2}$	490.00
40	9¼ x 18¼ x 4¼	$11\frac{1}{4} \times 20\frac{1}{4}$	. 196.00				

For  $\frac{1}{2}$  inch bulls-eye add \$0.56 per signal to above prices.

Bulls-eye of amunicators from 2 signal to 450 to 72 signal in vertical rows of two; from 16 signal to 52 signal in vertical rows of four; from 54 to 79 signal in vertical rows of six; from 80 signal to 96 signal in vertical rows of eight; 100 signal in horizontal and vertical rows of ten.

List || List

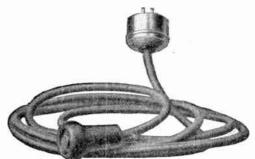
# **Devices for Calling Stations**

N 4	To. 80 81	Control switch less plate	Price   \$9.80 10.50		3 circuit mechanism for emergency switch	
		Com	plete	Sect	ions	
A		Plate with receptacle and lamp Plate with receptacle and porcelain	- 11		Plate with No. 2202 double pole emergency push switch	\$2.10
(	7	Plate with receptacle and indestruct-	1.76	P	Plate with No. 602 double pole emergency push switch	
	)	ible plugPlate with receptacle and plug	2.04	P	Plate with double pole removable mechanism emergency switch	2.38
	3	Plate with receptacle	1.12	P	Plate with 3 circuit removable mechan- ism emergency switch	
ļ		Plate with receptacle	1.06	Q	Plate with control switch	10.50
4	)	Plate with receptacle plug, 8 foot cord	8 06	Q	Plate with control lock switch	11.20

## MISCELLANEOUS APPARATUS



"J" Section for B. S. C. System



Push Button Cord and Plug

# One Station for Two Beds

Economy in installation cost can sometimes be effected by making one station answer for two beds. An extra "J" section may be added to any calling station thus providing an additional plug receptacle for bed cord extension, both bed pushes operating on the one control switch.

Li	ist Price	Each
Receptacle for cord extension to bed push without plate.		80.56
Extra "J" section of calling station plate		.49
Extra bed push button with 8 feet of special signal cord and plug.		7.00

Note: When an extra "J" section is added to any calling station an extra gang section of outlet box will be required.

# Push Button and Cord

List No.		List Price
	8 feet calling cord complete with No. 478 110 volt, pear push button and No. 485 plug.cach	\$7.00
478	Extra button each	4.20
485	Extra plug	.70
	Extra cord	ot .14
483	Extra fuses (for direct current)	.07
484	Extra fuses (for alternating current)	.07

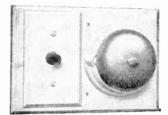
Lock Type Control Switch



Single Door Light Receptacle and Plate



Double Door Light Receptacle and Plate



Signal for Night Calls

# Pilot Lamp and Door Lamp RECEPTACLES AND PLATES

The door signal lamp assists the one answering a call to locate the room or to attract the attention of anyone passing. Pilot lamps may be located where desirable.

-		ice Each						
361883	Single door light receptacle and plate. (Requires 1 gang switch box)	81.12						
361884	Double door light receptacle and plate. (Requires 2 gang switch box)	2.24						
361885	Three pilot light receptacle and plate. (Requires 3 gang switch box)	3.36						
361886	Four pilot light receptacle and plate. (Requires 4 gang switch box)	4.48						

## Audible Signals for Night Calls

Two gang standard outlet box is required for the audible signal without switch and three gang for andible signal with switch.

Audible signal and switch.

Audible signal without switch.

\$14.00

Audible signal without switch.

Finish of plates: Calling Station, Door Lamp and Pilot Lamp plates are regularly finished in brush brass. Other finishes, excepting those requiring gold and silver, will be furnished at \$0.14 list, extra, per unit section of plate.

For gold and silver finish, prices quoted on application.

# VEHICLE CALL ANNUNCIATOR





Vehicle Call

Switchboard

# Edwards Vehicle Call System

An orderly, dignified and efficient means of signaling chauffeurs and coachmen who are waiting for their passengers at hotels, clubs, department stores, theaters, piers, etc.

The annunciator consists of two or more five-sided lanterns with opalescent glass sides etched and filled in with black so that numbers are white and plainly discernible from a great distance in the daytime; at night an incandescent light inside each lantern makes the number just as plain. The lanterns are revolved by means of the switchboard shown above, which has one lever for each lantern. It is only necessary to move the switch over to the desired number to have it appear on the annunciator. This is accomplished by means of a 1/16 H.P. motor, which, through worm gear, revolves the lantern to the proper position.

The case is sheet steel, so designed that ornamental covering case to match design of building may be put over it.

The switchboard is a slate box with heavy brass front, and arranged for flush or surface mounting.

The annunciator with two lanterns gives 25 different numbers; three lanterns give 125 numbers; four lanterns give 625. They are supplied to show the same number from two sides or one and with figures from 12 to 18 inches high.

Operation. The system is operated entirely from the switchboard, which is generally installed in the entrance vestibule of the building, and usually operated by a carriage attendant, whose duty it is to hand duplicate numbers to passenger and driver upon arrival, and display such numbers on the annunciator as vehicles are wanted. For this purpose the switchboard containes radial arm dial switches with arrowhead pointers, and it is only necessary for the attendant to move these switches so that the pointers rest over the numbers on the switch dial that are to be displayed on the annunciator.

### SIZES OF NUMBER PLATES IN INCHES

		14 Inch			14 Inch	
	Number of Cylinders—			Nur	nber of Cylinde	rs
	2	3	4	2	3	4
1 way	\$1650.00	\$1750.00	\$1850.00	\$1750.00	\$1850,00	\$1950.00
2 way	1760.00	1950.00	2100.00	1900,00	2100.00	2350.00

### SIZES OF NUMBER PLATES IN INCHES

		16 Inch			18 Inch	
	Number of Cylinders-			Nu	mber of Cylinde	278
	2	3	4	2	3	4
1 way	\$1900.00	\$2000.00	\$2150.00	\$2100.00	\$2300,00	\$2500.00
2 way	2100.00	2250.00	2500.00	2300.00	2600.00	2900.00

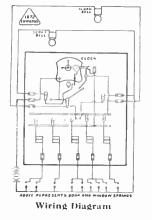
By 1 way is meant a call that can be seen from one direction. By 2 way is meant a call that can be seen in two opposite directions. Prices include operating switchboard, and are F. O. B. New York.

Prices include the cost of plain sheet steel weatherproof cases, finished in black, and so made that customer, should be so desire, may have ornamental case made and slipped on directly over the one which we furnish.

Delivery F. O. B. New York. For warehouse deliveries write nearest house,

# BURGLAR ALARM APPARATUS







No. 5

# AUTOMATIC CLOCK BURGLAR ALARM NO. 3

Equipment—Fine 8-day clock, servants' call, voltmeter, bell, battery and silent tests, constant ringing switch, and automatically illuminated dial if ordered. Extra attachments, as listed below.

Finish -Oak or any ordinary wood, filled, varnished and rubbed; beveled plate glass door with lock. Surface or flush types furnished. Prices and dimensions given are for surface types; other styles on request.

	Arrange-	,	-Outside Dimensions-		*
No. of	ment	Width	Height	Depth	*List
Sections	Rows	Inches	Inches	Inches	Price
6	1	14	23	73/4	\$473,00
8	1	17	23	$73\frac{7}{4}$	495,00
10	1	19	23	$7\frac{3}{4}$	517.00
10	2	$12\frac{1}{2}$	27	$73\frac{1}{4}$	517.00
12	2	14	27	73/4	539,00

Additional sections in width, add to width, 1½ inches. Additional rows in height, add to height, 4 inches. Additional sections, add to list per section, \$12.64.

For white enamel finish, add to list, \$16.50.

Note: Heavy face type indicates finish supplied when not otherwise ordered.

# AUTOMATIC CLOCK BURGLAR ALARM NO. 5

Equipment: Standard 8-day long pendulum clock. Battery, bell and silent test, constant ringing switch. Extra attachments, as listed below.

Finish: Same as No. 3 but without glass door. Other finishes and flush types furnished. Prices and dimensions shown are for surface types.

		2	-Outside Dimensions		
No. of Sections	Arrangenient Rows	Width Inches	Height Inches	Depth Inches	*List P <b>rice</b>
6 8	1 1	$\frac{13\frac{1}{4}}{16}$	$\begin{array}{c} 24 \\ 24 \end{array}$	$\frac{61/4}{61/4}$	\$154.00 176.00
10 10	1	18	$\overline{24}$	$6\frac{1}{4}$	198,00
12	$\frac{2}{2}$	131/4	$\begin{array}{c} 27\frac{1}{2} \\ 27\frac{1}{2} \end{array}$	$\frac{6\frac{1}{4}}{6\frac{1}{4}}$	220,00 242 00

Additional sections in width, add to width, 1½ inches. Additional rows in height, add to height, 3½ inches.

Additional price per section, list, \$7.70.

Servants' call can be furnished at an additional list price of \$16.50.

For white enamel finish, add to list, \$13.20.

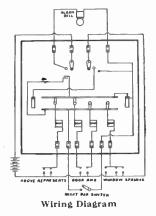
### **EXTRA ATTACHMENTS**

For No. 3, or No. 5 Burglar Alarms.	*List Price
Automatic incandescent lamp lighter, in ease, capacity 5 amps	\$77.40
Automatic incandescent lamp lighter, in case, capacity 10 amps	88.00

\*Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

# BURGLAR ALARM APPARATUS







No. 2

### AUTOMATIC BURGLAR ALARM NO. 7

Furnished with battery, bell and silent tests.

		,	——()utside 1)imensions—		
No. of	Arrangement	Width	Height	Depth	*List
Sections	Rows	Inches	Inches	Inches	Price
6	1	131/4	$14\frac{1}{2}$	$6\frac{1}{4}$	\$84.70
8	1	16	141/2	$6\frac{1}{4}$	91.30
10	1	1834	141/2	614	96.80
10	2 .	113/4	181/4	614	96.80
12	2	131/4	181/4	$6\frac{1}{4}$	103.40

Additional rows in height, add to height, 31/4 inches. Additional sections in width, add to width, 11/2 inches. Add to price per section, \$6.60.

Finish: Filled, varnished and rubbed oak. Other standard finishes to order.

### Special Finish

Note: Heavy face type indicates finish supplied when not otherwise specified. For white enamel finish, add to list \$8.80. For mahogany, add to list, 25%.

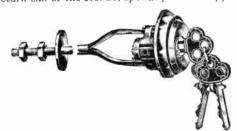
### CLOSED CIRCUIT DROP NO. 11

For annunciators or burglar alarms on closed circuit, each drop acting as its own relay.

\*List Price-Add to list price of burglar alarm: With Clock Without Clock \$159,50 \$77.00 For 6-section cases..... 192.50110.00 For 8-section cases.... 225,50143.00 For 10-section eases.....

For larger sizes, prices furnished on application. For annunciators all styles except fire alarm, return call or the No. 81, special prices on application.





No. 95B

LOCK BURGLAR ALARM SWITCHES Schedule "E"

The No. 95 switch is placed on the outside of door frame, so that when burglar alarm is set, persons having a key may enter without giving the alarm.

\$13.20 Polished brass or nickel.....

The No. 95A operates the same as No. 95, but has two locks. Keys fit both inside and outside locks so that after switch has been turned off outside, key can be withdrawn and person entering can close the door, insert key on inside and reset switch.

Polished brass or nickel plate..... 95A

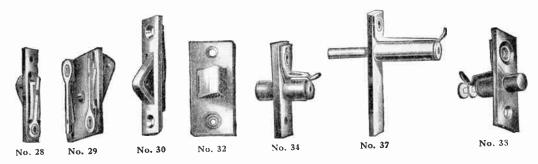
The No. 95B is the same as No. 95, but with rod to go through door frame, fastened by nuts on inside, so that it cannot be removed from the outside. \$9.24 Polished brass or nickel...

\*Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

# Western Electric

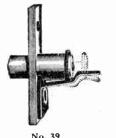
# BURGLAR ALARM ACCESSORIES

# Open and Closed Circuit Springs



		OPEN CIRCUIT SPRINGS	O' & Disks	Std.	*List
List No.	For Use On	Description	Size of Plate Inches 2 <sup>3</sup> / <sub>8</sub> x <sup>1</sup> / <sub>2</sub>	Pkg.	Price \$0.55
28 29	Window Window	Double	$\frac{2}{8} \times \frac{72}{1}$ $\frac{1}{2} \times \frac{1}{3} \times \frac{3}{4}$ $\frac{3}{8} \times \frac{5}{8}$	25 50	.84
$\frac{30}{32}$	Window Transom	Heavy contactFor French or pivot windows	21/4 x 1	100	$\substack{1.54\\.40}$
34 37 38	Door Shutter Door	Extra long break	3 x 5/8	50 100	1.00 .44

38 The make and break spring No. 38 differs from other types in that it establishes the contact as the door opens and closes, but not when the door is open or closed. It is used for store doors and other places where a signal that a door is being opened or closed is desired and yet permit the door to remain in either position without ringing the bell.



No. 121













No. 236

# CLOSED CIRCUIT SPRINGS

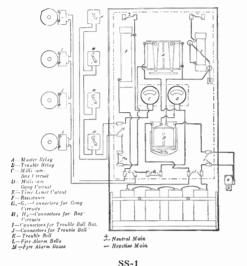
Tit Ma	For Use On	Description	Size of Plate	Std. Pkg.	
			$2\frac{3}{8} \times \frac{1}{2}$ in.	100	<b>\$</b> 0.78
28	Window		33% x 5% in.		.97
00	Window	neavy spring	3 x 5% in.		1.00
37	Shutter	Extra long break	2 x 5/8 in.		.44
39	Door	Opening door breaks contact	4½ x ¾ in.	7.5	.44
121	Window	Flat contact or for loose sash	134 x 5% in.		.66
		Fits 3/8 inch hole (price with plate)			.66
42	Door or Safe	Price with plate			.78
44	Door or Safe	With extra plate No. 44a			.22
44A	Door or Safe	Extra plate only	1% X % III.	50	
42 44		Fits % inch hole (price with plate)	1 <sup>3</sup> ⁄ <sub>4</sub> x <sup>5</sup> ⁄ <sub>8</sub> in. 1 <sup>3</sup> ⁄ <sub>4</sub> x <sup>5</sup> ⁄ <sub>8</sub> in.	50 50	.66 .78

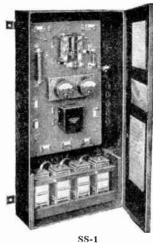
### DOOR TRIP NO. 236

	DOOK 1KII			
	To automatically ring bell when door is opening.	Screws to door frame.	6	<b>\$</b> 1.00
236	Door Trip		~	φ1,00
	*Delivery F. O. B. Factory, New York City. Fo	r warehouse deliveries write nearest ho	ouse.	

# **EDWARDS FIRE ALARM SYSTEMS**

SELECTIVE CODE RINGING CLOSED CIRCUIT TYPE FOR 100-250 VOLTS D.C. USING EDWARDS SINGLE STROKE DIRECT ACTING GONGS





SS-1 ELECTRICALLY SUPERVISED SYSTEM

The simplest type of electrically supervised system. For use where an absolutely dependable supply of direct current is available at all hours of the day or night. Employs single stroke gongs which require no winding and operate directly from lighting or power circuits.

Main circuits, box circuits and gong circuits are constantly under electrical test. Trouble of any nature or failure of operating current is indicated automatically by ringing of trouble bell and by visual indication at the panel.

### OPERATING PANEL WITH CABINET NO. SS-1

All necessary instruments, relays, resistances and connectors mounted on slate panel and enclosed in sheet steel cabinet, arranged for conduit connection. Price includes trouble bell and battery for operating same.

	W. E. List
Don't be to the control of the contr	Price
For single circuit systems not to exceed 14 gongs	\$174.75
For each additional circuit add per circuit	34.85

### SINGLE STROKE GONG-NO. 2000-CONDUIT TYPE

No winding required—strikes heavy powerful blow. Have separable conduit fitting for  $\frac{1}{2}$  inch surface conduit ( $\frac{3}{4}$  inch if specified).

List No.		W. E. List
		Price
2100	6 inch single stroke aların bell	\$24.85
2100	8 inch single stroke alarm bell	21 Ad
2100	TO inch stugle stroke alarm bell	27 90
2100	12 inch single stroke aların bell	16, 50
2100	14 mch single stroke alarm bell	54.75
2100	16 inch single stroke alarm bell.	108.00
		100.00

### FIRE ALARM BOXES-SELECTIVE RINGING TYPES

T 1 1 37		W. E. List
List No.		Price
1275	Enclosed pull lever type for surface conduit	<b>4=0</b> (0)
1276	Dischard and have for the first the	<b>\$7</b> 9.40
1270	Enclosed pull lever type for surface conduit	35.70
1275-2	Combined pull lever and break glass type	40.50

Trouble bell, conduit type, included in price of panel.

Customer must specify number of bells to be operated on each circuit so suitable resistance unit may be supplied in panel.

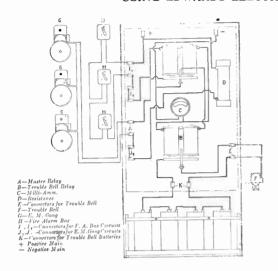
Conduit connections are detachable and may be shipped separately in advance to facilitate installation. System similar to the above can also be supplied for operation on storage or primary battery.

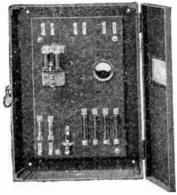
Send for complete Edwards Fire Alarm Bulletin.

Prices given on this page apply to 100 to 125 volts D.C. Prices for 200 to 250 volt material quoted upon application.

### EDWARDS FIRE ALARM SYSTEMS

# SELECTIVE CODE-RINGING CLOSED CIRCUIT TYPE USING EDWARDS ELECTRO-MECHANICAL BELLS





ЕМВ-2

### EMB-2 ELECTRICALLY SUPERVISED SYSTEM

The system most generally employed in industrial plants, warehouses, institutious and all buildings requiring a reliable supervised code-ringing system operated independently of electric lighting circuits.

Operation. When any box is operated by pulling the lever a code signal is given by all gongs—showing location of box from which alarm was sounded.

All gongs on each circuit are connected in series and all boxes on each circuit are connected in series. See diagram.

Main circuits, box circuits and gong circuits are under constant electrical test. Trouble of any nature or failure of operating current is indicated automatically by ringing of trouble bell and by visual indication at the panel.

#### OPERATING PANEL WITH CABINET EMB-2

All instruments, relays, resistances and connectors are mounted on slate panel and enclosed in steel cabinet, arranged for conduit connection. Price includes trouble bell and battery to operate same.

List No.		W. E. List Price
EMB-2	For single circuit system—not to exceed 14 gongs.  For each addition circuit, add per circuit.	$\$174.75 \\ 34.85$

### ELECTRO-MECHANICAL BELLS-No. 1330 OR 1331

A dependable powerful bell with separable fitting for ½ inch conduit.

	W. E. LIST
	Price
6 inch Edwards electro-mechanical bell.	\$64.96
8 inch Edwards electro-mechanical bell	67.28
10 inch Edwards electro-mechanical bell	70.50
12 inch Edwards electro-mechanical bell	77.40

### FIRE ALARM BOXES

		W. E. List
List No.		Price
1275	Enclosed pull lever type for surface conduit	\$29.40
1276	Enclosed pull lever type for concealed conduit.	35.70
1275-2	Combined pull lever and break glass	40.50

Trouble bell, conduit type. Price included in panel.

Primary battery or storage battery and charging outfit. Prices quoted upon application.

Customer must specify number of bells to be operated on each circuit so suitable resistance unit can be supplied in panel.

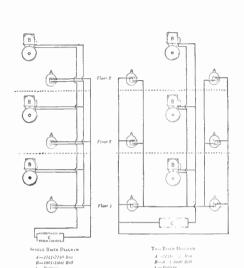
Conduit connections are detachable and may be shipped separately in advance to facilitate installation of conduit.

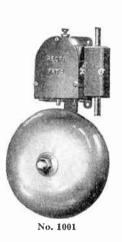
Electro-mechanical system, supervised and code-ringing, can also be supplied for operation on alternating or direct current lighting circuits.

Send for complete Edwards Fire Alarm Bulletin.

## EDWARDS FIRE ALARM SYSTEMS

OPEN CIRCUIT, NON-SUPERVISED BATTERY TYPE USING EDWARDS RECTI VIBRATING BELLS







No. 2241

A simple open circuit battery system, moderate in first cost and maintenance and suitable for many installations when the owner does not consider the supervised system to be necessary.

### **OPERATION**

When any alarm box is operated by breaking the glass in the front, all gongs ring continuously until the box is restored or until battery is exhausted.

Alarm does not indicate location of the box operated.

All bells and boxes on each circuit are connected in multiple.

### GONGS RECTI No. 1001-VIBRATING-SURFACE CONDUIT TYPE

A sturdy, clear ringing weatherproof gong.

Case has oil soaked gasket allowing no moisture to penetrate.

Hammer rod is of brass, direct acting and strikes a powerful blow.

Contacts are of carbon and will not rust, corrode or stick.

Separable conduit fitting drilled and tapped for 1/2 inch conduit (3/4 inch if specified).

List No.	Size	Ohms	W. E. List Price
1001	6	4	\$25.47
1001	8	$\frac{1}{4}$	29.95
1001	. 10	6	39.47
1001	12	6	51.60
	BOXES	Ÿ	
List No.			W. E. List Price
2241	Break glass type for surface conduit. Has separable ed	onduit fitting for 1/2 inch conduit.	11100
	With test key. Finish, red enamel		\$10.88
2240	Duplicate of No. 2241, except for concealed conduit.		10.88
	BATTERY CABINET—FOR STOR		
An To take	approved metal cabinet to hold cells and protect them	from dust, dirt and injury.	
For larg	up to 10 cells. er sizes—add for each 2 cells.		\$31.50 4.00
	BATTERY SETS		
Pric	es cover approved cabinet and dry battery.		

6 volts D.C.
10 volts D.C.
12 volts D.C.
Storage Battery—Prices on Application

Prices
on
application

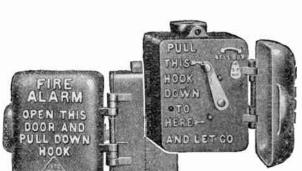
Conduit connections on bells and boxes are detachable and may be shipped separately in advance to facilitate installation of conduit—boxes and gongs may be attached at any time by machine serews supplied with them.

Open circuit systems similar to the above can be supplied for operation on 100 to 250 volt D.C. lighting circuits.

Prices upon application.

# EDWARDS FIRE ALARM BOXES

# Pull Lever Type Alarm Box-No. 1275



Substantial in construction,

Reliable in operation.

Operation: When lever is pulled and released it automatically disengages so as not to interfere with proper operation of the box through additional pulling. When signals have been completed lever is automatically re-engaged and box is ready for another alarm. No winding ever necessary. The door is provided with a spring hinge so that when released after sending alarm it automatically returns to closed position. Silent test of any box may be made by using key supplied with the alarm box. Telephone receiver test may be substituted if desired at additional cost.

Detachable conduit fitting drilled and tapped top and bottom for ½ inch conduit (¾ inch if desired), so that conduit work may be completed, wire pulled in and connected up then. Boxes may be attached at any time by machine screws supplied with them.

Finish: Red enamel.

List		List
No.		Price
1275	For use with surface conduit	\$29.40
1276	For use with concealed conduit	35.70

# Combination Pull Lever Break Glass Box Alarm-No. 1275-2



No. 1275-2

This is the regular 1275 or 1276 except that a locked door is substituted making two operations necessary to sound an alarm. Upon breaking the glass the door automatically opens to the full extent, then pulling the lever sounds an alarm. Door may be opened by means of key without breaking the glass.

List		List
No.		Price
1275-2	For use with surface conduit	\$40.50
1276-2	For use with concealed conduit	46.50

# Weatherproof Cases for Fire Alarm Boxes



No. 129

Substantial east-iron cases to protect boxes from weather or mechanical injury.

Finish: Red enamel,

World Radio History

List No.		List Price
129	Size 8½ x 7½ x 4 inches for No. 2241 boxes	\$25.88
1290	Size 12 x 11½ x 6½ inches for 1275 or 1275-2 boxes	32.55
	Extra for strap key for testing	2.84
	Extra for glass in door	3.74

### EDWARDS FIRE ALARM BOXES









No. 2240

No. 2241

# Break Glass, Contact Making Types

These boxes are used where a general alarm on alarm apparatus such as vibrating bells of Recti type is desired, or in centrally controlled systems, where annunciators such as the No. 114—which is equipped with bell control switches—and vibrating alarm bells are employed. In this latter system, the operation of a box causes tag bearing number of the box operated to indicate on annunciator, and annunciator bell to ring continuously. It is then possible for person at annunciator to ring any or all alarm bells to clear building. In using this type of apparatus, open circuit system is usually employed.

A very high degree of perfection has been obtained by close attention to details of manufacture.

Prices include hammer and chain.

### NO. 224 FLUSH TYPE

Breaking glass closes circuit. Size plate,  $3\frac{\pi}{16}$  x  $4\frac{3}{8}$  inches. Fits standard switch box. Standard finish: Dark mat ground, raised lettering and borders brush brass or bronze. \*List Price List No.

224Fire Alarm Box, Flush type.....

\$6.44

### NO. 224A SURFACE TYPE

Same as No. 224, except made for surface mounting. Operation: Breaking glass closes circuit. Size, overall dimensions, including mat, 41/8 x 51/4 inches. Standard finish: Dark mat ground, raised lettering and borders brush brass or bronze.

List No. 224A Fire Alarm Box, Surface type..... Mat only for 224A.

\*List Price \$7.20

Special Note: Boxes No. 224 and No. 224A have heavy cast brass faces; clear glass in front, is backed by red plate; contacts are so designed as to be positive in operation, irrespective of length of time they have been inactive. Special test key included with box; signaling without this key or by breaking glass impossible.

### NO. 2240 CONCEALED CONDUIT TYPE

This box fits a standard push button switch box. The contacts are of a new positive acting design. Raised letters finished in white are cast on the front. The box is finished in red enamel.

Test may be made by unlocking and opening the hinged front of the box, which accomplishes the same result as if the glass were broken, in that it allows the operation of the regular contact mechanism. Contact springs are heavy phosphor bronze, and when box is operated the heavy disk makes a positive scraping contact.

List No. 2240 Flush conduit type.....

\*List Price \$10.88

### NO. 2241 SURFACE CONDUIT TYPE

The No. 2241 is the same as the No. 2240, except that a back case has been added to adapt it to use with surface conduit installations. The case is drilled and tapped for 1/2 inch conduit. \*List Price List No.

2241 Surface conduit type.....

\$10.88

### NO. 77 SURFACE TYPE

Operation: Breaking glass closes circuit. Size, 3¾ inches diameter. Standard finish: Polished brass, brush brass or bronze.

Fire Alarm Box, with hammer and chain..... 77 Prices other finishes on request.

\$1.88

### **EXTRAS**

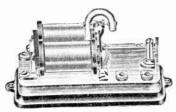
Extra glasses with papers; or all types of boxes

Extra chain and hammer for No. 77 box \$0.37 .45 Extra chain and hammer for other boxes
\*Delivery F. O. B. Factory, New York City. For warenouse deliveries write nearest house. ,67

#### FIRE ALARM APPARATUS







No. 238

# Central Station Contact Box

This instrument consists of a mechanical movement somewhat similar to that installed in the standard fire alarm box. Also a series of brass wheels marked with the numbers which they sound, mounted individually on pins in the case. Case is quartered oak, with glass door supplied with lock and key. This instrument is used for village or town fire alarm systems, for the operation of tower bells, or it is located at fire headquarters, so that any box number may be rung from that point.

It is also available for use in connection with factory signal systems, for the calling of company officers, superintendent, foreman, etc., by sounding numbers of each on single stroke or vibrating bells.

To operate number, wheel bearing proper number is placed on shaft of incchanism, after which the pulling of lever starts it in motion, automatically sounding number of district in which fire is located, or if used for individual signal the number of person it is desired to reach.

Mechanism can be arranged to sound this number 3 or 6 times as may be desired.

List	*	*List Price
No.	Description	The all
229	Box including 6 number wheels	Each
223	Too metading o number wheels	\$87.00
	Extra number wheels.	3.74

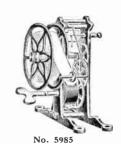
### Fire Alarm Relay NO. 238

Base polished mahogany, metal parts, old brass. Specified with Edwards' Factory or Town Fire Alarm System, with electro-mechanical gongs when used on separate circuits, or any extension work.

List		*List
No.		Price
238	20 ohma	Trice
	20 ohms	\$15.45
238	50 ohms	16.95
238	100 ohma	10.30
	100 ohms	18.36
238	250 ohms	20.25
		2(1, 24)



No. 2197



# Automatic Pen Register

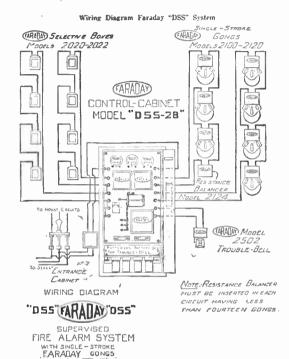
Self-starting and self-stopping. Registers in ink the number of the fire alarm box (by means of short dashes on paper tape) from which call is made. Standard resistance unless otherwise specified, 20 ohms. Other resistances special.

7.1			
List		Std	*List
NT -		Duu.	TISE
No.		Resistance	Price
0107	C: 1 .	recording	1 1100
2197	Single pen.	20 ohma	\$949 In
0107	Thank have	. 20 Omms	#242.10
2197	Double pen.	20 ohing	971 50
T		. 20 omms	will, UU

Japanned finish; operates in connection with either type of pen register.
\*Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

# FARADAY FIRE ALARM SYSTEMS

Selective Code Ringing Closed Circuit Type, for 100-250 Volt D.C. Circuits Using Single-stroke Non-clock work Faraday Gongs





Model DSS, Faraday Fire Alarm Control Cabinet

## MODEL DSS, ELECTRICALLY SUPERVISED

Model DSS (direct single-stroke) Faraday Fire Alarm Systems are designed for use where an absolutely dependable supply of direct current is available at all hours of the day and night.

Model DSS systems are similar to Model DEM systems, but employ single-stroke gongs, which require

no winding up, in place of Electro-mechanical Gongs, which do require winding.

Main circuits, box circuits and gong circuits are constantly under electrical test. Trouble of any nature, on any part of the system or failure of operative current is automatically indicated by ringing of Trouble Bell. CONTROL CARINETS

CONTROL CABINETS		f 1 . 35 .	
List No. DSS-14	Description Faraday Control Cabinet for installations not exceeding 14 gongs, complete	List Price Each \$225.00	
DSS-14 DSS-28 DSS-42 DSS-56	Same as DSS-14, except for 15 to 28 gongs. Same as DSS-14, except for 29 to 42 gongs. Same as DSS-14, except for 43 to 56 gongs.	$270.00 \\ 315.00 \\ 360.00$	
	SINGLE-STROKE HALF-GUARDED GONGS		
2120 2120 2120 2120 2120 2120 Abov	6 inch half-guarded single-stroke Faraday Enclosed Type Gong.  8 inch half-guarded single-stroke Faraday Enclosed Type Gong.  10 inch half-guarded single-stroke Faraday Enclosed Type gong.  12 inch half-guarded single-stroke Faraday Enclosed Type Gong.  14 inch half-guarded single-stroke Faraday Enclosed Type Gong.  15 gongs are furnished with knock-outs to slip both 1/2 or 3/4 inch conduit.	\$24,00 30,00 36,00 45,00 56,30	
	BOXES		
F-2022 FF-2022	Enclosed-lever code-ringing selective type Faraday Surface Box  Enclosed-lever code-ringing selective type Faraday Flush Box	\$28.50 34.50	
TROUBLE BELLS			
2502	Faraday Enclosed Type Trouble Bell, with outlet-box back	\$10.00	

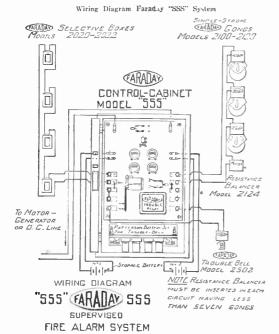
Where any circuit of less than 14 gongs is to be installed, same must be specified, so that resistance-unit may be mounted in control-cabinet.

Delivery F. O. B. New York City. For warehouse deliveries write nearest house

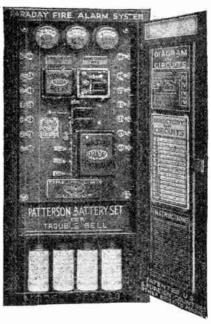
245

### FARADAY FIRE ALARM SYSTEMS

Selective Code Ringing Closed Circuit Type



FARADAY GDNGS



Model SSS, Faraday Fire Alarm Control Cabinet

# Model SSS, Electrically Supervised

Model SSS (storage single-stroke) Faraday Fire Alarm Systems are designed for use where neither A.C. nor D.C. electric light or power current is available from a constantly dependable source, but where either A.C. or D.C. at certain periods is available.

Model SSS systems are similar to Model SEM systems, but employ single-stroke gongs which require

no winding up in place of electro-mechanical gongs which do require winding up.

Main circuits, box circuits and gong circuits are constantly under electrical test. Trouble on any part of system, or failure of operative current is automatically indicated by ringing of trouble bell.

	CONTROL CABINETS	
List No. SSS-17 SSS-27 SSC1) SSCM	Description Faraday Control Cabinet for installations not exceeding 7 gongs, complete. Same as SSS-17, except for installations 7 to 14 gongs. Charging cabinet for charging storage battery from D.C. circuits. Charging cabinet for charging storage battery from motor generator.	Each \$255.00 300.00 180.00 210.00
	BATTERIES	
SB-24	Storage battery for above systems, complete	On appl.
	MOTOR GENERATORS	
MG-108	Motor generator, direct connected, with base, to charge storage battery	On appl.
	HALF-GUARDED SINGLE-STROKE GONGS	• •
2120 2120 2120 2120 2120 2120	6 inch Single-stroke Enclosed Type Gong. 8 inch Single-stroke Enclosed Type Gong. 10 inch Single-stroke Enclosed Type Gong. 12 inch Single-stroke Enclosed Type Gong. 14 inch Single-stroke Enclosed Type Gong.	\$24.00 30.00 36.00 45.00 56.30
	BOXES	
F-2022 FF-2022	Enclosed lever code ringing Faraday Box, surface type Enclosed lever code ringing Faraday Box, flush type.	\$28.50 34.50
	TROUBLE BELLS	
2502	Enclosed Type Trouble Bell, with outlet box back	\$10.00
0.1	no and directly of local to the first the firs	

Where any circuit of less than 14 gongs is to be installed, same must be specified, so that resistance-unit may be mounted in control cabinet.

Send for special bulletin on Faraday Fire Alarm Systems.

Delivery F. O. B. New York City. For warehouse deliveries write nearest house.

Selective Code Ringing, Closed Circuit Type, Using Electro-mechanical Faraday Gongs

ELECTRO-MECHANICAL ARADA GONGS MODEL 2520 MADD SELECTIVE BOXES FARADAY CONTROL-CABINET MODELS" SEM - SEMA U. 67 170 60 07 00 **TARAD** 0 Q: • 0 TO MOTOR -GENERATOR OR D. C. LINE **♥ARADAD** - III TROUBLE-BELL MODEL 2502 Eint

Wiring Diagram Faraday "SEM" System



SUPERVISED

FIRE ALARM SYSTEM WITH ELECTRO - MECHANICAL FARADAY GONGS



Model SEM, Faraday Fire Alarm Control Cabinet

# Model SEM, Electrically Supervised

Model SEM (Storage Electro-mechanical) Faraday Fire Alarm Systems are designed for use where neither A.C. nor D.C. electric light or power current is at all times available from a constant absolutely dependable source, but where either A.C. or D.C. at certain periods is available.

Model SEM systems are similar to Model SSS systems, but employ electro-mechanical gongs which require winding up in place of single-stroke gongs which do not require winding up.

Main circuits, box circuits and gong circuits are constantly under electrical test.

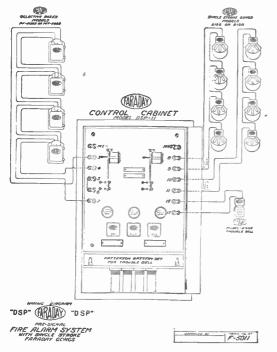
Trouble of any nature

on any part of the system, or failure of operative current is automatically indicated by ringing of Trouble Bell. CONTROL CARINERS

	CONTROL CABINETS	
List No. SEM-14 SEM-28 SEMA-14 SEMA-28		List Price Each \$345,00 390,00 375,00 420,00
	STORAGE BATTERY	
SB-24	Storage battery for above systems complete (not charged), per cell	On appl.
	MOTOR-GENERATOR	
MG-108	Motor generator, direct connected unit, to generate direct current for storage battery charging, complete, with base (may be used in connection with either SEMA-14 or SEMA-28 control cabinets).	On appl.
	D.C.:ELECTRO-MECHANICAL GONGS	
2620 2620 2620 2620 Abov	6 inch Electro-mechanical Faraday Gong. 8 inch Electro-mechanical Faraday Gong. 10 inch Electro-mechanical Faraday Gong. 12 inch Electro-mechanical Faraday Gong. e gongs are furnished with outlet box backs to slip either ½ or ¾ inch conduit.	\$64,50 66,30 69,80 76,20
	BOXES	
F-2022 FF-2022	Enclosed lever code ringing Faraday Box, surface type.  Enclosed lever code ringing Faraday Box, flush type	\$28.50 34.50
	TROUBLE BELLS	
2502 Send Deliv	Enclosed Type Trouble Bell, with outlet box back.  for special bulletin on Faraday Fire Alarm Systems.  ery F. O. B. New York City. For warehouse deliveries write nearest house.	\$10.00

Selective Code Ringing Closed Circuit Using Single-Stroke Faraday Gongs

Industrial Board State of New York Standard





Model "DSP" Faraday Fire Alarm Control Cabinet

# Model "DSP" Electrically-supervised Pre-signal or Dualoperated Type

"DSP" (Direct Single Pre-Eignal) Faraday Fire Alarm System is designed for use where an absolutely

dependable supply of direct current is available at all hours of the day and night.

"DSP" Faraday System is designed especially for hotels, hospitals and similar institutions where it is not desirable to alarm all the occupants of the building immediately upon a fire being discovered, but where it is desired to notify the members of a previously trained fire brigade. The operation of the system is such that when any box is pulled, the code number is sounded on certain pre-determined gongs located at points within hearing of the fire brigade, but not necessarily located so as to be a source of annoyance to the guests. Upon the signal being received on these gongs, members of a fire brigade immediately proceed to the point indicated and in the majority of instances are able to put out the fire; however, should the fire brigade not be able to cope with the situation themselves, and it becomes necessary that the guests be alarmed, a second operation of the box by any member of the fire brigade will sound a general alarm on all the gongs in the building, thus advising all occupants of the fire.

Main-Circuits, Box-Circuits and Gong-Circuits are constantly under test; trouble of any nature, on any part of the system, or failure of operative current is automatically indicated by the ringing of Trouble-Bell.

# Faraday Pre-signal Control Cabinets

7 1 4 37		List
List No.		Price Each
DSP-11	Control Cabinet for installations consisting of 1 Pilot Circuit and 1 Gong Circuit	\$119.50
DSP-12	For installations consisting of 1 Pilot Circuit and 2 General Gong Circuits.	457.50
DSP-13	For installations consisting of 1 Pilot and 3 General Gong Circuits.	502.50

# Faraday Single-stroke Gongs

2120 and 2100 For description and prices, see "DSS" System, on another page.

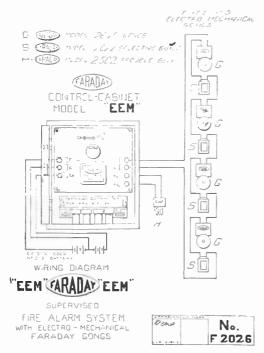
## Faraday Boxes

PF-2022 PFF-2022	Pre-Signal Enclosed-Lever Code-Ringing Boxes, Surface. Pre-Signal Enclosed-Lever Code-Ringing Boxes, Flush	\$39.00 45.00

### Faraday Trouble-bells

Enclosed-Type Trouble-Bell, with outlet-box back (one bell for each system)..... 2502 \$10,00 Delivery F. O. B. New York City. For warehouse deliveries write nearest house.

# Selective Code-Ringing Closed-Circuit, Using Electro-Mechanical Faraday Gongs





Model "BEM" Faraday Fire Alarm Control Cabinet

## MODEL "EEM," ELECTRICALLY SUPERVISED

# Factories, Schools, Public Institutions, Apartments, Warehouses, Yards, Etc.

"EEM" (Edison Electro-Mechanical) Faraday Fire Alarm System is designed for use where neither A.C. or D.C. electric light or power current is at all times available from a constant, absolutely dependable source and where the use of Storage Batteries is not desirable.

"EEM" System is similar to "SEM," but is operated from Edison Primary Batteries instead of Storage

"EEM" System requires for the operation of the gongs. 3 Edison BSCO Cells of 300 ampere hour capacity per gong; to this must be added an additional 3 cells for line resistance and Troubie-Relay. It is desirable to install the batteries in duplicate and this duplicate set of batteries is controlled by the Faraday Throw-Over Switch mounted in the Control-Cabinet,

FARADAY "EEM" CONTROL CABINETS

List No. EEM	Control Cabinet complete	List Price Each \$200.00
FARADAY D.C. ELECTRO-MECHANICAL GONGS		
2620	6 inch Electro-Mechanical Faraday Gongs.	864.50
2620	8 Inch Electro-Mechanical Faraday Gongs.	66.20
2620	10 inch Electro-Mechanical Faraday Congs	69.80
2620	12 inch Electro-Mechanical Faraday Gongs	76.20
A 3-	gove goings are furnished with outlet how backs to slip oithout 1/ on 3/ inch our laiser and	*C - 1

	The second secon	
2620 2620	6 inch Electro-Mechanical Faraday Gongs. 8 inch Electro-Mechanical Faraday Gongs.	\$64.50 66.30
2620	TO THEN PRECIFO-ACCUANICAL PARAGRY COMES	80.80
2620	12 inch Electro-Mechanical Faraday Gongs ve gongs are furnished with outlet box backs to slip either ½ or ¾ inch conduit as speci	76.20
ADO	ve goings are turnished with outlet box backs to superther ½ or ¾ meh conduit as speci	fied.
	FARADAY BOXES	
F-2022	Enclosed-Lever Code-Ringing Faraday Boxes, Surface.	\$28.50
FF-2022	Enclosed-Lever Code-Ringing Faraday Boxes, Flush.	34.50
	FARADAY TROUBLE-BELLS	
2502	Enclosed-Type Trouble-Bell, with outlet box back (one bell for earh system)	\$10.00
	BATTERY	
302	Edison BSCO Battery, per cell	plication
Deli	very F. O. B. New York City. For warehouse deliveries write nearest house,	-

World Radio History

"No. 1." NON-SUPERVISED, OPEN CIRCUIT

Non-selective, Non-code-ringing, Open-circuit, for Battery Circuits using Faraday Vibrating Gongs

FOR SMALL HOTELS, SMALL PUBLIC INSTITUTIONS, LODGING HOUSES, SMALL SCHOOLS AND OTHER PLACES WHERE OPEN-CIRCUIT, NON-SUPERVISED FIRE ALARM SYSTEM IS DESIRED



Model 2500 Enclosed Vibrating Gong with Conduit Box Back



Models 2040 and 2042 Break Glass Non-Code Ringing Box with Conduit Box Back

Faraday No. 1 Fire Alarm System is a simple open circuit, non-selective, non-code-ringing, non-supervised system, i. e., does not indicate the location of the box from which the signal originated and does not automatically indicate failure of operative current or derangement of circuits or apparatus.

Breaking the glass of any box automatically rings all gongs. Gongs are vibrating type and after glass is once broken, will continue ringing until glass is replaced in box.

T * 4	GONGS	
List No.	Description	List Price Each
2500	8 inch Enclosed Type Vibrating Gong, wound to special resistance, as follows: Up to and including 4 gongs, resistance per gong 10 ohms. Up to and including 9 gongs, resistance per gong, 20 ohms. 10 gongs and over, resistance per gong, 40 ohms.	\$27.70
2500	10 inch gong, same as above	36.00
2500	12 inch gong, same as above	43.00
	BOXES	
2040	Break-glass Fire Alarm Box for surface work, for ½ inch conduit	\$12.00
2042	Break-glass Fire Alarm Box for concealed work, for ½ inch conduit	12.00
	BATTERY SETS	
FA-62	Duttom Cat : auntum at al Cara t	
FA-02	Battery Sct, surface steel, for not over 4 gongs, no cells	\$67.30
FA-102	Battery Set, surface steel, for 5 to 9 gongs, inclusive, no cells	112.20
FA-122	Battery Set, surface steel, for 10 gongs and over. Subject to certain limitations, no cells	134,60

BOXES GONGS CARADAD (TRADO B CARADAD ARABAD B CARADAY B MARADAD B PATTERSON BATTERY SET TI. 6 VOLTS 50 AMPS 0

VIBRATING

Send for special bulletin on Faraday Fire Alarm Systems.

Delivery: F. O. B. New York City. For warehouse deliveries write nearest house.



Model 3010 Fire Alarm Annunciator





Fire Alarm Box

# "No. 1-A" Faraday, Non-Supervised, Open Circuit

Non-Selective, Non-Code-Ringing, Open-Circuit for Battery Circuits Using Annunciators

FOR SMALL HOTELS, SMALL PUBLIC INSTITUTIONS, LODGING-HOUSES, SMALL SCHOOLS AND OTHER PLACES WHERE OPEN-CIRCUIT, NON-SUPERVISED FIRE ALARM SYSTEM IS DESIRED.

"No. 1-A" Faraday Fire Alarm System is a simple, open-circuit system, so arranged that the breaking of a glass in a fire alarm box will cause an annunciator drop to fall, thus indicating the point from which the alarm originates.

"No. 1-A" System is a non-supervised system—i.e., does not automatically indicate failure of operative current or derangement of circuits or apparatus.

# Faraday Fire Alarm Annunciators

Faraday Fire Alarm Annunciator, gravity type, golden oak finish, complete with necessary DeVeau Gravity Drops, strong lever-switches, double-gonged pivoted armature bell—mechanism mounted in hard wood case with extended backboard. Drops indicate location of the alarm. One or more bells can be connected to circuit by switching the levers on the lower section of extended backboard.

List No.	List Price   List	List Price								
3004	Each No. \$34.10 3012 12 drop	Each								
3006		. \$61.00								
3008		. 64.60								
3010	8 drop. 46.90   3016   16 drop. 10 drop. 53.70   Each additional drop.	. 70.40 . 4.80								
	Daen and trop.	. 4.30								
	Faraday Fire Alarm Boxes									
2024	Break-Glass Fire Alarm Box, finished in English Vermilion, will fit standard outlet bor for conduit. Furnished with special test key and contact device. Test may be made with key without breaking glass, but without key it is impossible to send test signal Size 43% inches high x 37% inches wide.	e . \$6.90								
Break-Glass Fire Alarm Box, finished in English Vermilion, for surface work, made for 1/2 inch conduit, projects from wall 3 1/8 inches. Size 5 1/4 inches high x 3 1/4 inches wide, New York Fire Prevention Burgau Standard.										
Faraday Gongs										
2500	8-inch Enclosed-Type Vibrating Gongs, wound to special resistance	\$27.70								
2500	10-inch Enclosed-Type Vibrating Gongs, wound to special resistance	36 00								
2500	12-inch Enclosed-Type Vibrating Gongs, wound to special resistance	45.00								
	Battery Sets									
FA-62	Patters on Battery Set, Surface-Steel, for not over 4 Gongs—no cells	\$67.30								
FA-102	Patterson Battery Set, Surface-Steel, for not over 9 Gongs—no cells	119 90								
FA-122	Patterson Battery Set, Surface-Steel, for 10 Gongs or over—no cells.	134.60								
Patterson-Columbia Ignitor Screw-Top Cells										
For use i	n Patterson Battery Sets	\$0.80								

Delivery F. O. B., New York City. For warehouse deliveries write nearest house.

Send for special bulletin on Faraday Fire Alarm Systems.

# FARADAY FIRE ALARM BOXES



Types WF-2022 and WN-2022



Type N-2022



Type NF-2022

List No.		W. E. List Each
WF-2022	Weatherproof Fire Alarm Box, consisting of standard pull lever box enclosed in weather-proof case, complete with spring latch with flat key or turn handle brass spring, no key	\$60.00
W-2022	Cast iron weatherproof enclosing case only with spring latch with flat key or turn handle brass spring latch, no key (without pull lever box)	31.50
OF-2022	Pull Lever Selective Code-ringing Type Fire Alarm Box only (no lever enclosing door), without weatherproof enclosing case	28,50
WN-2022	Weatherproof Non-interfering Enclosed Pull- Lever, Code Ringing Fire Alarm Boxes, weatherproof case, no test bell, etc	94.00
WNB-2022	Same as WN-2022, complete with lightning	
Prices	arrester, test bell, door shunt, etc	125,00 on.

N-2022	Non-interfering Enclosed Pull Lever, Code Ringing, Fire Alarm Boxes, for surface	
	mounting with outlet box back for conduit	62.50
(*-2022	Same arranged for watchman's call, in addition	55,00
F-2022	Enclosed Pull Lever, Code Ringing, Selective Type Faraday Fire Alarm Box, with outlet	
	back box for conduit, surface mounting	-28.50

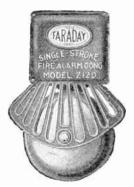
NF-2022	Non-interfering Enclosed Pull Lever, Code Ringing, Fire Alarin Boxes, for flush	
	mounting with outlet back box for conduit.	68.50
CF-2022	Same arranged for watchman's call, in addition	61,00
FF-2022	Enclosed Pull Lever, Code Ringing, Selective Type, Faraday Fire Alarm Box, with outlet	
	back box for conduit, flush mounting	34.50

Send for special bulletin on Faraday Fire Alarm Systems.

Delivery F. O. B. New York City. For warehouse deliveries write nearest house.



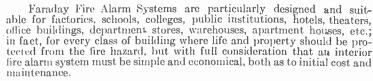
Model F-2022 Enclosed Pull-lever, Code Ringing Fire Alarm Box, for Surface Work. Has Conduit Box Back



Model 2120 Single-stroke Half-guarded Gong



Model 2620 Electro-mechanical Gong



Faraday Fire Alarm Systems are designed to operate from three sources of electrical energy, viz.:

- D.C. electric light and power circuits.
   A.C. electric light and power circuits.
   Battery (both primary and storage) circuits.

Faraday Fire Alarm Systems represent the latest developments in the fire alarm field. Particular attention is called to the entirely original cabinet-unit mounting feature of all control apparatus and instru-ments. Cabinets are absolutely fireproof. They are of heavy pressed steel, finished in glossy vermilion. All instruments and control mechanisms are back connected, mounted on slate panels. Cabinets are furnished with glass windows through which all instrument dials are easily read without opening doors. Terminals on slate panels are latest type Underwriters' pattern, with each terminal so plainly marked that the connecting of circuit wires to mains, boxes, gongs and trouble bells can be readily made by any good mechanic.

Faraday Fire Alarm Systems may perhaps be classified in two general types, viz.:

- (a) Electrically supervised closed circuit code ringing.
- (b) Non-supervised open circuit non-code ringing.

Electrically supervised closed circuit code ringing systems are operated by a continuous flow of electric current, by either pull lever or break-glass boxes, indicating by powerful single-stroke signals on gongs, location of box from which signal originates. Main circuits, box circuits and gong circuits are constantly under electrical test. Trouble of any nature on any part of this system or failure of operative current automatically indicating itself by ringing of trouble bell.

Non-supervised open circuit non-code ringing systems are operated by the current when the simple break-glass type box is put in service. The great disadvantage of this open-circuit non-supervised system is that some accident may, of course, at any time open the circuit and when this happens an attempt to send in a fire signal completely fails. Furthermore, with the open circuit system, location of box from which signal originates cannot be indicated, as the bells simply ring continuously till the glass in the box is replaced.

Electrically supervised closed circuit systems may be sub-divided into two classes, viz.:

- (a) Non-clockwork single-stroke gong systems.
- (b) Electro-mechanical (clockwork) gong systems.



Model FF, 2022 Enclosed Pull-lever Code Ringing Fire Alarm Box for Flush Work. Has Conduit Box Back



Model 2040 Break-glass Fire Alarm Box with Conduit Box Back

# WATCHMAN'S TIME DETECTORS BATTERY AND MAGNETO TYPES WITH OR WITHOUT TIME PIECES Magneto Type No. 75—With Time Piece

		—Dimensions–			1		-Dimensions-		
No. of	Height	Width	Depth	List	No. of	Height	Width	Depth	List
Stations	Inches	Inches	Inches	Price	Stations	Inches	Inches	Inches	Price
-1	$31\frac{3}{4}$	$17\frac{1}{2}$	$5\frac{1}{2}$	\$216.32	12	313/4	$17\frac{1}{2}$	$5\frac{1}{2}$	\$257.28
6	$31\frac{3}{4}$	$17\frac{1}{2}$	$5\frac{1}{2}$	226.16	15	$31\frac{3}{4}$	171/2	51/2	272.64
8	$31\frac{3}{4}$	$17\frac{1}{2}$	$5\frac{1}{2}$	236.80	20	$35\frac{1}{2}$	$21\frac{1}{4}$	$51\frac{7}{2}$	298.24
10	$31\frac{3}{4}$	$17\frac{1}{2}$	$5\frac{1}{2}$	247.04	25	$35\frac{1}{2}$	$21\frac{1}{4}$	$5\frac{1}{2}$	325.12

Extra stations, per station up to 50, list \$8.22. Where more than 25 stations are required two recording dials will be used.

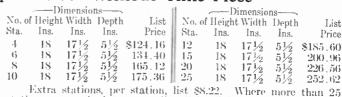
Standard finish, oak. For white enamel, add to list, \$15.36,

Prices include a year's supply of dials, but do not include magneto or battery stations. Listed below.

# Magneto Type No. 76—Without Time Piece



No. 76-Magneto Type



stations are required, two recording dials will be used.
Standard finish, oak. For white enamel, add to list, \$10.24.
Prices include a year's supply of dials, but do not include battery

or magneto stations, listed below.

Battery Type No. 97—With Time Piece Same prices and dimensions as No. 75 above.

Battery Type No. 98—Without Time Piece Same prices and dimensions as No. 76 above.

Paper Dials
For all types of watchman's time detect



Paper Dial

	1	171	an cypes	()1 ()	анеш.	IIa	11	D	U	111	U	CH	21	U(	:10	т	5	11:	5 U	60	1 :	ar	)(	v	e	:
11 16	to	$\frac{15}{20}$	stations, stations, stations, stations,	per per	1000								٠	٠.	٠											30.79

# Magneto Stations FOR USE WITH NOS. 75 AND 76 TIME DETECTORS

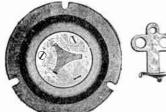








Na.	No. 161	No. 162	No. 163	List Price
16 <b>1</b>	Wood case. Hand	generator with removable handle		\$15.36
161P	Portable type with	carrying strap, No. 72 plug and three foot cord		23.04
162	Weatherproof for o	utdoor use and in more or less exposed places. Hand g	enerator with	
	removable han	dle		17 92
163	Flush metal case.	Hand generator with removable handle		23.04



No. 211

# Battery Key Stations

FOR USE WITH NOS. 97 AND 98 TIME DETECTORS
No. List Price
211 Flush type, mounted on plate to fit a standard push
button switch box. \$8.11
211A Surface type, plate 234 ins. diameter. 4.98
Finish. Nickel plated standard; old brass or polished brass
furnished if specified.
Key only for above. \$1.06

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

**World Radio History** 

# GRAVITY DROP ANNUNCIATORS Standard Elevator Types







No. 12 Wood Case

### NO. 130, METAL CASE

			-Outs	ide Dimer	sions	,	—Outside Dimensions—							
No. of	Arr. of	Drops	Width	Height	Depth	*List	No. of	Arr. of	Drops	Width	Height	Depth	*List	
Drops	Across	Down	Inches	Inches	Inches	Price	Drops	Across	Down	Inches	Inches	Inches	Price	
3	1	3	4	93/4	$3\frac{1}{8}$	\$13.18	10	2	5	$6\frac{1}{4}$	$14\frac{1}{4}$	$3\frac{1}{8}$	\$38.02	
4	1	4	4	12	$3^{1}_{8}$	16.00	12	2	6	$6\frac{1}{4}$	161/2	$3\frac{1}{8}$	45.63	
5	1	5	4	$14\frac{1}{4}$	$3\frac{1}{8}$	19.97	14	2	7	$6\frac{1}{4}$	1834	$3\frac{1}{8}$	53.38	
6	1	6	4	161/2	318	24.00	16	2	8	$6\frac{1}{4}$	21	$3\frac{1}{8}$	60.80	
7	1	7	4	$18\frac{3}{4}$	31/8	28.03	18	2	9	$6\frac{1}{4}$	$23\frac{1}{4}$	$3\frac{1}{8}$	68.42	
8	1	8	4	12	$3\frac{1}{8}$	30.40	20	2	10	$6\frac{1}{4}$	$25\frac{1}{2}$	31/8	75.97	

Dimensions do not include bell on top, nor reset on the bottom, for which add 31/4 inches to height. Finish: Black, other finishes on application. For wood finishes add to list 25%.

Not furnished in other arrangement than listed. For intermediate sizes deduct \$3.00 per drop from list price of next larger size listed.

For larger sizes add \$3.84 per drop to list.

Made of sheet steel, perfectly insulated and dust-proof.

For semaphore types see Nos. 410 and 411.

Metal Case No. 130D: Same as the No. 130 except that No. 130D is arranged for up and down service drops arranged vertically in two rows, one row for up and one row for down. Prices add to list price of No. 130 \$1.60 for lettering on glass up and down. Dimensions and finish same as No. 130.

### NO. 12, WOOD CASE

			.—Outs	ide Dimens	ions—	·	Outside Dimensions—						
No. of	Arr. of	Drops	Width	Height	Depth	*List	No. of	Arr. of	Drops	Width	Height	Depth	*List
Drops	Across	Down	Inches	Inches	Inches	Price	Drops	Across	Down	Inches	Inches	Inches	Price
3	1	3	5	93/4	3	\$10.24	10	2	5	$6\frac{1}{4}$	$14\frac{1}{4}$	3	\$28.03
4	1	4	5	12	3	12.03	12	2	6	$6\frac{1}{4}$	$16\frac{1}{2}$	3	33,60
5	1	5	5	141/4	3	-15,04	14	2	7	$6\frac{1}{4}$	$18\frac{3}{4}$	3	39.23
6	1	6	5	$16\frac{1}{2}$	3	-17.98	16	2	8	$6\frac{1}{4}$	21	3	44.80
7	1	7	5	$18\frac{3}{4}$	3	-20.99	18.	2	9	$6\frac{1}{4}$	$23\frac{1}{4}$	3	50.43
8	2	4	$6\frac{1}{4}$	12	3	-22,40	20	2	10	$6\frac{1}{4}$	$25\frac{1}{2}$	3	56.00

Dimensions do not include hell on top nor reset knob on the bottom, for which add 31/4 inches to height.

Finish: Filled varnished and oil-rubbed oak. For other finishes prices on application. For intermediate sizes deduct \$2.00 per drop from list price of next larger size listed.

For larger sizes add per drop to list \$2.80.

For semaphore types see Nos. 410 and 411.

No. 12D Wood Case: Same as No.12 except that No. 12D is arranged for up and down service drops arranged vertically in two rows, one row for up and one row for down. Prices add to list price of No. 12 \$1.60 for lettering on glass up and down. Dimensions and finish the same as No. 12 except in 6 drop size drops arranged in two rows.

### Special Finish, Lettering, Setback and Lamp Signal Attachment

For white enamel finish, add to list:

... \$11.00

With electrical setback, add to height of case, 1½ inches. Other finishes, special—information on request.

For Lamp Signal Attachment, listed elsewhere, add to list, \$11.20.

Note: Heavy faced type indicates finish supplied when not otherwise specified.

For "up and down" push buttons for use with elevator annunciators see listing elsewhere.

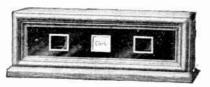
\*Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

# **GRAVITY DROP ANNUNCIATORS**

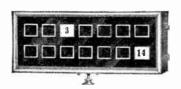
# For operation on Battery or Transformers of Sufficient Capacity SPECIAL TYPES



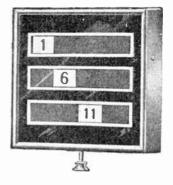
Semaphore Lock Gravity Drop Type



No. 412 Semaphore Lock Gravity Drop Type



No. 813 Lock Gravity Drop Type



No. 807HV Lock Gravity Drop Type

## SEMAPHORE LOCK GRAVITY ELEVATOR TYPE

NO. 410-NO. 411

					nsions -		
No. of	Arr. of	Drops	Width	Height	Depth	List	Price -
Drops	Across	Down	Inches	Inches	Inches	No. 410	No. 411
3	1	3	5	12	$2^{+}_{2}$	\$11.71	\$14.72
-1	1	-1	5	14	2:2	-14.02	17.98
5	1	5	ō	16	212	17.54	22.52
6	1	6	5	18	212	20.99	26.81
7	1	7	5	20	212	24.51	31.49
8	2	4	738	14	21/2	26.43	34.43
10	2	5	73%	16	21/2	33.02	43.01
12	2	6	73%	18	216	39.62	51 58

NO. 410 WOOD CASE Finish: Filled, varnished and oil rubbed \*oak; for other finishes prices on application

No. of Arr, of Drops Width Height Depth — List Price— Drops Across Down Inches Inches Inches No. 410 No. 411 46 21 \$60 26 52.80 68.80 59.39 77.38 20 22 22 18 q 20 2 10 45.50Larger sizes; add per drop.. 3.33 4.28 Intermediate sizes: not listed, deduct from 2.56 3.52

NO. 411 METAL CASE Finish: \*Black; other finishes prices on application. For imitation wood finishes, add to Lst 25 per cent.

## WOOD CASE DESK TYPE, PORTABLE NO. 412

			,	~ Outside Dimensions		
No. of	— Arr. of	Drops	Width	Height	Depth	11.4
Drops	Across	Down	Inches	Inches	Inches	List
2	2	1	8	353	niches	Price
3	3	i i	101/4	35%	012	\$19.97
4	4	i	1213	35%	313	22.40
ř,	5	î	113		319	26.30
6	45	i	177	3%	3   5	30.27
5	3	1	17	31/8	314	31.18
· ·		. ,	2112	35%	318	41.98
Large	T SIZES, Drices spec	etal.				11.00

Finish: Filled, varnished and rubbed \*oak; for other finishes prices on application,

### STANDARD RAILWAY ANNUNCIATOR NO. 813

Metal case finished to match wood or metal trim. Designed particularly for sleeping, Jining and parlor car service. Bell or buzzer not a part of equipment

10	5	2	914	51.3	·> 5	640.50
12	6	2	103 c	512	252	\$16.78
14	7	2	1217	513	252	56.13
16	8	2	1337	51.	952	65.47
18	9	2	1517	512	952	71.88
20	1G	2	163	51.5	952	84.16
22	11	2	1813	5.1 %	952	93,50
24	12	2	1937	512	957	102.85 112.19

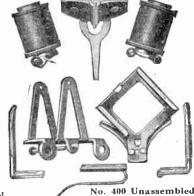
110 VOLT ANNUNCIATOR NO. 807HV

Annunciator for 110 volt D.C. service.

A metal case with slate back board designed especially for service on the high voltages. Great care is given to the insulation of all current-carrying parts as well as to the elimination of such material as would be affected by heat or moisture. This annunciator is a new departure and will be found dependable.

2	2	1	434	5	21,	\$38.53
- 3	3	1	734	5	91	
4	4	1	73.	¥	2 2	-54.46
6	3	2	612	2	512	67.07
- 8	<u>.</u>	•)	732	4	212	81.92
10	É		674	4	215	98.82
10	o o	- £	914	7	91.0	
12	6	2	103.	7	5.12	111,10
1.5	5	3	0.12	617	212	154.72
143	Č		17.14	914	218	147.65
1.8	D	3	$10^{3}4$	91/	917	
20	5	.1	0.12	1117	5.12	160.51
0.4	č	i	. 17.74	11'2	213	169.15
24	. 0	4	1034	1114	912	
	Larger sizes, add per drop		*	2. 2	÷ 7′2	186.37
	Intermediate sizes, not list	ed deduct tron	n next larger size par dra			4.29
			t new target size her dro	9		4 03





No. 400

### GENERAL DESCRIPTION

This class of drop has been used for many years in places where the indication is to be electrically restored. The "Edwards" development should more properly be called an invention, for it only retains the principle of a target electrically operated from one position to another. All of the uncertain and supersensitive balance or magnetic features have been omitted, and there is presented in this drop for the first time a positive, self-locking indication. The action of the drop cannot be affected by vibration, and is capable of taking care of several times the current necessary for operation without injury. The Edwards Lock Semaphore drop (patented) is really the combining of two lock drops in one unit, and does away entirely with the use of permanent magnets. The "position" locking feature of this drop is unique and original. There is nothing flimsy in construction or uncertain in its operation and only the drops that are indicating are in the reset circuit; a big saving in battery life. All iron parts are protected by electro-plating, and magnets are wound with enameled wire, making the most substantial and at the same time simple and positive electric control drop that has ever been produced. The usual manual reset found in gravity or needle type annunciators is omitted, control being entirely electrical.

### **OPERATION**

Upon energizing the right hand magnet, the shutter is thrown to the left, after which it may be returned to the first position by energizing the left magnet. The front of the annunciator is clear, as all necessary marking appears on white bristol board card carried by the drop. The result is a decided improvement in appearance over types exposing all markings upon the face; in addition it affords a convenient means of changing indications at practically no expense or effort.

### METHODS OF WIRING RESET BUTTONS

None of these annunciators have the old-fashioned reset plungers in the bottom of the cases. The drops are all electrically reset by an ordinary push button. This makes it possible to locate the reset button away from the annunciator, but if specified on order it can be mounted on the annunciator case.

First: An ordinary push button may be located in any convenient place, and by pushing this button

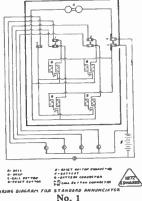
all of the drops that are down in the annunciator will be electrically reset.

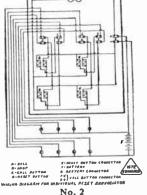
Second: One reset button may be provided for each drop in the annunciator so that any drop may be restored without affecting any other. A system of this kind is splendidly adapted for use in hospitals and other places where general supervision of any kind is desired.

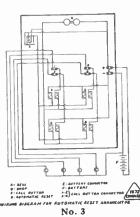
Third: The drops of an annunciator may be divided into two or more groups, each group having its own reset button or buttons. **GENERAL** 

Unless otherwise specified, no push buttons will be supplied with semaphore drop annunciators. For office installations we recommend the use of the Edwards Directory Push No. 190, and, if the wiring is to be in accordance with plan No. 1 shown below, one of the buttons in this push may be used as the Schedule "E"

reset button. Complete wiring diagram in the back of every semaphore drop annunciator. .....\*List Price \$3.76 Lock Semaphore Drop.... List No. 400







\*Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house

## FIRE ALARM AND SIGNAL BELLS

## VIGILANT ELECTRIC SINGLE STROKE BELLS—DIRECT CURRENT—6 OHMS

Magnets and Armature are so arranged that the armature is strongly attracted from a considerable distance, giving the hammer a long sweep and a powerful blow.

Striker. The hammer is attached to the hammer rod by a strong flat spring, causing a quick recoil, resulting in clear and distinct signals. Tension and strength of blow are adjustable.

Single Stroke. Single stroke bells can be wound to operate on direct current up to 500 volts.

Vibrating. Vibrating bells are furnished up to 110 volts direct current.

## The Vigilant, Open Type—No. 20



No. 20

Size	List Price	Size	List Price
2½ in	\$9.85	8 in	\$24.52
3 in	10.12	10 in	40.66
4 in	17.39	12 in	
6 in	19.80	16 in	
777		18 in	

Vibrating, add to list \$3.71.

Combination vibrating and single stroke, add to list \$5.25.

Finish. 2 ½ to 6 inch, nickle plated and black; larger sizes, polished brass and black.

## The Vigilant, Covered Type-No. 21

Size 6 in	. 28.50	Size 14 in	. 147.00
10 in	. 44.86	18 in	. 165 00

Vibrating, add to list \$3.71.

Combination vibrating and single stroke, add to list \$5.25.

Finish. 2½ to 6 inch, nickle plated and black; larger sizes, polished brass and black.



No. 21

## The Vigilant, Fire Alarm Type-No. 21C

A special form of the Edwards Vigilant Bell for fire alarm use. Approved by States having fire protection laws. This bell is highly efficient; it has no heavy retracting springs nor is there loss of power through compound levers.

The conduit fitting shown on right side of cut is separable, so that conduit wires pulled in and the bell attached at any time.

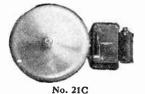
Size	List Price	Size	List Price
	\$28.28	14 in	
8 m 10 in		16 in , , , ,	153.00
12 in	65.40	18 in	171.00

Finish. Polished brass and red.

Conduit boxes regularly drilled for  $\frac{1}{2}$  inch conduit. Furnished for  $\frac{3}{4}$  inch, if ordered.

For higher voltages refer to "Special Resistance Table."

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.



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## FIRE ALARM AND SIGNAL BELLS



No. 133 Full Grid



No. 1331

## Electro-mechanical Bells

#### FOR ALTERNATING OR DIRECT CURRENT UP TO 110 VOLTS

## For Open or Closed Circuit on Direct Current, but Open Circuit Only on Alternating Current

The Edwards electro-mechanical bell is operated by a strong spring mechanism which is electrically released on an exceptionally small current flow. The mechanism is entirely insulated from the case. The binding posts are on the side where they are most accessible. Regularly supplied single stroke, but will be furnished, if ordered, as a constant ringing bell, i.e., to ring continuously until run down on either open or closed circuit. These bells are dust, insect, moisture and weatherproof, or non-weatherproof if for interior use.

Operation. The hammer, when released, makes a full revolution, passing under the gong to an inclined plane, where it is raised, and strikes the gong with the great force gathered in the revolution. The recoil causes it to drop and become locked in its normal position under the gong. As the full force of the blow is spent on the gong, there is no strain on the mechanism. The operation, through an eccentric, produces positive action.

Resistance. 5 ohms. (Up to 20 ohms furnished without additional charge.)

Finish. Polished brass and red.

Capacity. 300 to 450 blows to each winding.

Keys. One key furnished with each order. Additional keys \$4.00 each.

#### WEATHERPROOF TYPE-NO. 133

O in	$62.00 \\ 65.26$	14 in	104.00

#### CONDUIT TYPE-NO. 1331

Conduit box drilled for ½ inch conduit. Furnished for ¾ inch if ordered. State if for use with surface or concealed conduit.

8 in	$67.28 \pm 70.50$	Size 14 in	100.00
12 in	77.40		

#### **GRIDS**

#### For Electro-mechanical Bells

For prices of gridded bells add to list of Nos. 133 or 1331 the following:

Size
6 ins. \$13.50
8 ins. \$22.25
8 ins. \$30.00
9 ins. \$39.75

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house,

#### RECTI BELLS AND GRIDS



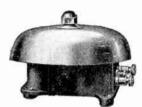




Recti No. 100 Standard



Recti No. 100U Underwater Type



Recti No. 219 Underdome Type

#### Recti No. 100

		For	Battery-		110-125	Volts, D.C	220 Volt.	s D.C
	No. of	Ohms	Amp.	List Price	Ohms	List Price	Ohms	List Price
Size	Dry Cell	Resistance	Gong	Each	Resistance	Each	Resistance	Each
3 ins.	3	2	.35	\$9.76	500	\$14.16	2000	\$20.80
4 ins.	3	$\overline{2}$	.35	10.30	500	14.72	2000	21.60
5 ins.	4	-1	.30	16.84	500	23.36	2000	31.20
6 ins.	4	4	.30	19.08	500	25.20	2000	33.20
7 ins.	4	4	.30	21.40	500	27.60	2000	35.60
8 ins.	4	4	.30	23.55	500	29.68	2000	37.60
10 ins.	6	6	. 20	39.50	500	46.40	2000	55.20
12 ins.	6	G	.20	53.88	500	61.76	2000	71.20
14 ins.	8	10	, 12	65.84	500	73.60	2000	78.00
15 ins.	8	10	, 12	123.74	500	128.62	2000	117.00
16 ins.	8	10	.12	129.62	500	138,62	2000	140.62
18 ins.	8	10	.12	147.34	500	148.70	2000	140.02

Recti No. 100U for operating on alternating current, price same as 100.

Recti No. 219, underdome type, for operating on battery and direct current, price same as No. 100 above.

# RECTI-ALTERNATING CURRENT TYPE No. 100AC Single Phase, 25, 40 or 60 Cycles; Carbon Contacts

A loud-ringing, vibrating bell for operation direct on alternating current up to 220 volts, 25 to 60 cycles. Size 220-250 Volts 110-125 Volts 110-125 Volts Size 220-250 Volts 4 in. \$18.66 \$26.26 8 in \$39,90 \$48.66 31.00 5 in. 40.00 10 in. 64.19 73.456 in. 34.00 42.8312 in. 85.88 96.327 in. 36.9255.76

No. 100UAC and No. 219AC same price as No. 100AC.



#### Grids for Recti Bells

It is sometimes considered necessary to have additional protection for bells to prevent the maliciously inclined from tampering with the hammer rod or from breaking the gong, or so deadening the sound that it would not be heard. For this purpose the "Part Grid" or "Full Grid" is furnished.

Any Recti type bell, except the No. 219, can be furnished with "grids."

In ordering, add to List No. the initials "P. G." for part grid, or "F. G." for full grid.





Full Grid

	Add to List	Trice of Rell			Add to List	Price of Bell
Size		Full Grid			Part Grid	Full Grid
4 in. Recti	\$1.60		14 in.	Recti	\$6.40	
5 to 6 in. Recti	2.40	\$14,40	15 in.	Recti	13.22	
7 to 8 in. Recti	4.00	21.60	16 in.	Recti	17 32	
10 in. Recti	4.80	32.00	18 in.	Recti	28 65	
12 in. Reeti	6.40	42.40			-0.00	

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## RECTI DIRECT CURRENT BELLS



No. 217



No. 1001 Conduit Type For D. C. or A. C.



No. 100A Auto Type



No. 220 Recti Buzzer

#### RECTI HIGH VOLTAGE TYPE NO. 217

Long, quick break contacts, slate base mounting, operates gong only. Suitable for use on direct current up to 600 volts. For intermittent service. Not made weatherproof.

	_			Sizes			
√olts	6 Inches	8 Inches	10 Inches	12 Inches	14 Inches	16 Inches	18 Inches
220 to 299	\$49.60	\$45.20	\$72.80	\$84.00	\$105,00	\$151.20	\$180.00
300 to 499	60.80	67.20	77.26	125.00	114.76	160.44	189.70
500 to 600	66.40	71.20	83.26	97.50	119.26	164.50	193.56

#### RECTI CONDUIT TYPES NO. 1001 AND 1001 A.C.

For battery or direct urrent up to 250 volts, and for alternating current up to 220 volts; 25, 40 or 60 cycles, single phase.

						No. 1	1001———		1001 A	l. C.——
		—-F	r Battery—		<del></del>	V.D.C.	-220 Vo.	lts D. C.—	110 Volts	220 Volts
	Dry	Ohms	Amps.	L st	Ohms	List	Ohms	<b>List</b>	List	List
Size	Cells	Resist.	Per gong	Price	Resist.	Price	Resist.	Price	Price	Price
6 in.	4	4	.30	\$24.00	500	\$29.92	2000	\$37.92	\$38.72	\$47.50
8 in.	4	4	.30	28.32	500	35.20	2000	43.20	45.60	74.40
10 in.	6	6	.20	44.80	500	52.00	2000	52.00	69.60	79.20
12 in.	6	6	.20	66.16	500	68.00	2000	77.60	86.40	96.20
14 in.	8	10	.12	72.00	500	75.00	2000	84.00		

#### RECTI AUTOMOBILE TYPE NO. 100A

The sizes generally used are 5, 6, 7, 8 or 10 inches, and to operate on a direct current from either primary or storage batteries.

General voltages for automobile 1 ells are 22, 44 or 88 volts.

Ohm	Size	List	Oh :	Size	List	Ohm	Size	${ m L}^{ m i}{ m st}$ ${ m Price}$
Resist.	Inches	Price	Resist.	Inches	Price	Resist.	Inches	
4	5	\$16.84	4	7	\$21.40	6	10	\$39.50
	6	19.08	4	8	23.55	6	12	53.88

#### RECTI BUZZER

#### For Operation on Battery, Direct or Alternating Current

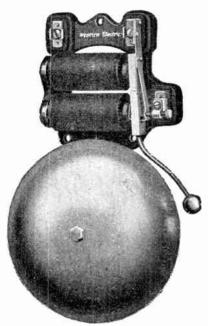
						——Direct	Current-			-Alternating	Curren	t
		-Battery	Current-		110-1	25 Volts—	220	Volts-	110	Volts	220	Volts-
	Dry	Ohms			Ohms		Ohms		Ohms		Ohms	
	Cells	Re-	Amps		Re-		Re-		Re-		Re-	
	Re-	sist-	$\mathrm{Pe}\mathbf{r}$	List	sist-	List	sist-	List	sist-	List	sist-	List
No.	quired	ance	Gong	Price	ance	Price	ance	Price	ance	Price	ance	Price
220A	3	<b>2</b>	.35	\$8.46	500	\$11.26	2000	\$17.90	4.5	\$16.00	100	\$18,40
220B	4	4	.30	12.74	500	19.25	2000	25.76	45	20.69	100	24.69

No. 220A is furnished with silver contacts; for carbon contacts add to list price, \$0.80. Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## TRANSFORMER AND ECONOMY BELLS







#### Transformer Bells No. 510

Edwards transformer bells are a scientific A.C. bell development, to meet the demand for a loud ringing, dependable bell in the larger sizes, to operate on low voltage transformers of limited capacity. For use in schools, industrial plants, institutions, and wherever reliable signals are required. Any

number of bells may be operated from one transformer.

#### LIST PRICES

		Weatherproof	Full	Part
	Regular	Bell	Grid	Grid
3 in	\$6.72	\$9 92	\$16.32	\$13.12
4 in	7.20	10 40	16.80	13.60
5 in	15.36	10.08	26.56	23.36
6 in	16.96	21.76	28.16	24.96
( In	19.52	24 - 32	30.72	27.52
8 in	21.12	25/92	32.32	29.12
10 m	37.76	42.56	48.96	45.76
12 inch	47.20	25 92	58.40	55.20
Buzzer	6.40	9.60		

Standard winding, 6-10 volts, 60 cycle A.C. Other voltages and frequencies can be furnished.

## No. 17 Economy Bell

The Edwards economy bell is a high-grade, adjustable, fully insulated bell for all purposes.

Intensified Stroke Armature. An intensified and powerful stroke with great economy of current is obtained as follows:

The armature, contact spring and their support form a single unit. The spring serves the double

purpose of holding the contact points and supplying the spring tension for the armature action.

When the magnets are energized they attract the armature, but the contact points do not separate until the armature has practically completed its stroke. The pull of the magnet is effective during the entire stroke, which is long and powerful.

New Code Connectors. New code binding posts as approved by the National Board of Fire Underwriters are supplied on this high-grade bell. Wires may be quickly connected. After the screws are set down it is impossible for wires to spread or loosen.

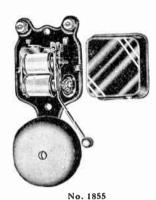
Adjustable Contacts, Positive Lock, Non-turning Binding Post. A positive locking screw holds the contact screw in position. The contact post is securely fastened to the frame so it positively cannot turn. The contacts are heavy, broad-faced, and made of pure silver.

]	LI	S	T	P	R	1	C	E.	٤

3 ins	<b>\$5.12</b>	5 ins,	\$7.20	7 ins	\$12.40	10 ins	\$22.80
4 ins	5.44	6 its	7.60	8 ins	13.76	12 ins	25, 36
Standard res	sistance, 3	3 ohms. Special r	esistance.	same prices as fo	r No. 100.	Recti bell	213.17.7
Delivery F.	O. B. Fa	ctory, New York (	City. Fo	r wareĥouse deliv	eries write	nearest house.	

#### IRON BOX BELLS AND BUZZERS DIRECT CURRENT







No. 1848



No. 1900

#### Iron Box Bells and Buzzers

Class "B" Adjustable

This Bell is guaranteed to give satisfaction.

Every part is designed for long and hard service with the possibility of a "ground" or "short circuit" in the bell practically eliminated. Specially formed hard fiber in addition to rubber covering is used to prevent circuit wires coming in contact with the bell frame. The base or back of the bell is made from prevent circuit wires coming in contact with the bell frame. The base or back of the bell is made from dead soft steel formed under heavy pressure and arranged with a continuous rim which rests flush on the surface to which the bell is attached, preventing anything getting into the bell mechanism. The armature and magnets are mounted on a separate base which is securely attached to the back. The armature rod and ball are made from one piece of metal, therefore, no chance of any parts becoming loose. The armature is pivoted and fitted with an adjustable tension spring which can be adjusted for one to eight cells of battery. The contact post is non-turnable and fitted with a lock nut on the contact screw. The binding posts are non-turnable. Magnet cores are tipped with copper caps to prevent armature from sticking. The cap and frame are protected with a covering of black japan and all other parts are nickel and copper plated to prevent rueting. plated to prevent rusting.

			(Q	uantity Prices	
	CLASS "B"	1-10	10-100	100-500	500 and Over
1855	2½ inch gong	\$1.46	\$1.06	\$0.80	\$0.74
1856	3 inch gong	1.54	1.14	.84	.78
1857	4 inch gong	2.10	1.52	1.14	1.04
1858	Buzzer	1.40	1.02	. 76	.70

#### Class "C" Non-adjustable

The cover is made of tinned sheet steel, black japanned, and is held rigidly in place by metal projections on top of base, under which the cap is snapped.

The base is of heavy annealed steel, black japanned. Contact post is attached to the magnet head

which insures permanent adjustment and no danger of a "ground" on the base as it does not touch it.

The armature, striking rod and ball are all made from one piece of metal—a sure prevention of loose striker rods or balls.

Magnets are standard size and end of upper magnet is fitted with a copper cap to prevent armature sticking.

Binding posts are non-turnable, which prevent holding screws from turning and making loose contact. Every detail of the bell and buzzer is constructed for durability and satisfactory service.

One cell of battery will operate either, and as many as five cells can be used if desired.

	CLASS "C"	1-10	10-100	100-500	500 and Over
1845	Bell, 2½ inch gong	\$1.32	\$0.96	\$0.72	\$0.64
1846	Bell, 3 inch gong	1.44	1.02	. 76	.70
1847	Bell, 4 inch gong	1.88	1.44	1.08	.98
1848	Buzzer	1.30	.94	.70	.62

## Improved Monitor Bell

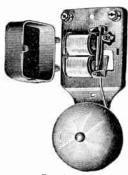
A neat, compact, reliable, round bell with double magnets, non-turning contact spring and binding posts. The gong is nickel plated, and secured in its place so it cannot turn, giving always a clear ring instead of a rattle caused by a loose gong.

			Less (nan 10	10 to 99	99 and Over
1900	Improved Monitor	Bell	\$1.68	\$1.26	\$1.12

5 or More

## IRON BOX BELLS AND BUZZERS

#### DIRECT CURRENT







Dixie Buzzer



The Cadet

The Dixic (Non-adjustable) and the Cadet (Adjustable) are wound to two ohms only and are not furnished in higher resistance or special finish.

The Arrow (Adjustable) is wound to 5 ohms standard and can be furnished for any higher resistances

as listed below.

Exclusive and advantageous features of Edwards Iron Box Bells.

Fahnestock Clip. For connecting wires instead of old screw terminals. Eliminates all trouble from loose wires and saves time. Fahnestock Clip is furnished only on Edwards Bells and Buzzers.

Gong. Riveted to support to prevent removal or turning.

Cover. Held in position at three points. Interference impossible.

Hammer Rod, Ball and Armature. One piece. Rod swaged to prevent bending in operation. Hammer ball under gong to prevent disarrangement.

Pivot. At eenter of balance to prevent strain.

Dust and Bug Proof. Pivot is located at nearest possible point to cover where there is practically no motion—hence the opening is but slightly larger than the rod which passes through it, leaving no room for foreign matter to enter.

Finish. Black enamel, nickel trimmings.

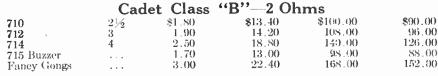
#### NET QUANTITY PRICES

## Dixie Class "C"-2 Ohms



Cow

			Less Than			Std. Pkgs.
	List	Size	Unit Package	1 Unit Pkg	1 Std Pkg.	Price for 1
	No	Inches	Price Each	Price for 10	Price for 100	Std. Pkg.
	720	$2\frac{1}{2}$	\$1.70	\$12.40	\$92.00	\$84.00
	722	3 ~ ~	1.80	13.40	100,00	90.00
,	724	4	2.40	17.80	134.00	-120.00
	725 Buzzer		1.60	12.00	90,00	80,00
	Fancy Gongs		2.90	21.20	160.00	144.00





Sleigh

	Arr	ow Class	"A"—5 Oh	ms	
700	21/2	\$2.70	\$20.00	\$150.00	\$134.00
702	3	2.90	21.00	158.00	140.00
704	4	3.40	25.20	192.00	170.00
705 Buzzer		2.70	19.60	148.00	132.00
Fancy Congs		3.90	29.00	218.00	198.00

Above prices F. O. B. New York.

Unit Package. 10 pieces of same size and class. Standard Package. 10 unit packages same size and class.

5 or more Standard Packages. Assortment of sizes and classes in Standard Packages.

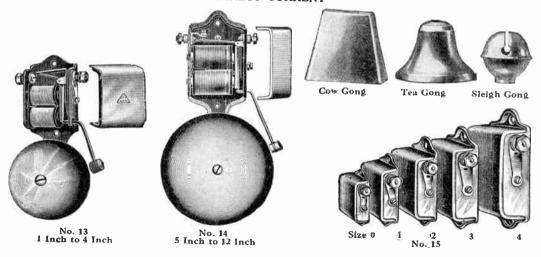
Assortment of special resistance and regular wound bells **not allowed** to make Standard Packages. **Platinum Contacts.** Prices on application. Furnished on Class "A" only,

SPECIAL RESISTANCE-FURNISHED ON CLASS "A" ONLY Add to Net Prices per Bell

12-21 ohms 21-50 ohms 51-100 ohms 1-10 ohms Resistance . . . . . . . . . . . 7-10 volts 21- 30 volts 11-20 volts 3- 6 volts \$2.00 \$2.20 \$1.80\$1.60

## BELLS AND BUZZERS

DIRECT CURRENT



## The Lungen Bell

This is a very high grade iron box bell and buzzer. It has been made continuously in the various sizes for a period extending over 30 years. As the hammer rod is so shaped that the opening through which it passes in the side of the case is only slightly larger than the size of the rod, it may justly be described as a dust and insectproof bell. It is worthy of notice that this is the only type bell in which the standard size of 1 inch gong can be obtained.

#### LUNGEN NO. 13-3 OHMS

Schedule "E"

Specifications

Compact, positive acting, durable, insectproof. (a)—Cover and base formed steel. (b)—Unit hammer rod and armature. (c)—Pivoted armature. (d)—Small hammer rod channel. (e)—Heavy spring nut adjustment. (f)—Brass gong heavily nickeled. -Ribbed edges, spring cover. Finish, one inch size, all nickel; other sizes, enameled base, nickel gong and cover.

1 in. 13/4 ins. 2 ins.  $2\frac{1}{2}$  ins. 3 ins. 4 ins \*List Price..... \$1.80 \$1,22 \$1.60 \$1.66 \$1.35 \$1.80 Fancy Gongs..... \$1.92 Special finishes—prices on application. Special resistance prices furnished on application.

#### LUNGEN NO. 14-3 OHMS

Schedule "E"

Characteristics and specifications, the same as No. 13, except as follows:

(a)—Base, cast. (e)—Screw and locknut adjustment. (f)—Cast bell-metal gong.

In 5 and 6 inch case, japanned; gong and binding post, nickel; the other sizes, gongs and binding posts, polished bronze.

Sizes..... 5 ins. 6 ins. 7 ins. 8 ins. 10 ins. 12 ins. \*List Price......\$8.06 \$9.08 \$14.08 \$14.20 \$24.32 \$30,40 Special finishes—prices on application. Special resistance prices furnished on application.

#### The Lungen Buzzer LUNGEN NO. 15-3 OHMS Specifications

Schedule "E"

Cover and base formed sheet steel. Pivoted armature. Lock nut adjustment screw. Ribbed edge spring cover. Positively dust and insect proof

List	Outside D	Outside Dimensions, Not Including Binding Posts					
Size	Length, Inches	Depth, Inches	Width, Inches	*List Price			
0	15/8	11/8	1/2	\$1.60			
1	$\frac{2\frac{1}{8}}{8}$	$1\frac{5}{16}$	5/8	1.20			
2	216	134	3/4	1.48			
4	ა 21∠	2	7/8	1.72			
7	Standard finish No. 0 full nickel.	3rger sizes ignanned bese	l <sub>16</sub>	1.86			

Special finishes—prices on application. Special resistance prices furnished on application.

<sup>\*</sup>Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## WOOD BOX BELLS

FANCY GONGS FOR WOOD BOX BELLS













## No. 760 Wood Box Bells-3 Ohms

The "EDWARDS" are a decided improvement in wood box bells and are constructed after the design of Edwards Iron Box Bells containing all of the features of the Cadet (Adjustable) Type.

The mechanism and gong support are one unit. All connecting wires are on the inside of the box where they are fully protected. Edwards Wood Box Bells are equipped with Fahnestock Clips.

Base and cover of seasoned oak. Cover is secured to base by three spring arms holding it in a permanent position

Gong is riveted to gong support and cannot loosen.

Net Quantity Prices

Size 2½ inch 3 inch 4 inch Buzzer Faney Gongs	Less Than Unit Pkg. Price Each \$2.80 2.90 3.40 2.72	1 Unit Pkg. Price for 10 \$21.00 22.00 26.00 18.40	1 Std, Pkg, Price for 100 \$156.00 162.00 192.00 152.00	5 or More Std. Pkgs. Pricefor 1 Std. Pkg. \$140.00 146.00 172.00 136.00
Faney Gongs	3.80	29.00	212.00	136 00 192.00

nit Package. 10 pieces of same size and class.

Standard Package. 10 unit packages, same size and class.

5 or more Standard Packages. Assortment of sizes in standard packages. Assortment of special resistance and regular wound bells not allowed to make standard package.

## No. 750 Bronx Watch Case Buzzer—3 Ohms

The smallest round buzzer made. Especially convenient for pocket use for testing.

Resistance. 3 ohms standard. Special resistances, see table below. Distinctive Features. Round brass case, heavily nickel plated. Cover fits snugly to base making it dust and bugproof. Phosphor bronze springs. Silver contacts.



No. 750

## NET QUANTITY PRICES

List	Height	Diameter			
No.	Inches	$1\frac{3}{4}$	Less than 10	10 to 99 ·	100 or Mora
750	5/8		\$1.50	\$1.00	80 96

## No. 156 Re-al Monitor Bell-3 Ohms

This small compact bell is especially designed for street cars, apartment houses and annunciator work and for positive operation under the most severe conditions.

Resistance. 3 ohms standard. For special resistance, see table below. Size. 3 inch. Standard Package. 100. Finish. Nickel plated gong. Black enamel base.

Distinctive Features. Entire movement self contained unit. Direct acting straight line hammer-rod. Weather, dust and buggroof. Heavy phosphor bronze contact springs. Large wiping contact points.



No. 156

### **NET QUANTITY PRICES**

Less than 10 10 fa 99 100 or More \$2.00 \$1.50 \$1.30

#### SPECIAL RESISTANCES

T>=-* 4	Add	to Net Prices	per Bell		
Resistance	1-10 ohms 3-6 volts \$1.60 .50	11-20 ohms 7-10 volts \$1.80 .80	21-50 ohms 11-20 volts \$2.00 1.20	51-100 ohms 21-30 volts \$2,20 1,55	101-200 ohms 31-50 volts \$2,40 1.80
Bell	.50	.80	1.20	1.50	1.80

**World Radio History** 

## THE EDWARDS RIOT BELL "Motor Driven" Bells

An absolutely new principle—a very powerful quick responding, loud ringing, weatherproof, revolving An absolutely new principle—a very powerful quick responding, loud ringing, weatherproof, revolving stroke bell—bells that obtain all the sound that the gong can produce. A smooth running, high efficiency motor, especially designed for the purpose used. They are designed to operate on battery voltages of 6 and higher, also lighting circuits of 110 volts alternating and lirect. The full power of the revolution and its momentum produce a strength of blow never before obtained. No adjustment is needed. No parts to wear out. No gears to stick. No heavy parts to move. Striker is mounted directly on motor shaft.



No. 300 The Riot Bell



No. 320 The Liberty Riot Bell



No. 310 The Double Gong Riot Bell

## NO. 300 GENERAL SIGNAL RIOT BELL

Available wherever a loud ringing alarm or signal bell is desired. For operation on alternating or direct current lighting circuits or battery. The bells are weatherproof and may be used out of doors. Made in sizes 10 to 18 inches for all voltages and frequencies. Furnished for 6 volt battery circuit when not otherwise specified.

300 10 110 A.C. or D.C. 147.60 300 15 110 A.C. or D.C. 123.40 300 16 6 D.C. 1300 12 110 A.C. or D.C. 151.20 300 16 110 A.C. or D.C. 129.60 300 16 110 A.C. or D.C. 129.60 300 18 6 D.C.	List No. 300 300 300 300 300 300	10 10 12 12 14	Voltage 6 D.C. 110 A.C. or D.C. 6 D.C. 110 A.C. or D.C. 6 D.C.	$\begin{array}{c ccc} 122.40 & 300 \\ 151.20 & 300 \\ 129.60 & 300 \end{array}$	15 15 16 16 18	110 A.C. or D.C. 6 D.C.	\$144. 172. 151. 180. 165. 194.	00 80 22 00 60
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#### NO. 320 LIBERTY RIOT BELL

Designed for use on fire fighting apparatus vehicles only. An adaptation of the Riot movement to the engine or locomotive type gong. Replaces the hand operated type of same bell now widely in use. Gives a greater volume of sound than the hand operated bell, and is controlled by the driver from a push button on the steering wheel. It is the different signal so essential to the rapidly moving fire department vehicle. Additional buttons may be placed on other parts of the vehicle if desired, enabling others than the venice. Additional puttons may be placed on other parts of the venicle if desired, enabing others than the driver to operate the bell. Economical in current consumption, it can be operated on the ignition batteries. Where vehicles are equipped with electric starting and lighting system, the Riot Liberty Bell can be furnished without extra charge to operate on it. This saves the cost of and space for separate battery. Where this type of gong, hand operated, is now used, the Riot attachment can be furnished to fit the gong. By sending gong to the factory, attachment can be applied to best effect.

gong. 1	sy sending going to the .		Voltage	List Price
List No.		Size Inches	3	\$129.60
320	Liberty Riot Bell	10	6 D.C.	100.00
320	Riot attachment only			

## NO. 310 DOUBLE GONG RIOT BELL

For fire engines, ambulances and patrol wagons. The only signal sufficiently different and with clamorousness enough to meet the urgent necessity of fire fighting and emergency vehicles.

They operate on a 6 volt battery by steering wheel push, and produce a far-reaching, effective and

entirely different warning of the approach: a rigorous, emphatic demand for the right of way in a tone loud enough and strong enough to be heard at a distance, enabling pedestrians or traffic to keep the way open.

An adaptation of the Riot Bell using two gongs and a double striker. The gongs are struck alternately,

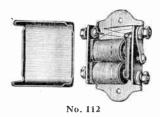
and as the gongs are different tones the volume of sound is greatly intensified.

CHICA CAD CARO	B	List Price			List Price
List No. 310 310 310	Size Inches 12 14 15	6 Volts D.C. \$129.60 144.00	List No. 310 310	Size Inches 16 14	6 Volts D.C. \$158, 40 180, 00

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## CIRCUIT CLOSING DEVICES





## Constant Ringing Drop No. 26-4 Ohms

#### FOR USE WITH BATTERY AND MAGNETO

Especially designed for use on Telephones, Burglar Alarms, etc.

Compact, positive and reliable. Is attached to the main line; the closing of the circuit drops the lever thus closing the local circuit, and causing a bell to ring continuously until the lever is raised into place.

Furnished for magneto wound to 80 ohms.

Can also be arranged as an indicating buzzer, so that when buzzer operates arm will drop at side showing that call has been made.

Will give satisfactory operation wound to any resistance up to 300 ohms.

Will not guarantee operation on more than 25 volts.

Finish: Niekel. Standard package: 6,

List No.		List Price
26B	For battery, 4 ohms.	\$2.56
26M	For magneto, 80 ohms	3.52
26X	Indicating buzzer	3.52

Assortment of B, M and X permitted to make standard packages.

Special resistance, see table below.

## Relay No. 112-10 Ohms

#### FOR OPERATION ON DIRECT CURRENT ONLY

This relay is designed to meet the demand for a reliable relay for the handling of small currents. The contacts and clearances are constructed to take care of current equal in value to one ampere at 20 volts or 20 watts.

Equipped with silver contacts, phosphor bronze spring.

Will give satisfactory operation wound to any resistance up to 300 ohms.

Finish	Std. Pkg.	List Price
Nickel, japanned base	6	\$3.00

#### For Special Resistance, see table below SPECIAL RESISTANCE

	Add to List Price						
	$\Gamma_{\rm p}$	21	51	101	151	201	251
	to	to	to	to	to	to	to
Ohms Resistance		0.0			200		300
No. 26B							
No. 112 Relay	.96	1.50	2.00	2.56	3.00	3.50	3.85

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## FARADAY BELLS

#### GENERAL OUTLINE OF STANDARD TYPES OF FARADAY SIGNAL GONGS WITH DATA AS TO OPERATIVE CURRENT, ETC.

Faraday Signal Gongs are made in five (5) general types, viz.:

Vibrating (enclosed and skeleton types).

Single Stroke (enclosed and skeleton types).

Two-signal Combination Single Stroke and Vibrating (enclosed types only).

Electro-mechanical (enclosed types only).

## Vibrating Gongs

Vibrating Gongs will be furnished as ordered to operate from the following sources of energy as may be specified:

(a) Battery Circuits—all voltages (gongs to be wired in multiple).

(a) Battery Circuits—an voltages (songs to be water in multiple).
(b) D.C. Light and Power Circuits—all voltages up to 600 (gongs to be wired in multiple).
(c) A.C. 25-60 Cycle Circuits (18 to 24, 100 to 110, 200 to 220 volts) as follows:
(1) A.C. 25-60 cycle bell-ringing transformer circuits, 12 to 24 volts, single gong patterns up to 12 inches inclusive—double gong patterns up to 18 inches inclusive. (Gongs to be wired in multiple.)

(2) A.C. 25-60 cycle light and power circuits—100 to 110, 200 to 220 volts.

(Gongs best wired in series, but may be wired in multiple.)

(3) In series (any number as may be specified not exceeding 10 gongs) on 100-110 volts A.C. light and power circuits-25-60 eyeles.

(4) In series (any number as may be specified not exceeding 20 gougs) on 220 volts A.C. light and power circuits-25-60 cycles.

## Single Stroke Gongs

Single Stroke Faraday Gongs of standard type (except electro-mechanical patterns) cannot be operated on A.C. circuits; single stroke gongs must have, as a source of current supply, either battery current or D.C. light and power current; single stroke gongs are particularly adapted to code signalling and, of course, are preferable to vibrating gongs for code signalling; single stroke gongs cannot, from the nature of their construction, be counted on to give anywhere near the volume of sound that a continuous ringing vibrating bell

Single Stroke Gongs are best wired in series, but may be wired in multiple.

## Two (2) Signal Combination Single Stroke and Vibrating Gongs

Two (2) Signal Combination Single Stroke and Vibrating Faraday Gongs, like the single stroke type in preceding paragraph cannot be operated on A.C. current; battery current or D.C. light and power current must be used; special attention is called to the fact that two (2) signal combination single stroke and vibrating gongs draw a much greater amount of current for full normal operation than vibrating gongs of same size, and when operated from battery, ample ampere capacity of the battery set is essential

Two (2) Signal Combination Single Stroke and Vibrating Faraday Gongs should always be connected in multiple on a 3 wire circuit.

## Electro-mechanical Gongs

Electro-mechanical Faraday Gongs will be furnished to operate on battery current, A.C. (25-60 cycle) circuits (6 to 220 volts) and D.C. light and power circuits (100 to 600 volts).

Electro-mechanical Faraday Gongs are furnished to operate as specified, for open or closed circuit lines, as follows:

Style 1—Single stroke, for open circuit work. Style 2—Single stroke, for closed circuit work.

Style 3—Continuous ringing, for open circuit work.
Style 4—Continuous ringing, for closed circuit work.
Style 5—To ring continuously until run down, for open circuit work.
Style 6—To ring continuously until run down, for closed circuit work.

In an Electro-mechanical Faraday Gong, the blow on the gong is struck by a heavy ball on the end of a lever released by the electric current, but operated by a powerful clock-spring.

Electro-mechanical Gongs are designed for use where requirements demand a heavier and more powerful blow than is possible to obtain from an electric signal gong of regular design, or where current for operation of gong must be kept down to a minimum (Faraday Electro-mechanical Gongs can be furnished to operate on a minimum of 60 milli-amperes per gong)

Electro-mechanical Gongs require winding of clockwork spring after 600 or 700 blows have been struck.

Electro-mechanical Faraday Gongs should always be wired in series for most economical operation.

#### SPECIAL RESISTANCE WINDINGS

#### FOR FARADAY AND EKLA SKELETON AND FARADAY ENCLOSED-TYPE BELLS AND BUZZERS

List additions shown below apply to Faraday Skeleton EKLA Skeleton, Faraday Enclosed-Type Gongs, Faraday Under-Dome Gongs, Faraday Double-gong Bells, Faraday Electro-Mechanical Gongs and Faraday Buzzers for use on Battery and D.C. circuits—do not apply to A.C.

To obtain the list price of special resistance bells, add the list prices shown below for the desired resistance to the list price of the "regular resistance" bell; from the combined figure thus obtained, standard

discount on bells apply.

"Regular resistance" vibrating bells will operate satisfactorily on battery and D.C. circuits at the voltage shown in table listing various types of bells on other pages, but where gongs are to be operated on highervoltage circuits, or where a number of gongs are to be operated simultaneously in "multiple" on a circuit, goings wound to proper higher resistance must be used to obtain satisfactory results.

For D.C. light and power circuits, as well as lower D.C. voltages, data given in table at bottom of

page should be used—this table showing approximate ohms' resistance for vibrating bells for various D.C.

For vibrating bells resistance given in table below for D.C. circuits may be slightly varied from, in actual practice, without bad results, but the maximum resistances shown for specific D.C. voltages insure minimum sparking at contacts and best results; minimum maintenance expense will be obtained by using the highest resistances shown below for specific voltages.

Unless wired in series resistance of single-stroke goings to be connected to D.C. light and power circuits, should be approximately one-quarter that of vibrating goings when designed for operation on similar voltages.

To operate on low voltage battery, single-stroke gongs are best wired in multiple. Figure resistance by following formula:  $R=E^2\pm 20$ . Faraday Enclosed Type Vibrating Gongs will be furnished, when ordered, wound to 150 ohms to operate direct in multiple on 600 volts D.C. street railway circuits; 600 volt gongs should be used either with Faraday

Resistance Panels or with 5-60 watt lamps, connected as per blueprint attached to each 600 volt gong. For A.C. bell ringing transformers and A.C. light and power circuits, Transformer Type Faraday Gongs should be used. Listings of transformer gongs cover gongs suitable for connection direct to 12 and 18 volt bell ringing transformers and 100 to 240 volts A.C. light and power circuits. It is never desirable to use PR MARLO Transformer Gongs on less than 12 volts, and Faraday Transformer Gongs on less than

Resistances of transformer gongs for A.C. circuits are entirely arbitrary and cannot be figured on the

same basis as shown below for D.C. circuits.

For A.C. circuits, Transformer Single-gong Bells, Transformer Under-Dome Gongs, or Transformer Double-gong Bells should invariably be used; all Faraday Single-gong and Under-Dome Transformer Gengs, except double-gong types, are of the "no-contact" non-sparking type; they may be connected in series (when wound to proper resistance for this work) and when so connected, the total number of gongs on the circuit requires no more current than one gong would require in multiple. Particular attention is called to this advantage over other transformer gongs, for the reduced current demand for the operation of the number of gongs, makes possible the use of any first-class contact-key of standard design.

Triplex contacts will be furnished when specially ordered, at slight additional cost on all Faraday Vibrating Gongs and Buzzers, except the smallest size on No. 00 frames. Triplex contacts are a guarantee against the failure of a signal gong, for with three (3) independent sets of contacts, one set may break down

or even two sets, without causing the failure of the gong.

Pure platinum is, without question, the most dependable for gong contacts, but where price of platinum seems prohibitive, platinoid will be found satisfactory.

Single stroke and electro-mechanical gongs have no contacts.

List additions for special resistance windings of skeleton bells may be combined with list prices of skeleton bells and likewise list additions for special resistance windings of enclosed type bells (including Underdome gongs, double-gong bells, electro-mechanical gongs and buzzers) may be combined with list prices of these bells to obtain list values determining discounts; however, list additions for enclosed type bells (including under-dome gongs, double-gong bells, electro-mechanical gongs and buzzers) cannot be combined with skeleton bells to make up list values.

Resistance of single-stroke gongs is approximately one-quarter that of vibrating gongs when designed

for operation on similar voltages.

## OHMS RESISTANCE FOR OPERATION OF FARADAY VIBRATING GONGS ON DIRECT CURRENT VOLTAGES WITHOUT EXCESSIVE SPARKING AT CONTACTS

	Adapted to		Adapted to		Adapted to		Adapted to
Ohms	Operate on	Ohms	Operate on		Operate on		Operate on
Resistance	Following	Resistance	Pollowing	Ohms	Following	Ohms	Following
per Bell	Voltages	per Bell	Voltages	Resistance	Direct Current	Resistance	Direct Current
5	610	150	30-35	per Bell	Voltages	per Bell	Voltages
10	10-15	200	35-45	350	65— 80	550	110-120
20	15-20	250	4555	400	80-95	1000	120-130
50	2025	300	5565	450	95105	2000	220-240
100	25-30			500	105110	1.50	500600
				(With Re	seigtanca Panal or	bank of 5-60 m	att farnise)

SPECIAL RESISTANCE WINDING LIST ADDITIONS—PER GONG

Size Skeleton Gong	Size Enclosed Type Gong	Frame No.	0-10-11	-20 21-50		—Ohms 101– 150	Resist 151- 200	201- 300	301- 500	501- 1000	1001- 1500
Not made	134 and 2 ins.	00	\$1.60 \$2				\$5.28	\$5.44		1 1	
Not made	212 and 3 ins.	0	1.60 2	40 3.20	4.48	4.80	5.28	5.44			
21/2, 3, 31/4 and 4 ins.	4 ins.	1	1.92 2	.88 3.68	5.12	5.60	5.92	6.08	\$6.24	\$7.84	\$8.96
5 and 6 ins.	5 and 6 ins.	2	4.00 5	.60 .5.84	6.08	6.40	6.72	7.04	8.16	9.28	10.88
7 and 8 ins.	7 and 8 ins.	3	5.60 7	52 8.96	9.76	10.08	10.40	11.36	11.52	11.68	12.96
9 and 10 ins.	9 and 10 ins,	4	7.58 8	40 9,20	11.84	12 16	12.48	12.80	13.12	13.44	14.08
12, 14, 15 ins.	12 and 14 ins.	X-5	7.58 8	.40 .9,20	11.84	12.16	12.48	12.80	13.12	13.44	14.08
15, 16 and 18 ins.	15, 16 and 18 ins.	6	19.36 29	28 40,32	41.60	42.88	44.16	45.28	46.72	47.84	49.42

Faraday Skeleton Bell Model "O"

#### **FARADAY SKELETON BELLS**

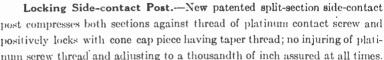
#### VIBRATING TYPE, BELL METAL GONGS, CLASS A

"High-power" Armature.—Patented "High-Power" armature allows the keeping of armature in magnetic field up to the moment of striking the gong.

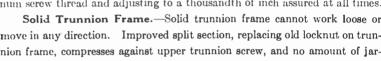
Breakage of Springs Cannot Disable Bell.

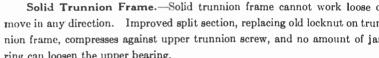
Insulated Mechanism.—Frame of bell carries no current at any time. as entire electrical mechanism is insulated from frame casting. Bells may be mounted on metal without fear of grounding.

Solid Back.—Solid back prevents dampness from getting into insulation washers on back of bell, or affecting magnet windings. All insulation washers sealed in with waterproof wax.



Solid Trunnion Frame.-Solid trunnion frame cannot work loose or move in any direction. Improved split section, replacing old locknut on trunnion frame, compresses against upper trunnion screw, and no amount of jarring can loosen the upper bearing.







There is no possibility of armature breaking away from either upper or lower bearing; construction utilizes full strength of both upper and lower trunnion frame casting.

Non-turning Contact and Binding Posts.—Non-turning and non-loosening binding posts equipped with split steel lock-washers prevent connections from ever jarring loose.

Contact Points.—Contact points are made of platinoid or pure platinum, as specified, and are always plainly marked on both screw and spring. Platinoid contacts furnished, unless otherwise specified.

Note: Faraday Skeleton Bells will be wound, when specially ordered, to any resistance up to 2000 ohms: however, we do not recommend Skeleton Bells for 110, 220 or 500 volts service. For this service, Faraday Enclosed Type Bells (with no enclosed terminals), shown on other pages, should be invariably used.

Faraday Skeleton Bells up to 6-ineh, inclusive, will operate on both A. C. and D. C. circuits when wound to proper resistance (1750 to 2500 ohms for 100-120 volts D. C., 110 ohms for 60-cycle, 100-115 volts A. C.). Above 6-inch these gongs will not give satisfactory service on A. C. circuits, and Faraday Double-Gong Bells must be used.

Faraday Skeieton Type Gongs will be furnished single-stroke, when specially ordered, at \$1.00 list additional, but for important single-stroke work the Faraday Single-Stroke Gong is recommended, and the slight advance in price will be found more than justified.

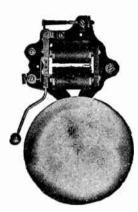
#### PRICE LIST

List No. O- 2½ O- 3 O- 4 O- 5 O- 6	Size, Gong Inches 2½ 3 4 5	Frame No. 1 1 2 2	Resistance in Ohms 1.5 1.5 2.1 2.1	Each   \$5.28   5.68   6.48   8.80   9.92	List No. O-12 O-14 O-15 OL-15 O-16	Size, Gong Inches 12 14 15 15	Frame No. X-5 X-5 X-5 6 6	Resistance in Ohms 5.2 5.2 5.2 8	Each \$33.20 66.32 80.78 117.45 124.05
0-6	6	2	2.1				6	8	
()- 8 ()-10	8 10	3 4	$\frac{3}{5.2}$	$\begin{array}{c c} 15.52 \\ 26.56 \end{array}$	()-18	18	6	8	143.63

Special resistance gongs to order—for prices, see special listing elsewhere.

Assortment of all sizes of Faraday Skeleton and Elka Skeleton Bells permitted to make up quantity, but Enclosed Type Bells cannot be included with Skeleton Bells to make up quantity.

Note: The Underwriters' Laboratories approve only the Enclosed Type Bell for signal systems coming under their supervision.



## BELLS AND BUZZERS

#### EKLA SKELETON BELLS, CLASS Z

EKLA Model "Z" bells differ from the Faraday Model "O," principally in the following details:

Armatures not pivoted, but provided with patent double-screw-lock back-tension adjustment of reed-pattern.

Mechanism not insulated from frame-easting.

Silver contacts in place of platinoid.

Binding-posts simply non-turning, in place of Faraday patented duplex posts, non-turning and non-loosening.

Skeleton EKLA Bells, Model "Z," listed below, are designed to operate on battery circuits only; for bell-ringing transformer circuits, transformer enclosed-type Single-gong Bells, transformer enclosed-Type double-gong bells, transformer underdome gongs or PR MARLO transformer gongs are recommended. Skeleton bells should never be used on electric light and power circuits.

Skeleton EKLA Bells will be furnished Single-Stroke when specially ordered at 50 cents net additional but for important single-stroke work the special Faraday Single-Stroke Gong shown on another page is recommended, and the slight advance in cost found more than justified.

List	Size Gong		Resistance	List Price
No.	Inches	Frame No.	in Ohms	Each
Z- 2½	$2\frac{1}{2}$	1	1.5	\$4.80
Z- 3	3 -	1	1.5	5.12
Z- 4	4	1	1.5	5.44
Z- 5	5	2	2.1	10.78
Z- 6	6	2	2.1	<b>1</b> 1.39
Z- 8	8	3	3	20.67
Z-10	10	4	5.2	34 18
Z-12	12	X-5	5.2	38.08

Skeleton EKLA Bells will be wound to any special resistance desired at standard list additions.

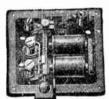
Assortment of all sizes EKLA and Faraday Skeleton Bells permitted to make up list values, but enclosed type gongs or buzzers cannot be included with skeleton bells; list price additions for special resistance windings may be included with bells and buzzers to make up list value.



Nos. 93, 99 and 101 Buzzers, Cover in Position



Mechanism of Nos. 89, 91, 93, 99 and 101 Buzzers



No. 94, Cover Removed

#### FARADAY ENCLOSED TYPE BUZZERS

The Standard Nos. 89, 91, 93, 99 and 101 have the Faraday "High-power" armature; No. 94 Extra Loud, in addition to the "High-power" armature, has a heavy steel ball at the end of the armature rod this steel ball striking on extension of the base frame casting with such force and rapidity as to make the signal three times as powerful as the No. 99 or No. 101.

Models 89 and 91 are the same as the 101 mechanism shown above with no cover; they are intended for interior mounting in annunciators, switchboards, telephone apparatus, etc.; Model 93 is the same mechanism, with standard cover as shown in left-hand cut above, complete with rubber gasket, etc.; the size of the Models 89, 91 and 93 is so small that they fill a very long-felt want.

Frame of buzzer carries no current at any time, as entire electrical mechanism is insulated from frame These buzzers may be mounted on metal without fear of grounding. Breakage of tension spring will not disable mechanism.

Side-contact adjustment is of patented micrometer-lock type; all working parts are heavily copperplated against dampness. Magnet coils are waterproof; soft-rubber gasket between frame and cover guards against outside moisture. Triplex contacts will be furnished when specially ordered, and insure the best

contact co	nstruction ever ma	ide.	Resistance in	Size	List Price
List No.	Style	Frame No.	Ohms	Inches	Each
89	No Cover	00	1.4	$1\frac{13}{16} \times 1\frac{13}{16} \times 1\frac{1}{8}$	<b>\$</b> 6. <b>5</b> 9
93	Enclosed	00	1.4	$2\frac{1}{8} \times 2\frac{1}{8} \times 1\frac{3}{16}$	7.20
91	No Cover	00	1.4	$2\frac{7}{16} \times 2\frac{7}{16} \times 1\frac{1}{8}$	6.59
99	Enclosed	0	1.4	$3\frac{1}{8} \times 3\frac{1}{8} \times 1\frac{3}{8}$	8.26
101	Enclosed	1	1.5	$4\frac{1}{4} \times 4 \times 2\frac{1}{16}$	9.60
94	Enclosed	1	1.5	$4\frac{1}{4} \times 4 \times 2\frac{1}{16}$	10.21

Faraday Buzzers will be wound to any special resistance desired at standard list additions.

Platinum Contacts: Add to above prices of buzzers for pure platinum contacts, \$2.40. Triplex Contacts: Add to above prices of buzzers for Triplex Platinoid contacts, \$8.00; for Triplex Pure Platinum contacts, \$12.00.

Triplex contacts not furnished on 89, 91 and 93 buzzers.

## ENCLOSED-TYPE FARADAY SIGNAL GONGS Standard Models A, B and C

National Code Standard
VIBRATING-WEATHERPROOF-FOR BATTERY AND D.C. CIRCUITS
(Cannot Be Used on A.C. Circuits)

Faraday Enclosed-Type Bells are recommended whenever the gong is exposed to dust, dampness or mechanical injury. They are used for important signal work by leading railroads, fire alarm companies,

etc. The mechanism is protected by a heavy bauer-barff iron case.

Faraday Gongs A, B and C, listed below. are designed to operate on Battery, and when ordered wound to proper resistance, on D.C. electric light and power circuits from 100 to 600 volts; for A.C. circuits, both Bell Ringing Transformer and 100 to 240 volt A.C. circuits, Transformer Enclosed Type Single Gong, Transformer Enclosed Type Double Gong Transformer Underdome Gongs or PR Marlo Transformer Gongs are recommended:

These gongs will be furnished Single-Stroke when specially ordered at \$1.00 additional.







Model B



Model (

Model No. Don't Fail to Specify Model No. and Voltage at Which to Operate	Size Gongs Inches All Gongs Full- Polished Nickel Unless Otherwise Specified	Frame No. (Size of	Number of Dry Cells Required at Gong Terminals for Normal Operation	(Gangs to`l	Approx. Watt Consumption per Gong	Regular Resistance Ohms for Battery Circuits	List Price Each	To Operate on 110-125 Volt D.C. Circuits In Multiple, No External Resistance Required Wound to 500 Ohms List Price Each	To Operate on 220-250 Volt D.C. Circuits In Multiple, No External Resistance Required Wound to 2000 Ohms  List Price Each
MODEL "A" NON-GUARDED GONGS—1% INCHES TO 18 INCHES									
A-134 A-21/2 A-31/2 A-33/4 A-4 A-5 A-6 A-8 A-10 A-12 A-14 A-15 A-16 A-18	134 21/2 3 31/2 4 5 6 8 10 12 14 15 16 18	00 00 0 1 1 2 2 3 4 X-5 X-5 6 6	222233445666888	2222334455666888	1.5 1.1 1.1 1.8 1.8 2.2 2.5 2.55 2.55 4.	1.4 1.4 1.4 1.5 1.5 2.1 2.1 3. 2.1 2.1 2.1 8. 8.	\$6.24 6.72 7.20 8.24 10.08 10.32 16.88 19.04 23.52 39.52 53.36 65.84 123.75 129.60 147.30	\$14 16 14 72 23.36 25.20 29.68 46.40 61.76 73.60 132.75 138.60 148.68	\$20.80 21.60 31.20 33.20 37.60 55.20 71.20 78.00 140.63 142.80
			HALF-GRID						
B- 3½ B- 4 B- 5 B- 6 B- 8 B-10. B-12 B-14	3½ 4 5 6 8 10 12 14	1 1 2 2 3 4 X-5 X-5	3 3 4 4 5 6 6 6 6	3 3 4 4 5 6 6 6	1.8 1.8 2.2 2.5 2.55 2.55 2.55 2.55	1.5 1.5 2.1 2.1 3. 5.2 5.2 5.2	\$11.68 11.92 19.28 21.44 27.52 44.32 66.32 72.24	\$15.76 16.32 25.76 27.60 33.68 51.20 68.16 75.00	\$22.40 23.20 33.60 35.60 41.60 60.00 77.60 84.00
MODEL "C" FULL-GRID-GUARDED GONGS-5 INCHES TO 12 INCHES									
C- 5 C- 6 C- 8 C-10 C-12	5 6 8 10 12	2 2 3 4 X-5	4 4 5 6 6	4 4 5 6 6	2.2 2.2 2.5 2.55 2.55	2.1 2.1 3. 5.2 5.2	\$31.28 33.44 45.12 71.52 89.55	\$37.76 39.60 51.28 78.40 96.90	\$45.60 47.60 59.20 81.75 105.75

Assortment of all sizes Enclosed-Type Gongs and Buzzers permitted to make up list-value, but Faraday and Ekla Skeleton Bells cannot be included with Enclosed-Type Gongs or Buzzers; list price additions for Special Resistance Windings may be included with bells to make up list-value.

Special resistance bells make up instruction.

Special resistance bells made to order. For prices, see special listing elsewhere.

Platinum Contacts: Add to above prices for Pure Platinum Contacts, \$2.40 for bells up to and including 6 inch; \$4.00

for 7 inch and larger.

Triplex Contacts: Add to above prices for Triplex Platinoid Contacts, \$8.00 For Triplex Pure Platinum Contacts add to above prices the following:

## CONDUIT-PATTERN ENCLOSED-TYPE FARADAY SIGNAL GONGS

National Code Standard
VIBRATING-WEATHERPROOF-FOR BATTERY AND D.C. CIRCUITS
(Cannot Be Used on A.C. Circuits)



Model AP For Conduit Work



Model BP For Conduit Work



Model CP For Conduit Work

Faraday Conduit Type Signal Gongs make possible the installation of a signal gong system on the outside of a building or on the inside with positive assurance that no breakdown can occur.

Heavy marine gaskets between conduit box back and bell frame prevent entrance of dampness or water, and mechanism of gong, connections, etc., is absolutely protected at all times.

Faraday Gongs AP, BP and CP, listed below, are designed to operate on battery and when ordered wound to proper resistance, on D.C. electric light and power circuits from 100 to 600 volts; for A.C. circuits both Bell Ringing Transformer and 100 to 240 volt A.C. circuits, Transformer Enclosed Type Single Gong, Transformer Enclosed Type Double Gong, Transformer Underdome Gongs, or PR Marlo Transformer Gongs, are recommended.

These gongs will be furnished single-stroke when specially ordered at \$1.00 additional.

These gongs will be furnished wound to any special resistance desired at standard list additions.

Model No. Don't Fail to Specify Model No. and Voltage at Which to Operate	Size Gongs Inches All Gongs Full- Polished Nickel Unless Otherwise Specified	Frame No. (Size of Mechan- ism)	Number of Dry Cells Required at Gong Terminals for Normal Operation	Operative Voltage at Gong Terminals			List Price Each	110-125 Volt D.C. Circuits In Multiple, No External Resistance Required Wound to 500 Obms List Price	To Operate on 220-250 Volt D.C. Circuits In Multiple, No External Resistance Required Wound to 2000 Ohms  List Price Each
AP- 3½ AP- 4 AP- 5 AP- 6 AP- 8 AP-10 AP-12 AP-14 AP-15 AP-16 AP-18	31/2 4 5 6 8 10 12 14 15 16 18	1 1 2 2 3 3 4 X-5 X-5 6 6	3 3 4 4 5 6 6 6 8 8 8 8	3 3 4 4 5 6 6 6 8 8 8 8 8	1.8 1.8 2.2 2.2 2.5 2.55 2.55 2.55 4 4	1.5 1.5 2.1 2.1 3 5.2 5.2 5.2 6 6	\$17.28 17.52 24.32 26.56 31.60 48.16 60.40 74.48 134.55 140.40	\$21,36 21,92 30,88 32,72 37,76 55,04 70,40 77,10 113,55 149,40 158,76	\$28,00 28,80 38,72 40,72 45,68 63,84 79,84 86,10 141,33 152,88 172,48
BP- 3½ RP- 4 BP- 5 BP- 6 BP- 8 BP-10 BP-12 BP-14	31/2 4 5 6 8 10 12 14	1 2 2 3 4 X-5 X-5	3 4 4 5 6 6	3 4 4 5 6 6	1.8 1.8 2.2 2.2 2.5 2.55 2.55 2.55	1.5 1.5 2.1 2.1 2.1 3 5.2 5.2 5.2 5.2	\$18.88 19.12 26.72 28.96 35.60 52.96 68.96 75.83	\$22.96 23.52 33.28 35.12 41.76 59.84 76.80 83.10	\$29.60 30.40 41.12 43.12 49.68 68.64 80.85 92.10
CP- 5 CP- 6 CP- 8 CP-10 CP-12	5 6 8 10 12	2 2 2 3 4 X-5	4 4 5 6 6	4 4 5 6	2.2 2.2 2.5 2.55 2.55	2.1 2.1 3 5.2 5.2	\$38.72 40.96 53.20 75.15 97.65	\$15.28 47.12 59.36 81.60 195.00	\$53.12 55.12 67.28 89.85 113.85

#### A. C. TRANSFORMERS SINGLE-GONG

## Faraday Enclosed-type Bells

(National Code Standard)

VIBRATING-WEATHERPROOF-FOR OPERATION ON 18 VOLT A. C. BELL-RINGING TRANSFORMER-CIRCUITS AND 100 TO 220 VOLT A, C, LIGHT AND POWER CIRCUITS, 25-60 CYCLES



Model "AT" Regular Pattern Model "ATP" for Conduit Work



Model "BT" Regular Pattern Model "BTP" for Conduit Work



Model "CT" Regular Pattern Model "CTP" for Conduit Work

The mechanism of these Transformer Faraday Gongs is entirely different in design and operation from the ordinary type of signal gong; Transformer Faraday Gongs having no contacts can be operated in series or in multiple, with absolutely no sparking, and may be safely installed in places where presence of gas, inflammable vapors and dust have hitherto made the use of electric signalling apparatus dangerous, if not actually impossible.

The extreme rapidity of vibration gives a sound just as satisfactory for code signalling as a single stroke gong.

Transformer Faraday Gongs are regularly furnished, as listed below, to operate direct in multiple without external resistance on 18 volt, 110 volt and 220 volt circuits; when specially ordered they will be furnished to operate as follows, viz.:

(a) In series (any number as may be specified not exceeding 10 gongs) on 100-110 volts A.C. light and power circuits 25-60

(b) In series (any number as may be specified not exceeding 20 gongs) on 220 volts A.C. light and power circuits 25-60 eveles.

Prices for series gongs same as given below for 18 volt transformer circuits.

Even when as many as 20 Transformer Faraday Comes are connected in series on a 220 volt circuit or 10 on 110 volt circuit, the current consumption of all gongs is no greater than that required by one gong—an important desideratum in satisfactory operation and life of circuit closing devices.

Magnet cores are of latest type laminated construction, windings are of enameled wire and every detail of the mechanism is of the same standard as light and power circuit apparatus.

When used on bell ringing transformers, it is very important that the transformer be of sufficient capacity, or satisfactory gong operation is impossible; ample size copper in line between transformers and gongs is also an absolute essential.

Model No. Don't Fail to Specify Model No. and Voltage at Which to Operate	Size Gongs Inches All Gongs Full- Polished Nickel Unless Otherwise Specified	Frame No. Size of Mechanism	To Operate on A.C. 18 Volt Transformer Circuits in Multiple List Price Fach	To Operate on 100-110 Volt A.C. Circuits in Multiple No External Resistance Required List Price Each	To Operate on 220-250 Volt A.C. Circuits in Multiple No External Resistance Required List Price Each	Conduit Patterns Add 'P' to Model No. and Add to Lists in Previous Columns For Model
	"AT" MO	DEL-NON-GUA	ARDED GONGS-	-31/2 INCHES TO 6	INCHES	"ATP" Add
AT- 312 AT- 4 AT- 5 AT- 6	3 1/2 4 5 6	1 1 2 2	\$19,90 20,26 31,26 34,60	\$26,04 26 88 41 04 43 80	\$35, 96 37, 20 52, 80 55, 80	\$10,80 10,80 11,24 11,24
	"BT" MODEL	HALF GRID-	GUARDED GONG	GS-3½ INCHES T	O 6 INCHES	"BTP" Add
BT- 31/4 BT- 4 BT- 5 BT- 6	3½ 4 5 6	1 1 2 2	\$22.34 22.66 34.86 38.20	\$28.44 29.28 44.74 47.40	\$38,36 39,60 56,40 59,40	\$10,80 10,80 11,24 11,24
	"СТ" МО	DEL-FULL GR	ID-GUARDED G	ONGS-5 AND 6 I	NCHES	"CTP" Add
CT- 5 CT- 6	<b>5</b>	2 2	\$52.86 56.22	\$62.66 65.40	\$74.40 77.40	\$11.24 11.24
Don't fail t	to specify voltage g	ongs are to operate	e on in addition to M	Iodel No.; otherwise o	orders cannot be fill	ed.

Assortment of all sizes enclosed type gongs and buzzers permitted to make up list value, but Faraday and EKLA Skeleton bells cannot be included with enclosed type gongs or buzzers; list price additions for special resistance windings may be included with bells to make up list value.

## FARADAY ENCLOSED TYPE GONGS

NATIONAL CODE STANDARD

#### UNDERDOME FARADAY GONGS



Model UP For Exposed Conduit Work

These gongs are far superior to projecting-neck type of signal-gong heretofore almost universally used. The entire mechanism of an Underdome Gong, including hammer rod and ball, are within the gong, completely housed and protected; nothing can possibly injure or derange the mechanism and, in addition, the design of the Underdome Faraday Gong lends itself to the requirements of building work, i.e., that the gong shall not in any way mar the general building lines:

Underdome Faraday Gongs have the following advantages in mechanism:
(a) Patented "High-Power" armature allows the keeping of armature in magnetic field up to the moment of striking the gong-twice the power of any other mechanism made, because contact points do not open or cut off current till the end of stroke.

(b) Bronze-steel power-multiplying gears between armature and ham-(c) No springs can break to stop operation of gong.

(d) Frame-casting of bell carries no current at any time, as entire electrical mechanism is insulated. Faraday Bells may mounted on metal without fear of grounding.

Underdome Faraday Gongs are made in three (2) models, viz.:

"DB"-for surface-mounting without conduit.

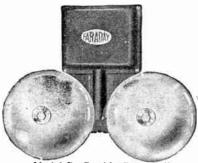
"DBC"-with outlet box for surface-mounting with conduit,

		.,	•	Price	Each——
List No.	Size, Gong Inches	No. of Frame	Resistance, Ohms	Model DB	Model DBC
U- 8	8	3	3	\$43.52	\$52.40
U-10	10	4	5.2	61.92	70.56
O	1 manifest contract to all 1	4 1 0 1	1.11	1	10.00

Special resistance bells made to order—for prices see special listing elsewhere.

Note: Underdome Faraday Bells are ideal for electric vehicle work; will be furnished wound to any resistance required; generally used for 88 volts.

#### D. C. DOUBLE-GONG ENCLOSED TYPE



Model D-Double-Gong Bell stopped without interfering with the working of other gongs in circuit.

These bells are designed for five different D.C. service conditions, as shown in headings above price columns below. All five types on this page are designed to be connected direct in multiple on line without external resistance of any sort, but there are two distinctly different types of bells, viz.: Multiple-Type

and Scries-Type.

Multiple-Type Gongs for 100-125 and 220-250 volts and battery circuits of all voltages should always be connected in multiple, like an incandescent lamp is connected to circuit. Multiple-Type Gongs must never be connected in series.

Series-Type Gongs, while requiring no external resistance, may be connected either in multiple or in series—the latter being particularly advantageous, however, under some conditions when lines are long and size copper small; Series-Type Gong, in operation, never opens the circuit, minimizing sparking at contacts, etc.; the operation of any one or more gongs in the series may be

PRICE LIST

MULTIPLE									SERIES				
List	Size Each	Frame 1	D. C. 100 Direct in on No E	PLE-TYPE 0-125 Volts n Multiple Line External stance	D. C. 220 Direct in on No E	PLE-TYPE 0-250 Volts n Multiple Line External istance	MULTI D. C. Direct in	PLE-TYPE Battery n Multiple Line	D. C. 10 Direct on No E	S-TYPE 0-125 Volts in Series Line External istance	D. C. 22 Direct on No E	ES-TYPE 0-250 Volts in Series Line External istance	add "P" to Model No. and add to Lists
No.	Gong Inches	No.	Ohms Re- sistance per Pair Coils	List Price Each	Ohms Re- sistance per Pair Coils	List Price Each	Ohms Re- sistance per Pair Coils	List Price Each	Ohms Re- sistance per Pair Coils	List Price Each	Ohms Re- sistance per Pair Coils	List Price Each	For Model "DP" Add
D- 3	3	1	1000	\$21.76	2000	\$26.24	3	\$12.80	1000	\$21.76	2000	\$26.24	\$7.20
D- 4	4	1	1000	22.72	2000	27.20	3	13.80	1000	22.72	2000	27.20	7.20
D- 5	5	1	1000	26.96	2000	31.42	3	18.00	1000	26.96	2000	31.42	7.20
D- 6	6	3	1000	33.36	2000	39.84	6	20.40	1000	33.36	2000	39.84	8.06
D- 8	8	3	1000	38.16	2000	44.64	6	25.20	1000	38.16	2000	44.64	8.06
<b>D-10</b>	10	4	1000	53.68	2000	60.72	10	39.60	1000	53.68	2000	60.72	8.64

Note: Double-Gong Bells, above described, will be wound to any desired special resistance for use on D. C. circuits. For list prices for such winding, see special listing elsewhere, being careful to note that double-gong bells always have to be wound to maximum resistance per coil, not per pair as single-gong bells; therefore, list prices of double the resistance of single-gong bells must be figured. For example, a single-gong bell to operate without excessive sparking on a given D. C. voltage might be wound to 500 ohms, but a double-gong for same use 500 ohms per coil or 1000 ohms per pair.

Don't fail to specify which of five types is required and voltage in addition to "List No.," and "Model"

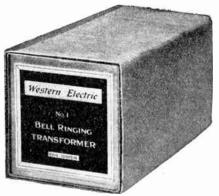
No.," otherwise order cannot be filled.

When Series type gongs are required order must state: (a) How many gongs are to be connected in each series. (b) Voltage of circuit. (c) Length of line (both legs) and size of wire.

#### BELL RINGING TRANSFORMERS



No. 1 Transformer



Carton for 12 No. 1 Transformers Standard Package

## Western Electric No. 1 Bell Ringing Transformer

The function of the beil ringing transformer is the operation of bells, door openers, buzzers, annunciators, or, in fact, any means of signalling that is used in the average residence as well as for factory and general

signalling purposes.

The Western Electric No. 1 Transformer is a small inexpensive device, having three different voltages on the secondary side of 6, 8 and 14 volts, this range is provided to meet the varying conditions of operation. The external dimensions are: width, 2¾ inches; height, 1¾ inches; length, 3¾ inches. It is encased in a sheet metal container. This transformer is of the shell type construction, and it is so designed as to give absolute maximum bell ringing power allowed by the fire underwriters, as such bell ringing power is expressed in watts capacity. Particular attention has been paid to the insulation factors and to that end insulaton material is so disposed as to protect the primary and secondary from each other as well as from the primary and secondary and iron. Electrical bell transformers are always floating on the service or lighting line. It is therefore essential that their no-load losses—core losses—be as low as possible, at least small enough not to operate the ordinary house watt meter.

List							List Price
No.		Watts		Height	Length	Weight	Each
1	Western Electric Transformer	. 20	$2\frac{3}{4}$ ins.	$1\frac{3}{4}$ ins.	33 ins.	2 lbs.	\$3.00



Medium 60 Watts Capacity



Large 125 Watts Capacity

Bell Ringing Transformers

Wayne bell ringing transformers are built in capacities suitable to answer every bell ringing requirement ranging from 5 to 125 watts capacity inclusive.

						-		Capacity in Std. Makes	Shp.	List
List		—Voltage—			Length	Width	Depth	of Trans. Bells	Wgt.	Price
No.	Primary	Secondary	Watts	Frequency	Inches	Inches	Inches	Simultaneously	Lbs.	Each
192340	110	12	5	25 to 49	61/2	$3\frac{1}{2}$	$2\frac{1}{2}$	3-3"	$5\frac{1}{2}$	<b>\$5</b> .00
179543	110	5, 10, 15	60	25 to 49	$5\frac{3}{4}$	6	$3\frac{3}{4}$	15-4", 5- 5", 4-7", 3-10"	10	18.00
179544	110	8, 16, 24	125	25 to 49	$6^{\frac{1}{2}}$	7	$4\frac{1}{2}$	30-4", 16-5", 8-7", 6-10"	15	24.00
					50 to 14	10 Cycle	8			
179541	110	12	5	50 to 140	$2\frac{3}{8}$	23/8	$2\frac{1}{4}$	3-3"	2	\$4.50
191395	110	8, 16, 24	60	50 to 140	61/2	$3\frac{1}{2}$	$3\frac{1}{4}$	15-2", 5-5", 4 <b>-7</b> "	8	15.00
99192	110	10, 20, 30	125	50 to 140	$5\frac{3}{4}$	6	33/4	30-3", 10-5", 8-7", 6-10"	10	20.00
179542	220	12	5	50 to 140	$2\frac{1}{2}$	$2\frac{3}{8}$	$2\frac{1}{4}$	3-3"	$2\frac{1}{2}$	5.00
191771	220	8, 16, 24	60	50 to 140	61/2	$3\frac{1}{2}$	$3\frac{1}{4}$	15-2", 5-5", 4 <b>-7</b> "	8	16.00
191772	220	10, 20, 30	125	50 to 140	$5\frac{3}{4}$	6	$3\frac{1}{4}$	30-3", 10-5", 8-7", 6-10"	10	21.00

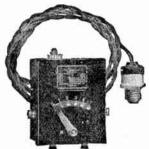
## BELL RINGING, TOY AND SIGN LIGHTING TRANSFORMERS



Type SS Ringing Transformer



Danditoy Transformer



No. 2D Toy Transformer

## Bell Ringing Transformers

#### For Alternating Current Only-Standard 110 Volts, 60 Cycles

Types C, D, SS and 3S are for extra heavy duty such as the operation of large size bells or a large installation of bells to be rung at once.

List	Voltage	Cap.	D	imensions, Inch	es	Wt.	List Price
No.	Secondary	Watts	Length	Width	Height	Lbs.	Each
Type C	6	60	6	$4\frac{1}{8}$	43/8	$7\frac{1}{2}$	\$9.00
Type D	6-14-20	60	6	41/8	43/8	$7\frac{1}{2}$	10.50
Type SS	6-12-18-24	100	6	41/8	43/8	9	13.50
Type 3S	10-25-35	100	6	$4\frac{1}{8}$	43/8	9	15.00

## New Type Thordarson Toy Transformer

The Danditov is of the same construction and material as the higher priced transformers, the only difference being size. It is equipped with a voltage regulator giving eleven different voltages in steps of  $2\frac{1}{2}$  volts, starting at  $2\frac{1}{2}$  and going up to  $27\frac{1}{2}$  volts. This device will run all electrical toys excepting the heavier higher priced train outlits, for which we recommend the larger sizes.

\$4.50 215-271/2 Danditoy

## Standard Type Toy Transformer

Thordarson toy transformers eliminate the use of batteries. They are designed to operate all classes of rnormation may transformers enumate the use of batteries. They are designed to operate all classes of electrical toys, such as miniature trains, small signs, motors light small lamps, operate Ruhmkorff and other types of induction coils. The 1D has secondary voltages ranging from 1 to 20 volts in steps of one volt each. The 2D has a range from 1 to 25 volts in steps of one volt each, and the No. 5B and 5D a range of from 1 to 15 volts in steps of one volt each. Several different voltages can be used simultaneously.

The 5B is equipped with both circuit breaker and voltage regulator. The D's are equipped with voltage

regulator only.

It is unnecessary to use a rheostat with any of the above transformers.

List				imensions. Inch	ies	Wt.,	List Price
No.	Voltage	Watts	Length	Width	Height	Lbs.	Each
1D	1-20	80	5 ຶ	4	$3\frac{3}{4}$	8	\$8.26
2D	1-25	140	$5\frac{1}{4}$	5	4	11	11.26

## Sign Lighting Transformers



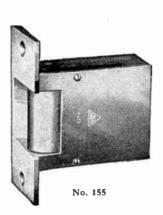
Sign Lighting Trans-

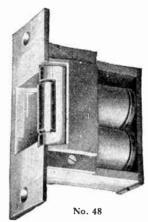
The multiple lighting transformers are designed to be used in connection with low voltage Mazda lamps, either for sign or residence lighting. These transformers embody all essentials of a perfect design, electrical, magnetic and mechanical. They are double wound and insulated to withstand a breakdown of 2500 volts between the primary, secondary and core. Standard transformers can be furnished for two and three wire systems, 110 and 220 volt primaries, 11 and 22 volt secondaries.

List							*List Price
No.	Watts	Length	Width	Height	Efficiency	Weight	Each
361224	100	4 1/2 ins.	$3\frac{5}{8}$ ins.	$3\frac{1}{4}$ ins.	91.2%	6 lbs.	\$14.40
361225	150	5 ins.	4 ins.	$3\frac{1}{2}$ ins.	92 - %	8 lbs.	19.20
361226	250	$5\frac{3}{4}$ ins.	4 7 % ins.	4 ins.	93 %	13 lbs.	25.60
361227	500	$6\frac{5}{8}$ ins.	5 ins.	$4\frac{5}{8}$ ins.	94.2%	19 lbs.	28.80
361228	750	67% ins.	$5\frac{1}{4}$ ins.	$4\frac{3}{4}$ ins.	94.9%	25 lbs.	32.00
361229	1000	$7\frac{5}{8}$ ins.	$5\frac{3}{8}$ ins.	5 ins.	95.2%	28 lbs.	35.20
361230	1500	734 ins.	$5\frac{5}{8}$ ins.	$5\frac{1}{4}$ ins.	95.9%	35 lbs.	44.80
361231	2000	$8\frac{5}{8}$ ins.	в ins.	6 ins.	96.1%	46 lbs.	56.00
361232	2500	9 ins.	634 ins.	$6\frac{3}{4}$ ins.	96.5%	55 lbs.	64.00
Appr	oved by	the National	Board of	Fire Underw	riters.		

\*Delivery F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.

#### ELECTRIC DOOR OPENERS FOR OPERATION ON BATTERY OR BELL RINGING TRANSFORMERS





No. 155 "Nojar" Mortise Type—Solid Nose

Width, 2 inches; depth, 21/8 inches; thickness, 11/8 inches; nosing opening, 1/4 inches; face plate, 11/4 x 33/8 inches Finish Standard Package List Price Brass \$4.80

No. 79 Push-out Spring included.

Mortise Type—Roller Nose—Nos. 48 and 48A

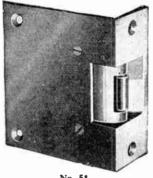
Solid bronze. Each opener is tested under a heavy pressure and warranted.

48 Width, 2½ inches; depth, 2½ inches; thickness, 1½ inches; opening, 1½ inches,
48A Width, 2½ inches; depth, 2½ inches; thickness, 1½ inches; opening, 1½ inches; face plate
No. 48A, 1½ x 3½ inches; face plate No. 48B, 1½ x 4 inches.

Finish Standard Package List Price No. 48 No. 48A

No. 48 Bronze None \$28.80 48A Bronze None 36.80 No. 49 Push-out Spring included.

No. 50



Rim Type—Roller Nose—Nos. 50 and 50B

FOR SURFACE OR RIM LOCKS, THIN DOORS, IRON GATES, ETC. Width, 2½ inches; depth, 25% inches; thickness, 1 inch; opening, 1½ inches. Width, 2½ inches; depth, 25% inches; thickness 1 inch; opening, 1½ inches. Standard Package No. 50 No. 50B No. List Price 50 Cast bronze None \$28.80 50B Cast bronze None 30.40 No. 49 Push-out Spring included.

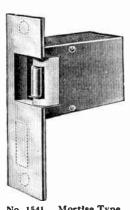
Plate Type—Roller Nose—Nos. 50 and 51A

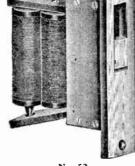
FOR DOOR FRAMES TOO THIN TO TAKE MORTISE
Width, 2½ inches; depth, 25% inches; thickness, 1 inch; opening, 1½ inches.
Width, 2½ inches; depth, 2½ inches; thickness, 1 inch; opening, 1½ inches; face plate, 3¾ x 1½ No. 51 No. 51A inches; side plate,  $3\frac{3}{4} \times 2\frac{7}{8}$  inches.

No. Finish List Price Standard Package 51 Bronze \$30.40 51A Bronze 32.00

No. 79 Push-out Spring included. Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## ELECTRIC DOOR OPENERS







No. 1541. Mortise Type

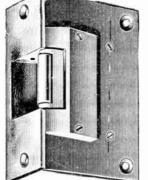
No. 52

Door Openers and Latches

List No.	Width	Depth	nensions——— Thickness	Opening	Dimensions Face Plate	Finish	Std. Pkg.	List Price Each
1541 *52 239	2 ins. 3 ins. Latch for us	37% ins. 3¼ ins. e with No.	11% ins. 7% in. 52 Opener	$\frac{1\frac{1}{4} \text{ ins.}}{\frac{1}{2} \times \frac{3}{4} \text{ in.}}$	$1\frac{1}{2} \times 6\frac{3}{4}$ ins. $1 \times 4\frac{3}{4}$ ins.	Brass Bronze Bronze	6 1 1	\$11.60 39.20 1.80







No. 153 Plate Type Roller Nose



No. 152 Rim Type Solid Nose



No. 49



No. 79



No. 89

## Door Openers and Latches

List			Dimensions-					List Price
No	Width Depth	Thickness.	Opening	Face Plate	Side Plate	Finish	Pkg.	Each
	25/in. 13/in	1 in	1.3 ins.	5% x 11/4 ins.		Brass	100	\$4.00
1159	Dina 274 ina	11/2 ins	11/4 ins.	- 144 x 32 s m 5.	3°8 X 374 IIIS.	1013188	6	5.60
11150	0 1 0 3 1	11/ inc	11/2 mg			DIDUING	6	6.80
152	Arranged to take	1/2 inch cond	uit					28.32

## Push-out Springs

~			Standard	List Price
List	Desc.:iption	Finish	Package	Each
No.	•	Phosphor Bronze	6	\$0.72
49	Mortise Type	Brass	12	.64
<b>7</b> 9	Fits 1 1/2 in. hole		12	.56
80	Fits 16 in, hole	Brass		

Charge for special resistance all door openers same as R. E. A. L. Bell.
Delivery: F. O. B. New York City. For warehouse deliveries write nearest house.
\*For use with sliding doors. Mechanism enclosed. Requires straight mortise.

#For door frames too thin to take mortise. ††For surface or rim locks, thin doors, iron gates, etc.

**World Radio History** 

## MISCELLANEOUS SWITCHES

#### Door Switches

#### Fit Standard Switch Boxes GENERAL DESCRIPTION

Eco and Lungen Door Switches are designed to automatically light and extinguish electric lamps by the opening or closing of a door. They are used in telephone booths, bank vaults, closets, dressing-rooms, etc. Attention is called to the compactness of the switches; the springs and contacts are phosphor bronze; all types are guaranteed mechanically and electrically perfect. Finish, brass, unless otherwise specified.

#### ECO NO. 174

Made to operate every other time; operates as follows: when door is shut, light is off; open door, lamp lights; after entering, shut door, lamp remains lighted; open door for exit, lamp goes out; shut door, lamp remains out.



#### LUNGEN NO. 175

*175A †175B	Lungen Lungen	110 V. 110 V.	5 amp	$\frac{25}{25}$	\$6.24 6.24
•			->	447	0.45

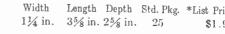
\*Lights lamp when door is opened; turns it off when door is shut. †Lights lamp when door is shut; turns it off when door is open

#### SWITCH BOXES Schedule "E"

Switch boxes are specially designed for placing in mortise of door frame. If sufficient space is available any standard flush switch case may be used, as the screw centers on Eco and Lungen switches are the same as on standard push switches.

List No. Length Depth Std. Pkg. \*List Price 2000 Box







No. 175

No. 174

No. 172



No. 178



No. 165

## **Battery Switches** HARD RUBBER BASE

List				-*List	Prices-	
No.	Style		Std.			Adv.
				1-Pt.	2-Pt.	per Pt.
172	Keystone	Niekel trimmings, hollow back. Regular up to 3 pt.	6	\$0.88	\$0.96	\$1.28
178	Square	Nickel triminings, hollow back. Regular up to 3 pt	6	1 12	1.36	1.60
165B	Pole-changing	Nickel trimmings, back connections.	3	3 52	Spe	ecial
165F	Pole-changing	Nickel trimmings, front connections	3	4.80	Spe	ecial

Engraving on knobs, per letter, list, 24 cents additional.

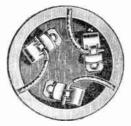
<sup>\*</sup>Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## Western Electric

## **BATTERY SWITCHES**



Front View No. 122



Rear View No. 122

List 122



Front View No. 102



Rear View No. 102

## Spring Connector Switch No. 122

A greatly superior construction. Eyelet contact points into which the cupped arm springs and is securely retained. Fahnstock clips replace the obsolete binding post insuring perfect connection and ease of installation.



No. 104 Wood

Finish.	Oak,		
		List	Price
No.	Std. Pkg.	1 Point	2 Point
	100	\$0.24	<b>e</b> n 20

## Wood Base Switch No. 102

Lever is held by spring washer insuring perfect contact.



No. 164 Metal

		List Pr	ice
List No.	Std. Pkg.	1 Point	2 Point
102	25	\$0.64	\$0.88

Additional points up to 6, add to list per point, \$0.24.

#### Crown Switches

No. 104, oak base. No. 164, nickeled base.

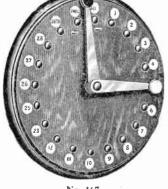
A single pole double break switch with cupped contact arm which springs on points ensuring perfect connection.

Assortment permitted.

List No.	Std. Pkg.	-List Price, Either Style
	25	\$0.64

## Dial Switch No. 167

For selective or program bell ringing where a number of bells are to be operated singly or all at once. To operate a single bell the short arm is moved to the number corresponding to the bell to be rung and pressed on to the contact point. To ring all bells the long arm is moved to contact point marked "All." Base oak, nickel metal parts. Numbering on celluloid, inlaid flush with the wood base.



No. 167

List No.	List Price
167 10 points	\$30.08
Each additional point	3.01

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## FLUSH PUSH BUTTONS











No. 1162

Midget and Mite Types

No. 63 New Mite. Formed shell, over all, 5/8 x 5/8 inches; non-turnable centers, spring clip fasteners. Binding posts take up to No. 12 B.&S. wire. Std. Pkg. \*W. E. List Mfrs. Fits Hole List Price Lbs. List Center No. Inches New Mite 12 Light or dark pearl 50 \$0.45 \$0.72 No. 620 and 621. Non-turnable centers. Fully insulated. Scraping contact. Economy binding 80.72 63 New Mite post takes all sizes of wire. Screws eannot come out. A high-grade reliable push. No. 60 escutcheon may be used with this push. 5/8 5/8 \$0.28 \$0.45**Light** or dark pearl 620 Dixie Jr. Pearl, protruding 1/8 in. 25 .95 621 Dixie Jr. No. 1062 Midget Jr. Scraping contact, shallow depth. No. 60 escutcheon may be used with this hutton. \$0.40 5/8 Light or dark pearl 200 80.251062 Midget Jr., No. 1162 Midget Jr. Same as No. 1062 Midget Jr., but without back springs or binding posts. Spring clip fasteners. 5/8 80.25\$0.4050 1162 Midget Jr. **Light** or dark pearl No. 59 Midget. Non-turnable centers, secure spring clip fasteners, phosphor-bronze contacts. Binding posts take any size wire. No. 61 escutcheon may be used with this button. \$0.88 3/4 \$0.55Light or dark pearl 59 Midget







No. 260 No. 1160 No. 85 No. 1059 No. 1059 Midget. Non-turnable centers, secure spring clip fasteners, phosphor-bronze spring, scraping contacts. Connectors take any size wire. No. 61 escutcheon may be used with this button. Std. Pkg. W. E. List Mfrs. List Fits Hole Price Lbs. List Ins. Center No. \$0.50 50 \$0.80 1059 Midget 34 Light or dark pearl HIGH VOLTAGE—No. 85

Long quick break. Phosphor-bronze contact springs. Shell solid brass with condensite insulation and rubber center perfectly insulated.

and 1	dimer center perfectly instanced.			. 11. 1 11	2.54	337 T3 T 1
List		Fits Hole		Std. Pkg.	Mirs.	W. E. List
	Style	Inches	Center	Lbs.	List	Price
No.	50/16					
85	For 110 volts open circuit	34	Hard rubber,	12	\$2.00	\$3.20
85A	For 220 volts open circuit	114	Hard rubber	12	4.50	7.20
COUL	TOI MAN VOICE OPEN CITCURE.	112	Hard rubber	12	5.75	9.20
85C	For 110 volts closed circuit	1 1/8	Hard rupper	1 2	0.10	9.20
85A	For 220 volts closed circuit. Not Furnish	ed.				
Hard	rubber bushing for 110 volts				\$1.00	\$1.60
	l.l lunding for 220 realts				1 25	2.00

bronze contact springs recessed in insulator, locking in place. For closing 2, 3 or 4 circuits; 4 contacts furnished unless otherwise ordered. \$0.95 \$1.52 Light or dark pearl 260 Van Tassell  $\frac{3}{4}$ 

No. 1160 Midget. Same as No. 1159, but for return-call use. No. 61 escutcheon may be used with this button. \$1.52 Light or dark pearl \$0.951160 Midget For any group "A" finish, listed previously, add..... .24 72 For any group "B" finish, listed previously, add..... .32For engraving, per letter.....

Note: Heavy face type indicates center and finish supplied when not specified.

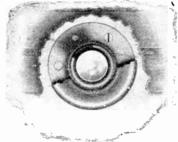
ALL FINISHES: Nickel plate, brush brass, old brass or bronze.

\*Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

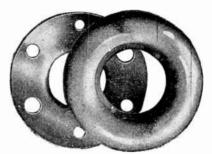
## MISCELLANEOUS PLATES



No. 116



No. 60 or 61 Sectional View of Plaster Wall



No. 60 or 61 Escutcheon and Plate

## Slow Break-No. 116

\*Nickel plate, brush brass or bronze. Used in electric automobile controller handles, etc. It is supplied with wiping contacts and phosphorbronze springs.

No. 116 Fits Ilole, Inches 1/2

Center Hard rubber Std. Pkg.

List Price

\$1.44



No. 157D

## Flush Push Escutcheon-No. 60

This is an exceptionally neat fitting escutcheon for use on plaster, or where larger push than the midget is required. The iron plate is secured to the wall first; there being a number of screw holes it is always possible to have the screw engage a lath; the top plate is placed over the iron-plate and a midget or midget junior button is then slipped into the hole and pressed tight. The spring clips on the side of button, grips the iron plate, and holds the button and brass plate securely in

No.	Style	Hole	Std. Pkg.	List Price
60 Escutcheon	Metal	5/8 in.	50	\$0.40
61 Escutcheon	Metal	34 in.	50	.40

Finish. \*Nickel plate, brush brass or bronze. For any group A finish add \$0.24. For group B add \$0.64.



## Stone Escutcheon-No. 261

A plain flanged easting designed to cement into stone work, drilled to take 34 inch push.

The No. 260 Van Tassel Push is recommended for use with this escutcheon.

No. List Price 261 Escutcheon, imitation stone finish.....

## Plates—Diamond or Square—No. 157

Finish. \*Nickel plate, brush brass or bronze.

Bevel edge; drilled for 1 button. No. 1578 size 17/8 inch; No. 157D size between points  $2\frac{1}{3} \times 3\frac{1}{16}$  inches. Assortment permitted to make standard package. For  $\frac{5}{8}$  inch or  $\frac{1}{2}$  inch pushes only.

No. Std. Pkg. List Price No. 158 **357S** Square plate..... 25 \$0.48 157D Diamond shape plate.....

For any group A finish, add to list \$0.24. For any group B finish, add to list \$0.64. In ordering, state size of button for which plates are intended to be used; 5% inch size furnished if not otherwise ordered.

### . Switch Box Plate-No. 158

Finish. \*Nickel plate, brush brass or bronze.

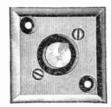
For standard switch box, drilled for 1, 2 or 3 buttons, 5% inch. of 1 or 2 buttons 34 inch. Screw hole centers are  $3\frac{9}{32}$  inches. Machine screws furnished. In ordering, state if for  $\frac{5}{8}$  inch, or  $\frac{3}{4}$  inch buttons.

No. Std. Pkg. List Price 158 Switch box plate, size  $4\frac{1}{2} \times 2\frac{3}{4}$  ins..... \$1.52

Add for special group A finish \$1.28; group B finish, \$1.92, Note: \*Indicates finish supplied when not otherwise ordered.

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## PUSHES AND PUSH PLATES



No. 9628

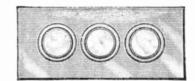
## Square Push

List			Size	Std.	*List
No.	Type	Description	Inche <b>s</b>	Pkg.	l'rice
9628	Flush	Square Shape	$178 \times 178$	25	\$1.04

Finish: Nickel plate, brush brass, old brass or bronze; for any group A finish add \$0.48 for any group B finish, add \$1.28.



No. 136



No. 180

## Combination Bell and Push

	Consisting of bell and push for eall and return call in connection with annunciators.	
List	-	List
No.		Price
136	Combination bell, oxidized copper finish.	<b>\$</b> 3.71

#### Metal Plates for Pushes

METAL PLATE NO. 180

#### Plate Only for No. 147 and No. 148 Wood Blocks

Prices do not include buttons, but in ordering, specify whether size A, 5% inch, or size B, 3/4 inch, is required.

required.		Size "A"	Size "B"	
List	No. of	5% Inch Button	3/4 Inch Button	List
No.	Pushes	Inches	lnches	Price
180	1	$1\frac{5}{16} \times 1\frac{5}{16}$	134 x 134	\$1.02
180	2	$2\frac{3}{8} \times 1\frac{5}{16}$	$3 \times 134$	1.09
180	3	$3\frac{1}{2} \times 1\frac{5}{16}$	4 1/4 x 1 3/4	1.22
180	4	$4\frac{1}{2} \times 1\frac{5}{16}$	$5\frac{1}{2} \times 1\frac{3}{4}$	1.28
180	5	$5\frac{1}{2} \times 1\frac{5}{16}$	6¾ x 1¾	1.41
180	6	$6\frac{1}{2} \times 1\frac{5}{16}$	8 x 134	1.66
180	8	$4\frac{1}{2} \times 2\frac{3}{8}$	$5\frac{1}{2} \times 3$	1.98
180	10	$51_2 \times 23_8$	$634 \times 3$	2.62
180	12	6½ x 2¾ g	8 x 3	3.52

\*Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

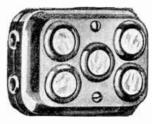
#### **DIRECTORY PUSHES**







No. 191



No. 71

## Edwards Directory Push

No. 192 is the same as the No. 192, except that the buttons are on the alined plane, the block higher in the beef then in

front.	and the state of t	te on an inchited plant, the mock inghe.	in the back than in
No. of	*List    No. of	*List H No. of	*List
Buttons			
Durtons	Price   Buttons	Price   Buttons	Price
1	\$4.03    4	\$8.45 7	\$12.80
2	5.50   5	9.79   8	14.08
3	6.78 6		16.96
**	0.76 [] 0	11 20    10	10.90

For No. 192, add \$4.03 to the list price.
The list numbers apply to 190; for 191 add "F" af or the number letter.
For larger sizes, add to list for each button, \$1.00.
For pearl buttons, add to list per button, \$1.90.
For silk covered cable connected, add to list per foot, per button, \$0.32
For silk cable not connected, per foot per conductor, \$0.11.
Standard finish, nickel; dark oak, mahogany and brush brass can be supplied without extra charge.
Standard package, 3 or more plates, totalling 40 buttons.

Paper Weight Push

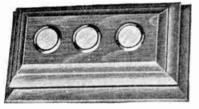
Finish: Nickel plate, brush brass, old brass or bronze.

Made of pressed steel, weighted back, felt-rovered, 8 to 12 button, cast case. Price includes No. 63 pushes matched finished rims. Special finishes group A or group B, add to list \$0.26 or \$0.98 per push.

1.181		Size	*List    List	No. of	Size	*List
No.	Pushes	Inches	Price No.	Pushes	Inches	Price
71	2	21/2 x 17/8	\$5.32   71	6	2½ x 1%	\$9.92
71	3	$2\frac{1}{2} \times 1\frac{7}{8}$	6.52   71	8	4 x 178	13.18
71	4	215 x 178	7.60   71	10	1 × 17%	14.53
71	5	$2\frac{1}{2}$ x $1\frac{7}{8}$	8.70   71	12	51/2 x 17/8	15.81
	Other sizes up to 20 b		11.11.1		273 × 178	10.01

Other sizes up to 20 buttons. For attaching green silk cord, per foot for each button, \$0.32 For silk cable not connected, \$0.12. Special finishes group "A" add to list \$0.38. Special finishes group "B" add to list, \$1.54.

Note. Heavy face type indicates finish supplied when not otherwise specified.



No. 147

148

148

148

## Standard and Special Finishes

Note. Heavy face type indicates finish supplied when not otherwise

Finish Group "A"

Old English bronze Antique or Flemish brass Oxidized bronze English bronze Mottled copper Oxidized copper

Japanese bronze

Polished copper Polished steel Bauer-barff Acid or statuary Lemon brass Gun metal Black Antique copper or

Gilt Satin gold Etruscan gilt Gold bronze Oxidized silver Butler's silver Ormolu or French gilt

Finish Group "B" Burnished gilt Polished silver Pompeiian bronze Roman or dull gold Sand blast, antique brass

Sand blast, old brass Verde antique

## Compound Pushes

No. 147 TYPE

Two piece separable block in oak, ash, cherry or mahogany; other woods special. Front hollowed for connections. Back solid, felt protected. Cord outlet not cut unless ordered. Price does not include buttons, but in ordering specify whether size "A." % inch, or size "B." % inch, is required.

List	No. of	Size "A"	Size "B"	Std.	List 1	List	No of	Size "A"	Size "B"	Std.	List
No.	Pushes	Ins.	Ins.	Qty.	Price	No.	Pushes	Ins.	Ins.	Qty.	Price
147	1	21/2 x 21/2	234 x 234	24	\$1.28	147	6	8 x 216	9 x 234	18	\$4.24
147	2	31/2 x 21/2	4 x 234	21	1,76		8	534 x 21/2	61/2 x 4	16	4.96
147	3	$4^{3}\frac{7}{4} \times 2^{1}\frac{7}{2}$	514 x 234	21	2.08	147	10	7 x 313	$7\frac{3}{4} \times 4$	16	6.24
147	4	534 x 21/2	612 x 234	18	2.48	147	12	$8 \times 3\frac{1}{2}$	9 x 4	16	7.52
147	5	7 x 216	737 v 937	1.3	3 59	1				- 0	

For larger sizes, add to 12 button \$0.64 per button.

If weighted for paper weight, add per button, list. \$0.48.

\*No. 148 TYPE

Same as No. 147, except block is in one piece with hollow back. In ordering, specify whether size "A," 5% inch, or size 34 inch, is required.

1 21/8 x 21/8
2 31/4 x 21/8
3 43/8 x 21/8 "B," 148  $734 \times 21$  $516 \times 31$ 18 \$2.24 148

 $\begin{array}{c} 834 \times 216 \\ 616 \times 334 \\ 716 \times 334 \end{array}$ 2½ x 2½ 3¾ x 2½ 5 x 2½ 6¼ x 2½ 7½ x 2½  $\frac{1.28}{1.52}$ 2.48 2.72 3.0424 148 24 10 148 31 145 5½ x 2½ 65% x 2½ **4** 5 148 12 834 x 334 18 2.00 \*Sizes may be assorted in quantities of 24 to make standard packages. If size is not specified, size A will be furnished.

Nos. 147 and 148 furnished in paper cartons, six in each.

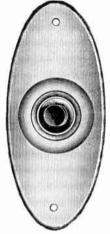
# PUSH BUTTONS Wrought Metal Pushes







No. 25755



No. 25793

#### PLAIN STYLES

#### Schedule "R"

List		Size	Number in	
No.	Description	Inches	Carton	per Dozen
25750	Wrought bronze, loose back	$4\frac{1}{8} \times 1\frac{3}{8}$	6	\$11.52
25755	Wrought bronze, loose back	4 x 2	6	11.52
	Wrought bronze, loose back		6	11.52



No. 25794



No. 25795



No. 25792



No. 25770

#### FANCY STYLES

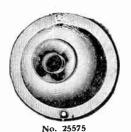
#### Schedule "R"

List		Size	Number in	*List Price
No.	Description	Inches	Carton	per Dozen
25794	Wrought bronze, loose back	$434 \times 2$	6	\$11,52
25795	Wrought bronze, loose back	4½ x 13/8	6	11.52
	Wrought bronze, loose back		0	11.52
25770	Wrought bronze, loose back	4 x 2	6	11.52

For variety of finishes, see preceding page.

<sup>\*</sup>Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

#### WROUGHT METAL PUSHES





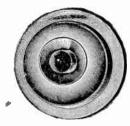


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7.4	υ.	4.7	20	ı d

No.	Description	Size Inches	No. in Carton	List Price per Doz.
25575 25577 25587	Wrought bronze, loose back Wrought bronze, loose back Wrought bronze, loose back	$1\frac{3}{4}$	12 12 12	$\begin{array}{c} \$7.20 \\ 7.50 \\ 7.50 \end{array}$







No. 25578

No. 25585

No. 25651

No.	Description	Size Inches	No. in Carton	per Doz.
	Wrought bronze, loose back Wrought bronze, loose back Wrought bronze, loose back Cast bronze, screw cap	$\frac{2^3 \frac{7}{8}}{2^3 \frac{7}{8}}$	12 12 12 12	\$7.50 7.50 7.50 14.40

Black centers only. For return call service extra contact is supplied for which add to list per button \$0.60.

Any of these pushes furnished in bronze, nickel plate, antique copper, oxidized copper, bauer-barff, or brush brass, without extra charge. Polished bronze furnished when not otherwise ordered,







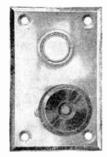
## Anti-wood Push Buttons-Stamped Steel

To take the place of wood pushes. Better than screw cap buttons.

No.	Style	Finish	Size Inches	List Price per 100
03	Wrought steel	Red bronze	21/1	\$20.40
04	Wrought steel	Polished bronze	$2\frac{1}{4}$ $2\frac{1}{4}$ $2\frac{1}{4}$	24.00
08	Wrought steel	Oxidized copper	$2\frac{1}{4}$	24,00
010	Wrought steel	Nickel plated	$2\frac{1}{4}$	24.00
011	Wrought steel	Satin brass	$21\sqrt{4}$	24.00

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

#### WALL PLATES AND PUSHES





No. 205

Switch Plate No. 158-72

#### Combination Wall Plates COMBINATION WALL PLATE NO. 205

Finish: Nickel plate, brush brass, old brass or bronze.

Metal plate 2 x 3 inches, with No. 620 Midget, Jr., push and No. 72 detachable extension plug, with flexible cord and pear push furnished if desired.

## Switch Plate and Plug No. 158-72

Finish: Nickel plate, brush brass or bronze. Plate fits standard switch box. List No. List Price 158-72 Plate and Switch..... .....\$3.62 







No. 72

.96

## Floor and Extension Type Pushes

NO. 237 REGULAR FLOOR PUSH

Heavy contacts and indestructible insulation. A reliable push. No attachment for	cora.	
List No.	Std. Pkg.	*List Price
237 Floor push, nickel plate	6	\$0.84
NO. 235 WITH REMOVABLE PLUG	Sched	lule "E"
Has extension attachment for connecting flexible cord with table clamp or pear push	ı. Eyele	ets can be
placed in carpet or rug for entrance of plug without injury.		
Heavy contacts and indestructible insulation. A reliable push.		
235 Combination complete	€	\$1.00
Plug only		.48
Finish: Nickel plate, brush brass, old brass or bronze.		
ATTACHMENT PLUG AND PLATE NO. 72		
For flexible cord connection. Size of plate, 2 inches diameter.		
72 Plug and plate	6	\$2.00

Plug only....

Finish: Nickel plate, old brass, brush brass or bronze.

	Standard and	Special Finishes	
Finish Gr	oup "A"	Finish C	Group "B"
Old English bronze	Polished copper	Gilt	Burnished gilt
Antique or Flemish brass	Polished steel	Satin gold	Polished silver
Oxidized brass	Bauer-barff	Etruscan gilt	Pompeiian bronze
English bronze	Acid or statuary bronze		Roman or dull gold
Mottled copper	Lemon brass	Oxidized silver	Sand blast, antique brass
Oxidized copper	Gun metal	Butler's silver	Sand blast, old brass
Antique copper or	Black	Ormolu or French gilt	Verde antique
Japanese bronze			

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## MISCELLANEOUS PUSH BUTTONS









Pendant Pushes

	NOS. 67 AND 268 PUSHES	Schedu	ıle "E"
List	Equipped	Std.	*List
No.	Case with Push	Qnty.	Price
67	Ash, oak, cherry or stained mahogany No. 620 Dixie, Jr.	25	\$0.72
-67	Black walnut, maple, cypress or mahogany	12	1.28
67	White enamel	6	2.00
67	Genuine rosewood	6	7.52
268	White or black celluloid No. 620 Dixie, Jr.	6	2.00
	Assortment of 25 constitutes a standard package.		

#### NO. 68 METAL PUSH

	Finish: Nickel plate, brush brass, old brass or bronze.			
List	Case	Equipped with Push	Std. Qnty.	*List Price
68	Single, corrugated metal	No. 620 Dixie, Jr.	12	\$0.72
	Group A finish, add \$0.64. Group B finish, add \$0.28. Assortment of finishes permitted to make standard package.			• • • • • • • • • • • • • • • • • • • •

#### NO. 173 MULTIPLE PUSH

Finish: Wood part, any ordinary wood. Oak shipped unless otherwise ordered. Metal part, nickel plate, brush brass, old brass or bronze.

List		Equipped	Std.	*List
No.	Case	with Push	Qnty.	Price
173	Two button	No. 63 New Mite	12	\$4.80
173	Three button	No. 63 New Mite	6	6.24
173	Four button	No. 63 New Mite	3	7.76
173	Five Button	No. 63 New Mite		10,00
173	Six Button	No. 63 New Mite		12.48
173	Seven Button	No. 63 New Mite		15.04
173	Eight Button	No. 63 New Mite		17.60

Additions: For attaching flexible green silk cord, 1 or 2 conductor, per foot, \$0.14. For white enamel, add to list \$2.48.

If connected—add 40 cents list per button in addition to cost of cord.

## Standard and Special Finishes

Note: Heavy face type indicates finish supplied when not otherwise specified.

Finish C	Group "A"	Finish Group "B"		
Old English bronze Antique or Flemish brass Oxidized brass English bronze Mottled copper Oxidized copper Antique copper or Japanese bronze	Polished copper Polished steel Bauer-barff Acid or statuary bronze Lemon brass Gun metal Black	Satin gold Etrusean gilt Gilt Gold bronze Oxidized silver Eutler's silver Ormolu or French gilt	Burnished gilt Polished silver Pompeiian bronze Roman or dull gold Sand blast, antique brass Sand blast, old brass Verde antique	

#### PUSH BUTTONS







No. 1386



No. 1382

## Watertight Push Button

This push button is for use in boats, ice houses, cold storage plants, mines, or any place where the atmosphere is continuously damp. A watertight pigskin cap is held in place over the push center by a threaded ring. The base is solid bronze with two cast lugs projecting, through which connecting wires

DITT ( FECTOR )		io make in court mount arm the case man in ofcoring, unrough	*********	
pass.			Mfrs.	†W. E.
List No.	Diameter		List	List Price Each
*1375	$2\frac{1}{2}$ ins.	With platinum contacts	\$2.40	\$3.36
*1376	$2\frac{1}{2}$ ins.	Without platinum contacts	1.80	2.52
Pric	es include	any finish from Nos. 1 to 11 inclusive.		

## Improved Watertight Push Button

Navy Standard

This push button has heavy German silver springs with platinum contacts. Screw cap, rubber gaskets under the base and between the base and serew cap. Hard rubber back. Push center covered by pigskin, which is held in place by rim and four screws. 25% ins. Improved watertight push button..... \$2.50 .... \$3.00

## Non-watertight Push Button

Navy Standard

This push button has heavy platinum contacts; serew cap. 23 ins. Non-watertight push button...... \$1.80 ..... \$2.52 1382



No. 1258



No. 1396



No. 1364

## Paper Weight Wood Desk Push

This is a polished wood push, with lead in bottom which can be used as a paper weight. It is very convenient and neat.

List No. 1258	Wood pus	n, oak only		List Price Each	
		Wood Push Buttons	Mfrs.	†W. E.	
List No.	Size	Style	List	List Price Each	
1396	21% ins.	Walnut, polished	\$0.15	\$0.21	
1398		Ash, polished			
1399	21/2 ins.	Stained cherry, polished	. 15		
1401	$-2i\zeta$ ins.	Antique oak, polished	.15		
1397	21% ins.	Oak, polished	. 15		
1402	$2\frac{1}{5}$ ins.	Mahogany, polished	.15	21	

### Extension Push Buttons

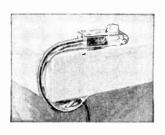
This can be used as a regular push button, and by attaching a double conductor flexible cord with pear push or table clamp on the end, the circuit can be extended to a bed for the convenient use of a sick person Mfrs. or to desk, table, etc. List List Price Each List No. \$0.50Walnut or oak . . . . . . . . . . 1364

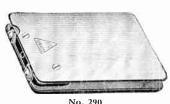
\*The price quoted with each push is for the finish designated by the following numbers:

Finish No. 1, bronze, polished (natural color of metal). 2, nickel plated. 3, polished bronze, inlaid with black. 4, silver plated. 5, silver oxidized (mottled). 6, antique eopper (dark color). 7, copper oxidized (mottled). 8, Bauer barff (dead black). 9, brass (plated). 10, appearance of a dull, wrought copper finish. 11, lemon brass (brushed brass).

†Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

#### MISCELLANEOUS PUSHES







No. 206

#### Dixie Floor Tread No. 290

Double heavy brass contact plates, felt covered bottom — Can be used under rug to avoid cutting. — Constructed sufficiently rigid to bear weight of rug. Strain removed from connections by passing wire over 3 rounded corners. Vise grip, solderless connections.

		Std.	List
No.		Pkg.	Price
290	Dixie tread	25	\$2.48

## Table Clamp No. 206

Finish. \*Nickel plate, brush brass or bronze.

May be used in connection with floor push or wall plug.

A self-contained unit, buttons and contacts built into spring clamp base. Contacts open to inspection and are self-cleaning, wire connections easy of access and very substantial.

		Std.	List
No.		Pkg.	Price
206	Table clamp.	25	\$1.52

#### Automobile Foot Push No. 117

Especially constructed for automobiles. Case is of 2 pieces of heavy cast brass with rubber flange between, resulting in moisture proof, perfect insulation. Contact springs and lever springs of phosphor bronze. An additional rubber gasket on back provides insulation from vehicle. Finish, natural metal. Capacity, 100 volts or less at  $\frac{1}{2}$  ampere, size 3 x  $\frac{3}{4}$  inches.

		ota.	List
No.		Pkg.	Price
117	Foot push	6	\$6.40

#### Card Rack No. 25

Screwhole projections turned in. Takes card 178 x 34 inches. Finish, \*nickel plate, brush brass or bronze. For special finishes add to list for group A, \$0.48, group B, \$0.28.

		Std.	List
No.		Pkg.	Price
25	Card rack	100	\$0.40

Note: \*Indicates finish supplied when not otherwise ordered.

## Special Finishes

#### FINISH GROUP "A"

Old English bronze Antique or Flemish brass

Oxidized brass English bronze

Mottled copper

## Polished copper Polished steel

Gun metal

Bauer-barff Acid or statuary bronze Lemon brass

Gilt. Satin gold Etruscan gilt Gold bronze Oxidized silver

Butler's silver

FINISH GROUP "B" Burnished gilt Polished silver Pompeiian bronze Roman or dull gold Sand blast, antique brass Sand blast, old brass Verde antique

Oxidized copper Ormulu or French gilt Antique copper or Black Japanese bronze

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

## MESCO CONNECTORS AND BINDING POSTS



No. 6536







No. 6540



No. 6534

List	Small Rectangular Connect	or	*List Price
No.		Size	Each
6536	Small rectangular connector	$1\frac{7}{8}$ x $_{16}^{11}$ x $_{16}^{7}$ in.	\$0.86
	Medium Rectangular Connec	ctor	
6535 6537	Medium rectangular connector. Plug only.	$1\frac{7}{8} \times 1\frac{1}{4} \times \frac{3}{4}$ in.	\$1.08 .58
6538	Receptacle only		.58
	Large Rectangular Connect With One Hole		
6540	Large rectangular connector	2½ x 1 7 g x ¾ in.	\$1.37
6539	Plug only	, ,	.72
6543	Receptacle only		.72
	Rectangular Connector		
6534 6545 6526	Rectangular connector	$17\% \times 17\% \times 7\%$ in.	\$1.37 .72 .72





No. 4822



No. 4820



No. 4821

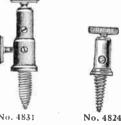




No. 4830



No. 4826









No. 4827



No. 4819



Binding Posts These binding posts are made of brass and can be furnished in plain brass or nickel plate at same price.

List	*Li	st Price	List	* Lis	st Price
No.		Each		201	Each
4834	Nickel plated	\$0.56	4833	Nickel plated	80.16
4823	Nickel plated	. 48	4829	Niekel plated	20
4822	Nickel plated	. 32	4825	Nickel plated	28
4820	Nickel plated	. 44	4827	Nickel plated	24
4821	Niekel plated	. 40	4828	Nickel plated	24
4835	English pattern, nickel plated	. 56	4819	Nickel plated	32
4830	Nickel plated	. 32	4831	Nickel plated.	64
4826	Nickel plated			Nickel plated.	32
4832	Nickel plated				.02

Special prices for quantities of 1000 or more.
\*Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

# **EVEREADY DAYLO**

Equipped with guaranteed Eveready Tungsten batteries and Mazda bulbs. They have permanent contacts, permitting both flash and continuous light. Can be used with absolute safety ground oil, gas, gun powder, and other inflammable or explosive material.







Nos. 2602 to 2612

Nos. 2622 to 2628

Nos. 2616 to 2623

TUBULAR TYPE DAYLO W.E.

Vulcanized fiber	$\frac{1_{-2}}{1_{-2}} \times \frac{612}{\times 812}$	List Price Complete Each \$2.50 3.00 3.50	Battery List No. 791 790 705	W. E. List Price Each 80.70 .70 1.00	Mazda List No. 1182 1198 1193	W. E. List Price Each \$0.20 .20 .20			
2622 Snake cloth STANDARD DAYLO (SPRING CONTACT)									
Snake cloth Black cloth Alligator cloth Enameled metal Black enamel	$\begin{array}{c} 1^{1} \stackrel{.}{\cancel{2}} \times 6^{1} \stackrel{.}{\cancel{2}} \\ 1^{1} \stackrel{.}{\cancel{2}} \times 6^{1} \stackrel{.}{\cancel{2}} \end{array}$	\$2.30 2.30 2.30 2.20 1.80	790 790 790 790 705 <b>790</b>	\$0.70 .70 .70 1.00 .70	1198 1198 1198 1193 1198	\$0.20 .20 .20 .20 .20			
2616 Vulcanized fiber MINERS' DAYLO									
Vulcanized fiberVulcanized fiber	112 x 61/2 114 x 814	\$3.50 4.00 6.00	790 705 715	$\begin{array}{c} \$0.70 \\ 1.00 \\ 1.70 \end{array}$	$\begin{array}{c} 1198 \\ 1193 \\ 1195 \end{array}$	\$0,20 ,20 ,20			
	Vulcanized fiber Vulcanized fiber STANDARD D Snake cloth Black cloth Alligator cloth Enameled metal Black enamel Vulcanized fiber Vulcanized fiber Vulcanized fiber Vulcanized fiber Vulcanized fiber	Vulcanized fiber	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			







Nos. 2653 to 2659

Nos. 2630 to 2632

Nos. 2633 to 2634

SEARCHLIGHT DAYLO
The most powerful and penetrating portable light obtainable. Tately ground lenses. Throws a long, penetrating beam of light.

W.E.

List No.		Size	List Price Complete	Battery List	W. E. List Price	Mazda List	W. E. List Price		
2659	Vulgarizad filos	Ins.	Each	No.	Each	No.	Each		
2653	Vulcanized fiber	1/2 X 8/2	\$7.00	705	\$1.00	1193	\$0.20		
2434343	Vulcanized fiber		9.00	715	1.70	1195	. 20		
NICKLE PLATED TURILLAR DAVIO									
В	cauttrully finished, and adapted for use where the	user's hands ar	e likely to be	cily and a	area t				
$2630 \\ 2631 \\ 2632$	Nickel plated Nickle plated Nickle plated	114 x 5 115 x 616	\$3.00 3.50 4.20	791 790 705	\$0.70 .70	1182 1198	\$0.20 ,20		
					1.00	1193	, 20		
This type has large lens and reflector and throws a volume of light a long distance.									
2633	is type has large lens and reflector and throws a	a volume of lig	ht a long dis	tance,					
	Nickel plated	112 x 812	\$5.70	705	\$1,00	1193	\$0.20		
2634	Nickel plated	11/2 x 61/2	4.80	790	.70	1198	. 20		





Nos. 2637 to 2638

Nos. 2683 to 2684

SEARCHLIGHT	NICKEL	PLATED	DAYLO
		W. E	i.

List	Size Ins. 1½ x 8½ 1½ x 6½	List Price Complete Each \$7.50 6.50	Battery List No. 705 790	W. E. List Price Each \$1.00 .70	Mazda List No. 1193 1198	W. E. List Price Each \$0.20
FOUN	TAIN PEN	DAYLO				
Exactly like a fountain pen in size and appearance 2683 Black canamel 2684 Nickel plated	514 in long	\$2.50	tact. 706 706	\$0.60 .60	1179 1179	\$0.20 .20
	COAT POO Black W. E.		DAYLO red			. = .



List No. 1991 6903 6902	$\begin{array}{c} {\rm Sizes} \\ {\rm Inches} \\ 1^{16} \times 2^{14} \times 5 \\ 1 \times 2^{34} \times 3^{16} \\ 1 \times 1^{76} \times 3^{12} \end{array}$	List Price Complete Each \$3.00 2.50 2.50	Battery List No 793 703 792	W. E. List Price Each \$0.80 .70	Mazda List No. 1197 1190 1179	W. E. List Price Each \$0,20 ,20
1992 6904 6952	$\begin{array}{c} 11 \leqslant \mathbf{x} \ 2^{4} \leqslant \mathbf{x} \ 5 \\ 1 = \mathbf{x} \ 2^{3} \leqslant \mathbf{x} \ 3^{4} \leqslant \\ 1 = \mathbf{x} \ 1^{7} \leqslant \mathbf{x} \ 3^{4} \leqslant \end{array}$	Snake Clo \$3.00 2.50 2.50	793 703 792	\$0.80 .80 .70	1197 1190 1179	\$0.20 .20 .20
1993 6901 6953	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Alligator C \$3.00 2.50 5.20	loth Covered 793 703 792	80.80 .80 .70	1197 1190 1179	\$0.20 .20 .20

# VEST POCKET TYPE DAYLO

This type is popular with professional and business men. They give an unusually strong light in proportion to their size and are conveniently carried in a vest pocket.

## NICKLE PLATED. BOTTOM OPENING



21		•	
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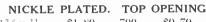
6000

6991 6992

No.	6900

EVERFADY

List	Size	W. E. List		W. E. List	Mazda	W. E. List		
No.	Inches	Complete		Each	List No.	Each		
6909	$\begin{array}{c} 214 \times 114 \times \frac{11}{16} \\ 216 \times 138 \times \frac{34}{24} \\ 216 \times 2 \times \frac{34}{216} \times 2 \\ 312 \times 178 \times 1 \end{array}$	\$1.80	700	\$0.70	1179	\$0.20		
6961		1.80	750	.70	1180	.20		
6962		2.40	751	.80	1181	.20		
6954		2.40	792	.70	1183	.20		



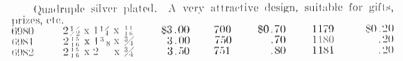
6970	$2^{1}$ \[\frac{1}{2}\]\ \text{x}\] $1^{3}$ \[\frac{1}{2}\]\ \text{x}\] $\frac{11}{16}$	\$1.80	700	\$0.70
6971	$2^{7}_{8} \times 1^{1}_{2} \times 3^{3}_{4}$	1.80	750	.70
6972	$2\frac{7}{8} \times 2 \times \frac{3}{4}$	2.40	751	. 80





$2\% \times 11\% \times 5\%$	\$2.40	700	\$0.70	1179	\$0.20
$3\frac{1}{4} \times 1\frac{7}{8} \times \frac{3}{4}$	2.40	750	.70	1180	.20
$3\frac{1}{4} \times 2\frac{3}{8} \times \frac{3}{4}$	3.00	751	.80	1181	20

## SILVER PLATED. BOTTOM OPENING





No. 6971



#### CANDLE DAYLO

Useful as well as decorative. Has white enameled taper and nickeled holder. Lighted by a slight pressure of the thumb, and when pressure is removed the light goes out.

	List Price				List
List	Complete,	Battery	List Price	Mazda	Price
No.	Each	List No.	Each	List No.	Each
1650	S9 00	753	\$1.00	1113	\$0.90

This candle is lighted by a lever switch and is particularly convenient about the home. Nickle finish throughout, \$2.50791 \$0.70 11921657



Use standard 6 inch dry cell and will give about fifty hours of continuous burning. Black enamel finish. W. E. List

List No.		ce Each
4716 4718 1451	Reflector at top, less battery	-3.00



No. 1657



### CAP DAYLO

Two pins are located at the back of this Daylo so that it can be fastened in the cap. The battery case is carried in the pocket and on it is a switch by which the light can be turned on and off. With 5 cell battery.

TIC. LUIT	TICG OH C	filti Oil.	* * * * * * * * * * * * * * * * * * * *	.,	
	W. E.				W. E.
	List	Battery	W. E.	Mazda	List
List	Com-	List	List	List	Price
Ne.	plete	No.	Each	No.	Each
2876	813.00	731	\$1.80	1195	80.20



\$0.20 2877 \$12.00 734 \$1.10 1199

### LAPEL DAYLO

Similar to the Cap Daylo, but smaller. 703 \$5.00 752 \$1.10 1199 \$0.20



Nos. 2876-3703



No. 4716

# DAYLO FLASHLIGHTS SPECIAL MILITARY TYPES

These are designed for soldiers, sailors, ambulance drivers, etc., to give light and leave both hands free. No other portable lamp is so easily carried, so useful and so practical.



No. 3650

### **EVEREADY MILITARY DAYLO**

The most practical lamp for military or any outdoor service. Can be hung on the coat button or clipped on the belt. Supplied with or without compass. Without

11.	ith Comp	ass		(	ompass
	W. E.				W. E.
	List				List
List	Price		Size	List	Price
No.	Each	Finish	Inches	No.	Each
3650	\$8,00	Gun metal	$334 \times 215$	3651	85.00
3660	8.00	Nickle	$33_{1} \times 21_{9}$	3661	5.00
703	.70	Tungsten battery renewa	l	703	.80
1190	20	Mazda lanin renewal		1100	20

No.

2629

2639

 $\frac{791}{1182}$ 



No. 3650

W. E. List

Price Each

### SOLDIER BOY DAYLO With Belt Clip

Small but very effective and equipped with a convenient belt, clip Can be clipped on belt, pocket edge, shaving mirror, etc.





# Nickle finish, length 534 ins.3.50Tungsten battery renewal.70Mazda lamp renewal.20

### EVEREADY CARTRIDGE TYPE DAYLO

A practical light which fits the pocket comfortably and is attractive in appearance. It is lighted by removing bullet head. Brass base and nickle-plated head.

List No.											E. List ce Each
791	$6\frac{1}{2}$ x $1\frac{1}{4}$ inches Tungsten battery renewal. Mazda Lamp renewal.										\$3.00 .70



## PISTOL DAYLO Gun Metal or Nickle Finish

A very compact flashlight. Has two-piece, gun metal finish case, the butt being hinged at the bottom. Case may be opened for insertion or withdrawal of battery or lamp by depressing the sight. Contact is made by pulling the trigger.

List	W. E. List
No.	Price Each
2675	3 x 35% ins \$3.50
750	Tungsten battery renewal
1180	Mazda lamp renewal



### **EVEREADY DAYLO TROUBLE LAMPS**

Designed especially for automobiles and motor boats. Has highly polished silvered parabola reflector,  $3\frac{1}{2}$  in, diameter and heavy beveled plate glass lens. This lamp will throw a powerful beam of light over 100 feet. Equipped with Style G-6, 4 C.P. single contact Ediswan base lamps and attaching plug.

List No.	W. E. List Price Each
3751	Double contact
	Single contact. 6.00 Mazda lamp renewal

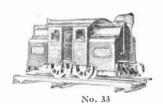
In construction, finish and general appearance Lionel Electric Toys have no equal.

All locomotive bodies are of sheet steel, not east iron. They are enameled and ornamented in gold, with hand rails, bells, headlights and other fittings of nickeled steel. Every Lionel locomotive has an electric headlight.

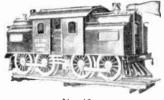
All cars are hand enameled, not lithographed. They are decorated in gold, have removable roofs, seats in the interior, and imitation glass in windows and transoms. Being made of a heavier gauge of metal, they are more durable than any others. Wheels are nickeled steel. Trucks are flexible, which enables cars to stay on track at high speed.

Track is very rigidly constructed. Track ties are wider than any others. Insulated third rail makes

short circuits impossible.



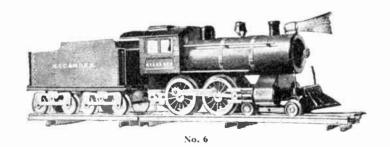




No. 38

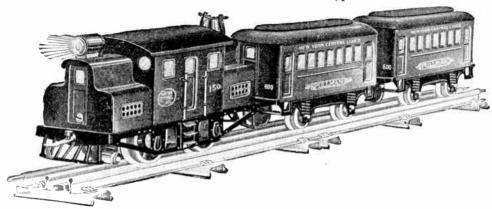
No. 42

## Electric Type Locomotive for 21/4 Inch Track List Price Each No. 33. Length 11 ins., width 3 ins., height 4½ ins. Outfit includes 8 sections curved track making a circle 3/2 ft. in diameter. Has electric headlight and connection for lighting interior of \$20,00 passenger car..... No. 38. Length 12 ins., width $3\frac{1}{2}$ ins., height 5 ins. Outfit includes 8 sections curved track, making a circle $3\frac{1}{2}$ ft. in diameter. Has electric headlight. Reversing controller and connection for lighting interior of passenger cars. 24.00No. 53. Length 13 ins., width $3\frac{1}{2}$ ins., height 5 ins. Outfit includes 8 curved and 4 straight sections of track, making an oval $3\frac{1}{2}$ ft. wide by 5 ft. 9 ins. long. Has electric headlight, reversing controller and connection for lighting interior of passenger cars..... 27.00No. 42. Length $15\frac{1}{2}$ ins., width 4 ins., height 6 ins. Outfit includes 8 curved and 4 straight sections of track, making an oval $3\frac{1}{2}$ ft. wide by 5 ft. 9 ins. long. Has electric headlight, reversing controller and connection for lighting interior of passenger cars. Has 8 driving wheels, connected 35.00No. 54. Dimensions same as No. 42. Locomotive of nickel and brass, beautifully finished. 55.00



Steam Type Locomotive for 2½ Inch Track List Price Each Outfit No. 5. Comprises locomotive with electric headlight and reversing controller, 8S and 4 C track, making an oval 3½ ft. by 5 ft. 9 ins. Length of locomotive, 11 ins..... \$27.00 Outfit No. 51. Same as No. 5 with the addition of a double-truck tender, 7 ins. long...... 30.00Outfit No. 6. Comprises locomotive and tender, 22 ins. long over all. Locomotive has electric headlight reversing controller and a 4 wheel pilot truck. Included are 8 C and 4 S track, making an oval 3½ ft. by 5 ft. 9 ins. 42.00Outfit No. 7. Similar in appearance to No. 6 with same track equipment, but finished entirely in niekel and brass.... Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

TRAIN OUTFITS FOR "O" GAUGE TRACK 11/4 INCHES WIDE



### OUTFIT NO. 160

List Price Each

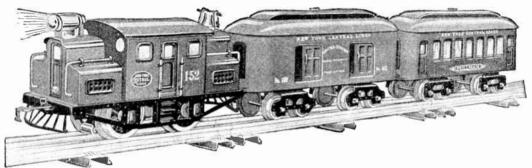
Outfit No. 160. Comprises No. 150 Locomotive with electric headlight, 2 No. 600 Pullman Cars, 8 sections OC curved track, making a circle  $28^{+}_{-2}$  ins. in diameter, and 1 No. 88 controlling rheostat. Length of train 20 ins.

\$12.00

### OUTFIT NO. 161

Outfit No. 161. Comprises No. 150 Locomotive with electric headlight, 1 No. 800 Box Car, 1 No. 801 Caboose, 8 sections OC curved track, making a circle 28½ ins. in diameter, and 4 No. 88 controlling rheostat. Length of train 20 ins.

\$12.00

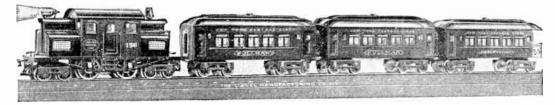


### OUTFIT NC. .162

\$17.00

### **OUTFIT NO. 164**

\$22.00



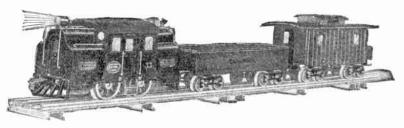
# Outfit No. 166. Passenger Train De Luxe

Outfit comprises No. 156 Locomotive, 2 No. 610 Pullman Cars, 1 No. 612 Observation Car, 8 sections OC curved track and 6 sections OS straight track, making an oval 28½ by 69 ins., also 1 No. 88 controlling rheostat. Length of train 39 ins.

\$33,00

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

TRAINS FOR STANDARD GAUGE TRACK 21/4 INCHES WIDE



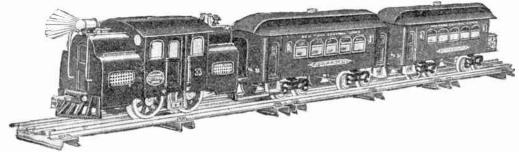
List Price Each

Electric Freight Train Outfit No. 37. Comprises No. 33 Locomotive, 1 No. 112 Gondola Car, 1 No. 117 Caboose, and 8 sections curved track, making a circle 3 ½ ft. in diameter. Length of train, 31 ins.

\$24,00

Electric Freight Train Outfit No. 39. Comprises No. 38 Locomotive, 1 No. 116 Coal Car, 1 No. 117 Caboose and 8 sections curved track, making a circle 3½ ft. in diameter. Length of train 32 ins.

26.00



Electric Pullman Outfit No. 34. Comprises No. 33 Locomotive, 1 No. 35 Pullman Car, 1 No. 36 Observation Car, 8 curved and 2 straight sections of track, making an oval 4 ft. 8 ins. long by 3½ ft. wide. Length of train 34 ins.

Electric Pullman Outfit No. 40. Comprises No. 38 Locomotive, 2 No. 35 Pullman Cars,

\$30,00

1 No. 36 Observation Car, 8 curved and 4 straight sections of track, making an oval 5 ft. 9 ins. long and 3½ ft. wide. Length of train, 4 ft.

40.00

Electric Freight Outfit No. 41. Comprises No. 38 Locomotive, and 1 each Nos. 112 Gondola, 113 Cattle Car, 114 Box Car, 116 Coal Car, 117 Caboose, 8 curved and 4 straight sections of track, making an oval 5 ft. 9 ins. long by 3½ ft. wide. Length of train, 5 ft. 4 ins.

36.00



Outfit Nos. 420. Passenger Tram De Luxe. Comprises No. 42 Locomotive, 1 each Nos. 18 Pullman Car, No. 19 Pullman and Baggage Car, No. 190 Observation Car, 8 curved and 8 straight sections of track, making an oval 3½ ft, wide by 8 ft. 2 ins. long. The outfit also includes a series of 3 lights complete with cords for interior illumination of the cars.

870.00

Outfit No. 421. Similar to Outfit No. 420, but equipped with Locomotive No. 54, finished in nickel and brass.

85.00

Electric Passenger Outfit No. 44. Comprises No. 42 Locomotive, 2 No. 29 Day Coaches, 8 curved and 4 straight sections of track, making an oval 3½ ft. wide by 5 ft. 9 ins. long. Length of train, 52 ins.

50.00



Steam-Type Electric Pullman Outfit No. 620. Equipment and cars are same as described in Outfit No. 420, but has steam-type Locomotive No. 6 instead of the electric-type No. 42......

. \$80.00

Steam-Type Electric Pullman Outfit No. 621. Similar to Outfit No. 620 described above, but has steam-type Locomotive No. 7, finished in nickel and brass; a strong, beautiful outfit.....

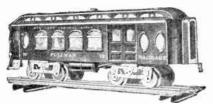
100.00

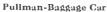
Electric Pullman Outfit No. 52. Comprises No. 53 Locomotive, 1 each Nos. 180 Pullman Car, 181 Pullman and Baggage C.r., 182 Observation Car, 8 curved and 4 straight sections of track, making an oval 3½ ft. wide by 5 ft. 9 ins. long. Length of train, 54 ins.

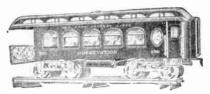
50.00

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

# CARS FOR STANDARD AND "O" GAUGE TRACK







Observation Car

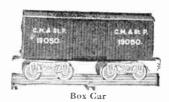
FOR "O" GAUGE TRACK 114 INCHES WIDE	List Price
Pullman Car No. 600. 6 ins. long, 2 ins. wide, 3 ins. high	Each \$1.00
Pullman Car No. 601. $7\frac{1}{2}$ ins. long, $2\frac{3}{8}$ ins. wide, $3\frac{1}{2}$ ins. high.	1.80
<b>Mail Car No. 602.</b> $7\frac{1}{2}$ ins. long, $2\frac{3}{8}$ ins. wide, $3\frac{1}{2}$ ins. high	1.80
<b>Pullman Car No. 610.</b> 834 ins. long, 2½ ins. wide, 4 ins. high	4.00
Observation Car No. 612. 8¾ ins. long, 2½ ins. wide, 4 ins. high.	4.00
Box Car No. 800. 6 ins. long, 2 ins. wide, 3 ins. high.	1,00
Cattle Car No. 802. 6 ins. long, 2 ins. wide, 3 ins. high.	1.00
Caboose No. 801. 6 ins. long, 2 ins. wide, 3¼ ins. high	1.00
Box Car No. 820. 7½ ins. long, 23% ins. wide, 3½ ins. high.	1.80
Caboose No. 822. 7½ ins. long, 23% ins. wide, 3¾ ins. high.	1.80



Caboose

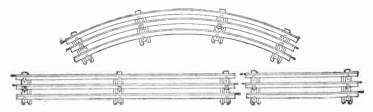


Cattle Car



FOR STANDARD GAUGE TRACK 21/4 INCHES WIDE	List Price
	Each
Pullman Car No. 35. 11 ins. long, 3 ins. wide, 5 ins. high	\$6.00
Observation Car No. 36. 11 ins. long, 3 ins. wide, 5 ins. high.	6.00
Pullman Car No. 180. 12½ ins. long, 3½ ins. wide, 5 ins. high	7.00
Pullman and Baggage Car No. 181. 12½ ins. long, 3½ ins. wide, 5 ins. high.	8.00
<b>Observation Car No. 182.</b> 12½ ins. long, 3½ ins. wide, 5 ins. high	8.00
Pullman Car No. 18. 1612 ins. long, 312 ins. wide, 6 ins. high	9.00
Pullman and Baggage Car No. 19, 16½ ins. long, 3½ ins. wide, 6 ins. high.	10,00
Observation Car No. 190. 16½ ins. long, 3½ ins. wide, 6 ins. high.	10,00
Day Coach No. 29. 16 ins. long, 3 ins. wide, 6 ins. high	7.00
Gondola Car No. 112. 9½ ins. long, 3 ins. wide, 2½ ins. high.	2.00
Cattle Car No. 113. 9½ ins. long, 3 ins. wide, 4½ ins. high	3.00
<b>Box Car No. 114.</b> $9\frac{1}{2}$ ins. long, 3 ins. wide, $4\frac{1}{4}$ ins. high.	3.00
<b>Ballast Car No. 116.</b> 9½ ins. long, 3 ins. wide, 3¾ ins. high	3.00
<b>Caboose No. 117.</b> 934 ins. long, 3 ins. wide, 434 ins. high	3.00
Flat Car No. 11. 11 ins. long, 3½ ins. wide, 3½ ins. high	3.40
Gondola Car No. 12. 11 ins. long, $3\frac{1}{2}$ ins. wide, $3\frac{1}{2}$ ins. high.	4.00
<b>Cattle Car No. 13.</b> 11 ins. long, 3½ ins. wide, 5½ ins. high	5,00
Box Car No. 14. 11 ins. long, 3½ ins. wide, 5½ ins. high	5,00
Oil Car No. 15. 11 ins. long, 3½ ins. wide, 5¼ ins. high	5.00
<b>Ballast Car No. 16.</b> 11 ins. long, 3½ ins. wide, 4¾ ins. high	5.00
Caboose No. 17. 934 ins. long, 314 ins. wide, 61/2 ins. high	5.00
Delivery F. O. B. New York City. For warehouse deliveries write nearest house.	- 100

## TRACK AND ACCESSORIES FOR STANDARD AND "O" GAUGE



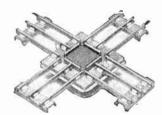
Standard Gauge Track

### STANDARD GAUGE TRACK, 21/4 INCHES WIDE

7,		List Price
No. C, 16½ ins. long, curved.  No. CC, 16½ ins. long, curved, with battery connections.  No. S, 14 ins. long, straight.  No. ½S, 7½ ins. long, straight.  No. SC, 14 ins. long, straight, with battery connections.	Per section Per section Per section	. ,70 . ,50 .40
"O" GAUGE TRACK, 11/4 INCHES WIDE		
OS straight track, 10¼ ins. long. OSC straight track, 10¼ ins. long, with battery connections. OC curved track, 11½ ins. long. OCC curved track, 11½ ins. long, with battery connections.	Per section Per section	.30







Crossing No. 20, 020 and 020X

### FOR "O" GAUGE TRACK, 11/4 INCHES WIDE

	List Price
Switch No. 022. (Right and left hand). Construction is similar to No. 22 switch. Leng	gth
11½ ins.; width 5½ ins.; height 3 ins.  Electric Switch No. 021. (Right and Left Hand.) Similar in construction to No.	\$3.00
Electric Switch No. 021. (Right and Left Hand.) Similar in construction to No.	21
Switch Length 1125 ins.; width 525 ins.; height 3 ins	4 . 00
Crossing No. 020. Similar in construction to No. 20 Crossing. Measures 10¼ ins. square	e 1,50
Crossing No. 020X. A 45 degree crossing for use with curved sections only. Length 101/4 in	ns. 2.00
FOR STANDARD GAUGE TRACK, 21/2 INCHES WIDE	
Switch No. 22. (Right and Left Hand.) Length 16½ ins.; width 8 ins.; height 4½ i	ns.



Lamp Post



Connects with track in same manner as straight or curved sections. . . . . . \$4.00 Electric Switch No. 21. (Right and Left Hand.) This is similar in construction to No. 22 described above, but is equipped with an electric signal, having a 14 volt bulb, which can Crossing No. 20. For use in conjunction with switches, enabling the formation of Fig. 8 and Fig. 8 loop. Measures 12 5.00 ins, square. Cross rails are mounted on a solid base...... 2.00square. Cross rails are mounted on a solid base.

Lamp Post No. 61. 1 light, complete with electric globe.

Lamp Post No. 67. 2 lights, complete with 2 electric globes

Semaphore No. 63. 1 arm, no light.

Semaphore No. 64. 2 arms, no light.

Semaphore No. 65. 1 arm, 1 light.

Semaphore No. 66. 2 arms, 2 lights.

No. 118 Tunnel for "O" Gauge, 1¼ in. Track.

No. 119 Tunnel. 16 ins. long, for either "O" Gauge or Lionel addred Gauge track. 3.00 5,00 1.502,00 3,00 5,00 2.50Standard Gauge track... 4.00Tunnel No. 120. 20 ins. long, for both gauges.
No. 121 Station. Substantially constructed and finely finished in colors. Size, 14 x 10 x 9 ins. 7.00

> Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

7.00

### HEAT REGULATORS

Western Electric Heat Regulators are intended for the home. The function of these regulators is to automatically maintain a given temperature in the home and to automatically open the draft of the furnace at a predetermined hour in the morning so that the house will be warm and comfortable when the occupants arise. The equipment consists of an electric thermostat, which is mounted on a wall in the home. Connected to this is a three-wire cable running to a motor in the basement.

The thermostat is so constructed that when the temperature reaches a certain degree the thermostat arm closes an electrical circuit. This starts the motor in the basement, which in turn closes the furnace draft and opens the check damper.

If the house should cool below a certain degree the thermostat arm contracts in the opposite direction, closing another circuit, again starting the motor. This time the motor opens the draft and closes the check damper, thereby increasing the fire. The thermostat can be adjusted to operate on a change of temperature of one degree.

If it is desired to have the house cooler at night than during the day the thermostat may be set to maintain a lower degree of heat by simply turning the indicator on the thermostat to the night temperature desired. Then the temperature will not fall below this point and the danger of frozen water pipes or frosted flowers or plants will be eliminated.

Each thermostat is equipped with a high-grade one-day clock. The alarm dial of the clock can be set to turn the heat on at any desired hour in the morning. When the thermostat operates at that hour in the morning it automatically throws the indicator to the day temperature of 68° and will hold the temperature at that point until the indicator is set back at night.

Western Electric Heat Regulators absolutely prevent fuel wastage.

Western Electric Heat Regulators come in two styles. The No. 100 Regulator is equipped with a spring motor that operates the dampers of the furnace. This motor has a heavy spring that requires winding every ten days or two weeks. Current for the thermostat is supplied by two batteries or by a bell-ringing transformer. When the thermostat operates it starts the spring motor, which in turn opens or closes the dampers of the furnace.

The No. 200 outfit is exactly the same as the No. 100, except that instead of having a spring motor it is furnished with a 110-volt A.C. motor together with a transformer that supplies the current for the thermostat. It can be equipped to operate on 25 cycles, A.C. circuit at a slight additional cost. batteries are needed with the No. 200 Regulator. The principal advantage of the No. 200 Regulator is that the motor does not require winding—it is always ready for service.

Western Electric Heat Regulators may be applied to hot water, steam, hot air, gas, vapor, vacuum and combination heaters. These regulators may be installed equally well in old houses or new ones. When installed in an old house, the thermostat is mounted on a partition wall, the cable dropped on the inside of the wall to the basement and there connected to the motor which is mounted on the wall conveniently located to the furnace.

At a slight increase in price, the No. 100 Regulator can be furnished, mounted on a

special display-board and connected to two furnace dampers. We recommend the purchase of a display outfit for your store. With one of these display outfits in your store it will be easy to explain the operation of the regulator to prospective purchasers.

0	0		
List			†List Price
No.		Weight	Each
100	Western Electric Heat Regulator Spring Motor Type	30 lbs.	\$61.10
200	Western Electric Heat Regulator A.C. Motor Type	30 lbs.	87.10
100D	No. 100 spring motor outfit mounted on display board		70.60
200D	No. 200 A.C. motor outfit mounted on display board		96,60

Each regulator is packed in a wooden box. The equipment includes thermostat, motor, necessary pulleys, brackets, chain and cable.
All thermostats are finished in sand-blasted bronze.

†Delivery F. O. B. Minneapolis, Minn. For warehouse deliveries write nearest house.

# Pyrene Fire Extinguisher

This extinguisher is the most efficient and practical device known for the protection of electrical risks. It is used extensively by steam railroads, traction companies and power plants throughout the United States and Canada.

Pyrene is also recognized as the most effective extinguisher of incipient fires in highly inflammable materials, such as gasoline, benzine, kerosene, oils, etc.

#### PROPERTIES OF PYRENE

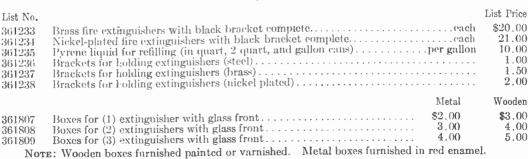
Pyrene liquid is a combination of purely organic materials, having an aromatic odor and a high specific gravity. Pyrene contains neither acid, alkali, salts nor moisture, and will not injure materials with which it may come in contact. Pyrene liquid does not lose its strength nor deteriorate with age. It will not freeze at a temperture of 50 degrees F. below zero. When Pyrene liquid is subjected to a temperature of 200 degrees F. or over, it is immediately transformed into a heavy, dry, cohering, non-poisonous gas blanket, which surrounds the burning material, cutting off the air supply necessary for the life of the fire, and thereby extinguishing is



The device in which Pyrene is used is a double acting pump, easily operated by hand, of one quart capacity, strongly built of brass and white metal throughout. Pyrene extinguisher will throw a continuous stream to a distance of about thirty feet. The extinguisher is 3 inches in diameter and 14 inches in length, and weighs (filled) 6 lbs. It is not necessary to return extinguishers to the factory to be refilled. They may be recharged by removing the filler cap and pouring in the amount used.

### THE ELECTRICAL USES OF PYRENE

The resistance of Pyrene liquid is 30,000 megohms per cubic inch. Its dielectric strength is 13,240 volts per 1/10 inch. Owing to its extremely high resistances, Pyrene will always be serviceable on the highest voltages commercially used and on all classes of electrical equipment. It may be directed between the commutator and brushes or the armature and field of any moving rotary without in any way causing damage to the apparatus or injuring the operator, irrespective of voltage used. This applies as well to controller boxes, rheostats, transformers, switchboards and all other electrical equipment. Pyrene will break an arc caused by short circuit and, when broken, the arc will not reëstablish.





Fire Extinguisher



Fire Extinouisher

## VIBRATORS AND MEDICAL BATTERIES

### New Life Vibrators

New life vibrators are made in three different styles, Types A, C and D. All of these types give both the rubbing and percussion stroke so essential in high grade vibrators.



Type A Vibrator

New Life Vibrator Type A

The Type A vibrator has an aluminum casing making it light and compact. A speed regulating switch enables the motor to be run fast or slow. Standard voltages, 110–120 volts A.C. 25 to 60 cycles and D.C. 100–120 volts. The current consumed without load is .325 amperes; with load .35 amperes. The motor is 1-20 H.P. of 6,000 R.P.M. Specify whether for A.C. or D.C. circuits.

List	. Vibrator complete with	Net	Shipping	*List Price
No.		Weight	Weight	Each
	six (6) applicators, cord and plug	$4\frac{1}{2}$ lbs.	5½ lbs.	\$23.50

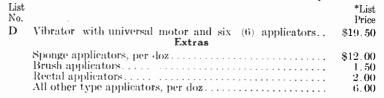
# New Life Vibrator Type C

Designed especially for professional use. Widely used in hospitals, sanitariums and turkish baths. A speed regulating switch enables the motor to run fast or slow. Standard voltages, 110-120 volts A.C. 25 to 60 cycles, and D.C. 110-120 volts. The motor is 1, 20 H.P. of 7,000 R.P.M.

List No.	Vibrator complete	W	Net eight	Shipping Weight	*List Price Each
•	six (6) applicators, and plug	cord	lbs.	6 lbs.	\$32,90

# New Life Vibrator Type D

This type has no speed regulator, but it may be stopped or started instantly by means of a push button in the handle. This vibrator is provided with a universal motor which will work on either A.C. or D.C. currents. Standard voltages, 110-120 volts A.C. 25 to 60 cycles and D.C. 100-120 volts. Current consumed is 3.5 without load .325 amperes.



The Appollo Medical Battery

This is a two-cell medical battery, and is recommended where more current is desired than can be obtained from the single cell type, dimensions  $9 \times 7\frac{1}{4} \times 8$  inches high. All metal parts heavily nickel plated and highly polished. It has battery and pole changing switches. Furnished with two metal hand electrodes, one massage roller electrode, one hair brush electrode two wooden electrode handles and one pair of green and red silk conducting cords.

List		†List Price
No.		Each
2233	Appollo medical battery	\$18.00

# Home Medical Apparatus

The Home medical battery is contained in a highly polished oak or mahogany case with nickel plated handle. Dimensions of the case 83/4 x 51/4 x 41/2 inches. Weight 51/2 lbs.

List No.	†	List Price Each
2204	Home No. 4 apparatus batteries and electrodes com-	174011
194 شت	plete	\$8.20

\*Delivery F. O. B. Factory, Raeine, Wis. †Delivery F. O. B. Factory, New York. For warehouse deliveries write nearest house.



Type D Vibrator

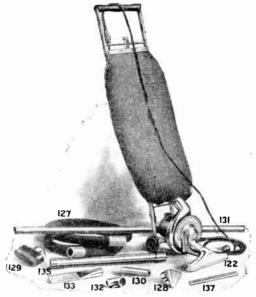


No. 2233 Medical Battery



No. 2204 Home Medical Apparatus

# Western Electric Western Electric VACUUM CLEANER



Note: Motors can be furnished as follows: 32, 60, 110, 220 volt D. C. 100 volt, 25, 40, 60 cycles A. C. 220 volt, 60 cycles A. C. 110 volt universal A. C. or D. C.

2.00

1.00

No. 11 Vacuum Cleaner with Tools No. 11 Portable Type

With a Western Electric Vacuum Cleaner you can clean in one-fourth the time that it takes with the broom and dust rag. In ordinary sweeping and dusting, the surface dirt is simply dislodged to scatter its unhealthful germs in the air we breathe.

With a Western Electric Vacuum Cleaner—the modern, sanitary method of cleaning—the dirt and dust are actually drawn out of the carpets, rugs and draperies by a vacuum into a bag which may be easily de-

tached and emptied.

The extension tool-furnished as a part of the regular equipment-will enable one to reach the out-

of-the-way places—under heavy furniture that cannot be moved.

The comfortable horizontal handle—not found in any other machine—provides the most natural way for pushing a cleaner. A special device in the cleaning tool picks up all the dirt, threads and ravelings. This is the cleaner not set like a broom.

By means of the hose attachment and different nozzles, the Western Electric Vacuum Cleaner can be used for many difficult cleaning operations. Dirt that cannot be gotten at in any other way is easily removed. A thin nozzle is very effective in cleaning the radiators. It gets in between the pipes and removes the

dust and dirt. It reaches the corners which are always difficult to clean.

The handle of the cleaner remains in an upright position when not in use. For cleaning upholstered furniture, mattresses, etc., the hose attachment is most valuable. The dust and particles of dirt which cannot be besten out or reached with the whiskbroom are easily drawn out by the strong suction of the vacuum cleaner. By disconnecting the bag and attaching the hose to the bag connection, the cleaner may be used as a blower for blowing the dust out of the crevices, renovating pillows and drying the hair.

The old method of beating the draperies not only destroys their crispness and luster, but soon wears them out. With the extension handle and hose attachment, one can take all the dust and dirt out of the

draperies v	without injury to the most delicate of fabrics. It enables the user	to reach the to	ps of the doors
and moldi	ings, the plate rails and pictures high above the head.		
List No.	Description	Shpg. Wgt.	List Price Each
11	Vacuum cleaner with tools 106, 135 and 137	24 lbs.	\$90.00
	(Complete equipment for floors and floor coverings.)		105.00
11	Vacuum cleaner with tools 127, 128, 129, 130 and 131	27 lbs.	105.0 <b>0</b>
	(Lan all andinant household algening requirements)		
A con	mplete and efficient tool equipment—light, substantial and beautiful	lly finished, ha	s been designed
for use wit	th this cleaner.		- 46
166	General cleaning tool		\$4.00
127	Eight foot length of hose		5.50
128	Upholstery tool		1.80

129 1.20 130 42 in. extension handle for use at end of hose.

Elbow attachment for changing angle of tools. 131 132 Library tool for radiators, bookcases, etc.... 133 Extension tool for cleaning under furniture, etc..... 135

Dust bag..... 136 Special device used in general cleaning tool for picking up threads..... 137 Delivery F. O. B. destination.

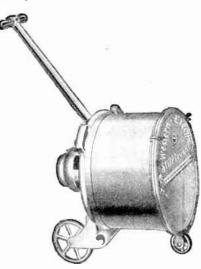
# Western Electric





No. 2. Note.—Motors can be furnished as follows: 32. 110, 220 volts direct current, and 110 volts 25, 40,60 eyeles alternating current, 220 volts, 60 eveles alternating current, any frequency.

No. 3. 110 volt direct current, and 110 volt 25, 40 and 60 cycles alternating current.



No. 3 Cleaner

## Nos. 2 and 3 Vacuum Cleaners

These are larger than the No. 1 Cleaner, and are adapted to use in rather large residences with somewhat heavier rugs and furnishings.

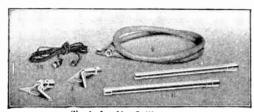
They have the same superior features in respect to the arrangement of the bag, large clearance, high efficiency of the fan, low center of gravity and other essential respects. They are built almost entirely of aluminum with the exception of the drum and the motor, giving an exceedingly light but strong construction. The motor and fan are mounted on the same shaft and run in self-aligning ball bearings in a

dust-proof easing.

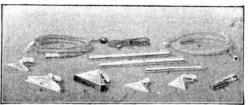
No. 2 Cleaner

Twelve feet of high-grade, non-collapsible rubber hose and twenty feet of electric cord are furnished with each cleaner, giving the machines a radius of operation of thirty-two feet from the lamp socket. Several rooms can be cleaned without taking down the cord. A slight pull on the hose will draw the cleaner over the floor. They roll easily over door sills and rugs, and because of the horizontal mounting will not topple over like many vertically mounted cleaners. Being perfectly balanced on large cushion tired wheels, they can be rolled from step to step in moving up or down stairs like a perambulator. The case with which they can be handled is in striking contrast to other cleaners which have to be lifted bodily.

List No.	Shpg. Wgt. with Tools	List Price Fach
2 Cleaner complete, with tools as listed below	96 lbs.	\$230.00
3 Cleaner complete, with tools as listed below	140 lbs.	250 00



Tools for No. 2 Cleaner

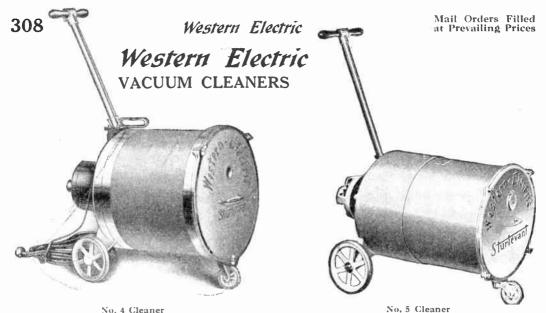


Tools for No. 3 Cleaner

# Tool Equipments

Tools ordered extra; prices are as follows

CT 1 2 7	roots ordered extra; prices are as follows		
Tool No.			ce Each
		$N_0$ . 2	No. 3
140	20 feet of electric cord with plug	\$4.50	
1	8 in, floor tool, swivel joint, wide slot	8.50	\$8.50
3	Upholstery tool	9 90	2.20
5	10 III. Wall Drush, Swivel joint		11.00
141	20 it. electric cord, plug and switch		6.00
114	12 red of rose (suction) with taper connections.	17.00	17.00
10	1/4 in curved floor tool handle	$\dot{7}.50$	7.50
61	Hardwood floor tool attachment (not shown)	4.00	4.00
Del	ivery F. O. B. destination.		2.00



No. 4 Cleaner No. 4 and No. 5 Cleaners

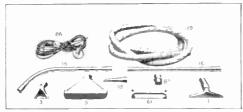
These are exceptionally high powered portable cleaners. They are designed for the exacting requirements of large office buildings, schools, clubhouses, and other public buildings, where considerable quantities of dirt and litter must be disposed of rapidly and effectually.

Features of Construction

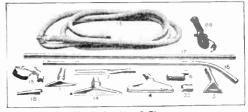
They are equipped with multiple fans. The No. 4 has two fan units and the No. 5 has four fan units. In these so-called multi-stage fans the air is drawn into the first fan and propelled into the fan ahead, receiving an impulse from each fan until it is finally discharged into the exhaust pipe. This gives a much higher velocity and suction than could be attained with a single fan. They have the same superior features of design and construction as the smaller cleaners.

Attention is especially ealled to the fact that the motors for Western Electric-Sturtevant Vacuum Cleaners have been designed throughout especially for vacuum cleaner work; one object having been to avoid excessive starting currents on alternating current circuits. All sizes of portable cleaners up to and including the No. 5 can be operated from the ordinary lighting circuits without change of fuses. For most other cleaners the fuse capacity must be raised, particularly for the higher powered portable cleaners, beyond the limits permitted by the underwriters.

ist No.		-								List Price
4	Cleaner	complete.	with	tools as	listed b	clow,	110 volts	universal,	 . 140 lbs.	\$150.00
.1	Cleaner	complete.	with	tools as	listed b	oelow.	220 volts	universal.	 . 149 lbs.	460.00
5	Cleaner	complete.	with	tools as	listed b	elow.	110 volts	universal.	 . 325 lbs.	650,00



Tools for No. 4 Cleaner

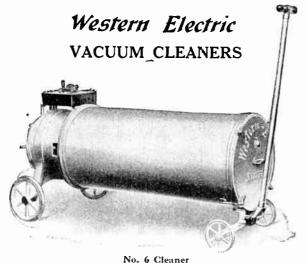


Tools for No. 5 Cleaner

# Tool Equipments

Tools ordered extra; prices are as follows

	FOR NO. 4 CLEANER										
Tool	1.	ist Price	Tool		List Price						
No.		Each	No.		Each						
1	8 in. floor tool	\$8.50	61	Hardwood floor tool attachment							
3	Upholstery tool	2.20		Electric cord plug and switches							
5	10 in. wall brush, swivel joint	11.00		Reducing coupling							
16	1¼ in. curved floor handle	7.50	119	12 ft. 1½ in. hose	15.50						
18	Blowing nozzle	3.50									
	FOR	NO. 5	CLEA	NER							
1	8 in, floor tool	88.50	16	Curved floor tool handle							
3	Uphotstering tool	2,20	17	Wall handle, 4 feet long							
- 4	12 in. hardwood floor tool	12.00	18	Blowing nozzle							
õ	40 in. wall brush	11.00	138	25 ft. electric cord switch and							
6	5 in. clothes brush	4.50		plug							
7	Library tool	4.00		Taper coupling							
	12 in. floor tool	9.00		25 ft, hose (Light)	. 28.00						
1	Delivery F. O. B. destination. World	Radio Histor	у								



## No. 6 Cleaner

The No. 6 is an exceedingly powerful cleaner. It has a multi-stage fan of five fan units driven by a 2 H.P. motor. It has a dust bug capacity of 4600 cu. in, when mounted in the cleaner drum. It is the most powerful and efficient portable cleaner on the market. Designed for street railway, factory and heavy industrial work and will successfully take care of any scrap litter or dirt which would be within the scope of any vacuum cleaning system. It has been built in recognition of the principle that losses of electrical energy transmitted through wires are very low, while losses in velocity, volume and suction of air moving through a piping and hose system are—comparatively—very high. Wherever conditions will permit bringing the cleaning apparatus close to the work this cleaner will give results superior to most stationary cleaner installations of similar capacity and cost.

List List Price Lbs. Each Cleaner complete without tools..... 80 \$1050,00 Nore: The application of this cleaner is so varied that the choice of tools is left to each purchaser to suit his individual requirements.

### No. 7 Cleaner

The No. 7 cleaner is designed to use either as a portable or sta-

tionary machine.

The No. 7 has a two-stage fan and a powerful motor. It is attached to the piping system and electric service as shown in the cut. This cleaner will do thoroughly satisfactory work in moderate sized homes of ten or twelve rooms or less where the system can be operated through 25 feet of 2 inch pipe and 25 feet of 1) 2 inch hose.

List Wt. List Price No. Each Cleaner complete with tools as listed below 150 \$450.00

### TOOL EQUIPMENT

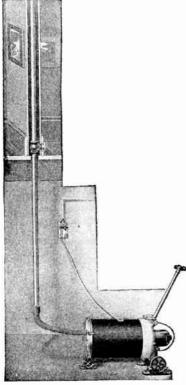
Tools ordered extra; prices are as follows: For No. 7 cleaner.

Tool List Price No. Each 8 in. general eleaning tool..... \$8.50 Unfolstery tool..... 2.201¼ in. curved floor handle..... 7.5016 25 ft. 1½ in. hose...... 28.00Hardwood floor tool attachment...... 4.00 25 ft. No. 16 electric cord with plugs and switch... 7.00

Always specify in ordering whether the cleaner is to be used as a portable-stationary or as a portable cleaner only.

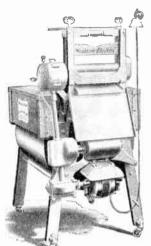
TABLE OF DATA-ALL CLEANERS No. 1 No. 2 No. 3 No. 4 No. 5 No. 6 No. 7 1/2Horse power...  $\dots 1/12$ 1/6 1/63/103/10Motor universal or not. Yes No No No Yes Yes Yes Net weight less tools... 16 41 50 70 112 560 75 Net export..... 75 109 165 Motors can be furnished as follows:

No. 6-110, 220, 500, volts direct current. No. 7—110 and 220 volts universal.



Combined Portable Stationary Cleaner

## WASHER AND WRINGER



Stationary Wringer

All moving parts of the Western Electric washer are enclosed.

This machine can be operated with perfect safety by any woman or child.

It is the safest washer made and the safest washer made is the safest washer to sell.

It is the only machine that has three free sides around which the operator can work without obstruction.

It occupies less floor space than any other machine of equal capacity.

Has patented safety release on wringer which prevents tearing of clothes due to elogged wringer.

There are no bolts or chains to slip or break-no complicated machinery to get out of order. The automatic reverse is accomplished by means of an absolutely new mechanical movement, having by far fewer parts than any other reversing cylinder machine on the market.

Simple. The machine is composed of but 35 parts against more than

one hundred in the next simplest machine. Operated by only 2 levers—one

for washing and one for wringing.

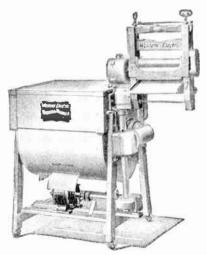
Operation. Machine operates on the reversing cylinder principle, which is conceded by experts to be the only correct method for washing clothes clean and without injury. The wringer has 2 rolls, reversible, and the rolls are made of the best Para rubber. This machine will do the washing of a family of four in one hour at only 2 cents for electricity.

Sanitary. Tub is completely lined with metal, leaving no crevices or corners for the collection or absorption of impurities. Easily emptied

by means of a faucet in bottom of machine.

Features: Only 2 operating levers, no gears inside to tear or spot cloth, reversing cylinder insures thorough washing, metal top, no warping, metal lining throughout, rust-proof swivel castors easily moved, all parts enclosed, no danger to operator or children, motor covered splash-proof, all gears at one end and protected, shaft drive, no troublesome belts or chains, safety release for wringer rolls.

						1.181	1.1.16.6
	Material	Capacity		Vringer	Shipping	East of	West of
Type	of Body	Sheets Shirts	Size	Type	Weight	Rockies	Rockies
A	Steel	6 or 14	11 ins.	Stationary	250 lbs.	\$250,00	\$260,00
AS	Steel	6 or 14	11 ins.	Swinging	-250 lbs.	275.00	285,00
AC	Copper	· 6 or 14	11 ins.	Stationary	250 lbs.	300.00	310.00
ACS	Copper	6 or 14	11 ins.	Swinging	250 lbs.	330.00	340,00
В	Steel	9  or  20	12 ins.	Stationary	260 lbs.	340.00	252.00
BS	Steel	9 - or - 20	12 ins.	Swinging	260 lbs.	260.00	372.00
BC	Copper	9 or 20	12 ins.	Stationary	260 lbs.	400.00	412.00
BCS	Copper	$9  ext{ or } 20$	12 ins.	Swinging	260 lbs.	420.00	432.00



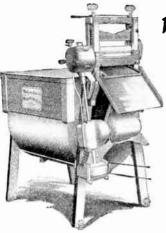
Swinging Wringer

# Small Cylinder Type "AA"

This type of Western Electric washer is especially adapted for small size families of two or three people where the wash is not large or where space for doing weekly wash is limited, such as in small apartments particularly where laundry tubs are located in the kitchen. It has a capacity of 4 sheets or 8 shirts Except for its smaller capacity, this washer is essentially the same as the large size Western Electric cylinder type. It has a two roll reversible 10 inch wringer. The cylinder automatically reverses every six and one half times, like in the larger washer; and the grade of material used throughout is the same as in the higher priced washer. The machine is equipped with a friction clutch of the cover type instead of multiple disc clutch, which is used on larger type machines. The floor space required by machine is only 2234 x 27 inches, the narrow dimension being width from side to side.

-\*List Price--

Type AA AAS Moto	of Body Steel Steel	Sheets Shirts  4 or 8 4 or 8 4 or 8 5, 60, 25 and 40 Cycles	Size 10 ins. 10 ins. s 220 Volta	Tringer Type Stationary Swinging s 60 Cycles and	Shipping Weight 227 lbs. 227 lbs. 110, 222 and es write neare	East of Rockies \$190.00 210.00 32 Volts D. est house.	West of Rockies \$200.00 220.00 C.
*Deli	very F. O. l	B. Factory, Chicago, 1	ll. For wa	ireliouse deliverie	s write near	st nouse.	

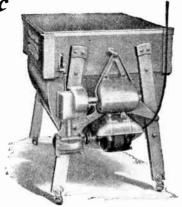


Western Electric Washer and Wringer

#### STANDARD MOTORS

#### TYPE A

110 volts, 60 cycles, A.C. 110 volts, 25 cycles, A.C. 220 volts, 60 cycles, A.C. 110 volts, 40 cycles, A.C. 110 volts, 133 cycles, A.C. 110 volts, D.C. 220 volts, D.C. 32 volts, D.C

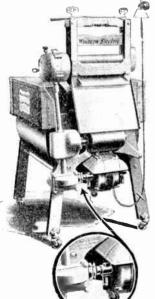


Washer Without Wringer

Washer for Gasoline Engine or External Motor Drive

Washer for Gasoline Engine or External Motor Drive
In order to make the Western Electric Washing Machine practical for use where electric service is not available, it is supplied when required without a motor, but equipped with a grooved pulley of 134 inch diameter, so that it may be operated by a gasoline engine. The capacity of the engine may be anything from ½ H.P. up, and the pulley on the washing machine is designed for a ¼ inch or 3% inch round leather that the pulley of the engine speed and diameter of pulley should be such as to drive the pulley on the belt or rope drive. The engine speed and diameter of pulley should be such as to drive the pulley on the washer at 1750 R.P.M.

	**					———List	Price
	Material	Capacity	~	ringer	Shipping	East of	West of
Type	of Body	Sheets Shirts	Size	Type	Weight	Rockies	Rockies
.1	Galvanized steel	6 or 14	11 ins.	Stationary	225  lbs.	\$170.00	\$180.00
AS	Galvanized steel	6 or 14	11 ins.	Swinging	225 lbs.	200,00	210.00
AC	Copper	6 or 14	11 ins.	Stationary	225 lbs.	220.00	230.00
ACS	Copper	6 or 14	11 ins.	Swinging	225 lbs.	250.00	260.00
B	Galvanized steel	9 or 20	12 ins.	Stationary	235 lbs.	230.00	242.00
BS	Galvanized steel	9 or 20	12 ins.	Swinging	235 lbs.	270.00	282.00
BC	Copper	9 or 20	12 ins.	Stationary	235 lbs.	290.00	302.00
BCS	Copper	9 or 20	12 ins.	Swinging	235 lbs.	320,00	332.00
$^{\mathrm{C}}$	Galvanized steel	12 or 30	14 ins.	Stationary	245 lbs.	290.00	302.00
CC	Copper	12 or 30	14 ins.	Stationary	245 lbs.	380,00	392.00



For Driving Other Equipment

Washer Without Wringer

All standard sizes and types of Western Electric Washing Machines are available without the wringer attachment. These are particularly desirable for institutions, small public laundries and others where the drying is done by a hydro-extractor. Thus the additional expense and complication of a wringer is avoided. The motor is the same size as on the standard washer, no reduction being made, due to the elimination of the

wringer.
This machine is exceedingly simple as shown in the cut, and only one

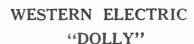
						List l	Price
	Material	——C'a	pacit	y	Shipping	East of	West of
Type	of Body	Sheets	,	Shirts	Weight	Rockies	Rockies
A	Galvanized steel	6	$\mathbf{or}$	14	235 lbs.	8200.00	\$210.00
AC	Copper	6	or	14	235 lbs.	250.00	260.00
В	Galvanized steel	9	or	20	240 lbs.	250.00	262.00
BC	Copper	9	or	20	240 lbs.	310.00	322.00
$\mathbf{C}$	Galvanized steel	12	or	30	250 lbs.	330.00	342.00
CC	Copper	12	or	30	250 lbs.	420.00	432.00

# Use of Washing Machine for Driving Other Equipment

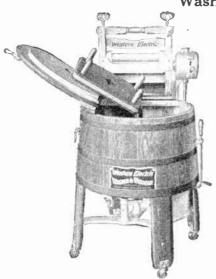
All standard washing machines are shipped out already equipped with a 134 inch grooved pulley on the motor shaft. This enables the user, if he desires, to use his washing machine to operate other household utilities like an ice cream freezer, ironing machine or mangle.

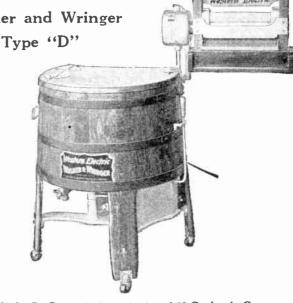
The pulley is designed for a ¼ inch or ¾ inch round leather belt or rope drive, and operates at 1750 R.P.M.

Delivery F. O. B. Chicago, Ill. For warehouse deliveries write nearest house.



Washer and Wringer





Standard Motors 32, 110 and 220 Volts D. C., 110 Volts, 25, 40 and 60 Cycles A. C., 220 Volts 60 Cycles, A. C.

The Western Electric "Dolly" washer and ringer will wash and wring the clothes far better than the most skillful laundress could do at a cost not much greater than running an electric fan. Fourteen shirts or six sheets washed and wrong in fifteen to twenty minutes—wrong without putting a hand to the wringer—and at a cost of less than two cents for current. All moving

lestern Electric

parts are enclosed and all machinery is located underneath the tub out of the way. The cover of the machine is not cluttered up with machinery. There is not a single piece of mechanism on it, and it can be used as a table when wringing clothes back through the wringer. No exposed, complicated parts. No belts and chains to get out of order or to endanger the user or children.

### **Features**

Capacity. Fourteen shirts or 6 sheets. It will wash and wring a tub of clothes in 15 to 20 minutes.

Height. Thirty-four inches from bottom of floor to top of tub. This is 4 inches higher than the ordinary machine of this type. The machine does not have to be set up on a special platform for stationary tubs in the laundry.

Dolly type is made of the best quality white maple, polished smooth as glass to prevent any possibility of injuring the most delicate fabrics.

Body is made of the best quality Southern Cypress with reinforced cypress cover attached.

Wringer is the very latest improved Swinging-Reversible type. It can be swung to any position, thus climinating the bother of pushing the machine from one tub to another. The rolls are 11 x 13/4 inches and are made of the best pure Para rubber

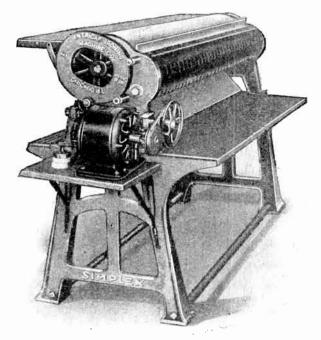
Motor. Machine is equipped with a guaranteed motor that operates the washer and wringer. Direct Gear Driven. Helical cut gears

packed in grease—absolutely noiseless. -List Price-

East of Rockies West of Rockies Type D Dolly washer and wringer... \$170.00 \$180.00 Shipping weight 212 lbs.

Delivery F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.

## "SIMPLEX" IRONING MACHINES



Nos. 48 and 56 Ironers, Motor Driven

# Simplex Ironing Machines

The "Simplex" Ironers are simple and durable and can be operated with ease and safety by inexperienced help. The principal features of the "Simplex" are: A well badded roller, operating under adjustable spring pressure against an accurately machined and highly polished shoe, its concave face forming contact with the circumference of the padded roll. This shoe inclines to the rear and draws its heat from a burner which extends across its back for the full length. Motor attached machines are furnished with plug connected to ordinary light socket with the exception of the 48 and 56 inch ironers, on which connection should be made direct to the line. Prices include gas or gravity gasoline burners.

# Nos. 32, 37, 42 and 46 "Simplex" Ironers

			,	,			_					
Roll	H.P.	Gas	C1	T- 12/ 17 ·		Lan	c Power	Belt	Driven	Moto	r Driven	*Extra
Length		Consumed	201 1	K.W. Hour Consump-		5374	*List	****	*List	****	*List	for
Inches	Motor	Cubic Feet per Hour		tion High	Na.	Wt. Lbs.	Price	W.E.	Price	Wt.	Price	Electric
		per mour					Each	Lbs.	Each	Lbs.	Each	Heat Coil
32	1/8	17	1/8	2.5	32	145	\$104.00	160	\$134.00	200		\$130.00
37	1/8	20	1	3	37	165	144.00	180	174.00	225	240.00	
42	1/6	23	I 1/8	4	42	190	164.00	200	194.00	240	260.00	
†46	1/6	26	1 11/4	4.8	46	330	230.00	350	[-260,00]	420	1.330.00	1.200.00

Note: Cast iron base can be furnished up to 42 inches, at \$26,00 additional list. †Prices No. 46 cover ironer and stand.

# Nos. 48 and 56 "Simplex" Ironers

							1					
Roll	II.P.	Gas	Caralia.	K.W. Hour		Hand	Power	B∈lt	Driven	Moto	r Driven	*Extra
Length Inches	of	Consumed Cubic Feet per Hour	Pints	Consump- tion High	List	Wt. Lbs.	*List Price Each	Wt. Lba	*List Price Each	Wt. Lbs.	*List Price Each	for Electric Heat Coil
48 56	1/4 1/4	27 33	11/4	5 6	48 56	550 575		505 580	\$380.00 430.00		\$460.00 510.00	\$240.00 280.00

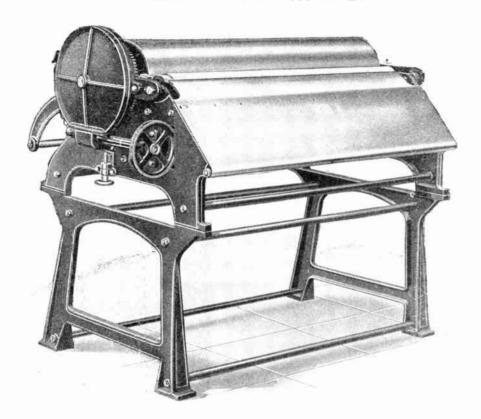
Ironing speed per minute, 32, 37, 42 and 46 inch rolls, 7 feet; 48 and 56 inch rolls, 8½ feet.

Speed of pulley on 32, 37, 42 and 46 inch ironers, 600 R.P.M.; 48 and 56 inch ironers, 370 R.P.M.

Diameter of pulley for 1¼ inch flat belt, 4 inches; grooved, ½ inch round belt for Nos. 32, 37, 42. 46, 5 inches; for Nos. 48 and 56, 8 inches. Nos. 46, 48 and 56 are furnished with iron stands. For other than 60 cycle A.C. price is special.

Note: Furnished for 110 volts, 60 cycles or 110 volts D.C. Voltages or frequency offer upon application. Delivery F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.

## SIMPLEX IRONING MACHINES



The Simplex Special Ironer

# The Simplex Special Ironer

This ironer is intended for hotels or institutions where the exquisite finish of the regular Simplex is not so important, but where a little greater speed is required, or where the ironer is to be used partly as a dryer. The roll is of steel,  $10\frac{1}{2}$  diameter, heated by a very powerful burner, supplied with a Hale mixer, securing absolutely perfect combustion and thorough heat regulation; has an ironing speed of  $13\frac{1}{2}$  feet per minute. The roll can be raised clear of the carrying apron to save from searching, and to facilitate removing and replacing apron on the rolls.

The drive is right angle and by worm. The ironer operates noiselessly.

By a simple change in gear ratio of ironing roll and apron roll the machine can be had to be used with excellent results as a dryer for prints of all kinds; can also be furnished without base at \$22.50 allowance.

Size	Pulley	R. P. M.	Н. Р.	Weight	Floor Space	List Price
45 in., gas	5 x 1½	300	1/4	625 lbs.	$34 \times 64$ ins.	\$360.00
Same with motor		300	1/4	685 lbs.	34 x 64 ins.	430.00

Can be had any size smaller at same price.

### PRESSURE GASOLINE TANK

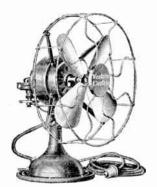
For pressure gasoline tanks with 20 feet of hollow wire add to list price of 32 inch to 56 inch inclusive at \$50 to the 48 inch and 56 inch at \$60.

Delivery F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.

World Radio History

# Western Electric

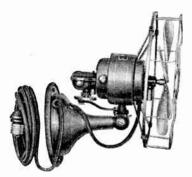
# OSCILLATING AND NON-OSCILLATING FANS



12 Inch Oscillating A. C. 4 Blades-Desk Position



12 Inch Non-Oscillating D. C. 4 Blades—Rear View Desk Position



9 Inch Oscillating Universal Wall Bracket Position

## Black Enamel Finish-Polished Brass Blades

## UNIVERSAL-FOR 110 VOLTS DIRECT OR ALTERNATING CURRENT, 25 TO 60 CYCLES

List			Νο.				Watts at	Weig	ght Lbs.
No.	Size	Type	Blades		——Speed——		High Speed	Net	Shpg.
6000	9	Non-Oscillating	. 4	1600	1200	1000	35	8	15
			}	on A.C. to	on A.C. to	on A.C. to	on A.C. to		
6100	9	Oscillating	. 4)	2300 on D.C.	1700 on D.C.	1400 on D.C.	45 on D.C.	8	15
		FOR ALT	ERNA	TING CURR	ENT 110 VO	LTS—60 CYC	LES		
6204	12	Non-Oscillating	. 4	•	1500-1275-112	5	60	17	35
6304		Oscillating			1475-1250-110		65	18	36
6254	16	Non-Oscillating	. 4		1475-1250-1150	0	85	20	43
6354	16	Oscillating	. 4	:	1450-1225-110	0	90	21	4.1
			FO	R DIRECT C	URRENT 110	VOLTS			
6401	12	Non-Oscillating.	. 4		1500-1250-110	0	45	15	33
6501		Oscillating			1475-1175-100		50	16	34
6451		Non-Oscillating.			1475-1225-107		55	18	41
6551	16	Oscillating	. 4		1450-1150- 97	5	60	19	42
			F	OR DIRECT	CURRENT	32 VOLTS			
6003	9	Non-Oscillating	. 4		1650-1300-100	0	30	9	16
6103	9				1650-1300-100	0	30	9	16
6400	12	Non-Oscillating			1500-1250-110		45	15	33
6500	12	Oscillating	. 4		1475-1175-100	0	50	16	34
6450		Non-Oscillating			1475-1225-107	5	55	18	41
6550	16	Oscillating.	4	•	1450-1150- 97	5	60	19	42

## ALTERNATING CURRENT 60 CYCLES AND DIRECT CURRENT 220 VOLT CIRCUIT

		No.	A.C. 60 Cyc	les D.C.			No.	A.C. Cycles	D.C.
Size	Type	Blades	List No.	List No.	Size	Type	Blades	List No.	List No.
9	Non-Oscillating	-4	6002	6004	12	Oscillating	.1	6305	6502
9	Oscillating	-1	6102	6104	16	Non-Oscillating	4	6255	6452
1.)	Non-Oscillating	.1	6205	6402	16	Oscillating	-1	6355	6552

Voltage Range. All of the direct current fans will operate on voltages 10 per cent, higher or lower than the normal 110 volts and 5 per cent, higher or 10 per cent, lower than the normal 220 volts.

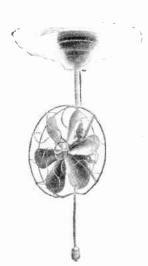
All of the alternating current fans will operate on voltages 10 per cent, higher or 5 per cent, lower than the normal 140 volts or 220 volts.

Fans (except for export) are packed one in a case and include 8 feet of black new code reinforced cord with separable plug attached to base of fan.

Fans can be adjusted to any desired cievation and can be used either in desk or bracket position. They can also be used as an oscillating or stationary fan as desired with slight adjustments.

Prices on application.

## FAN SPECIALTIES



No. S-203088 Tripod Cotter Pin Suspension Style



No. 203087 Stay Rod Suspension Type



8 Inch Battery Fan

# Telephone Operating Room Fans

These fans have been designed to meet the special requirements of telephone companies for a slow

speed, noiseless, easy running fan for use in telephone operating rooms.

These fans, which are modified types of Western Electric standard fans, are furnished in two styles, tripod cotter pin suspension type and the stay rod suspension type. Each type of fan is furnished for both direct and alternating current. The tripod cotter pin suspension type in the 16 inch size and the stay rod suspension type in the 12 inch size. Both types are furnished with 6 blade drawn steel frame fans with blade guards and screws finished in black.

Style No. of Fan	Style No. Suspension	Size	Current or Cycles	Volts	Speed R.P.M.	*List Price Each
244824 244825 244828 244829 244822 244823 244826 244827	\$-203088 \$-203088 \$-203088 \$-203088 \$-203087 \$203087 \$203087	16 ins. 16 ins. 16 ins. 16 ins. 12 ins. 12 ins. 12 ins. 12 ins.	60 60 D.C. D.C. 60 60 D.C. D.C.	100-125 200-250 100-115 200-230 100-125 200-250 100-115 200-230	1050 1050 1050 1050 1050 1050 1200 1200	Prices on Appl.

# Battery Fan

Type B. F.

A portable model of simplicity for the home, office or sickroom.

### POINTS OF CONSTRUCTION

Armature, laminated. Field, two-pole. Commutator, drawn copper segments, insulated with mica. Brushes, copper gauze, self-adjusting. Oil cups, wick feed. Base, fitted with starting switch. Finish, black japan, with brass polished fan and guard.

### BATTERY

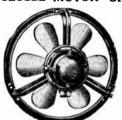
This is an ideal outfit with a 6 volt storage battery. Twenty good dry cells, 6 x 2½, connected 5 in series, 4 multiples, if run three hours per day will last for 200 hours upward; more continuous work will lessen the total run.

The box for 20 dry cells is wired complete and a diagram furnished, showing how to put in the cells and connect.

Performance: Speed, 1600 R.P.M. Volts, 6. Amperes, 1.2.

List	List Prices and Data	†List Price
No.		Each
145	B. F. motor, 8 in. fan and guard (no cord or battery)	
112	Box for 20 cells (less cells)	
110	6 ft. connecting cord, flexible	.68
	*Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.	
	†Delivery F. O. B. New York. For warehouse deliveries write nearest house.	

# VENTILATING (EXHAUST) FANS FULLY ENCLOSED MOTOR—SIX BLADES



Fully Enclosed A.C. and D.C.

# Ventilating (Exhaust) Fans

The Western Electric line of exhaust and ventilating fans has been developed through years of experience in solving ventilating problems of all kinds. Their efficient operation, with the small amount of care required, renders them particularly adapted to the installations for which they have been designed.

The 12 inch and 16 inch ventilating fans are recommended for ventilating restaurants, cafes, small moving picture theatres, halls, hotel and apartment house kitchens, etc. They are very light in weight and can be installed with small expense and without the necessity of special construction work. They have 6 flat polished brass finished blades and the frame is finished in black enamel.

They are intended for mounting in walls or partitions and exhausting into open space (free air). They may be mounted in a vertical position either upward or downward discharge as the bearings are provided with hardened steel and thrust washers.

with hardened steel and thrust washers.

Fully enclosed. The motors are fully enclosed, thus making them practically dust and moisture proof, and affording protection against grease, grit, acids or other substances which might deteriorate the winding or commutator.

Dimensions. 12 inch size—diameter of fan blades 12 inches; diameter of tripod ring inside 13¾ inches, outside 16 inches. 16 inch size—diameter of fan blades 16 inches; diameter of tripod ring inside 17¾ inches; outside 20 inches.

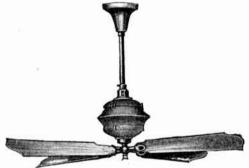
# FOR ALTERNATING CURRENT 110 VOLTS-60 CYCLES

List No. 7004 7054	Size 12 16	No. of Blades 6	Speed with 3 Speed Regulator 1550-1350-1150 1300-100-900	Watts High Epeed 85 120	Free air Cubic Feet per Minimum Displayed 1500–2000 2200–3300	Weigh Net 34 39	nt Lbs. Shpg.
7101 7151	12 16	6	FOR DIRECT CURREN 1550-1350-1150 1450-1250-1050			30 35	56 73

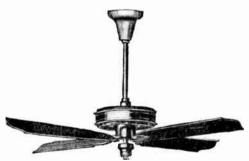
# Alternating Current 60 Cycles and Direct Current-220 Volt Circuit

.C. 60 Cycles	D.C. 60 Cycles.		
List No.	List No.	Size	No. of Blades
7005	7102	12	6
7055	7152	16	6





56 Inch Direct Current, Ceiling Fan



56 Inch Alternating Current, Ceiling Fan

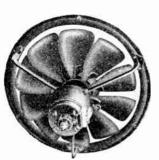
# Ceiling Fans

The Western Electric Ceiling Fans for alternating and direct current circuits offer a wide choice of fans for solution of ceiling fan installations of all kinds.

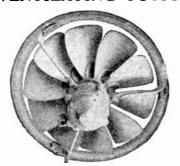
In their construction special attention has been given to the electrical and mechanical design, thus insuring exceptionally high operating efficiencies, reliability and serviceability, with a minimum of maintenance and current consumption.

Complete information covering prices and description upon application.

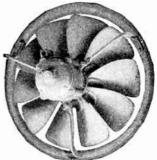
# Western Electric VENTILATING OUTFITS



A.C. Exhaust Fan Outfit Type R Repulsion Motor D.C. to Ventura Desk Fan



A.C. Exhaust Fan Outfit Polyphase Ind. Motor D.C. to Ventura Desk Fan



D.C. Exhaust Fan Outfit Constant Speed D.C. Motor D.C. to Ventura Desk Fan

#### Ventura A.C. Exhaust Fan Outfit Direct Connected

	Air				G).i.,			I.ist	Price Outfit	v
Diam.	Delivery		i	1	Ship. Wt.	1		Without	With 1	With
of	in				in Lbs.			Regu-	CR-1262	Verti-
Fan	Cu. Ft.	Speed		F	Outfit	н.Р.	Motor	lator	Regulator	eal
in	per Min.	Sync.	44.1.	Fan			Frame	Horizontal		Motor
Inches	(Approx.)	R.P.M.	Volts	No.	(Approx.)	(Approx.)				1110001
	CONST	ANT SPEE	D OUTFITS	S WITH 6	O CYCLE S				E SA)	
1037	720	1800	1 1	2	55	1/30	325	[ \$96.80 <u>]</u>		
1213	750	1200	110	213	60	1/30	325	103.40		
1417	1115	1200	and	23/3	65	1/30	325	110.00		
16	1580	200	220	3	90	1/15	137	132.00		
1837	1860	900		314	130	1/10	147	143.00		
117			SPEED OU	TFITS W	ITH SINGL	E-PHASE	MOTORS	(TYPE R)		
2117	1 2900	1 950	1 1 (	1 4	1 190	1/7	1 504	\$209.00	\$226.60	
263	4800	750	l 1 i	5	285	1/4	526	264,00	281.60	
32	6500	600	110	6	375	1/3	549	374.00	404.80	
37!4	9650	550	and	Ž	455	1/2	564	440.00	475 20	
4234	12500	475	220	8	585	3/4	584	660,00	710.60	
48	17500	440	1	l ğ	750	1	588	748.00	798 60	
111		CONSTANT	SPEED O	UTFITS V	VITH 60-CY	CLE POLY	PHASE N	MOTORS		
21!4	1 2800	1 900	(	1 4	1 205	1 1/7	1 110	1 \$209,00	1	
$\frac{2134}{2634}$	4200	720	110	5	290	1/4	120	264.00	1	
32	6500	600	220	6	390	3/8	120	308.00		
37!4	9900	600	440	7	460	5/8	140	396.00		
4234	11300	450	530	8	620	3/4	160	410.00	l l	
48	17500	450		9	850	1	180	550 00	\	
3.07		111.01	111		l. anna - CCO			Com and tales	.1	

Single-phase outlit with Type SA motor consists in each case of 60 cycle enclosed motor, fan and tripod.

Single-phase outlits with Type R motor consists in each case of 60 cycle enclosed repulsion motor, fan and tripod. The outlit may be used for constant speed work connecting the motor directly across the line. For variable speed work CR-1262 regulator as listed giving 33 per cent. speed reduction is used, air delivery varying in direct proportion to the speed. Type R motor may be operated on either 110 or 220 volt circuits by suitably interchanging the lead connections.

Constant speed outlit with three or two-phase motor consists in each case of 60 cycle motor, fan and tripod. Horizontal motor is totally enclosed. Vertical motor is open.

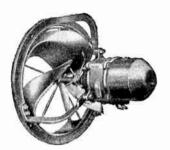
Ventura D.C. Exhaust Fans—Direct Connected

Diamof of Fan in Inches	Air Delivery Cu. Ft. per Min. (Approx.)	Speed R.P.M. (Approx.)	Volts	Fan No	Ship. Wt. in Lbs. Outfit (Approx.)	H.P. of Rheostat (Approx.)	List No. Speed Reg.	Motor Frame	I.ist l	Verti-
103 (103 (103 (103 (103 (103 (103 (103 (	650 650 850 850 850 850 1170 1170 1500 2200 2200 2900 2900 2900 4800 6900 6900 6900 9700 9700 9700 12500 12500 12500 16300 16300	1500 1500 1290 1290 1290 1200 1070 1070 1000 900 900 900 900 750 750 625 625 625 550 550 475 475 440 440	115 230 115 230 115 230 115 230 115 230 115 230 115 230 115 230 550 115 230 550 115 230 550 115 230 550 115 230 550 115	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	35 45 45 45 45 55 60 80 80 80 125 125 250 250 300 300 400 400 575 575 575 575 700 700	1/40 1/40 1/40 1/40 1/40 1/30 1/30 1/20 1/8 1/8 1/7 1/7 1/4 1/4 1/4 1/3 1/3 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	SP-30008 SP-30008 SP-30008 SP-30008 SP-30009 SP-30009 SP-30090 SP-	RT-1/20 RT-1/20 RT-1/20 RT-1/20 RT-1/20 RT-1/20 RT-1/20 *335 *335 *246 *246 *246 RT-1/4D RT-1/4D RT-1/2D RT-1/2D RT-1/2D RT-1/2D RT-1D RT-2D RT-2D RT-2D RT-2D RT-2D RT-2D RT-3D RT-	\$88,00 \$8,00 99,00 110,00 121,00 121,00 121,00 121,00 121,00 209,00 209,00 275,00 275,00 297,00 319,00 363,00 440,00 473,00 4473,00 484,00 550,00 550,00	\$105.60 105.60 116.60 116.60 127.60 127.60 143.00 154.00 154.00 231.00 231.00 297.00 297.00 352.00 319.00 385.00 396.00 495.00 528.00 594.00 594.00 594.00

<sup>\*</sup>Type 8D. The above outlits consist in each case of a series wound motor with totally enclosing covers, fan, tripod and armature speed regulator, equipped, on sizes 1834 and larger, with low voltage release. Regulator is capable of reducing motor speed 50 per cent. The air delivery varies in direct proportion to the speed.

## Western Electric

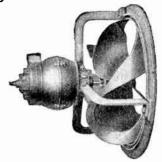
# Western Electric VENTILATING OUTFITS







Polyphase Induction Motor Di-rect Connected to Davidson Propeller Fan



D.C. Motor Direct Connected to Davidson Propeller Fan

## Davidson Exhaust Fan Outfits DIRECT CONNECTED

Single-phase outfit consists of single-phase Type R enclosed repulsion motor, fan and tripod. The outfit may be used for constant speed work connecting the motor directly across the line. For variable speed work CR-1262 regulator as listed giving 33 per cent. speed reduction is used, air delivery varying in direct proportion to the speed.

Direct Current outfit consists in each case of a series wound motor with totally enclosing covers, fan, tripod and CR-1225 armature speed regulator, with low voltage release, capable of reducing speed 50 per

cent. The air delivery varies in direct proportion to the speed.

Note: The air delivery and H.P. required for Davidson fans given herewith, are based on free intake and delivery. Hence these outfits are not designed for use with any great quantity of duct work, either in the intake or outlet. Air deliveries are supplied by the fan manufacturers, but are not guaranteed by the Company.

		A.C.	OUTFITS	WITH 6	0 CYCLE	SINGLE	PHASE I	MOTORS		
Diam.	Air Delivery			Ship.		List		Lis	st Price Out	fit
of Fan in Inches	in Cu. Ft. per Min. (Approx.)	Speed Sync. R.P.M.	Volts	Wt. in Lbs. Outfit (Approx.)	H.P. (Approx.)	No. Speed Reg.	Motor Frame	Without Regu- lator Horizontal	* With Regulator Horizontal	With Verti- cal Motor
18 24 30 36 42	2800 4800 8400 12200 15400	925 675 600 510 400	$ \left.\begin{array}{c} 110 \\ \text{and} \\ 220 \end{array}\right\} $	175 255 385 570 710	1/2 1/3 1/2 1 1 1 1/2		504 546 564 588 596	\$193.60 308.00 385.00 638.00 748.00	\$211.20 338.80 420.20 688.60 798.60	\$259.60 391.60 475.20
		A.C.	OUTFITS	WITH (	60 CYCL	E POLYP	HASE MC	TORS		
18 24 30 36	2700 4300 8400 14600	900 600 600 600	$   \begin{array}{c c}     & 110 \\     & 220 \\     & 440   \end{array} $	160 225 375 545	1/5 1/5 1/5 1/2		110 120 140 160	\$191.40 242.00 308.00 396.00		
42 48	17400 25900	450 450	550 D.C. OUT	655 730	1 2	FS WOLL	180 201	464.00 594.00		
18 18 18 24 24 24 30 30 30 36 36 36	2800 2800 2800 5200 5200 5200 8400 7800 12400 12400 11700	925 925 925 725 725 725 600 600 550 510 480	115 230 550 115 230 550 115 230 550 115 230	140 140 140 250 250 250 400 400 400 575 575	1/6 1/6 1/6 1/6 1/6 1/6 1/6 1/6 1/6 1/6	59607 59619 59631 59631 59632 59632 59609 59621 59633 59611 59633	RT-¼D RT-¼D RT-¼D RT-½D RT-½D RT-1D RT-1D RT-1D RT-2D RT-2D RT-2D		176.00 187.00 242.00 242.00 253.00 308.00 308.00 319.00 418.00	\$198.00 198.00 209.00 264.00 264.00 275.00 341.00 352.00 451.00 451.00
42 42 42 48 48 48	11700 16400 16400 14600 21300 21300 21300	480 425 400 380 370 370 370	550 115 230 550 115 230 550	750 750 750 1000 1000 1000	1 11/2 11/2 11/2 2 2	59635 59611 59623 59635 59612 59624 59636	RT-2D RT-3D RT-3D RT-3D RT-5D RT-5D RT-5D		440.00 495.00 495.00 517.00 693.00 693.00 715.00	473.00 528.00 528.00 550.00 737.00 737.00 759.00

\*CR-1262 regulator is used with single phase outfits; CR-1225 regulator with direct current outfits. Note: Single phase motor may be operated on either 110 or 220 volt circuits by suitably interchanging the lead connections.

# Western Electric PAUL PUMPS

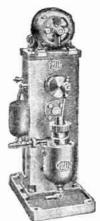


Fig. 803-Motor Driven

# Western Electric Paul Type E Pump, Motor Driven

FOR SHALLOW WELLS

The Paul Type "E" Pump, as illustrated by Fig 803, is especially adapted for residence service where the vertical suction lift is 20 feet or less. On account of their vertical design and very small floor space occupied, these pumps may conveniently be connected to the piping of existing systems when replacing hand pumps, water lifts or other power pumps. These pumps are also conveniently arranged with tanks, automatic electric pressure controllers and fittings assembled and mounted on east iron bases, thus forming complete systems.

### **SPECIFICATIONS**

The slow speed pump of a very special, yet extremely simple design (patent applied for) is bolted to the outside of a box shaped cast iron frame, fully accessible. It is double acting, brass fitted, with high grade rubber valves on brass seats and cup leather packing. The suction pipe entering below and the discharge pipe above can be swung in any desired direction. The frame also carries a perfectly silent and efficient drive, consisting of pulleys and flat belt with a low ratio of speed reduction in connection with a set of machine cut, slow speed, spur gears. Large removable bearings bolted to the face of the frame, insuring accurate alignment carry the intermediate shaft with pulley and pinion and the crank shaft with gear. The gears are central between bearings inside the frame, thereby completely encased. Conveniently located grease cups are provided for crank pin and all bearings. The crosshead end of the connecting rod works in a bath of oil. All parts subject to wear are easily renewable.

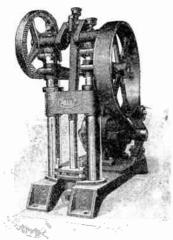
### List Prices of Paul Type E Pumps, Motor Driven

	1			Lis	t Price of Pr	imp and Pa	rts
				For Ope		For Pneumatic Tank Service	
No. of Pump	Capacity of Pump Gallons per Hour	H. P. of Motor	Electric Current	Pump and Motor for Hand Control	Pump, Motor, and Automatic Electric Float Switch	Pump, Motor and Air Charging Device Hand Control	Pump, Motor Air Charging Device and Automatic Electric Pressure Controller
90E 91E 90E	150 300 150 300	14 12 14 14	A. C. 1 Phase 60 Cycle 110-220 Volt or D.C. 110-220 Volt Motor With D.C. 32 Volt Metor	\$191.26 303.88 225.78 361.26	\$242,26 363,38 279,98 421,46	\$204,56 312,38 234,82 370,28	\$223.12 344.26 259.66 413.20

### Dimensions of Paul Type E Pumps, Motor Driven

No. of Pump	Maxi- mum Pressure	Totel Head	Size of		Spa	ree Occup	ed	Approx. Shipping	H.P. Re- quired
, vii. vii i diiip	in Lbs. perSq.In	in Feet	Suction	Dis- charge	Length	Width	Height	Weight Lbs.	quired
90E	50 59	115 115	s <sub>4</sub> in. 1 in.	$\frac{1}{3}$ in.	18 ins. 20 ins.	12 ins. 13 ins.	39 ins. 45 ins.	210 315	1/1 1/2

# Western Electric PAUL PUMPS



Type H Deep Well Pump

### TYPE H DEEP WELL PUMP AND WATER SYSTEMS

Capacity of pump 150 gallons per hour. Maximum working pressure 50 lbs. Maximum depth to cylinder 50 feet.

					List Price	
No. of Pump	Drive	H.P.	Approx. Shpg, Wt.	Equipment A Well Cylinder for Any System with Hand Control	B Well Cyl- inder and Float Switch Controller	Equipment C Well Cylinder Air Compressor and Pressure Controller for Pneumatic Tank Systems
	Electric motor A.C. single phase, 60 cycles, 110-220 volt or D.C.110-220 vo t Electric motor A.C. single phase, 25 30 or 40 cycle, 110-220	1/2	275	\$277.38	\$330,56	\$299.14
50 HE	volt, or D.C. 30-65 volt		285 500	320.44 346.80	377.62	367.34 362.80

### GENERAL DATA AND DIMENSIONS

	Length	Up Strokes	Inside Diameter	Size		Smallest Well Casing Cylinder		Din	neusions—Ir	iches
No. of Pump	of Stroke	Minute Minute	of Well Cylinder	Drop Pipe	Pump Pump	and Drop Pipe Will Enter	Sucker Rod	Length	Width	Height
50HM 50HE	5 ins. 5 ins.	48 48	$1\frac{3}{4}$ ins. $1\frac{3}{4}$ ins.	1¼ ins. 1¼ ins.	3.4 in. 3.4 in.	2 ins. 2 ins.	3/8	$\frac{2816}{2812}$	1312 1534	25½ 25½

### MOTOR AND GASOLINE ENGINE DRIVEN

Specifications: Each Paul system consists of the following equipment of sizes and capacities as listed below. (One) Paul Type II deep well pump (patent applied for) fitted with electric motor or gasoline engine as selected. (One) Paul air compressor attached to pump. (One) Paul special cylinder. (One) Paul pneumatic tank. (One) Paul automatic electric pressure controller (patent applied for) if automatic service is required. (One) each water gauge, pressure gauge, gate valve, check valve, relief valve, stop and waste cock, hose bibb, and a complete set of malleable iron fittings but no pipe.

### Motor Drive Rating 1/2 H. P.

				List Price of C	omplete System	
		Capacity	Approxi- mate Shipping Weight of	With A.C. Single Phase 60 Cycle 110- 220 Volt, or D.C. 110- 220 Volt Motor	With A.0 Phase 2 Cycle 1 Volt or 1 65 Volt	5,30, 40 10-220 D.C. 30-
No.	o. Size		Complete	Automatic Controller	Automatic	Controller
lf System	ot Tank	Tank Gallons	System Lbs.	Without With	Without	With

# Capacity of Pump 150 Gallons per Hour—Maximum presure 50 Lbs.—Maximum Depth to Cylinder 50 Feet

50HMA	24 ins. x 5 ft.	120	625	\$421,06	\$472.32	\$492.88	\$516.38
50HMB	24 ins. x 8 ft.	190	785	442,00	496.62	518.22	571.72
50HMD	30 ins. x 6 ft.	220	825	450,72	502.02	523.96	577.36
50HMD	44 ins. x 10 ft.	235	895	455,76	509.07	532.32	585.82
50HME	30 ins. x 8 ft.	295	975	475,06	526.32	549.21	602.73
50HME	36 ins. x 6 ft.	315	985	479,26	530.54	554.84	608.37
50HMC	30 ins. x 10 fr.	365	1090	496,62	547.92	571.72	625.26
50HMG	30 ins. x 10 fr.	440	1210	577,10	569.64	594.27	647.79
50H M II	30 ms, x 12 ft,	410	1210	577.10	009.64	594,27	647.79

Nore: 1: Prop pipe and 3's inch steel sucker rod is not included in the above prices.

Pumps will be furnished as standard with standard discharge head. If frostproof head is wanted, specify same on order.

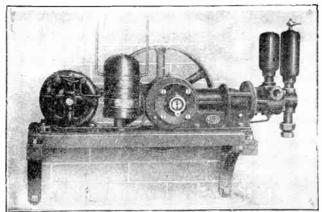
Delivery F. O. B. Factory, Ft. Wayne, Ind. For warehouse deliveries write nearest house.

11

# Western Electric

# Western Electric

PAUL HOUSE PUMP



Type "F" Electric House Pump

# Western Electric House Pump

The Paul Type "F" Electric House Pump has been designed especially to supersede the water motor driven pump, to positively do away with all the troubles connected therewith and to practically eliminate care and repair. Being noiseless in action, small in size, simple, strong and self-contained, it fills the requirements for residence service in the most ideal manner.

The pump bolted to the fully enclosed crank case frame is of the piston type, fully brass fitted. It is good for a suction lift of twenty-five feet. For lifts below twenty feet, no priming is required when starting up dry. The lubrication is entirely automatic and of the splash system.

### DIMENSIONS AND WEIGHT

Space occupied, wall or floor bracket mounting, length, 30 inches; width, 10 inches; height, 23 inches. Size of suction, 34 inch; discharge, 34 inch. Approximate shipping weight of pump with motor, 100 lbs.

# Capacity of No. 95F Pump, 150 Gallons per Hour. Rating of Motors, 16 to 11 H.P. Working Pressure, 40 and 50 Lbs.

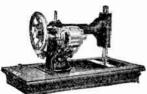
					and JU LDS.						
				*List Price of Pump and Equipment							
			1	For Ope Serv		For Pneumatic Tank Service					
	Capacity	:		Equipment A	Equipment B	Equipment C	Equipment D	Equipment E			
List No. of Pump	of Pump Gallons per Hour	II.P. of Motor	Electric Current	Pump with Motor, Hand Control	Pump with Motor and Automatic Electric Float Switch	Pump with Motor and Air Charging Device, Hand Control	Pump with Motor Air Charg- ing Device, Automatic Electric Controller	Pump with Motor Air Charging Device, Auto- matic Electric Controller (52) Gal. Galvanized Range Boiler, Tapped Special, Pressure Gauge and Relief Valve			
95F	150	1/6	A.C. 1 Phase 60 Cycle 110-220 Volt or D.C.	\$172.26	\$226.66	\$179.06	\$194.92	\$294.66			
96F	150	1/4	110-220 Volt	194.92	249.06	197.16	221.16	317.32			
95F 96F	150 150	1/6	D.C. 32 Volt	\$192.66 221.16	\$247.08 272.00	\$194.92 219.86	\$215.00 240.52	\$314.38 340.02			

Note: 1. Specify pump with Equipment A B, C, D or E; give electric current available.

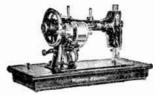
2. Pumps will be shipped with wall bracket mounting, as standard. If floor bracket mounting is wanted, specify same on order.

<sup>\*</sup>Deliver F. O. B. Factory, Ft. Wayne, Ind. For warehouse deliveries write nearest house.

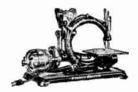
# Western Electric SEWING MACHINES







No. 2 Rotary Type



No. 3 Automatic Type

# Portable Electric Sewing Machine

The Western Electric sewing machine is a combination of the standard Western Electric sewing machine motor and a high-grade sewing machine of national repute, the combination resulting in a compact, self-

contained and easily portable electrically operated sewing machine.

The Motor. The electric motor is of the universal type, which can be operated on direct or alternating The Motor. The electric motor is of the universal type, which can be operated on direct or alternating current circuits. The standard motor is designed for operation on 110 volts and will operate efficiently on alternating current frequencies of 25, 30, 40, 50 or 60 cycles. Motors can be furnished for 220 volts and for 133 cycles at a slight additional cost.

The speed of the motor is controlled by a foot rheostat, and the sewing speed can be varied from slow to fast through several intermediate speeds by a slight pressure of the operator's foot.

No. 1 Type. The present Western Electric portable sewing machine is of the vibrating shuttle type, the

oldest and most popular type of sewing machine on the market.

No. 2 Type Rotary Sewing Machine. The rotary sewing machine is larger than the present vibrating shuttle type, the head being the same as that used in the standard pedal type machine.

No. 3 Type—Low Arm Single Thread Machine.

This machine is built on the principle of the Wilcox & Gibbs machine, and we are advised by the factory that the parts are practically interchangeable.

No. 4 Type—Two Spool Rotary Sewing Machine. This machine sews direct from two ordinary

commercial spools of thread.



No. 4 Two Spool Rotary Type



Sewing Machine enclosed in carrying



This foot control regulates perfectly. A press-ure of the foot starts the motor, produces any desired speed and stops the motor.

# Proper Needles for W. E. Sewing Machines

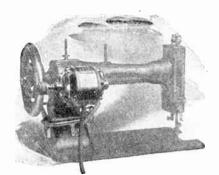
No. 1 Vibrator Type. Eldredge F. S. needles, sizes 1-2-8 inclusive.
No. 2 Rotary Type. N. S. Rotary needles, sizes 1 to 8 inclusive.
No. 3 Automatic Type. Eldredge auto needles, sizes 0 to 4 inclusive.
No. 4 Two Spool Type. Eldredge two spool needles, sizes 00-0-B-1/2 and 1 to 4 inclusive.

# Complete With Motor and Set of Attachments

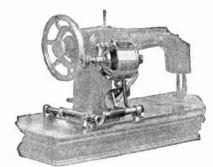
		East of the	Rockies	
List	Retail	List	Retail	List
No.	Price	Price	Price	Price
A 1919 of a 1919	110 Volt	110 Volt	32 Volt	32 Volt
1 Vibrating shuttle, net weight 32 lbs.; gross weight 50 lbs	\$39.50	\$79.00	\$40.25	\$80.50
2 Rotary type, net weight 37 lbs.; gross weight 67 lbs 3 Low arm single thread type, net weight 29 lbs.; gross weight	51.00	102.00	51.75	103.50
45 lbs.  Two spool rotary type, net weight 37 lbs.; gross weight	58.50	117.00	59.25	118,50
62 lbs	60 00	120.00	60.75	121.50
The above for 110 to 120 volts D.C. or A.C. 60, 50, 40, 30 For prices west of the Rockies, add \$4 list.  Extras	or 25 cycle	e circuits.		
For 220 volts A.C. or D.C., 32 volts D.C. or 133 cycle A.C. add				
to above prices	\$0.75	\$1.50	\$0.75	\$1.50
Cork pulley	. 45	.72	.45	.72
Foot control for Sew E-Z Complete	4.50	7.20	4.50	7.20
Foot control less cord and plug.	3.75	6.00	3.75	6.00
Rheostat with cord and plug	3.85	6.16	3.85	6.16
Rheostatouly	2.50	4.00	2.50	4.00

## WESTERN ELECTRIC

## Bracket and Tailor Type Sewing Motors



Holdfast Bracket



Bracket Motor on White Rotary Machine

The bracket type of Western Electric Sewing Motor is exactly the same in operating principle as the Jack Rabbit type. It is designed to fasten the motor permanently to the head of the machine and permits it to be swung under out of the way when the machine is closed.

The Holdfast Bracket will fit and operate any make of high head home sewing machine. The lugs of the bracket dropping into the belt holes of the machine, are tightened in position instantly holding the motor rigid.

Special brackets have been designed specially for the following machines:

Singer—All Types

National-Rotary and Automatic

White-Rotary, Vibrator

Standard-Rotary

New Home-Vibrator, Rotary, Automatic

Wilcox & Gibbs-Automatic

Free—All Types

Eldridge—Two Spool

King-All Types

Specify type and model of machine and manufacturer's name.

Tailor Type Motor

### TAILOR TYPE MOTOR

The Tailor Type Motor offers to the manufacturer of overalls and shirts and tailor shops a big opportunity to lower over-head and increase production. Attached to the machine without the use of tools and changes any make of any tailor sewing machine into a self-operating electric. A slight pressure of the foot on the control pedal regulates the speed from 300 to 1800 stitches a minute. It lowers operating cost because it consumes current only when it is sewing. Light, portable and can readily be changed from one machine to another. Guaranteed for a year against mechanical and electrical defects.

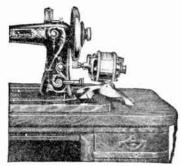
### DESCRIPTION

	W.E. LIST
Holdfast Bracket Type, 110 to 120 A.C. or D.C	\$24.00
Holdfast Bracket Type, Special Voltages	25.50
Special Brackets, 110 to 120 A.C. or D.C	23.00
Special Brackets, Special Voltages	24.50
Tailor Type Motor, 110 to 120 A.C. or D.C	35,00
Tailor Type Motor, Special Voltages	36.50

Delivery: F. O. B. Factory. Racine, Wis. For warehouse deliveries write nearest house.

W.E.

# WESTERN ELECTRIC Jack Rabbit or Home Motor



Runs your Sewing Machine

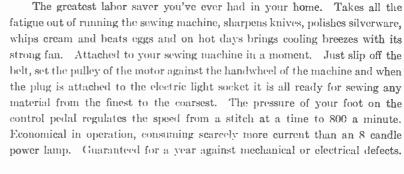
Easy to Attach and Operate. No bolts or brackets. Sew fast or slow.



Speed Regulator



As a Cream Whipper





As a Grinder

Fan Attachment: The nickel-plated steel blades are set in place of the pulley on the motor. A pressure of the fingers sets the guard in position.

Grinder and Polisher Attachment: Grinder is of best "A" grade carborundum and buffer of 30 ply cotton buff.



As a Polisher

Cream Whipper: Finished in highly polished aluminum, furnished with two quart glass bowl.



As a Fan

### DESCRIPTION

	List
Jack Rabbit or Home Motor, 110 to 120 volt, A. C. or D. C	\$23,00
Jack Rabbit or Home Motor, Special Voltages	24.50
Cream Whipper Attachment	7.50
Fan Attachment	3.50
Combination Grinder and Buffer Attachment	1.90

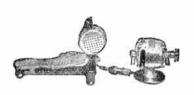
Delivery: F. O. B. Factory, Racine, Wis. For warehouse deliveries write nearest house.

## WESTERN ELECTRIC

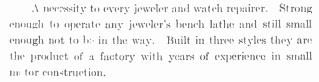
## Jeweler's Lathe Motors and Portable Grinder



No. 1 Jeweler's Lathe Motor



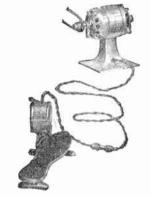
No. 2 Jeweler's Lathe Motor



No. 1 Jeweler's Lathe Motor is equipped with 1-20 Horse Power Motor, weight  $2\frac{1}{2}$  pounds, height  $5\frac{1}{2}$  inches Reversible at the turn of the switch. When it is running in one direction at high speed a turn of the switch changes it to slow speed in the opposite direction. Will operate on 110 to 120 volts, 25 to 60 cycles. Be sure to specify A. C. or D. C.

No. 2 Jeweler's Lathe Motor. This motor is a universal motor operating on either A. C. or D. C. and the speed is regulated by the control pedal shown in the illustration. A slight pressure of the foot starts the motor and a harder pressure increases the speed. Direction can be reversed by raising or lowering the carbon brushes. The motor is rated at 1-20 horse power.

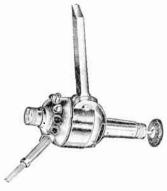
No. 3 Jeweler's Lathe Motor. Is practically the same as the No. 2 motor, except that it is a 1-12 horse power motor and has a larger base to take care of its larger size.



No. 3 Jeweler's Lathe Motor

# Portable Electric Grinder

Every machine shop, tool room and garage needs this grinder. A special feature is the dustproof bearing caps, which eliminate the possibility of any grit or dirt coming in contact with the high speed nickel babbit bearings. Equipped with any emery wheel of the best grade carborundum. A feed through switch placed near the grinder enables the operator to shut off the power without leaving his work. 1-12 Horse Power Universal motor operating on 104 to 120 volts A. C. or D. C.



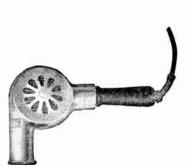
Portable Electric Grinder

## DESCRIPTION

	W. E. List
Jeweler's Lathe Motor No. 1	\$21.00
Jeweler's Lathe Motor No. 2	27,50
Jeweler's Lathe Motor No. 3	34.50
Portable Electric Grinder	33.00

## WESTERN ELECTRIC

## Hair Dryers, Shoe Dryers and Drink Mixers



No. 2 Hair Dryer



No. 1 Hair Dryer



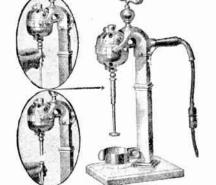
Shoe Dryer

### ELECTRIC HAIR DRYER

Makes shampooing a real pleasure. Dries the heaviest head of hair in a few moments. Changes from hot to cold blast at the turn of the switch. Light weight, portable and troubleproof. The fan is fully enclosed, eliminating any chance of catching the hair. The No. 2 Dryer is for ordinary home use, while the No. 1 is a heavier type for professional use. Operates on 105 to 120 volts A. C. or D. C.



A time saver for every up-to-date shoe shining parlor. Light weight and gives a strong blast of either hot or cold air and is foolproof. Equipped with universal support that fits any type of shoe shining stand. A universal motor operating on either A. C. or D. C. 105 to 120 volts.



No. 2 Electric Drink Mixer

### CYCLONE DRINK MIXERS

A labor saving device that brings trade to every soda fountain. Mixes any drink into a smooth creamy consistency in a fraction of the time taken by any other method and enables the dispenser to serve other customers while the drink is being mixed. The No. 1 is the original model while the No. 2 has the added feature of a detachable agitator, which can be removed and rinsed after each serving. Both styles made in two finishes, nickel and silver.



No. 1 Electric Drink Mixer

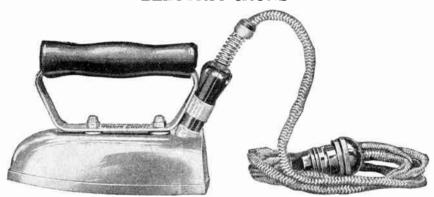
### DESCRIPTION

	W. E. List
Electric Hair Dryer, No. 1 Model	\$36,00
Electric Hair Dryer, No. 2 Model	24.00
Electric Shoe Dryer	26.00
Electric Drink Mixer No. 1 Model Nickel Finish	26.50
Electric Drink Mixer, No. 1 Model Silver Finish	32.50
Electric Drink Mixer, No. 2 Model Niekel Finish	-33.00
Electric Drink Mixer, No. 2 Model Silver Finish	-39.00

Delivery: F. O. B. Factory, Racine, Wis. For warehouse deliveries write nearest house.

**World Radio History** 

## **ELECTRIC IRONS**



No. 1 Electric Iron

## Western Electric No. 1 Iron

The Western Electric No. 1 Iron has round silver non-corroding removable contacts. The heating element is wound with chronium nickel ribbon designed so that heat will be distributed where it will be most effective. The cord is most attractive. Color black and white. The fine copper conductors are stranded, not breakable. Non-kink spring protects the cord at the iron. The handle support is made of one piece of metal, held by two hexagon cap nuts. The handle is of wood, shaped to fit the hand. Finished black. Bolt runs clear through the handle, holding it tight. The base is machine milled and polished. The pressure plate is also machine milled, and holds the elements tight against the bottom of the iron. The plug is composition, liberal in size. The contacts are phosphor bronze. This iron is made in one size only, 61/2 lbs., and each is packed in a separate box, six in a standard package. Retail Price List Price Watts List No. Carton Std. Pkg. Weight Each Each

Western Electric Iron. 5.25 $6\frac{1}{2}$  lbs. \$6.00 \$9.00 Voltage ranges are 95–104, 105–114, 115–125, 190–209, 210–229, 230–250 volts. Always specify voltage when ordering.



"American Beauty" Iron

3-B



"Little Beauty" Iron

# "American Beauty" Iron

This iron represents the highest art of making electric flat irons. It is not only a beautiful looking iron, finished in polished nickel, but has every refinement. It is suitable for all around household or laundry work. The service which it gives the user is in every way as perfect as can be given. Sufficient heat is

generated and concentrated evenly on the ironing surface without wasteful loss from the top and sides.

The edges and point of the iron are beveled and rounded. This iron is furnished complete with stand, cord, suspension spring, and cord having detachable plug and lamp socket attachment plug. The heating

element is guaranteed for one year from date of purchase.

Always specify voltage when ordering. Voltage ranges are: 95-104, 105-114, 115-125, 190-209, 210-229, 230-250,

List Case Wt. Retail Price List Price Wt. Wt. 6½ lbs. 8¼ lbs. (½ Doz.) 53 lbs. No. Length Each Each 61/2B 61/2 ins.  $3\frac{3}{4}$  ins. \$7.00 \$10.50

## "Little Beauty" Iron

This little electric iron is perfect for light ironing such as handkerchiefs and laces, and because of its light weight it is most attractive to travelers. Another useful feature of the "Little Beauty" is that curling iron tongs can be slipped into the stand, which comes with every iron, and be heated quickly without fire, soot, odor or danger. It is furnished complete with stand, and cord having detachable composition plug and lamp socket attachment.

Voltage ranges are: 95-104, 105-114, 115-125, 190-209, 210-Always specify voltage when ordering. 229, 230-250.

5% ins.  $3\frac{1}{8}$  ins. 350 3 lbs 31½ lbs. \$7.00 \$10.50 5 lbs.

For devices to operate on voltages other than listed add 75 cents to list.

## "AMERICAN BEAUTY" ELECTRIC IRONS







Length 7% inches Width 41/4 Inches



12 and 16 lb. "American Beauty" Pressing Iron



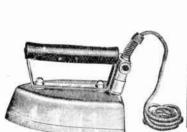
Length 95% Inches Width 3½ Inches 16-B Length 9½ Width 31/2 Inches

# No. 9, 12 and 16-lb. "American Beauty" Pressing Irons

The No. 9 lb. iron is adapted for heavy laundry work and is used in hotel laundries, etc. The 12 and 16 lb. irons are for light pressing of all kinds such as coat work or ladies' failor work. Always specify voltage when ordering. Voltage ranges 95-104, 105-114, 115-125, 190-229, 230-250.

List No.	Length	Width	Watts	Net W:.	Shpg. Wt.	Retail Price Each	List Price Each
9B	$7_{16}^{3}$ ins.	414 ins.	675	9 lbs.	11½ lbs.	<b>\$</b> 10.50	<b>\$15.76</b>
12B	95% ins.	$3^{\binom{5}{16}}$ ins.	650	12 lbs.	16 lbs.	15,00	22.50
16B	95% ins.	$3_{16}^{15}$ ins.	650	16 lbs.	20 lbs.	16.00	24.00

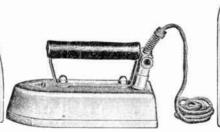
Furnished complete with stand and six foot cord having detachable metal sheathed plug.



16VB and 20VB lb, "American Beauty" Pressing Irons



16VB and 20VB 814 x 55% in.



20 and 24 lb. "American Beauty" Pressing Irons

20B and 2011R 11 x3 % in

# 16, 20 and 24-lb Pressing Irons

The 16VB and 20VB irons are sometimes called "pant" irons as they are "V" shaped, made to give off large volumes of heat and are adapted for heavy work of all kinds.

The 20B is our most popular pressing iron because it is of the proper size and weight for general all around work of tailors.

The 20HB is the same size and weight as the 20B. The only difference is that it is arranged to give off a larger volume of heat, thus being adapted especially for manufacturers.

The 24HB is the very heavy pressing iron and is especially adapted for use by manufacturers on very heavy work. Furnished with stand and 6 foot cord having detachable metal sheathed plug, but no lamp socket plug, as these irons should not be attached to lamp socket. Made in following voltage ranges: 95-104, 105-114, 115-125, 190-209, 210-229, 230-250.

List No.	Length	Width	Watts	Net Wt.	Shpg. Wt.	Retail Price Each	List Price Each
16VB	814 ins.	$5^{5}$ s ins.	1100	16 lbs.	25 lbs.	\$18.00	\$27.00
20VB 20B	$8\frac{1}{2}$ ins. 11 ins.	$5\frac{5}{6}$ ins. $3\frac{3}{4}$ ins.	$\frac{1100}{750}$	20 lbs. 20 lbs.	28 lbs. 25 lbs.	$\frac{19.50}{17.50}$	$\frac{29.26}{26.26}$
20HB	11 ins.	$33\frac{7}{4}$ ins.	1000	20 lbs.	25 lbs.	18.50	$\frac{20.20}{27.76}$
24HB	11 ins.	$3\frac{3}{4}$ ins.	1000	24 (bs.	30 lbs.	20.50	30.76

Lamp socket attachment plugs are not supplied with any of the above irons excepting the 9B.

Always specify voltage when ordering.

For devices to operate on voltages other than listed add 75 cents to list.

## "AMERICAN BEAUTY" UTENSILS





Toaster in Operation

# "American Beauty" Toaster

With this utensil two slices of toast can be made at one time, on the dining-room table. Made of sheet steel, finished in highly polished nickel, and equipped with double base, having composition, heat insulating legs, which prevents marring or scorching the surface upon which it stands. Furnished with 6 feet of cord, and detachable plugs

					Net	Shipping	Retail	W . 15.
List	Length	Width	Height		Weight	Weight	Price	List Price
No.	Inches	Inches	Inches	Watts	Lbs.	Lbs.	Each	Each
5825G	8	-1	7	440	112	$2^{1}\acute{2}$	\$6,50	\$9.75

Orders should specify voltage. Standard voltages are: 95-104, 105-114, 115-124, 190-209, 210-229, 230-250.



No. 3320



No. 3310 Stove Parts

# Triangle Lektrik Toaster Stove

With this Toaster Stove of many uses a meal can be prepared right at the dining table. The heating coils are placed as shown in the above illustration, so as to make it easy and convenient to make two slices of toast at a time, one above and one below the heating coils. Or a slice of toast can be made below the heating coils and at the same time a flat bottomed utensil can be placed on top of the Toaster Stove, in which can be made tea, coffee, breakfast food, etc., or eggs may be fried in a skillet placed on the top of the Toaster Stove. It is made of sheet steel finished in polished nickel, and is provided with three heats, and insulating legs of fibre, so that the surface upon which the stove rests will not be marred or scorched. Furnished with 6 feet of cord and detachable plugs.

	Top			Shipping	Retail	W. E.
List	Diameter	Height	Weight	Weight	Price	List Price
No.	Inches	lnches	Lbs.	Lbs.	Each	Each
3320	6 ins.	$3\frac{1}{2}$	$1\frac{1}{4}$	134	\$5.50	\$8.25

Orders should specify voltage. Standard voltages are: 95-109, 110-125, 190-209, 220-250.

## Electric Combination Disc Stove

"5-in 1"

There are five distinct classes of household service that this device will give, any one of which can be varied in many ways. You can use the Skillet No. 1 to fry, the Toaster No. 2 to toast, the Griddle No. 3 for pancakes, the Pot No. 4 to stew and the Disc Stove No. 5 has a variety of cooking functions.

It has three heat regulations—low, medium and high.

As listed below, it comes complete with all utensils, all ready for use by attachment to an ordinary electric lamp socket. Furnished with six-foot triple conductor cord (for series multiple three heat connection) having detachable porcelain plugs.

					Retail	List
List		Max.	Net	Shpg.	Price	Price
No.	Diameter	Watts	Wt.	Wt.	Each	Each
3310	6 ins.	600	8½ lbs.	934 lbs.	\$20.00	\$30.00

Orders should specify voltage. Standard voltages are: 95-109, 110-125, 190-209, 220-250.

For devices to operate on voltages other than listed add 75 cents to list.

#### "AMERICAN BEAUTY" UTENSILS



No. 2316 Pot Style Percolator



No. 2417 Pot Style Percolator



No. 2326 Urn Style Percolator



2427 and 2429 Urn Style Percolators

# "American Beauty" Percolators

The "American Beauty" percolators come in two styles, plain and fancy. Each of these can be furnished in either the pot or urn type. All devices, both plain and fancy will be supplied with a 6 foot gray silk cord. The standard finish is nickel. They are of heavy copper, polished nickel, lined with pure tin, fittings of aluminum. These devices are equipped with safety fuse plugs. If the temperature reaches a dangerous point, the special safety fuse plug in the base of the device melts open the circuit and saves the heating element from the trustion. Plain trans in pickel finish for more of the device and he analysis of the same learning and the same learning the same learning than the same learning the same learning the same learning than the same l ment from destruction. Plain trays in nickel finish for any of the above can be supplied for \$3.00 Retail W. E. List, \$4.50.

List			Shipping	Retail Price	W. E. List
No.	Capacity	Watts	Weight, Lbs.	Each	Price Each
2316A-32 volts	6 cups	420	5	\$12.00	<b>\$1</b> 8.00
2316	6 cups	420	5	11.50	17.26
2326	6 cups	420	10	15.00	22.50
2417	7 cups	420	$5\frac{1}{2}$	15.00	22.50
2427	7 cups	420	10	17.50	26.26
2429	9 cups	420	101/2	19.50	29.26
Orders shoul	d specify voltage.	Standard voltages	are 95–104, 105–114,	115-125, 215-225, 2	235–245.

Chafing Dish



No. 2333 Chafing Dish



No. 3375 Grill

"American Beauty" Chafing Dishes
The design of these chafing dishes is handsome. They are made of heavy spun copper finished in polished nickel, are double tinned lined, are equipped with safety fuse plugs which prevent burning out the heating element. They have chony finished wood handles and with ordinary care will last for years. Arranged for two heats, and furnished complete ready for attachment to any lamp socket, with 6 foot gray silk cord detachable plug. Plain trays in nickel finish, for any of the above can be supplied for \$3.00. Retail W. E. List, \$4.50.

List			Shipping		Retail Price	W. E. List
No.	Capacity	Watts	Weight, Lbs.	Heats	Each	Price Each
2333	3 pints	420	10	<b>2</b>	\$16.00	\$24.00
2433	3 pints	420	11	<b>2</b>	20.00	30.00
2100	1 11 10	3. (14	1 1 1/ 0/	104 105 1	14 117 107 017 00	F 005 045

Orders should specify voltage. Standard voltage ranges 95-104, 105-114, 115-125, 215-225, 235-245.

"American Beauty" Electric Grills

This handsome grill boils, broils, toasts, fries, and performs these operations in a satisfactory manner right on the table. It is made of sheet steel, finished in polished nickel, has reinforced composition, heat insulating legs which prevent marring and scorching the surface upon which it is placed. It has ebony finished wood handles, and is equipped with a three heat, practically indestructible open coil heating element. Furnished with 6 foot three conductor cord, and detachable plugs.

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List		Diameter			Retail Price	W. E. List
No.		At Top	Watts	Heats	Each	Price Each
3375 cor	nplete	$7\frac{1}{2}$ ins.	660	<b>2</b>	\$10.00	<b>\$</b> 15.00
3375S St	tove only	$7\frac{1}{2}$ ins.	660	3	8.50	12.75
Ord	ers should	specify voltage. S	tandard voltages are	95-104, 105-11-	4, 115–125, 190–209,	210-229,

230-250.SPARE PARTS FOR PERCOLATORS AND CHAFING DISHES

		Mfrs. List	W.E. List
Fuse plugs	,	\$0.15	<b>\$</b> 0.22
Extra cords complete. No. 815 gray silk		2.00	3.00
Elements for percolators Nos, 2316, 2326, 2427, 2429, 420 watts standa	ard voltage	1.50	2.25
Elements for chafing dishes Nos. 2333, 2433, 420 watt standard voltage	C	2.00	3.00
- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			

For devices to operate on other than listed add \$0.75 to list.

#### "AMERICAN BEAUTY" UTENSILS



TEA SAMOVAR

Made of heavy copper, lined with pure tin, and finished in highly polished nickel. Furnished with 6 ft. silk cord, detachable plug, reach to use on any lamp socket.

List No.	Watts	Capacity	Shipping Weight	Price Each	Price Each
2306	450	6 cups	10 lbs.	\$20.00	\$30.00

TEA KETTLE

Made of heavy spun copper, lined with pure tin and finished in highly polished nickel. Furnished with 6 foot silk cord, detachable plug, ready to use on any lamp socket.

5415 500 1 quart 334 lbs. \$16.00 \$24.00

WATER HEATERS

Made of spun copper, finished in polished nickel, the inner surface being heavily tinned. Furnished with cord and detachable plug, ready to use on any lamp socket.

Samovar, tea kettle and water heaters are made in the following voltages: 95-104, 105-114, 115-125, 190-209, 210-229, 230-250. Always specify voltage when ordering.



Food Warmer

Rite-Heat Glower Stove

Disc Stove

#### "TRIANGLE LEKTRIK" BABY FOOD WARMER

Shipping Retail Shipping W. E. List List Weight Weight Price Price Watts Each (1 Doz.) No. Capacity Each Each 2510 200 1 pint  $2\frac{1}{2}$  lbs. 28 lbs. \$5.00 \$7.50

RITE-HEAT GLOWER STOVE

Furnished complete with 10 foot eard and detachable plug. Voltage 100 to 125 only.

Casing is made of sheet steel, heavily nickeled, and highly polished. Furnished with 6 foot cord, detachable plug, ready to use on any lamp socket. Made in the following voltages: 95–109, 110–125, 190–219, 220–250. Orders should specify voltage.

I.ist		Size_			Shipping	Weight-	Retail Price	W. E. List
No.	Watts	Top	Height	Weight	Single	Case of 12	Each	Price Each
3350	500	5  ins. sq.	$3\frac{5}{8}$ ins.	$1\frac{1}{4}$ lbs.	2 lbs.	$23\frac{1}{2}$ lbs.	\$5.00	\$7.50
COMBINATION DISC STOVE								

This utensil fries, toasts, grids, stews, and boils. Furnished complete with all utensils, 6 foot triple conductor cord, detachable plug, ready to use on any lamp socket. Specify choice of voltage: 95–104, 105–114, 115–125, 190–209, 210–229, 230–250.

List			Heat	Net	Shipping	Weight	Retail Price	W. E. List
No.	Watts	Diameter	Reg.	Weight	0	(½ Doz.)	Each	Price Each
3310	600	6 ins.	3	$8\frac{1}{4}$ lbs.	934  lbs.	$58\frac{7}{2}$ lbs.	\$17.50	\$26.26
3210	450	4 ins.	1	2 lbs.	$2\frac{1}{2}$ lbs.	20 lbs.	6.00	9.00
3221	550	5 ins.	1	$2\frac{3}{4}$ lbs.	$3\sqrt{4}$ lbs.	20 lbs.	7.00	10,50
3231	600	6 ins.	1	$3\frac{1}{2}$ lbs.	$4\frac{1}{2}$ lbs.	20 lbs.	9.00	13.50

For devices to operate on other than listed add \$0.75 to list.

#### "AMERICAN BEAUTY" HEATING DEVICES

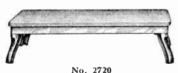


No. 1815





No. 601



# "American Beauty" Warming Pad

This device fulfills the functions of a hot water bottle. Its size is 12 x 13 inches, and it is covered with soft eiderdown material. It is equipped with double thermostatic regulation for automatically controlling the heat. Furnished with 10 foot cord, three heat switch and attachment plug.

				Shipping	Retail	W. E.
List	Weight			Weight	Price	List Price
No.	Oz.	Heat	Watts	Lbs.	Each	Each
1815	15	3	60	$2\frac{1}{4}$	\$10,00	\$15,00
Orders	should	specify	voltage.	Standard	voltages	are 95–125,
190-250.			_		•	

#### "AMERICAN BEAUTY" CURLING IRON HEATERS

These are designed to heat curling irons of standard sizes and shapes heating them quickly and eliminating all danger from fumes and flame. They are entirely free from dirt and odor. No. 601 iron will take a curling tong of any size or shape. The tong is placed on top of the heater, and heated by means of the red hot coil below. This type is equipped with cosmetic pan. The other types have hollow openings into which the curling tongs are inserted.

Each heater is made in the best possible manner and finished in polished nickel. Nos. 111 and 112 are equipped with marbleized slate bases with felt attached, to prevent scratching any surface upon which they are placed. Furnished with 6 feet of cord and attachment plug.

	Diameter		Shipping	Retail	W. E.
List	Opening		Weight	Price	List Price
No.	Inches	Watts	Lbs.	Each	Each
111	916	90	$\frac{2^{1}\!/_{\!2}}{3^{3}\!/_{\!4}}$	\$5.00	\$7.50
112	16 9 16	90	$3\frac{3}{4}$	6.00	9.00
601	• •	85	3/4	3.50	5.25

Orders should specify voltage. Standard voltages for Nos. 111 and 112 are 95–104, 105–114, 115–125, 190–209, 210–229, 230–250. Standard voltages for No. 601 are, 85, 100–125.

#### LABORATORY PLATES

Designed for use in laboratories and other places where a heating surface of large area and a fairly high temperature is required. The maximum surface temperature of these plates is approximately 600 degrees. A lower temperature may be maintained by means of the regulator. Made of heavy steel plate, straight, smooth and polished. The heating elements are securely attached to, and are in perfect contact with the under side of these plates. Equipped with 430 watt heating element, two being used in the smallest plate, and ten in the largest. Furnished with 5 foot cord, and three heat porcelain switch.

List			Heat	Maximum	Net	Retail Price	List Price
No.	Width	Length	Reg.	Watts	Weight	Each	Each
<b>2720</b>	9 ins.	12 ins.	3	860	30 lbs.	<b>\$25.00</b>	\$40.00
273 <b>0</b>	9 ins.	18 in <b>s.</b>	3	1290	40 lbs.	35.00	56.00
2740	12 ins.	18 in <b>s.</b>	3	1720	48 lbs.	45.00	72.00
2750	12 ins.	24 ins.	3	<b>2580</b>	65 lbs.	55.00	88.00
2770	18 ins.	24 ins.	3	3 <b>440</b>	110 lbs.	72.50	116.00
2790	18 ins.	30  ins.	3	4300	135 lbs.	90.00	144.00

Voltages: Always specify voltage when ordering. Made in following voltage ranges: 95-104, 105-114, 115-125, 190-209, 210-229, 230-250. Furnished with 5 foot cord and No. 812 three heat porcelain switch for series multiple connection.

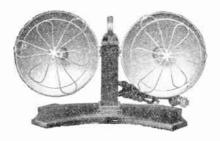
# FLEXIBLE CORDS

List				Retail Price	List Price
No.	Size	Conductor	Color	per 100 Ft.	per 100 Ft.
850RB	16	Twin	Red and black	<b>\$</b> 14. <b>50</b>	\$21.76
851RB	16	Triple	Red and black	21.75	32.62
852	14	Twin	Black	18.00	27.00
853	14	Triple	Black	27.00	40.50
854	12	Twin	Black	24.00	<b>3</b> 6.0 <b>0</b>
855	12	Triple	Black	34.50	51.76
856	10	Twin	Black	45.00	67.59
857	8	Twin	Black	60.00	90.00

For devices to operate on voltages other than listed add 75 cents to list.

#### AMERICAN BEAUTY

#### TWIN RADIANT ELECTRIC HEATER



Every important part of this heater is instantly and easily removable and replaceable. No tools of any kind are necessary. The wire guards can be snapped on and snapped off and the reflectors thus made easily accessible for dusting and polishing. The heating elements, or burners, slip out just as easily and the reflectors may, if desired, be removed in a moment's time. The reflectors are adjustable and can be arranged to throw the heat in any direction desired. These features are all important and exclusive.

The heater can be used anywhere where an ordinary lamp socket is available. There are no special connections to make and it is light and easily portable and thus can be carried from room to room and used wherever desired. Finished in antique copper. Furnished complete with 8 feet of cord, lamp socket attachment plug and detachable plug for connection to the heater.

It is substantially constructed and will, with ordinary usage, give many years of satisfactory service.

#### PACKED 6 HEATERS TO A SHIPPING CASE

List No.	Wattage of Each Burner	Carton Weight	Mfrs.	W. E.
6215	330	4 lbs.	List Each \$12.50	List Each \$17.50

#### "AMERICAN BEAUTY" HEATERS

# Contraction of the Contraction o

No. 6210

No. 6020



No. 4735



Portable Type

### "American Beauty" Electric Radiant Radiators

The heating element consists of two rows of small cone-shaped buttons of resistance wire, and when they become hot they glow like a bed of live coals. Handles are provided so that the radiator may be easily carried. Furnished with 8 foot brown silk cord, detachable composition plug and attachment plug. The legs are removable. Bronze is standard finish.

				Retail	W. E.
List	Size		Weight	Price	List Price
No.	Inches	Watts	Lbs.	Each	Each
6210	16 v 11 v 8	COO	61/	89.00	\$13, 50

Orders should specify voltage. Standard voltages are 95-104, 105-120, 190-209, 210-240.

#### "AMERICAN BEAUTY" LUMINOUS RADIATORS

Heat is generated in large frosted lamps. These lamps can be for either 250 or 500 watts, making the three lamp type consume 1500 watts. Three styles of these radiators are made, two of which are portable. The three lamp reflecting type, and three lamp round type. The latter type is designed for use where heat is desired on all sides. Nos. 6020 and 6125 are regularly finished in brush brass. Other finishes to order. Type No. 6235 is for permanent installation in the wall, taking the place of any ordinary grate. This type is finished in white enamel, and dimensions are special.

		Shipping	Retail	W. E.
List		Weight	Price	List Price
No.		Lbs.	Each	Each
6125	3 lamp round	3634	\$25.00	\$37.50
6020	3 lamp square	37	20.00	30.00
6235	- Wall typé	70	45.00	67.50
Orde	ers should specify voltage.			

# ADJUSTABLE AIR HEATERS, NAVY TYPE One Heat Only

Designed to meet the demand for a durable heater which can be used as a portable heater. Legs are adjustable for either floor or wall use. Made of steel with malleable iron castings, with heating units of flat sheathed type, each for a small wattage, and arranged to be easily removable. Finished in black japan, and provided with terminal connection only. All heaters are equipped with heat reflector.

								V) + 12.
				Net	Shpg.		Retail	List
List	Height	Length	Width	Wt.	Wt.		Price	Price
No.	Ins.	Ins.	Ins.	Lbs.	Lbs.	Watts	Each	Each
4712	$12\frac{3}{4}$	$15\frac{3}{4}$	516	834	$13^{+2}$	750	\$13.50	\$20.26
4722	$12\frac{3}{4}$	1534	$5^{1}\bar{2}$	9	$13\frac{3}{4}$	1000	15.00	22.50
4730	$15^{1}4$	1534			$17\frac{1}{4}$	1500	17.50	26.26
4735	$15\frac{1}{4}$	29	513	16	$23^{3}4$	2000	24.00	-36.00
4755	1514	29	$5^{1}_{2}$	$-191_{4}^{\circ}$	$30\frac{1}{2}$	3000	30.00	45.00
Ordo	ers shou	ld speci	fy volt	age.	Standa	rd vol	tages are	95-104,

Orders should specify voltage. Standard voltages are 95-105-114, 115-125, 190-209, 240-229, 230-250.

#### ELECTRIC PORTABLE AIR HEATERS

Finished in black japan, with polished nickel trimmings. The No. 4512 is made for single heat only and furnished with a single heat snap switch. All others are for three heat or equipped with a three heat indicating switch.

List						Net	Approx.	Retail	List
No.	Heats	Watts	Height	Length	Width	Wt.	Shpg. Wt.	Price	Price
4512	1	1000	13 ins.	1814 ins.	$8^{1}_{2}$ ins.	20 lbs.	30 lbs.	\$18.50	\$27.76
4530	3	1500	19 ins.	$24\frac{1}{2}$ ins.	$8^{1/2}$ ins.	28 lbs.	48 lbs.	22.50	33.76
4535	3	2000	19 ins.	$24\frac{1}{2}$ ins.	$8\frac{1}{2}$ ins.	28 lbs.	48 lbs.	27.00	40.50
4545	3	2500	19 ins.	$24\frac{1}{2}$ lns.	$8\frac{1}{2}$ ins.	28 lbs.	48 lbs.	31.50	47.26
4555	3	3000	19 ins.	30 ins.	$10\frac{1}{2}$ ins.	53 lbs.	70 lbs.	37.00	55.50
4560	3	4000	19 ins.	30 ins.	$10^{1\frac{7}{2}}$ ins.	53 lbs.	70 lbs.	42.00	63.00

Made in following voltage ranges: 95-104, 105-114, 115-125, 190-209, 210-229, 230-250.

#### "AMERICAN BEAUTY" INDUSTRIAL DEVICES





Electric Glue Pot

#### Industrial Type Disc Heater

These heaters are especially adapted for use in laboratories, or for industrial purposes. The maximum surface temperature is approximately 750 degrees F. They are equipped with a combination terminal box ready for direct connection to line wires. Furnished with three heat indicating snap switch, and terminal connection.

This type disc stove is suitable for use in laboratories, for industrial purposes, or for heavy work in the household or kitchen.

List	Maximum	Diameter	Net	Shpg.	Retail Price	List Price
No.	Watts		Weight	Weight	Each	Each
3240	1000	8 ins.	15 lbs.	20 lbs.	\$19.00	\$30.40
3245	1400	10 ins.	19½ lbs.	20 lbs.	23.00	36.80
3250	1800	12 ins.	23 lbs.	32 lbs.	27.50	44.00

Plug and cord not included in prices. See cords Nos. 852 and 854 and plug No. 806. Made in following voltage ranges: 95–104, 105–114, 115–125, 190–209, 210–229, 230–250.

#### "American" Electric Glue Pot

They entirely eliminate the fire hazard. Always keep the glue contents at the same even temperature and consistency. Outer vessel is of cast iron thoroughly galvanized before painting. The controlling switch or receptacle is connected at the end of a six foot cord and may be attached to the wall or elsewhere. Are arranged for three heats with multiple winding.

List	Maximum			Shpg.	Retail Price	List Price
No.	Watts	Capacity	Heats	Wt.	Each	Each
181	440	1 quart	3	18 lbs.	\$20.00	\$30.00
182	570	2 quarts	3	25 lbs.	23.00	34.50
145	880	4 quarts	3	50 lbs.	35.00	52.50

Furnished with 6 foot cord and No. 812 three-heat porcelain switch for series multiple connection. Standard voltage ranges: 95–104, 105–114, 115–125, 190–209, 210–229, 230–250.



Electric Soldering Iron

#### "American Beauty" Electric Soldering Iron

The element core and the shank of the copper tip are heat treated, and will not readily corrode or oxidize. The heating element is of nickel chromine ribbon, insulated with pure mica. Copper tips are of standard size rods, 3,8,5% and 3% inches in diameter. This soldering iron is of a very simple construction, and is made on the unit system so that every part is easily removable, replaceable and interchangeable.

List	Diameter	Outside Diameter	Length			Net Retail	List Price
No.	of Tip	Overall	Overall	Watts	Weight	Each	Each
3138	3/8 in.	$1_{16}^{3}$ ins.	$12\frac{1}{16}$ ins.	100	18 oz.	\$ 8.00	\$12.00
3158	5/8 in.	$1_{16}^{3}$ ins.	$12\frac{3}{32}$ ins.	200	26 oz.	11.00	16.50
3178	$\frac{7}{8}$ in.	$1\frac{1}{2}$ ins.	$13\frac{21}{32}$ ins.	300	42 oz.	13.00	19.50

For devices to operate on voltages other than listed add 75 cents to list.

# "AMERICAN BEAUTY" ACCESSORIES









#### Detachable Cords

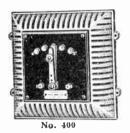
List No.	Color	For Use On	5-14	Net Retail	List Price
830	Gold and black	101 ( 86 ()11	Ocard company of Description	Each	Each
831	Gold and black	3B, 6J@B	Cord complete	\$1.75	\$2.63
832	Gold and black	011, Opg13	Cord and 803 plug only	1.50	2.25
340	Red and black	{	(Six loot cord only	1 00	1.50
841	Red and black	3RH, 6RH	Cord complete	1.75	2.63
842	Red and black	Julii, onli	Cord and 801 plug only	1.50	2.25
810	No. 14 black	9B and all	CELX TOOK COLD DILLY	1 00	1 50
811	No. 14 black	heavier irons	Cord and 806 plug.	2.05	3.08
860	Brown silk	Leavier froms	Colx 1000 cold only	1 15	1.73
861	Brown silk	6210	Cord complete	2.00	3.00
862	Brown silk	0210	Cora and 803 plug only	1 75	2.63
833		{	LEAGUE TOOK CORD ONLY	1 00	1.98
834	Red and green	3320	Cord complete, 807 plugs	1 75	2.63
815	Red and green	1	I I WIII, SIX 100L COCO ODIV	1 ()()	1.50
	Gray silk	Toasters,	Cord complete, 807 plugs	2 (10)	3.00
816 817	Gray silk	Percolators,	I Will, SIX 100E COEG only	1 95	1.98
818	Red and black	Water heaters,	Cord complete, 807 pings	1 75	2.63
	Red and black	etc.	LAWIII, SIX 100% COMI ONLY	T (M)	1.50
823	Gray silk	Chafing dishes,	Cord complete, 207 plugs	9 40	3.60
824	Gray silk	Combination disc	I TIDIE SIX TOOL COLD ONLY	1 60	2.40
820	Red and black	and other devices	Cord complete, 201 plugs.	2.10	3.15
821	Red and black	having 3 heats	Triple six foot cord only	1.40	2.10

# Heating Elements

T tak				Net	List					Net	List
List	#Y=- 1	3.7	117	Retail	Price	List				Retail	Price
No.	Used on	No.	Watts	Each	Each	No.	Used on	No.	Watts	Each	Each
9003	Rite-Heat small size	ODII	0.50	101 55	22.22	9097		117	60	81.75	\$2.63
0000	iron	3RH	350	\$1.75	\$2.62	9091		111	60	1.75	2.63
0000	Rite-Heat iron	6RH	525	1.75	2.62	9093	Curling iron heater	113	60	1.75	2.63
	Little Beauty iron	3B	350	1.75	2.62	9095	Curling iron heater.	115	60	1.75	2.63
9016	"American Beauty"	01/11				9090	Curling iron heater.	150	60	1.75	2.63
	iron	314B	525	2.00	3.00	-9092	Urling iron heater.	112	60	1.75	2.63
	Pressing iron	98	675	3.00	4.50	9131	Air Heaters	250		2.00	3.00
	Pressing iron	12B	6.50	4.00	6.00	9185	lot water urn	4315	600	4.50	6.75
9015	Pressing iron	16B	650	4.00	6.00	9186	Hot water urn	4320	800	6.00	9.00
	Pressing iron	20B	7.50	4.50	6.75	9187	Hot water urn	4325	1200	7.00	10.50
	Pressing iron	20HB	1000	4.75	7.12	9188	Hot water urn	4330	2000	8.00	
9024	Pressing iron	24HB	1000	4.75	7.12	9195	Coffee urn	4120	1400	7.00	12.00
9026	Pressing iron	16 V B	1100	5.00	7.50	9196	Coffee urn	4130	2000	8.00	10.50
9029	Pressing iron	20 V B	1100	5.00	7.50	9197	Coffee urn	4440	3200	10.00	12.00
9030	"American Beauty"					9198	Coffee urn	4450	4200	14.00	15.00
	toaster	5825	440	2.50	3.75	9201	Gluo pots.	181	500	4.50	21.00
9035	Triangle Lektrik					9202	Glue pots	182	600		6.75
	toaster stove	3320	520	1.75	2.62	9204	Clue pots.	184	1000	5.50	8.25
9037	Rite-Heat Glower					9210	Industrial disc stoves.	3240	1000	> 00	12.00
	Stove	3350	660	1.75	2.62	9212	Industrial diso stoves.	3245	1400	5 00	7 50
	Radiant radiator	6210	600	4.00	6.00		Industrial disc stoves.	3250	1800	6.00	9.00
9045	Water heater	5210	350	1.75	2.62	9250	Soldering irons	3108	90	7.00	10.50
9048	Triangle Baby Food				-	9252	Soldering irons	3110	100	3.50	5.25
	Warmer	2510	200	1.75	2.62	9254	Soldering irons	3111		3.50	5.25
9050	Disc stove	3210	4.50	2.50	3.75	9256	Soldering irons	3120	95	3.50	5.25
9051	Disc stove	3221	550	3.00	4.50	9258	Soldering irons	8121	150	3.75	5.63
9052	Disc stove	3231	600	3.50	5.25	9260	Soldering irons	3130	130	3.75	5.63
9056	Percolator	2506	350	1.75	2.62	9262	Soldering irons.	3131	300	4.50	6.75
9059	Percolator	2509	350	1.75	2.62		Soldering irons.		240	4.50	6.75
9065	Chafing dish	3.5.5	600	4.50	6.75	9266	Soldering irons.	3132	270	4.50	6.75
9076	Tea samovar	2306	450	4.25	6.37	3268	Tipping iron	3110	425	5.50	8.25
	Combination disc	3310	600	4.50	6.75	0200	rapping non.,	3123	150	3.75	5.63

For element, for devices to operate on voltages other than standards given in listing each article add 35 cents for voltages lower than 60 and 75 cents for voltages higher.

#### "AMERICAN BEAUTY" ACCESSORIES







No. 812

#### Temperature Regulators

By means of these Regulators or Rhoostats, the temperature of the irons or other devices can be regulated from full heat to just enough to keep them warm. Made in following voltage ranges, 95-125, 190-250. A separate rhoostat is necessary for each iron or device.

	in population into actual			For Devices Con-			List
List No. 400 401 402 403	Size 10 ins. 10 ins. 10 ins. 10 ins.	Height 10½ ins. 10½ ins. 10½ ins. 10½ ins. 10½ ins.	No. of Heats 5 5 5 5	suming not more than 400 watts 600 watts 800 watts 1000 watts	Shpg. Wt. 9 lbs. 9 lbs. 9 lbs. 9 lbs.	Net Retail Each \$8.50 8.50 9.50 9.50	Price Each \$13.60 13.60 15.20 15.20

#### Three-heat Plug and Receptacle Switches

Adapted only for use with devices containing two heat elements arranged for series multiple connection. Switches are made entirely of porcelain with heavy brass contacts. May be used for open or concelled wiring, and have a capacity of twenty amperes at 250 volts. Net Retail Price List Each Each Description No. \$2.25 Plug and receptacle complete..... \$3.38 812 1.50 2.25 Receptacle only..... 813 1.13 Plug only..... 814









List	Detach	able Composition Plugs and Parts	Net Retail	1
No.	For Use on	Description	Each 1	ist Price
803	(3B, 6½ B,	Plug complete Each	\$0.50	\$0.75
803A	6210 and	Composition parts only Per Pair	. 30	.45
803B	Luminous	Contact sleeves only Per Pair	.20	.30
803C	Radiators	Non-kink spring and bushing only Each	. 10	, 15
803D		Assembling screws and nuts Per Set	.05	.08
804	}	Plug complete Each	. 50	.75
804A	1	Composition parts only Each	.30	.45
804B	3 R <b>H</b>	Contact sleeves only Each	.20	.30
804C	6 RH	Non-kink spring and bushing only Each	. 10	. 15
804D	1	Assembling screws and nuts Per Set	.05	.08
805	}	Plug complete Fach	1.75	2.63
805A	4530 to 4560	Composition parts only Per Pair	1.00	1.50
805B	1000 00 1100	Contact sleeves only Per Pair	. 60	,90
805C	4630 to 4660	Non-kink spring and bushing only Each	.20	.30
805D	1000 00 2	Assembling screws and nuts Per Set	. 10	.15
806	All irons 9 B	Plug complete Each	1.00	1.50
806A	and heavier	Porcelain parts only Per Pair	. 50	.75
806B	4510, 4512	Contact sleeves only Per Pair	.40	, 60
806C	4610, 4612,	Non-Kink spring and bushing only Each	. 15	.23
806D	3240, 3245, 3250	Assembling screws and nuts Per Set	.05	.08
807	Toasters	Plug complete Each	.25	.38
807A	Percolators, etc.	Porcelain part only Each	. 15	.23
807B	Specify red or	Contact sleeve, washer and spring holder Each	. 15	.23
807C	Black	Small spring only Each	.05	.08

## Western Electric ELECTRIC RANGES

#### Type C-18-Two Burner



No. C 18 Electric Range

List No.

Two burner cooking surface. Two	o burner	oven. Fin	ish: plain				
black enamel with white enameled spla	sher.		1				
List	Wt.	Mfrs.	List Price				
No.	Lbs.	List	Each				
C-18 Electric Range	150	\$61.00	\$97.60				
Elevated warming shelf, extra.		7.50	12.00				
Type 37—Three Burner							
Type of Timee Duffler							
Same style as above. Three burner	cooking	surface, tw	o burner				

Type 48—Six Burner

Same style as above. Six burner cooking surfaces. Two burner oven. Finish: either black enamel or nickeled with white enameled splasher.

List Price
Wt.Lbs. Mfrs. List. Each

48	Electric Range, plain black enamel		220	\$126.00	\$201.60
48N	Electric Range, nickeled		220	131.00	209.60
	Bloom to I Warming Shalf ortho dither trans		220	101.00	
	Elevated Warming Shelf, extra either type	<b> </b>		7.50	12.00
		C-18			48
Floor	Space	$18 \times 25 \text{ ins.}$	26 x 29½ ins	s. 2716	x 341% ins.
Heigh	t of cooking surface	351% ins.	34 ins.		
Area c	of cooking surface		$2814 \times 2212$ ins	s. 33	$3 \times 23 \frac{1}{4}$ ins.
Dimer	nsion of oven	$18 \times 12 \times 12 \text{ ins.}$	18 x 18 x 12 ins	$-18 \times 18$	$3 \times 12$ ins.
Heigh	t with warming shelf	58 ins.	58 ins.		58 ins.

Type 27—Two Burner

	wo burner cooking surface.	Two burner oven.	Finish: either plai	in enamel c	r nickeled,	with white
	·led spiasher.		1	Wt.	Mfrs.	List Price
List N				Lbs.	List	Each
27	Electric Range, plain black	enamel		150	\$80.75	\$129.20
27N	Electric Range, nickeled			150	85.75	137.20
	Elevated Warming Shelf, ex	xtra, either type			7.50	12.00

Type 30—Three Burner

Same style as above three burner cooking surface, two burner oven. Finish: either plain enamel or niekeled, with white enameled splasher.

30 Electric Range, plain black enamel 170 \$91.25 \$146.00 30N Electric Range, nickeled 170 96.25 154.00 Elevated Warming Shelf, extra, either type. 7.50 12.00

## Type 40—Four Burner



No. 40 Electric Range

Same style as above four burner cooking surface. Two burner oven. Finish: either plain enamel or nickeled, with white enameled splasher.

List No.			Wt. Lbs.	Mfrs. List	List Price Each
40	Electric Range, plair		195	6105 00	6140 00
40N	enamel Electric Range, nicke	dad	195	\$105,00 110.00	\$168.00
3021	Elevated warming	shelf,	190	110.00	176.00
	extra, either type.			7.50	12.00
		27		30	40
		In	3.	Ins.	lns.
Floor	space	18 x	25	$34\frac{1}{4} \times 20$	$27 \times 29 \frac{1}{2}$
Heigh	t of cooking surface.	3	ŀ	34	31
	of cooking surface	$25 \mathrm{x}$		$33 \times 14 \frac{1}{4}$	$-2814 \times 2214$
	isions of oven	$18 \times 12$	$2 \times 12$	$18 \times 18 \times 12$	$18 \times 18 \times 12$
Heigh	t with warming shelf	58	3	58	58

All ranges are equipped with a lamp socket attachment. If not wanted, deduct \$1.60 from list price. All the above ranges, except two burner ranges, will be furnished with one 4-inch 500 watt 3 heat burner for small base utensils, percolators, etc. This small burner will replace the left-hand rear 880 watt burner. Ranges are made in the following voltages: 95, 100, 105, 110, 115, 120, 125 and

220. Always specify voltage when ordering and be sure there is not a variation of over 3 per cent, between the line and range voltage.

Delivery: F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house

# Western Electric ELECTRIC RANGES



No. 47 Electric Range

#### **TYPE 47 THREE BURNER**

Three burner cooking surface, two burner oven, warming closet, outside elevated warming shelf, outside lower shelf.

Finish: either black enameled or nickeled, with white enameled splasher W.E. List Mfrs. List Price No. Lbs. List Each \$188.40 47 400 \$117.75 Electric range, plain black enamel 47N 122.75 Electric range, nickeled..... 400 196.40

#### TYPE 56 FOUR BURNER

Four burner cooking surface, two burner oven, one burner broiler,

warming closet outside warming shelf, outside open shelf. Finish: either black enameled or nickeled, with white enameled

spiasi	RT,			
$_{56\mathrm{N}}^{56}$	Electric range, plain black enamel Electric range, nickeled	$\begin{array}{c} 435 \\ 435 \end{array}$	\$143.75 150.00	$$230.00 \\ 240.00$

#### TYPE 50 FOUR BURNER

Four burner cooking surface, two burner oven, warming closet, outside elevated warming shelf, lower open shelf.

]	Finish: either black enameled or nickeled, with white enameled splash	ner.		W.E.
List	•	Wt.	Mfrs.	List Price
No.		Lbs.	List	Each
50	Electric range, plain black enameled	365	<b>\$</b> 128.25	\$205.20
50N	Electric range, nickeled	<b>3</b> 6 <b>5</b>	133.25	213.20

#### TYPE 60 SIX BURNER

Six burner cooking surface, oven broiling compartment, warming closet, and two outside shelves. Finish: either black enameled or nickeled, with white enameled splasher.

$_{\rm 60N}^{60}$	Electric range, plain black enamel	470 470	\$164.75 170.00	\$263.60 272.00
	DIMENSIONS		*	

Floor space... Height of cooking surface.... Area of cooking surface..... Dimension of oven... Height of warming shelf.... Warming closet.....

No. 33

 $27\frac{1}{2}$  x 51 ins.  $32\frac{1}{2}$  ins.  $23\frac{1}{2} \times 27$  ins.  $18 \times 18 \times 12$  ins. 58 ins.  $21\frac{1}{4} \times 20 \times 9$  ins.

47

 $27\frac{1}{2} \times 51$  ins.  $32\frac{1}{2}$  ins.  $23\frac{1}{2}$  x 27 ins.  $18 \times 18 \times 12$  ins. 67 ins.

56

 $21\frac{1}{4} \times 20 \times 9$  ins.

 $32\frac{1}{2}$  ins.  $23\frac{1}{2} \times 27$  ins. 18 x 18 x 12 ins. 58 ins.  $21\frac{1}{4} \times 20 \times 9$  ins.  $21\frac{1}{4} \times 20 \times 9$  ins.

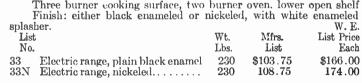
50

 $27\frac{1}{2} \times 51$  ins.

 $27\frac{1}{4} \times 59\frac{1}{2}$  ins.  $32\frac{1}{2}$  ins.  $23\frac{1}{2} \times 35$  ins. 18 x 18 x 12 ins. 67 ins.

60

TYPE 33 THREE BURNER



#### TYPE 44 FOUR BURNER

Four burner cooking surface, two burner oven, lower open shelf, Finish: either black enameled or nickeled, with white enameled

1.4				
44 44N	Electric range, plain black enamel Electric range, nickeled	$\frac{260}{260}$	$$117.50 \\ 122.50$	\$188.00 196.00

#### DIMENSIONS

	33	44
Floor space	$29\frac{1}{2} \times 30\frac{1}{2}$ ins.	$30\frac{1}{2} \times 32\frac{1}{4}$ ins.
Height of cooking surface	$31\frac{1}{2}$ ins.	$31\frac{1}{2}$ ins.
Area of cooking surface	$22\frac{1}{4} \times 26\frac{1}{4}$ ins.	$24\frac{1}{4} \times 26\frac{1}{2}$ ins.
Dimension of oven	$18 \times 12 \times 12 \text{ ins.}$	$18 \times 18 \times 12 \text{ ins.}$
Height of stove	65 ins.	65 ins.

Ranges are made in the following voltages: 95, 100, 110, 115, 120, 125 and 220. Always specify voltage when ordering and be sure there is not a variation of over 3 per cent. between the line and range voltage.

All ranges are equipped with a lamp socket attachment. If not wanted, deduct \$1.60 from list price. Delivery: F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.

## Western Electric ELECTRIC RANGES

#### TYPE C-2-TWO BURNER

Two burner cooking surface, two burner oven, elevated outside warming shelf and outside lower shelf.

Finish: Plain black enamel, with white enameled splasher.

List		V	Veight	Mfrs.	List Price
No.			Lbs.	List	Each
C-2	Electric range, plais	n black enamel	240	\$86.00	\$137.60

TYPE C-4—THREE BURNER

Same style as above, three burner cooking surface, two burner oven, elevated outside warming shelf and outside lower shelf.

Finish: Plain black enamel, with white enameled splasher.

					1
List			Weight	Mfrs.	List Price
No.			Lbs.	List	Each
C-4	Electric range, pla	in black ename	1 275	\$101.00	\$161.60

#### TYPE C-3—THREE BURNER

Same as C-4, but has a smaller oven, three burner cooking surface, two burner oven, elevated outside warming shelf outside lower shelf.

List		Weight	Mfrs.	List Price
No.		Lbs.	List	Each
C-3	Electric range, plain black enamel	200	\$96.00	\$153.60

#### **DIMENSIONS**

	C2	C4	C3
Floor space	26 x 36½	26 x 49½	26 x 43
Height of cooking surface.	34	34	34
Area of cooking surface	23 x 18	$22\frac{3}{4} \times 24\frac{1}{2}$	223/4 x 241/2
Dimension of oven	18 x 12 x 12	$18 \times 18 \times 12$	18 x 12 x 12
Height of warming shelf	54	54	54

#### TYPE C-17—TWO BURNER

Two burner cooking surface, a detachable oven without burners of its own fits snugly over the cooking surface. Plain black enamel finish.

List	Weight	Mfrs.	List Price
No.	Lbs.	List	Each
C-17 Electric range, without oven	47	\$24.00	\$38.40
C-170 Electric range, with oven	90	39.00	62.40
O-17 Oven only	5	15.00	24,00

All ranges are equipped with a lamp socket attachment—If not wanted, deduct \$1.60 from list price.—All the above ranges except two burner ranges will be furnished with one 4-inch 500 watt 3-heat burner for small base utensils, percolators, etc.—This small burner will replace the left-hand rear 880 watt burner.

Ranges are made in the following voltages: 95, 100, 105, 110 115, 120, 125 and 220. Always specify voltage when ordering and be sure there is not a variation of over 3 per cent. between the line and range voltage.

#### JUNIOR No. 6 RANGE

An electrical range for children, its six burners will actually cook and bake, with every range is furnished free four nickle plated cooking utensils and a cook book in language children can understand. Current consumption 500 watts.

List		Weight		List
No.		Lbs.	List	Each
6 Jr.	Junior range plain black enamel,			
	nickeled top, legs and oven door,			
	<ul> <li>complete with attachment plug, cord</li> </ul>			
	and switch	$7\frac{1}{2}$	\$8.00	\$12.80

#### DIMENSIONS

Height to top of shelf	15 inches
Area of cooking surface	111/4 x 8 inches
Dimensions of oven	$4\frac{1}{2} \times 2\frac{1}{2} \times 5$ inches

All ranges are made in the following voltages: 95, 100, 105, 110, 115, 120, 125 and 220. Always specify voltages when ordering and be sure there is not a variation of over 3 per cent. between the line and range voltage.

All ranges are equipped with a lamp socket attachment. If

not wanted, deduct \$1.60 from list price.

Delivery F. O. B. Factory Chicago, Ill. For warehouse deliveries write nearest house.



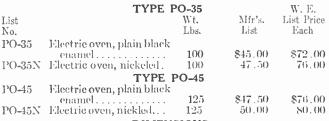




Junior Range No. 6 (Height 15 Inches)

#### **ELECTRIC OVENS**

These ovens are portable, occupy but little space and are designed for all round service. They are constructed of steel, with cast-iron legs. Equipped with one top and one bottom burner and a broiler attachment.



DIMENSIONS

\$20.00

TYPE PO-9

A portable oven large enough for two pies, two loaves of bread, small roasts, etc., one burner, two adjustable racks, cord and plug, Floor space,  $17 \times 15$  inches; height,  $15\frac{3}{4}$  inches; inside dimensions  $9 \times 11 \times 11$  inches.

PO-9 Body and door dull black enamel; corners, legs, and door support, nickel-plated.....

nickel-plated...... 54
TYPE 1015

Similar to above, but having no heat unit of its own, for use with No. 10 single electric hot plate from which it gets its heat. Inside dimensions,  $8 \times 10 \times 11 \%$  inches; combined height, 17 inches; black enamel, nickel trim.

1015 Portable oven, one adjustable rack.....

35 \$15.00

**\$15.00 \$22.50** 

\$30.00

**TYPE 1511** 

Similar to type 1015, except that it is designed for No. 15 two burner hot plate, from which it gets its heat. Inside dimensions, 8 x 17 x 11<sup>1</sup>½ inches. Combined height, 19 inches; nickel finish on black enamel.

1511 Portable oven, one ad-



Nos. PO-35 and PO-45

Western Electric

PO ''9'' Portable Oven

Electric Plate Warmer

#### Electric Plate and Food Warmer

TYPE PW-15

Equipped with two burners, one on each side, and three switches, black enamel finish, nickel trimmed. Inside dimensions, 30 x 20 x 17 inches.

List No. Mfr's List. List Price Each PW-15 \$85.00 \$136.00

# Hotel Type Electric Toaster TYPE T-316

Has a capacity of sixteen slices. Equipped with two trays, one above and one below the heat unit. Finished in black enamel throughout. Outside dimensions, 22 x 21 x 15 inches. Each tousting rack measures, 8 x 18½ inches.

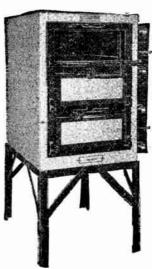
			W. E.
List	Wt.	Mfr's.	List Price
No.	Lbs.	List	Ea h
T-316	65	\$60.00	\$96.00

Ranges and ovens are made in the following voltages: 95, 100, 105, 110, 115, 120, 125 and 220. Always specify voltage when ordering, and be sure there is not a variation of over 3 per cent, between the line and range voltage.

Delivery: F. O. B. Factory Chicago, Ill., For warehouse deliveries write nearest house.

#### **ELECTRIC OVENS**





No. 150

# Western Electric Bake Ovens

These ovens have proven to give better results than fuel ovens. Especially adapted for hotels, bakeries, They are clean and compact, and have the advantage of perfect control of the heat supply. They are heavily insulated and radiate practically no heat. They occupy about one-fifth of the space required by brick ovens of the same capacity. In these ovens there is an absolutely ideal heat distribution. Instead of placing the heating elements in the bottom and depending on an uncertaint and variable circulation. of air the heat has been distributed for even baking through all parts of the article being cooked. In these ovens heat is more perfectly controlled, correctly applied and more uniform than in any other type in use, including the standard brick ovens. The body of these ovens rests on a substantial angle iron frame. The outside is of galvanized iron. The inside, which is entirely separate, is black steel. Won't it pay to climinate ashes, smoot, soot, or the furnes of gas from your baking process, heat at the throw of a switch, heat that you can turn off the instant you are through, heat that is positively uniform and perfectly distributed, bake bread almost automatically and without attention.

List No	No. 1-Lb. Loaves	No. 18 x 26 In. Roll Pans	No. Compartments		Size of Compart- ments in Inches	Н.	Sq. Ft. of Baking Surface	W.	Outside Dimensions in Inches	H.	Projection of Switch Box On Right Hand Side-Ins.	Shipping Weight—Approximate Lbs.	Maximum Kw. Consumption per Hour	List Price Each
150 175 200 215 220 300 315 400 415	30 40 60 80 120 180 270 400 600	3 4 6 8 12 18 27 40 60	3 4 3 4 3 3 2 4	18 18 37 37 37 37 37 51 74 56	27 27 27 27 27 53 80 80 132 134	8 8 8 8 9 9 10	10 13 20 27 41 61 90 138 208	26 26 45 45 47 47 64 84 122	33 33 33 60 90 90 142 144	63 66 63 66 64 67 67 74	4½ 4½ 5½ 5½ 6½ 6½ 8	800 900 1050 1250 1550 6000 9000 10009 13000	4 5 7.3 10 15 23 32 50 75	On Application

Ovens Nos. 220, 250, 300, 315 and 400 are shipped knocked down.

Decks of ovens with tile decks have a 7 inch clearance, instead of 8 inch, unless ordered specially.

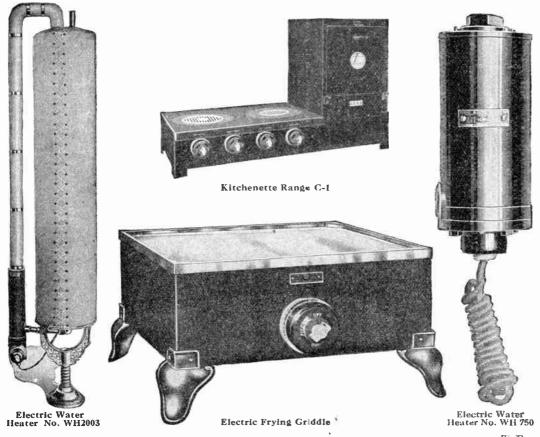
An accurate pyrometer can be supplied at an extra price of \$30.00 list.

These ovens can also be used for roasting meats, poultry, etc. Also for baking cores and any other work requiring uniform heat.

We can also build special ovens for enameling and other purposes.

Delivery F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.

#### ELECTRIC WATER HEATER, RANGE AND GRIDDLE



List No. Service Volts Wt. List Price Each WH2003 Intermittent service, 2000 W. three heat circulation type, 2 wire. 110 25 lbs. \$24.00 \$38.40 \$28.80 \$28.80

#### Kitchenette Range

The Western Electric Kitchenette Range is designed for one, two and three room apartments. For cabinet or "In-a-wall" type kitchen.

Equipment. It has two surface burners and a medium sized oven. The right surface burner consumes 500 watts and the left 1,100 watts. The oven has a top and bottom burner, each consuming 660 watts. The top burner is used for broiling. Total connected load, 2.920 watts.

									W.E.
				Cooking	Oven				List
	Length	Width	Height	Surface	Inside		Wgt.	Mfrs.	Price
Western Electric	Ins.	Ins.	Ins.	Ins.	Ins.	Finish	Lbs.	List	Each
Kitchenette Range	C-1 33	16	22	$15 \times 21$	$10 \times 10 \times 12$	Black enamel	125	\$53.00	\$84.80

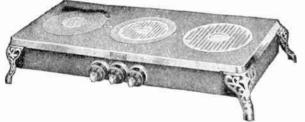
#### Electric Frying Griddle

This griddle is made expressly for frying fish, eggs, bacon, chops, steaks, etc., and also for use as a cake griddle. It is solidly constructed of steel and cast iron, and supported on four nickel-plated legs. Dimensions, 18 x 18 inches; height 6 inches. The maximum current consumption is 3 K.W.

		MITS	W . P.,
List No.		List	List Price
G318	Electric frying griddle	\$60.00	\$96.00
Deli	very F. O. B. Factory, Chicago, III. For warehouse deliveries write nearest	house.	

337 37

# Western Electric Western Electric HOT PLATES AND RADIATORS





Western Electric HP"20" Three-burner Hot Plate

Western Electric "10" Hot Plate

#### Electric Hot Plates

No. HP20 Three-burner Hot Plate. Has a cooking surface 14 x 32½ inches, stands 6½ inches high. Equipped with one 500, one 1100 and 1500 watt burner.

No. HP10 Hot Plate. Single burner cooking surface 10½ x 10½ inches, stands 4½ inches high.

No. 15 Two-burner Hot Plate. Cooking surface 10 x 21 inches, stands 6½ inches high. Right-hand burner 1500-750-375 watts. Left-hand burner 880-440-220 watts. W.E. List Ligh Mfrs Price Each No. Lhs. List Nickel HP-20 Three-burner hot plate with one 1500, one 1100 and one 500 watt burner 40 \$35.00 \$56.00 HP-10 Single burner hot plate (880 watt)..... 17 12.0019.20 HP-1511 38.40 35 24.00 HP-15 Two-burner hot plate with one 1500 and one 880 watt burner . . . . . . 24,00 38.40





No. TS5 Table Stove TS "5" Table Stove

Coffee Urn Heater

No. TS5 Table Stove. Has cooking surface  $7\frac{1}{2}$  inches diameter. Heating unit  $6\frac{1}{2}$  inches diameter. Height: 5 inches.

Current consumption, 660 watts. Accessories, attachment cord and plug switch is situated right on cord A single heat, fed through switch. Wt. W. E. List Mfrs Price Each List No. Finish Lbs. List T85 Table stove, single heat, 660 W. \$12.60 Nickel 5 \$9.00 **TS53** 10.50 Table stove, three heat, 660 W. Nickel 5 14.70

Coffee Urn Heater

The Western Electric coffee urn heater is made in three sizes. Capacities 1500-1100-800 watts, each having three heats. Mfrs. W. E. List Price Each List List No. Coffee urn heater, 1800 watt size, dia. 834 inches, height 10 inches... Coffee urn heater, 1100 watt size, dia. 612 inches, height 10 inches... Coffee urn heater, 880 watt size, dia. 612 inches, height 10 inches... \$14.00 UH-15 13 lbs \$22.40 13 lbs 12.00 19,20 UH-11 UII-8 13 lbs 11.00 17.60



#### Radiators

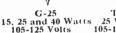
								17 . 12.
List		Length	Width Base	Height	Wt.		Mfrs.	List
No.	Wattage	Inches	Inches	Inches	Lbs.	Heat	List	Price
AH101	100Ŏ	15	9	$17\frac{1}{2}$	12	1	\$14.00	\$22.40
AH103	1000	15	9	$17\frac{1}{2}$	$12\frac{1}{2}$	3	16.50	26.40
AH203	2000	15	9	$23\frac{1}{2}$	$14\frac{1}{2}$	3	22.50	36.00
AH303	3000	191/2	9	23	$23\frac{1}{2}$	3	30.50	48.80
AH403	4000	$22\frac{1}{4}$	9	23	25	3	34.50	55.20
AH203 AH303	2000 3000	15	9	$\frac{23\frac{1}{2}}{23}$	$14\frac{1}{2}$ $23\frac{1}{2}$	3	$\frac{22.50}{30.50}$	36.00 48.80

Nos. AH101 to AH203 are furnished with seven feet of cord without attachment plug. Single heat radiators are not equipped with a switch.

Delivery F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.

# Western Electric SUNBEAM INCANDESCENT LAMPS







25 Watts 105-125 Volts



G-30 60 Watts 105-125 Volts



G-35 100 Watts 105-125 Volts



5 Watts 50-65 Volts 2½ and 5 Watts 7½ and 10 Watts 105-125 Volts 12½ Volts



10½ and 10½ and 12½ Volts (Sign Lamp)

#### (Sign Lamp) MAZDA LAMPS FOR ORNAMENTAL LIGHTING SERVICE—ROUND AND TUBULAR BULBS 110 TO 125 AND 220 TO 250 VOLTS

Size of Lamp n Watts	Lumens per Watt	Watts per Spherical	Type and Size Bulb	Diam. Bulb Inches	Maximum Overall Length Inches	Overall Base Length Regularly Inches Supplied		List	Price			
†110 to 125 Volt Round (Mazda B Lamps)												
15 25	$\frac{8.79}{9.31}$	1.43 1.35	*(1-25 *(3-25)	318	434	Med. screw	50	\$1.00	\$1.10			
40 60 100	$ \begin{array}{c c} 9.45 \\ 10.22 \\ 10.65 \end{array} $	1.33 1.23 1.18	G-25 J G-30 G-35	334 436		Med. serew Med. serew socket	24 24	1.40 2.00	$\frac{1.54}{2.20}$			
100	1 10.00				1	lazda B Lamps)						
25 50	$\begin{bmatrix} 7.71 \\ 8.32 \end{bmatrix}$	1.63	G-25 G-25	31/8	43/1 43/1	Med. screw Med. screw	50 50	\$1.20 1.20	\$1,30			
	†110 to 125 Volt Tubular (Mazda B Lamps)											
25 25 40	9.11 8.73 9.04	1.38	T-10 T- 8	11/4	$egin{array}{c c} 578 \\ 12 \\ \end{array}$	Med. serew Med. serew	100 50	2.00	\$1.20			

\*Lamps of these wattages can be supplied in G-18½ bulb at an efficiency in watts per spherical C.P.of 1.53 and 1.45 respectively. Standard package quantity 100 at \$1.00 clear and \$1.06 frosted.

†Lamps of voltages of 100 to 109 and 126 to 130 inclusive are not regularly carried in stock, but may be obtained at the same list prices.

Lamps of voltages of 200 to 219 and 251 to 260 inclusive are not regularly carried in stock, but may be obtained at the same list prices.

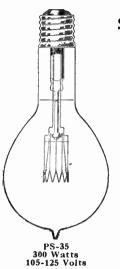
#### MAZDA B LAMPS FOR SIGN LIGHTING SERVICE STRAIGHT SIDE BULBS-11 TO 1214, 55 TO 65 AND 110 TO 125 VOLTS

Volts	Size of Lamps in Watts	Lumens per Watt	Watts per Spherical C.P.	Type and Size Bulb	Diam. Bulb Inches	Max. Overall Length Inches	Base Regularly Supplied	Std. Pkg. Qnty.	List I	Price Frosted
			St	raight Si	de (Maz	da B La	mps)			
$\left. \begin{array}{c} *11 \\ \text{to} \\ 12^{1} \frac{1}{2} \end{array} \right\}$	$\begin{vmatrix} 212 \\ 5 \end{vmatrix}$	8.27 8.61	$1.52 \ 1.46 \$	S-14	134	4	Med. screw	100	\$0.54	\$0.60
$egin{pmatrix} \dagger 5 ar{5} \ \mathbf{to} \ 65 \end{bmatrix}$	5	<b>7</b> .26	1.73	S-1.4	134	4	Med. screw	100	.60	. 66
$egin{array}{c} $110 \\ to \\ 125 \end{array} \}$	10	7.26	1.73	S-14	13/4	4	Med, serew	100	.60	. 66

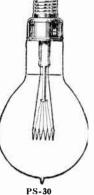
\*Lamps of voltages of 10, 10½ and 13 are not regularly carried in stock, but may be obtained at the same list prices.

†Lamps of voltages of 50 to 54 inclusive are not regularly carried in stock, but may be obtained at the same list prices.

thamps of voltages of 100 to 109 and 126 to 130 inclusive are not regularly carried in stock, but may be obtained at the same prices.



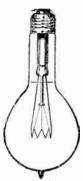
#### SUNBEAM INCANDESCENT LAMPS



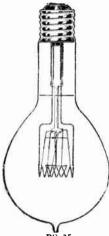
200 Watts 105-125 Volts



S-17, S-19 or S-21 10,15,20,25,40 or 60 Watts 105-125 Volts 25, 40 and 60 Watts 220-250 Volts



PS-25 100 Watts 105-125 Volts



PS-35 300 Watts 220-250 Volts

# MAZDA LAMPS FOR STANDARD LIGHTING SERVICE—STRAIGHT SIDE AND PEAR-SHAPE BULBS. \*110 TO 125 VOLTS

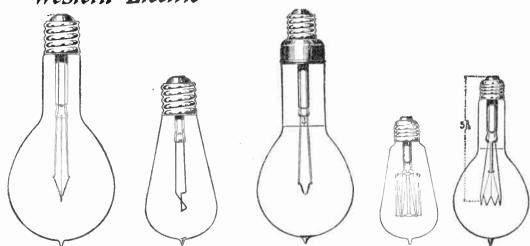
Size of [		Watts	Type	1	Maximum	1	,	1	
Lamp	Lumens	per	and	Diam.	Overall	Base	Std.	List	Price
in	per	Spherical	Size	Bulb	Length	Regularly	Pkg.		
Watts	Watt	C.P.	Bulb	Inches	Inches	Supplied	Quantity	Clear	Frosted
		1	10 to 125 V	olts Stra	ight Side	(Mazda B Lamp			
10 +	7.52	1.67)			1	1			
15	8.55	1.47	S-17	$2\frac{1}{8}$	45/8	Med. screw	100	\$0.60	\$0.66
25	9.17	1.37	0.40						l
40	9.45	1.33}	S-19	238	$5\frac{1}{4}$	Med. sçrew	100	. 60	. 66
50	9.52	1.32	S-19	23 8	51/4	Med. screw	100	.60	. 66
60	9.74	1.29	S-21	$2^{5}$ 8	51/2	Med. screw	100	.70	.78
100	10.13	1.24	S-30	$  3^3  $	778	Med. screw sekt	24	1.40	1.54
			110 to 125	Volt Pea	r-shape (i	Mazda C Lamps)			
75	11.53	1.09	PS-22	23/4	61/8	Med. screw	1 50	\$1.40	\$1.54
100	12.57	1.00	PS-25	318	71/8	Med. screw	24	2.20	2.20
150	13.66	0.92	PS-25	318	71/8	Med. screw	24	3.30	3.40
200	14.61	0.86	PS-30	$3^{3}4$	838	Med. screw	24	4.40	4.54
300	16.11	0.78	PS-35	438	934	Mog. screw	24	6.50	6.70
400	15.32	0.82	PS-40	5 ~	10	Mog. screw	12	8.60	8.90
500	16.11	0.78	PS-40	5	10	Mog. screw	12	9.40	9.70
750	16.98	0.74	PS-52	$6\frac{1}{2}$	1338	Mog. screw	8	13.00	13.50
1000	17.95	0.70	PS-52	612	133/8	Mog. serew	8	15,00	15,50
					O 250 VO				
					ght Side	(Mazda B Lamps)	)		
25	7.62	1.65	S-19	238	$5\frac{1}{4}$	Med. screw	100	\$0.70	\$0.76
50	8.43	1.49	S-19	238	$5\frac{1}{4}$	Med. screw	100	.70	.76
100	9.04	1.39	S-30	$3^{3}4$	77/8	Med. screw sekt	24	1.70	1.84
150	9.45	1.33	S-35	438	834	Med. screw sckt	24	2.60	2.80
250	10.47	1.20	S-40	5	10	Med. screw sekt	12	4.40	4.70
			220 to 250	Volt Pea	ır-shape t	Mazda C Lamps)			
200	12.57	1.00	PS-30	33/4	83/8	Med. screw	1 24	\$4.80	\$4.94
300	13.66	0.92	PS-35	438	$9\frac{3}{4}$	Mog. screw	24	7.80	8.00
400	14.61	0.86	PS-40	5	10	Mog. screw	12	10.20	10.50
500	14.78	0.85	PS-40	5	10	Mog. screw	12	11.20	11.50
750	15.32	0.82	PS-52	$6\frac{1}{2}$	1338	Mog. screw	8	15.40	15.90
1000	16.11	0.78	PS-52	$6^{\frac{1}{2}}_{22}$	1338	Mog. screw	8	18.00	18.50
* 1	a of	. 14 £ 1	00 4 100	1.100 41	200 1			. 11	

<sup>\*</sup>Lamps of voltages of 100 to 109 and 126 to 130 inclusive are not regularly carried in stock but may be obtained at the same list prices.

\*Lamps of voltages of 200 to 219 and 251 to 260 inclusive are not regularly carried in stock but may be

obtained at the same list prices.
†Orders for Mazda C lamps should specifically state if lamps are for use in other than pendent position. †Medium Serew Skirted Base (the lamp having maximum overall length of 101 inches and light center length 7½ inches) will be supplied at same price if demanded but attention is called to the fact that the use of Mazda C lamps of this wattage in Medium Screw Sockets is contrary to the Rules of the Underwriters.

# Western Electric SUNBEAM INCANDESCENT LAMPS



S-19 40 Watts PS-25 100 Watts S-241/2 60, 80 and 100 C.P. PS-40 400 C.P. 15 Amps. PS-35 250 C.P. MAZDA C LAMPS FOR USE IN SERIES ON STREET LIGHTING CIRCUITS—STRAIGHT SIDE AND PEAR-SHAPED BULBS\*

	Nominal				Diam.	Overall	Base	Std.	List P	rice
Amperes	Rated C.P.	Total Lumens	Avera <sub>b</sub> e Volts	Size Bulb	Bulb Inches	Length   Inches	Regularly Supplied	Pkg. Qnty.	Clear	Frosted
	60	600	8.5	S-24 <sup>1</sup> / <sub>2</sub>	3 1 6	714	Mog. screw	50	\$2,00	\$2.10
5.5	80 100	800 1000	$\{10.8\}$	S-2412	3.1	71/4	Mog. screw	50	2.40	2.50
3.3	$\frac{250}{400}$	2500 4000	29.7 47.4	PS-35 PS-40	43 g 5	$\frac{934}{10}$	Mog. screw	24 12	$\frac{4.70}{8.00}$	4.90 8.30
	60	600	7.1	S-24½	3 1 6	714	Mog. screw	50	2.00	2.10
	80	800 1000	$\left\{\begin{array}{c} 9.1 \\ 10.9 \end{array}\right\}$	S-24½	$3\frac{1}{16}$	714	Mog. screw	50	2.40	2.50
6.6	250	2500	23.5	PS-35	438	934	Mog. screw	24 12	4.70	4.90
	400 600	4000 6000	37.1 55.7	PS-40 PS-40	5	10 10	Mog. screw Mog. screw	12	8,00 10,00	$\begin{bmatrix} 8.30 \\ 10.30 \end{bmatrix}$
	60	600	6.4	8-2412	3 1 6	$7\frac{1}{4}$	Mog. screw	50	2.00	2.10
	80	800 1000	$\left[\begin{array}{c} 8.0 \\ 9.6 \end{array}\right]$	S-24½	316	71/4	Mog. screw	50	2.40	2.50
7.5	250	2500	19.6	PS-35	438	934	Mog. screw	24	4.70	4.90
	400	4()()()	30.5	PS-40	5	10	Mog. screw	12 12	8.00	8.30 10.30
	600	6000	45.8	PS-40 PS-40	5 5	$\begin{vmatrix} 10 \\ 12\frac{1}{2} \end{vmatrix}$	Mog. screw Mog. screw	$\frac{12}{12}$	$ \begin{array}{c c} 10.00 \\ 8.00 \end{array} $	8.30
15.0	400	4000	15.3 15.5	PS-40	5	1213	Mog. screw	12	10.00	10.30
20.0	$\begin{cases} 600 \\ 1000 \end{cases}$	6000 10000	25.9	PS-40	5	1212	Mog. serew	12	12.00	12.30

Orders for lamps of 250 C.P. and higher should specifically state if they are to be burned in other than pendent position. The light center length of the 15 and 20 ampere Mazda C lamps shown above is 9½ inches for burning in pendent position and 8¼ inches where ordered for burning tip up.

\*Medium screw skirted base also supplied at same price, except the 400, 600 and 1000 C.P. lamps, which are supplied only with Mogul screw base as indicated.

Mazda lamps for street series service selected for use on multiple compensators or for any other purpose where a single voltage or a range of voltages closer than stated are required will take a special price which may be obtained upon application.

MAZDA LAMPS FOR USE WITH COUNTRY HOME LIGHTING OUTFITS-STRAIGHT SIDE AND PEAR-SHAPE BULBS-16 CELL (28-32 VOLTS)

		Watts	Type		Maximum	~	a	List P	rices
Labeled	Lumens	per	and	Diam.	Overall	Base	Std.		
Watts	per	Spherical	Size	Bulb	Length	Regularly	Pkg.	Clear	Frosted
Nominal	Watt	C.P.	Bulb	Inches	Inches	Supplied	Quantity		
			16 Cell (2	8-32 Volt	s) Mazda	B Lamps			
5	8.73	1.44	S-14	134	1 4	Med. screw	100	\$0.60	\$0.66
10	9.17	1.37	S-17	213	458	Med. screw	100	.60	.66
20	9.74	1.29	S-17	218	458	Med. screw	100	.60	. 66
40	10.13	1.24	S-19	23/8	51/4	Med. screw	100	.60	. 66
			16 Cell	(28-32 Vo	olts) Mazo	la C Lamps			
50	13.96	1 0.90	PS-20	$2\frac{1}{2}$	51/2	Med. serew	50	\$1.40	\$1.50
75	14.78	0.85	PS-22	$2\frac{3}{4}$	61/8	Med. serew	50	1.60	1.70
100	15.71	0.80	PS-25	31/8	71/8	Med. serew	24	2.40	[-2.40]

Note: The watts per horizontal c.p. of the Mazda B lamps are as follows: 5 watt 1.14, 10 watts 1.02 and 40 watt 0.98.

# Western Electric SUNBEAM INCANDESCENT LAMPS



G-18½ 10, 15, 20 and 25 Watts 25-34 and 50-60 Volts



S-17 10, 15 and 20 Watts 25-34 and 50-65 Volts



G-25 100-150 Watts 30-34 Volts



G-25 72 Watts 5½ and 6 Volts



G-30 40 Watts 25-34 and 50-65 Volts 75 Watts 30-34 and 60-65 Volts

# MAZDA LAMPS FOR TRAIN LIGHTING AND LOCOMOTIVE HEADLIGHT SERVICE STRAIGHT SIDE AND ROUND BULBS— $5\frac{1}{2}$ AND 6, 30-34 AND 60-65 VOLTS

The 30-34 and 60-65 volt lamps are generally operated from locomotive headlight outfits or 16 and 32 cell battery lighting systems respectively. These lamps are used for ordinary train lighting service.

The 5½ and 6 and 30-34 volt concentrated filament Mazda C lamps are used for locomotive headlight service and are also operated from locomotive headlight outfits or battery lighting systems.

		į.	Watts	Type		Max.		-				
Total	Labeled Watts	Lumens	per	and	Diam.	Overall	Base	Std.	List P	rice		
Lumens	(Nominal)	per Watt	Spherical	Size	Bulb	Length	Regularly	Pkg.				
Lumens	(Nominai)		C.P,	Bulb	Inches	Inches	Supplied	Qnty.	Clear	Frosted		
		‡	30-34 Vol	ts Straigl	ht Side	(Mazda	B Lamps)					
85	10	9.17	1.37									
125	15	9.59	1.31 }	S-17	$2\frac{1}{8}$	$4\frac{5}{8}$	Med. serew	100	\$0.60	\$0.66		
175	20	9.74	1.29									
250	25 50	9.74	1.29	S-19	23/8	$5\frac{1}{4}$	Med. screw	100	.60	.66		
500	00	10.13	1.24 \$		-/0	974	Tricus Bell W	100	.00	.00		
			§60-65 Vo	lts Straig	ht Side	(Mazda	B Lamps)					
85	10	8.73	1.44)									
125	15	9.11	1.38 }	S-17	$2\frac{1}{8}$	$4\frac{5}{8}$	Med. screw	100	\$0.60	\$0.66		
175	20	9.24	1.36									
250	25	9.24	1.36 )	S-19	23 8	51/4	Med. screw	100	,60	ee		
500	50	10.13	1.24		-/8	0/4	area. serew	100	.00	. 66		
‡30–34 Volts Round (Mazda B Lamps)												
85	10	8.73	1.44)				<u> </u>	1 1				
12 <b>5</b>	15	9.11	1.38	G-18½	$2\frac{5}{16}$	33/4	Med. screw	100	\$0.80	\$0.86		
175	20	9.24	1.36	/2	1	17/4	Zizott, Bozt W	100	\$0.00	φυ.ου		
250	25	9.24	1.36	G-18½	$2\frac{5}{16}$	33/4	Med. screw	100	.80	.86		
500	50	10.30	1.22	G-30	$\frac{2\frac{5}{16}}{3\frac{3}{4}}$	61/4	Med. sc. sk.	24	1.40	1.54		
			§60-65	Volts Ro	und (Ma	zda B L	amps)					
85	10 1	8.32	1.51)			1	* /	1 1				
125	15	8.73	1.44	G-18½	$2\frac{5}{16}$	33/4	Med. screw	100	\$0. 80	\$0.86		
175	20	8.85	1.42		- 10	-/-	2.20.27 001 (1)	^\\\	Ψ0. 00	Ψ0.00		
250	25	8.85	1.42	G-18½	$2\frac{5}{16}$ .	33/4	Med. screw	100	.80	.86		
500	50	10.30	1.22	G-30	$\frac{2\frac{5}{16}}{3\frac{3}{4}}$	$6\frac{1}{4}$	Med. sc. sk.	24	1.40	1.54		
	*5½ a	nd 6 Vol	t Round N	/Iazda C I	Lamps f	or Locor	notive Headl	ight Se	rvice			
	1 36 4	14.78	0.85	G-18½	2 5 16	33/4	Med. screw	100	\$2.70	<u> </u>		
	72	15.71	0.80	G-25	31/8	43/4	Med. screw	50	3.20			
	108	16.76	0.75	G-30	334	57/8	Mog. screw	24	3.80			
	30-34	Volt Ro	ınd Mazd	a C Lami			ve Headlight	1		1		
	1 100	12.57	1.00	G-25	31/8	43/4	Med. screw	50	\$3.00			
	150	13.96	0.90	G-25	31/8	43/4	Med. screw					
	250	15.71	0.80	tG-30	33/4	51/2	Med. screw	$\frac{50}{24}$	$\frac{4.00}{6.00}$			
	<u>'                                    </u>		·				12 and 18 amr	, ,		1		

\*The 36, 72 and 108 watt lamps (nominal ratings) consume 6, 12 and 18 amperes respectively. †Can be burned in any position except within 45 degrees of vertically, base up.

Lamps of voltages of 25 to 29 inclusive are not regularly carried in stock but may be obtained at the same list prices.

\$Lamps of voltages of 50 to 59 inclusive are not regularly carried in stock but may be obtained at the same list prices.

The reduction factor of the Mazda B lamps in straight side bulbs is 79 per cent.; in G-18½ bulb, 81 per cent. and in G-30 bulb, 82 per cent.

#### SUNBEAM INCANDESCENT LAMPS





MAZDA B LAMPS FOR ELECTRIC STREET RAILWAY SERVICE—STRAIGHT SIDE BULBS

		Lumens	Watts	Type and	Diam.	Max. Overall	Base	Std.	List	Price
Nominal Watts	Amperes	per Watt	per Spherical C.P.	Size Bulb	Bulb Inches	Length Inches	Regularly Supplied	Pkg. Qnty.	Clear	Frosted
		5 i	n. Series-	-525, 550	, 575, 60	0, 625 a	nd 650 Volts			
23 36 56 94	$\begin{array}{c c} 0.214 \\ 0.342 \\ 0.519 \\ 0.863 \end{array}$	$\begin{bmatrix} 8.73 \\ 8.91 \\ 9.52 \\ 9.89 \end{bmatrix}$	1,44 1,41 1,32 1,27	S-19 S-19 S-21 S-24}2	23 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	514 514 514 71	Med. screw Med. screw Med. screw Med. sc. sk.	100 100 100 50	\$0.60 .60 .70 1.40	\$0.66 .66 .78 1.54

Only the above lamps, which are selected for amperes and for one-fifth the voltage on which they are labeled for use in series, will be supplied at these prices.

These Mazda lamps are selected for amperes and labeled for use five in series on the 525, 550, 575, 600, 625 and 650 volt circuits ordinarily used by electric street railway companies.

As considerable voltage fluctuation is sometimes found in this class of circuits, these lamps are only manufactured for 6 voltage groups and care should be taken to see that the voltage group of lamps supplied corresponds to the mean average voltage found on the circuit.

#### MAZDA C-2 LAMPS, PEAR-SHAPE BULBS, 110 TO 125 VOLTS

The following Mazda C-2 lamps are designed to produce light of a quality which will ordinarily make colors appear as in the light of day. The bulbs of these lamps are made of a special blue glass to filter out the excess red and yellow light rays, and for this reason they are called Mazda C-2 lamps to distinguish them from clear bulb Mazda C lamps.

Size of	Lymana	Watts	Type	Maximum	Base	Std.	Lis	t Price
Lamps in Watts	Lumens per Watt	per Spherical C.P.	and Size Bulb	Overall Length Inches	Regularly Supplied	Pkg. Quantity	Clear	Frosted
75			PS-22	614	Med. screw	50	\$1.60	\$1.80
100			PS-25	714	Med, serew	24	[2.50]	2.70
150	'		PS-25	718	Med. screw	24	3.80	4.00
200			PS-30	884	Med, screw	24	5.00	5.28
300			PS-35	934	Mog. serew	24	7.50	7.90
500			PS-40	10	Mog. screw	12	11.00	11.60

Lamps of voltages of 100 to 109 and 126 to 130 inclusive are not regularly carried in stock but may be obtained at the same list prices.

#### SUNBEAM INCANDESCENT LAMPS



G-25 100-150 Watts 30-34 Volts



G-25 72 Watts 516 and 6 Volts



S-17 and 19 20, 30, 40, 50 and 60 Watts Gem Type



S-19 60 Watts Mill Type Gem Type



G-25 50 Watts Gem Type

# MAZDA C LAMPS WITH CONCENTRATED FILAMENTS FOR FOCUSING PURPOSES ROUND BULBS—512 AND 6, 30 TO 34 AND 110 TO 125 VOLTS

i	Watts	Type		Maximum			1					
Lumens	per	and	Diam.	Overall	Base	Std.	List 1	Price				
per		Size	Bulb	Length	Regularly	Pkg.						
Watt	С.Р.	Bulb	Inches	Inches	Supplied	Quantity	Clear	Frosted				
İ	110 to 125	Volt Rour	nd Mazda	C Lamps	for Stereopti	con Service	•					
12.57	1.00	G-25	31/8	5	Med. screw l	50	\$3.00	1				
15.71	0.80	G-30	334	$5\frac{1}{2}$	Med. serew	24	6.00					
*5½ and 6 Volt Round Mazda C Lamps for Locomotive Headlight Service												
14.78	0.85	G-18½	25	33/4	Med. screw	100	\$2.70					
			31/8	43/4	Med. screw	50		1				
			334	5 1/8	Mog. screw	24	3.80	:::::				
30 to	o 34 Volt	Round Ma:	zda C Lar	nps for Lo	comotive Hea	adlight Ser	vice					
12.57	1.00	G-25	31/8	13/4	Med. screw	50	83.00					
13.96	0.90	G-25	$3\frac{1}{8}$	43/4	Med. serew	50						
15.71	0.80	§G-30	334	$5\frac{1}{2}$	Med. screw	24	6.00					
	per Watt    12.57   15.71   *5\frac{1}{2}:   14.78   15.71   16.76   30 to   12.57   13.96	Lumens per   Spherical C.P.	Lumens   per   Spherical   Size   Size   Rulb	$\begin{array}{ c c c c c c }\hline Lumens & per & and & Size & Bulb & Inches \\\hline Per & Spherical & Size & Bulb & Inches \\\hline \hline Watt & C.P. & Bulb & Inches \\\hline \hline & $\uparrow$110 to 125 Volt Round Mazda \\\hline 12.57 & 1.00 & G-25 & 3\frac{1}{8} \\\hline & *5\frac{1}{2} and 6 Volt Round Mazda C L \\\hline 14.78 & 0.85 & G-18\frac{1}{2} & 2\frac{5}{16} \\\hline 15.71 & 0.80 & G-25 & 3\frac{1}{8} \\\hline 15.71 & 0.80 & G-25 & 3\frac{1}{8} \\\hline 30 to 34 Volt Round Mazda C Lau \\\hline 12.57 & 1.00 & G-25 & 3\frac{1}{8} \\\hline 13.96 & 0.90 & G-25 & 3\frac{1}{8} \\\hline 15.71 & 0.80 & \S G-30 & 3\frac{3}{4} \\\hline \end{array}$	$\begin{array}{ c c c c c c c c } \hline Lumens & per & and & Diam. & Overall \\ \hline per & Spherical & Size & Bulb & Inches & Inches \\ \hline \hline Watt & C.P. & Bulb & Inches & Inches & Inches \\ \hline \hline \hline $110 \text{ to } 125 \text{ Volt Round Mazda C Lamps} \\ \hline \hline $12.57$ & $1.00$ & $G-25$ & $3\frac{1}{8}$ & $5$ \\ \hline \hline $15.71$ & $0.80$ & $G-30$ & $3^{3}4$ & $5^{1}2$ \\ \hline \hline $*5\frac{1}{2}$ and 6 Volt Round Mazda C Lamps for \\ \hline $14.78$ & $0.85$ & $G-18\frac{1}{2}$ & $2\frac{1}{16}$ & $3^{3}4$ \\ \hline \hline $15.71$ & $0.80$ & $G-25$ & $3\frac{1}{8}$ & $4^{3}4$ \\ \hline \hline $16.76$ & $0.75$ & $G-30$ & $3^{3}4$ & $5^{1}2$ \\ \hline \hline $30$ to $34$ Volt Round Mazda C Lamps for Lot \\ \hline \hline $12.57$ & $1.00$ & $G-25$ & $3\frac{1}{8}$ & $4^{3}4$ \\ \hline \hline $13.96$ & $0.90$ & $G-25$ & $3\frac{1}{8}$ & $4^{3}4$ \\ \hline \hline $15.71$ & $0.80$ & $\S G-30$ & $3^{3}4$ & $5^{1}2$ \\ \hline \hline \end{tabular}$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				

\*The 36, 72 and 108 watt lamps (nominal ratings) consume 6, 12 and 18 amperes respectively.

§Can be burned in any position except within 45 degrees of vertically, base up.

This lamp may be supplied without extra charge fitted with Unskirted Mogul Serew Base, giving a light center length of 3½ inches and a maximum overall length of 5½ inches.

†Lamps of voltages of 100 to 109 and 126 to 130 inclusive are not regularly carried in stock but may be obtained at the same list prices.

#### LAMP PRICE SCHEDULE G-1

#### Gem Lamps for Standard Lighting Service, Straight Side and Round Bulbs, 110 to 125 Volts

Size of Lamp ln	Efficiency	Type and Size	Diam. Bulb	Maximum Overall Length	Base Regularly	Std, Pkg. Our Std. and Shpg.		List	Price
Watts	W.P.C.	Bulb	Inches	Inches	Supplied	Quantity	Number	Clear	Frosted
			†11	0 to 125 V	olt Straight S	ide			
20 30	4.00 \ 3.00 }	S-17	21/8	41/2	Med. serew	250	200	\$0.44	\$0.49
4 ) 50 60	$\left\{ egin{array}{c} 2.56 \ 2.50 \ 2.50 \ \end{array}  ight\}$	S-19	23/8	51/8	Med. serew	250	200	,44	.45
			†110 to 12	5 Volt Str	aight Side, M	ill Type			<u> </u>
60	1 2.6	l S-19	$1 - 2\frac{3}{8}$	518	Med. screw	1 250	200	\$0.44	1 \$0.49
				†110 to 12	5 Volt Round				
50	-2.5	↑ *G-25	$1 - 3\frac{1}{8}$	1 45%	Med. screw	100	100	\$0.54	\$0.60

\*The 50 watt round bulb Gem lamp is regularly supplied in G-25 bulb but can be supplied in G-18½ bulb 3.0 w. p. c. (standard package quantity 200) at 80.50 clear and 80.55 frosted, but is not recommended. ‡Lamps of voltages of 100 to 109 and 126 to 130 inclusive are not regularly earried in stock but may be obtained at the same list prices.

The prices given above cover lamps with a tip unless otherwise indicated; for tipless lamps the additional charge is 10 per cent. on Gem lamps.

For anchoring filaments to the bulb in Gem lamps, except in the case of such lamps as are regularly standardized with bulb anchored filaments, an additional charge of \$0.06 list for each anchor shall be made. The charge for etching letters or designs on all sizes of Gem lamps is \$0.00¼ Net eash, subject to no discount.

#### SUNBEAM INCANDESCENT LAMPS



FE-3% lin. Flat End Opal Back



FE-4¼ in. Flat End Opal Back

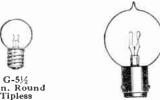


G-3½ in. Round Tipless



G-4½ % in. Round





G-6, 8 and 10 Sidelight Rear or Speedometer 3 Cell 6-8 Volts



G-12 and 161/2 Headlight Mazda B 3 Cell 6-8 Volts

#### MAZDA B MINIATURE FLASHLIGHT LAMPS

Fitted with Miniature Screw Base (Style 600)

Description and Use	Ratings on I Volts	Appearing amps Amperes	Type and Size Bulb	Diam. Bulb Inches	Maximun Overall Length	Unit Pkg.	List Price
	or Two C	ell Flashligh		inches	Inches	Quty.	Clear
	10 #	_					
Flat end opal back bulb for case type battery.	$\begin{cases} 2.5 \\ 2.5 \end{cases}$	$0.35 \\ 0.25$	FE-3¾ FE-4¼	13 17	13	10	\$0.30
Round plain bulb for tubular type battery	$\left\{ egin{array}{c} 2.7 \ 2.9 \end{array}  ight.$	$0.35 \\ 0.35$	G-3½ G-4½	3527 322 76	118	10 10	.30
†Fo	*	ell Flashligh		10	-/8	A - 7	, 00
Flat end opal back bulb for case or tubular typ							
battery	3.8	0.35	FE-334	15	3.3	10	\$0.30
Down to all in to the form of the territory	(3.8	0.35	G-31/2	3.2	16	10	,30
Round plain bulb for ease or tubular typ	e 13.8	0.35	G-41%	10	11/3	10	.30
battery	. (4.0	0.35	(1-41%	15 32 7 16 16 16	11%	10	.30
‡ <b>F</b>	or Five C	ell Flashligh	t Batteries		- / 4		
Round plain bulb for tubular type battery	6.2	0.35	G-5½	1.1	1 3	10	\$0.30
			y (Actual Vol		- 16		#0100
				ca 1.50)			
Round plain bulb	$\begin{cases} 1.50 \\ 1.50 \end{cases}$	0.70	¶G-5½	118	1 3	10	\$0.30
§For Two Cells o	f Standar	d Dry Batter	ies (Actual_V	olts_2.7-2.	8)		
Round plain bulb	$\begin{cases} 3.0 \\ 3.0 \end{cases}$	$\{0.42 \\ 0.80 \}$	$G-5\frac{1}{2}$	11	1 3	10	\$0.30
*Can be supplied 2.5 to 3.0 volts, 0.21 am	peres inste	ad of 0.25 and	0,28 instead of	0.35 amper	es without	extra char	rge.

tean be supplied 3.5 to 4.0 volts and 0.38 amperes without extra charge.

†Can be supplied 3.5 to 6.0 volts and 0.38 amperes without extra charge.

†Can be supplied 5.5 to 6.2 volts and 0.28 amperes without extra charge, but if fitted with candelabra serew (Style 500) or Bayonet candelabra single contact (Style 1100) or double contact (Style 1000) base, \$0.15 list additional.

oner candembra single contact (Style 1709) of double voltact (Style 1709) base, \$0.12 list additional, \$\) fifther the double contact (Style 1000) or single contact (style 1100) base, \$0.12 list additional, Note: Flat end bulbs (FE-3\)\(^2\_4\) and FE-4\(^4\_4\)) can be supplied plain instead of opal back at the same price.

#### MINIATURE MAZDA B AND MAZDA C AUTOMOBILE LAMPS

For Three Cell (Lead Type) Storage Battery-Generator Lighting Systems (6-8 volts)

Fitted with either bayonet candelabra single or double contact (Style 1100 or 1000) bases.

Description The following lamps are regularly	Apr on Volts	tings earing Lamps Amperes Lin stock s	Approx. C.P.	Watts per Spherical C.P.	Type and Size Bulb	Diam. Bulb Inches	Max. Overall Length Inches	Unit Pkg. Qnty.	List Price Clear
Rear and speedometer (two in series). Rear and speedometer. Side. Headlight (Mazda B). Headlight (Mazda C)	3-4 6-8 6-8 6-8	0.84 0.42 0.84 2.50 1.50 2.00	2 2 4 15 12 15	1.35 1.35 1.18 0.95 0.80	G-6 G-8 G-12 G-16½ G-8 G-10	3/4 1 1 1 1/2 2 1 1 8	13/8 13/3 1116 21/2 31/8 17/8	10 10 10 5 5	\$0.46 .46 .46 .60 .60
Spotlight (Mazda C)	6-8 6-8 6-8 ere is a	1.50 2.50 3.50 Llimited de	12 21 30		G-12 G-12 G-12 gularly carr			10 5 5 5	.70 .80 .70 1.00
Rear and speedometer Side (focusing) Headlight (Mazda B) Headlight (Mazda B) Headlight (Mazda B) Spotlight (Mazda B) Headlight (Mazda B)	6-8 6-8 6-8 6-8 6-8 6-8 6-8 6-8	0.84 1.25 1.00 1.50 2.00 3.00 3.00 3!2 & 4 3.00 4.00	4 6 6 9 9 12 18 18 21 & 24 24 36	1.35 1.18 1.00 1.00 1.00 0.95 0.95 0.95 0.95 0.80	G-6 G-8 S-8 G-10 G-12 G-12 G-16/2 G-16/2 G-16/2 G-16/2	3/4 1 1 1/4/23/24/24/24 1 1/4/23/24/24/24 2 1/4/23/24/24/24 2 1/4/23/24/24/24/24/24/24/24/24/24/24/24/24/24/	1 1 2 2 2 2 2 2 3 3 2 3 3 2 3 3 2 3 3 3 3	10 10 10 10 5 5 5 5 5	\$0.54 .54 .70 .60 .60 .60 .60 .60 .70 1.00

Customers are requested to order in unit package quantities to facilitate prompt deliveries.

# Western Electric SUNBEAM INCANDESCENT LAMPS



G-6, 8 and 16½ Rear, Side and Head Light 6 Cell 12-16 Volts



G-10, 12 and 161/2 Electric Vehicle



G-12 Mazda C Headlight 9 Cell 18-24 Volts



G-8 Side Light 9 Cell 18-24 Volts

MINIATURE MAZDA B AND MAZDA C AUTOMOBILE LAMPS For 6 Cell (Lead Type) Storage Battery-Generator Lighting Systems (12-16 Volts) Fitted with either bayonet candelabra single or double contact (Style 1100 or 1000) bases.

			1			1100 01	10(1/) 134	oco,	
	Ratings	Appearing		Watts	Type		Max.		
	on L	amps		per	and	Diam.	Overall	Unit	List
5		· .		Spherical	Size	Bulb	Length	Pkg.	Price
Description	Volts	Amperes	C.P.	C.P.	Bulb	Inches	Inches	10000	Clear
The following lamps are regularly carried in stock and should be ordered whenever possible.									
Rear and speedometer							1	770101	
(two in series)	6-8	0.42	2	1.35	G-6	3/	13/8	10	\$0.46
Rear and speedometer	12-16	0.26	$\overline{2}$	1.35	Ğ-6	$\frac{3}{4}$ $\frac{3}{4}$	13/8	10	.54
Side	12-16	0.42	4	1.18	Ğ-8	1 4	$1\frac{1}{16}$	10	.54
Headlight (Mazda B)	12-16	1.00	15	_	( G-12	11/2	$2\frac{1}{2}$	5	.66
, ,	12-10	1.00	15	1.00	G-161/3	$2\frac{1}{16}$	31/8	5	.66
Spotlight (Mazda C)	12-16	1.00	21	0.80	G-10 2	114	$2\frac{1}{4}$	10	.74
Headlight (Mazda C)	12-16	1.50	24	0.80	G-12	11/2	$2\frac{1}{2}$	5	.74
The following lamps, fo	r which	there is a l	imited d	mand "		-/4	2/2		
Headlight (Mazda B)!	19 16	11/ 6-11/	110 6 03	mand, w	in not be				
		11/4 & 11/2			G-16½	- 10	$3\frac{1}{8}$	5	\$0.66
Headlight (Mazda C)	12-16	2.00	40	0.80	G-16½	$2\frac{1}{16}$	31/8	5	1.50

Customers are requested to order in unit package quantities to facilitate prompt deliveries.

MINIATURE MAZDA B AND MAZDA C AUTOMOBILE LAMPS
Fitted with either bayonet candelabra single or double contact (Style 1100 or 1000) bases.

							*****			
	Ratings Appearing		Watts	Type		Max.	Unit 1			
	on Lamps		per	and	Diam.	Overall	Pkg.	List		
50 J. 16		Approx.	Spherical	Size	Bulb	Length	Quan-	Price		
Description	Volts Amperes	C.P.	C.P.	Bulb	Inches	Inches	tity	Clear		
Lamps for 9 Cell (Lead Type) Storage Battery-Generator Lighting Systems (18, 24 Vol.)										
The following lamps for which there is a limited demand, will not be regularly earried in stock.										
1) 1 1	1			11 110/6 1/6	c be correct i's	carried	III SLOCK	•		

Rear and speedometer (two in series)..... 10 0.261.35 G-6 3/4 3/4 10 \$0.60 Rear and speedometer... 18 - 240.17 2 13/8 111 116 1.35G-6 10 .70 Side. 18 - 240.264 1.18 G-81 10 .80 Headlight (Mazda B).... 18 - 241.00  $2\overline{1}$ 1.00  $3\frac{1}{8}$ G-16½  $2\frac{1}{16}$   $1\frac{1}{2}$ 5 1.00 18-24 Headlight (Mazda C).... 24 1,00 0.80G-1221/9 1.50

Lamps for Ford Magneto Lighting System\*

The following lamps are	regular	ly carried	in stock.						
*Headlight (Mazda B) (two in series)	9	2.00	18	0.90	{ G-12   G-161/6	$\frac{1\frac{1}{2}}{2\frac{1}{16}}$	$\frac{21/2}{31/8}$	5	\$0.60
*Headlight (Mazda C)		1		İ	(0-1072	216	3/8	0	. 60
(two in series)	9	2,00	27	0.72	G-12	11/2	21/2	5	.70

Lamps for Use Upon Lead and Alkaline Type Electric Vehicle Storage Battery Circuits (30-34, 40-44, 60-64 and 80-84 Volts)

The following lamps are regularly earried in stock.

Watts	Watts per	Type	Diameter	Maximum	Unit	List
	Spherical	and Size	Bulb	Overall	Pkg.	Price
	C.P.	Bulb	Inches	Length, Inches	Quantity	Clear
8	1.31	G-10	$\begin{array}{c} 1\frac{1}{4} \\ 1\frac{1}{2} \\ 2\frac{1}{16} \end{array}$	21/4	10	\$1.20
†15	1.20	G-12		21/2	5	1.20
†25	1.15	G-16½		31/8	5	1.20

\*These lamps are designed for use on the Ford magneto lighting system and are regularly fitted with double contact bayonet candelabra (Style 1000) base.

†If fitted with medium screw base (Style 100) or with medium bayonet base (Style 800) \$0.07 list additional.

Customers are requested to order in unit package quantities to facilitate prompt deliveries.

#### SUNBEAM INCANDESCENT LAMPS



S-17 and 19 20, 30, 40, 50 and 60 Watts Gem Type



60 Watts Mill Type Gem Type



50 Watts



10 and 20 Watts 105—125 Volts



20, 30, 50 and 60 Watts 105—125 Volts



P-19 and 21 30, 35 and 60 Watts 220—250 Volts

#### Gem Class-Large Style-Straight Side and Round Types

Size of Lamp in Watts	Efficiency W.P.C.	Type and Size Bulb	Diameter Bulb Inches	Maximum Overall Length Inches	Base Regularly Supplied	Std. Pkg. Our Std. and Shpt. Ouantity	Quantity  Maximum Number	List I	Price Frosted	
	‡110 to 125 Volt Straight Side									
$\frac{20}{30}$	$\left[\begin{array}{c} 4.00 \\ 3.00 \end{array}\right]$	S-17	21/8	41/2	Med. screw	250	200	\$0.40	\$0.45	
40 50 60	$\left\{ egin{array}{c} 2.56 \\ 2.50 \\ 2.50 \\ \end{array} \right\}$	S-29	23/8	51/8	Med. screw	250	200	.40	.45	
			‡110 to 1	25 Volt St	raight Side, M	ill Type				
60	2.6	S-19	$-2^3$ 8	$1 - 5\frac{1}{8}$	Med. screw	250	200	\$0,40	\$0.45	
	‡110 to 125 Volt Round									
50	1 2.5	*G-12	$1 - 3\frac{1}{8}$	45/8	Med. serew	100	[ 100 <sub>]</sub>	\$0.50	1 \$0.56	

\*The 50 watt round bulb Gem lamp is regularly supplied in G-25 bulb but can be supplied in G-18 $\frac{1}{2}$  3.0 w. p. c. (standard package quantity 200) at \$0.25 clear and \$0.27 $\frac{1}{2}$  frosted, but is not recommended.

>• tLamps of voltages of 100 to 109 and 126 to 130 inclusive are not regularly carried in stock but may be obtained at the same list prices.

The prices given above cover lamps with a tip unless otherwise indicated; for tipless lamps the additional

charge is 10 per cent. on Gem lamps.

For anchoring filaments to the bulb in Gem lamps, except in the cases of such lamps as are regularly standardized with bulb anchored filaments, an additional charge of \$0.03 list for each anchor shall be made. The charge for etching letters or designs on all sizes of Gem lamps is \$0.001/4 Net each, subject to no

discount.

#### Carbon, Large Style

#### REGULAR TYPE, 105-125 AND 220-250 VOLTS Plain Lamps-Standard Medium Screw Base STRAIGHT SIDE

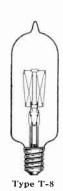
Size of Lamp		Base		В	ulb	Maximum Overall	Std.	Price :	Each
in		Regularly	Efficiency	Q1 1	Diameter	Length	Pkg.		
Watts	Voltage	Supplied	W.P.C.	Style	in Inches	in Inches	Quantity	Clear	Frosted
20	105	Med. screw	4.15	S-17	21/8	41/2	‡200	\$0.32	\$0.37
30		Med. screw	3.23	S-17	$  2\frac{1}{8}$	$4\frac{1}{2}$	‡200	.32	.37
50	to {	Med. screw	2.97	S-19	23/8	$5\frac{1}{8}$	‡200	.32	. 37
60	125	Med. screw	2.97	S-19	23/8	51/8	‡200	.32	. 37
35	220 to f	Med. screw	4.40	P-19	23/8	45/8	‡200	.36	.41
60	250 1	Med. screw	3.69	P-21	25/8	5	200	.36	. 41
			CITED A	CHE CI	DE CICI	.7			

	STRAIGHT SIDE—SIGN								
10	105 to f	Med. screw	5.00	S-14	13/4	‡3½	‡200	\$0.32	\$0.37
20	125 \	Med. screw	4.15	S-14	13/4	‡3½	‡200	.32	.37
30	$\left\{egin{array}{c} 220\  au 0 \ 250 \end{array} ight\}$	Med. screw	5.9	P-19	$2\frac{3}{8}$	‡4 <sup>5</sup> / <sub>8</sub>	‡200	.36	.41

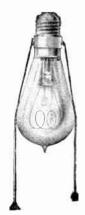
†Standard shipping quantity of these lamps is 250. Standard package discounts for lamps in the above schedule can be given only on orders for not less than a standard package quantity of one size or assorted sizes of bulbs. For any one size of bulb, lamps of different voltages, wattages and finish of bulb may be combined in one package.

# SUNBEAM INCANDESCENT LAMPS











Type S-12½ Hylo Economical Lamps

# Mazda B Miniature Candelabra Lamps

#### 105-125 VOLTS

Regular Fitted With Unskirted Candelabra Screw Base (Style 500) Unit Package Quantity
5 Lamps

		Watts	Type		Maximum		
		per	and	Diameter	Overall		
		Spherical	Size	Bulb	Length	List Pr	ice ———
Description	Watts	C.P.	Bulb	Inches	Inches	Clear	Frosted
Candelabra, Style B	15	1.67	B-9½	$1_{\frac{3}{16}}$	$3\frac{3}{4}$		1100000
Candelabra, Style D	15	1.67	D-10	11/4	33/4		
Candelabra, Style E	15	1.67	T-8	1	334	\$1.10	\$1.20
Candelabra, Style G	15	1.67	G-161/2	$2\frac{1}{16}$	31/8	Ψ1.10	φ1.20
Candelabra, Style F	15	1.67	$S-12\frac{17}{2}$	$1\frac{10}{16}$	31/2		

Customers are requested to order in unit package quantities to facilitate prompt deliveries.

## Hylo-Economical Lamps

#### MAZDA AND CARBON LAMPS—TURN-DOWN TYPE (110 TO 125 VOLTS)

Lamps on this schedule do not count in determining discounts in the sale of other lamps.

Turn-down Lamps. An incandescent lamp with one or more filaments to give two or more combinations of candle power at the same voltage and adapted for use in standard sockets.

Economical and Hylo Lamps. Fitted with medium screw type of turn-down bases. Either pull string or turn bulb style. Hylo pull string type of base, \$0.02 Net extra.

Watts	C.P.	Voltage	List Price Each
$\frac{25}{40}$	$20 \times 1.2 \\ 33 \times 1.2$	110-125 110-125	\$1.45 1.45

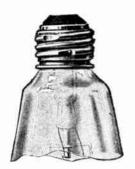
#### CARBON (105 TO 125 AND 220 TO 250 VOLTS)

C.P.	Voltage	List Price Each
$8 \times \frac{1}{2}$	105-125	\$1.20
16 x 1 32 x 1	105-125	1.20
8 x ½	$105-125 \\ 220-250$	1.40
16 x 1	220-250	$\frac{1.30}{1.30}$

For frosting or coloring carbon lamps the following **Net** additional charges are made per lamp: frosted or superficially colored, \$0.05. Natural colored glass, all colors, \$0.25.

For etching letters or designs on lamps, see sheet entitled "Extra Charges."

#### HUBBELL LOCKING LAMPS





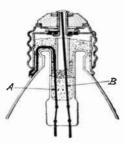
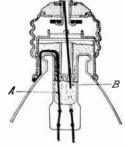


Fig. 1



## Hubbell Locking Lamps

Schedule "L"

The base of the Hubbell locking lamp consists of two parts: an outer, or rotating shell, and an inner shell cemented to the lamp.

The filament of the lamp is attached in the usual manner.

Figure 1 illustrates a cross-sectional view of lamp base ready for use, showing both the leading-in wires A and B soldered to the inner shell and to the center contact respectively.

A lamp equipped with the Hubbell locking base may be screwed into any standard Edison base socket, but cannot be removed therefrom by turning the lamp in the opposite direction.

Burned out or broken lamps may be removed by a slight downward pull of the lamp. This action will break the leading-in wire B, connecting the center contact to the lamp filament as shown in Figure 2.

In this lowered position the outer shell of lamp base engages a reverse ratchet and the lamp may then be

When the lamp is removed from the socket, the electrical connections are permanently destroyed and the

lamp becomes valueless.

Hubbell locking lamps are absolute proof against removal, and have for their object the furnishing of a lamp which may be readily attached to a socket, but when in place cannot be detached, thereby preventing the improper removal or changing of lamps by unauthorized persons. They are especially recommended for public buildings, railway stations, hotels (where sockets are frequently used for heating devices) and many other places where it is not desired to remove the lamps except for replacement.

#### STRAIGHT SIDE-FITTED WITH MEDIUM SCREW BASE

SIRAIGHT SIDE TITTES WITH MESTERS							
	Size of Lanup	Size and Type	Diameter	Overall Length			ce Each-
Volts	in Watts	of Bulb	in Inches	in Inches	age Quantity	Clear	Frosted
10100	(10	S-17	$2\frac{1}{8}$	45/8	100	\$0.92	\$1.00
	15	S-17	$\overline{2}\frac{1}{8}$	45/8	100	,92	1,00
	20	S-17	$\overline{2}\frac{1}{8}$	45/8	100	, 92	1.00
105 to 125	$\begin{cases} \frac{20}{25} \end{cases}$	S-19	$\frac{23}{8}$	51/	100	.92	1.00
	40	S-19	$2\frac{3}{8}$	51/4	100	.92	1.00
	60	S-21	$\overline{2}^{5}_{8}^{\circ}$	51/2	100	1.16	1.24
	25	S-19	$\overline{2}\frac{3}{8}$	$5\frac{1}{8}$	100	1.08	1.16
000 4- 950	{ 40	S-19	$\overline{23}_{8}^{\circ}$	$51_{8}$	100	1.08	1.16
220 to 250	60	S-21	$\frac{25}{8}$	57/8	100	1.36	1.46
			, 0	, ,	IUM SCREW	BASE	
	STRAIGHT	SIDE (SIGN			TOW SCIED	20.00	@O 04
10 / 10	$1 \frac{21}{2}$	S-14	$1\frac{3}{4}$	4	100	\$0.88	\$0.94
10 to 13	{ 5 }	S-14	$1\frac{3}{4}$	4	100	.88	.94
50 to 65	` 5	S-14	$1\frac{3}{4}$	4	100	. 92	1.00
105 to 125	10	S-14	$1\frac{3}{4}$	4	100	.92	1.00
	ROUN	ND BULB-FI	TTED WI	TH MEDIUM	SCREW BAS	E	
	( 15	G-25	31/8	43/4	50	\$1.38	\$1.50
	25	G-25	31/8	434	50	1.38	1.50
105 to 125	$\begin{cases} \frac{25}{40} \end{cases}$	G-25	$3\frac{1}{8}$	43/1	50	1.38	1.50
	60	G-30	$3\frac{3}{4}$		24	1.84	2.00
		G-25	21/2	$\frac{5\frac{1}{2}}{4\frac{3}{4}}$	50	1.62	1.72
220 to 250	$\begin{cases} 25 \\ 40 \end{cases}$	G-25	$\frac{378}{31/8}$	43/4	50	1.62	1.72
	. (40		078	*/4	0		

Instructions for ordering lamps:

In order to facilitate the work of our office and to avoid misinterpretation of orders, we would request that customers mention the following facts on each order:

1. Quantity (number of lamps desired).

2. Size of lamps (in watts, whether 40 watts, 60 watts, etc.).

3. Circuit voltage (voltage at the lamp socket)

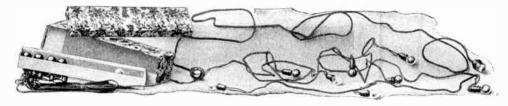
4. Style and size of bulb (for example, S-19-(i-25, etc.).

5. Finish of bulb (clear, bowl frosted or all frosted).

All lamps—medium screw only

Delivery F. O. B. Factory, Bridgeport, Conn. For warehouse deliveries write nearest house.

#### CHRISTMAS TREE AND DECORATIVE OUTFITS





For Use on 32 V. House Lighting System

List Price

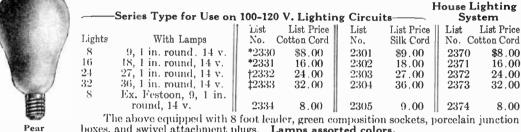
\$8.00

16.00

24.00

32.00

8.00



The above equipped with 8 foot leader, green composition sockets, porcelain junction boxes, and swivel attachment plugs. Lamps assorted colors.

Battery Type, Multiple Burning MERCERIZED, COTTON COVERED, TWISTED CORD

List Price List No. Bulbs Lamp Volts Branches \*2325 8 light battery outfit complete less batteries. 1 in. round 31/2 1 of 8 \$6.00 2310 8 light storage battery outfit less batteries... 1 in. round 1 of 8 7.00 Lamps assorted colors.

#### Series Type Mazda Decorative Lamps

Fo	For 100-120 V., 8 Lamp in Series				For :	32 V.,	House Lighting, 8	Lamps
List			List	н	List		in Series	List
No.			Price		No.	Color	Style	Price
01315	Clear 3	C.P., 14 v., G-8, 1 in.	\$0.42		01337	Clear	1 C.P., 4 v., G-8, 1 in	. Price
01317	Red 3	C.P., 14 v., G-8, 1 in.	.46				1 C.P., 4 v., G-8, 1 in	
01318	Blue 3	C.P., 14 v., G-8, 1 in.	.46				1 C.P., 4 v., G-8, 1 in	
01319	Green 3	C.P., 14 v., G-8, 1 in.	.46	Ш	01340	Green	1 C.P., 4 v., G-8, 1 in	cation

Battery Type, Multiple Burning
For Use on 3 Standard 6 In. Dry Cells For Use on 6 Volt St

For Use on 6 Volt Storage Batteries 01332 Clear 2 C.P., 6 v., G-8, 1 in. Price 01333 Red 2 C.P., 6 v., G-8, 1 in. on 01334 Blue 2 C.P., 6 v., G-8, 1 in. appli-01335 Green 2 C.P., 6 v., G-8, 1 in. cation 047 Green 1 C.P., 31/2 v., G-8, 1 in. .42

> Fancy Mazda Lamps 3 C. P. 14 Volts-Miniature Base Small Fruit Large Fruit

	List		List Price	List		List Price
	No.		Each	No.		Each
	01401	Peach	\$0.80	01410 B	anana	\$1.00
	01402	Orange				
	01403	Tomato				1 . 00
	01404	Apple				1.00
		Roses	Rosel			Lilies
	List	List Price	List	List Price	List	List Price
	No.	Each	No.	Each		Each
1	01420	Red \$1.00	01425 Red	\$1.00	01430	Purple \$1.00
)	01421	Yellow 1.00	01426 Yellow	7 1.00	01431	Red 1.00
ĺ	01422	Pink 1.00	01427 Pink	1,00	01432	Pink 1.00
		Birds	An	imals		Figures
	01435	Canary \$1.40	01440 Fish	\$1.20	□ 01450	Santa Claus. \$1.20
	01436	Blue Bird 1.40	01441 Lion.,	1.20	01451	Snowman 1.20
	01437	Robin 1 . 40	01442 Frog	1.20	01452	Dutch Girl 1 20

1.40 | 01443 Cat..... 1.20 | 01453 Policeman... Fancy Mazda lamps are packed in holly paper boxes—10 lamps of one type to a box \*Standard package 100. †Standard package 50. ‡Standard package 25.



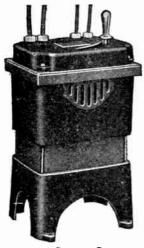


Santa |Claus

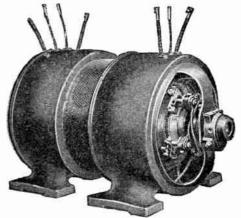


Clown

# COMPENSARCS FOR MOVING PICTURE ARC LAMPS



Alternating Current Compensare



Direct Current Compensare

## Alternating and Direct Current Compensarcs

ALTERNATING CURRENT COMPENSARCS

#### General Mechanical Construction

The compensare is a transforming device built with special reference to operating an alternating hand-feed arc lamp such as used with picture machines, requiring approximately 35 volts across the arc and a steady current of from 30 to 60 amperes.

The construction of this device is very substantial and embodies all the careful features of design and finish that is carried

out in our standard lines of transfermers.

**Electrical Characteristics** 

The following embodies some of the principal characteristics of the alternating current compensare:

The device has an electrical characteristic which enables it to hold the arc steady at predetermined current values through a considerable range in the length of the arc.

The current value at short circuit is such that it will not blow the fase, providing the fuse has a capacity slightly in ex-

cess of the normal operating current.

It is highly efficient, having low core loss and copper loss, resulting in a low operating temperature.

Each of the three adjustments of the switch is so designed that in short circuiting from step to step the circuit is at no time open. This obviates fickering at the lamp.

time open. This obviates flickering at the lamp.

The power factor of the current operating lamp is as high as can be obtained and at the same time maintain the stability at the arc which is necessary for steady pictures.

#### Connections

The compensare is a self-contained device and requires no auxiliary theostat or other controlling mechanisms. Through the top of the cover of the compensare four leads are brought through porcelain bushings, two of which are marked "Lamp," and these should be connected to the lamp terminals. The other two should be connected to the operating circuit or line. No other connections are necessary.

As this is an alternating current device, there are no positive or negative wires

#### DIRECT CURRENT COMPENSARCS

In communities where direct current is supplied to moving picture beuses, theostats are generally used to cut down the line voltage to the required voltage at the arc. This is, of course, a very inefficient method and in such cases the direct current compensare should be sold. This device consists of a direct current moter built to operate on direct current circuits of 115, 230 or 500 volts, directly connected to a direct current generator which cuts down the voltage to the voltage required at the arc, approximately 55 volts. This device shows a very good efficiency and is a very economical device as compared with the process. the rheostat.

#### General Mechanical Construction

The direct current compensare is constructed by using two frames connected together by means of a special casting. The sets have two bearings, two field frames and two armatures. The armatures are mounted on one shaft. The sets are not furnished with a subbase.

#### Electrical Characteristics

The electrical characteristics are similar to those of the ordinary direct current balancer sets. However, each frame is equipped with special windings, so as to give a volt ampere characteristic curve, such that when the current at the arc reduces, the voltage increases, thus insuring a stable arc. These results are obtained without using any lamp steadying resistance. On account of the characteristics of the set, if carbons are held in contact, the mains are not short circuited. The field rheostat can be adjusted to deliver the arc current from 20 to 45 amperes, approximately. These sets are designed on the basis of an arc consumption of 35 amperes, 50 volts.

#### Connections

The motor end of each set will have three terminals, and the same procedure will be followed in connecting up as in a shunt wound motor, the middle lend being the lend from the field coils, the two outside being for the main line leads.

The generator end will be equipped with two leads for connecting direct to the arc lamp.

In addition to this, two small leads from the two inner bushings are connected direct to a closed circuit rheostat, which rheostatis to be used for adjusting the current of the arc.

NOTE: See following page for prices.

# Western Electric COMPENSARCS (Continued)

#### Alternating Current Type A, Form 4 GENERAL MECHANICAL CONSTRUCTION

The compensare is a transforming device built with special reference to operating an alternating hand-feed are lamp, such as used with picture machines, requiring approximately 35 volts across the arc and a steady current of from 30 to 60 amperes.

The construction of this device is very substantial and embodies all the careful features of design and

finish that is carried out in our standard lines of transformers.

The core is made of the highest grade of sheet steel laminations, the outer surface being fully exposed to the air. The coils are mounted within the core and are completely protected and thoroughly insulated. Core and coils are given vacuum treatment, making them moisture proof and weather proof.

The assembled core and coils are supported by a cast iron base with four legs which hold the compensare

at a convenient height from the floor.

The case is also of cast iron and rests on the top of the core. It is liberally ventilated, encloses the ends

of the coils and protects the connections on the inside.

A slate top supports the switch blade and clips, which are protected by cast iron cover. The slate top, cover, case and base are securely held together by four long, heavy bolts, one passing through each corner of the slate top, case and base outside the core.

A horizontal, three-step, continuous switch is mounted on the slate top, providing three adjustments. The switch handle projects through a slot in the top of cast iron cover, which slot is plainly marked for the

three adjustments referred to.

The cast iron cover over the slate top completely encloses the switch blade and contacts, eliminating danger of handling current carrying parts; it also encloses the switching mechanism eliminating danger from fire and accidents.

List				Ship. Weight	W.E.
No.	K.W.	Volts	Cycles		
94312	2	110	60	in Lbs. 160	List \$96.80
94313	$2\frac{1}{2}$	220	60	180	
**	-/2	-=	00	170	116.00

For compensares equipped with ammeter, add \$24 to above prices.

Note: Compensares can be built for any three specified ratings of current at 35 volts at the arc. Standard rating of 30, 40, 60 amperes, 35 volts, should be furnished wherever it is possible.

#### **DIMENSIONS**

	110 Volts	220 Volts
TI-i-I a C O a a a C 'a I	60 Cycles	60 Cycles
Height from floor to top of switch	$22\frac{1}{4}$ ins.	$23\frac{1}{4}$ ins.
	10 ins.	10 ins.
Length.	12 lbs.	12 lbs.
Net weight	125 lbs.	150 lbs.

#### A.C. TO D.C. COMPENSARCS

List No. covers the compensare complete including the motor-generator, starting compensator for the 50, and 70-ampere, multi-phase equipment; steel cabinet panel with ammeter and generator field rheostat; and two short-circuiting switches, one of which is mounted at each picture machine.

The 35, 50 and 70-ampere equipments will be listed with multi-phase motors only. Where operating conditions will allow 5, 7½ and 10 H.P. single-phase motors we can supply these outfits single-phase. Such cases will be subject to special quotation.

A steel cabinet panel is furnished as part of the two-lamp series outfits. Mounted in the panel is a field rheostat and on the face of the panel an ammeter. The small panel for two 35-ampere lamps alternately has an ammeter with a 50-ampere scale; the panels for the 50 and 70-ampere outfits have an 80 and 100ampere scale respectively.

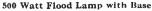
#### 60 CYCLES 1800 R.P.M. 35-AMPERE OUTFIT

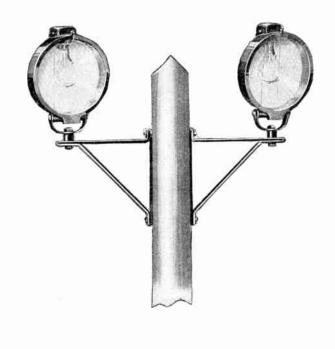
#### For Two 35-Ampere Are I ampe All

For I wo 35-Ampere Arc Lamps Alternately									
List			Approx.	W. E.					
No.	Voltage	Phase	Ship. Weight	List Price					
192111	110	2	1100	\$807.50					
192112	220	$ar{f 2}$	1100						
192113	110	3	1100	807.50					
192114	220	3		807.50					
	22.7	-	1100	807.50					
	50-AMPERE OUTFIT								
	For Two 5	0-Ampere Arc Lamps	Alternately						
192117	110	2	1200	\$906.50					
192118	220	$ar{2}$	1200	906.50					
192119	110	$\bar{3}$	1200						
192120	220	3	1200	906.50					
	<b>-</b> ,			906.50					
	F	70-AMPERE OUTFI							
	For I wo 7	0-Ampere Arc Lamps	Alternately						
192123	110	2	1500	\$1147.50					
192124	220	$\bar{2}$	1500	1147.50					
192125	116	3	1500						
192126	220	3	1500	1147.50					
	0	J	1900	1147.50					

#### Western Electric DAVIS FLOOD LIGHTS







500 Watt Flood Lamps with Brackets

#### Davis Flood Lights

Western Electric Davis 500 Watt Flood Lamp is designed for close-up lighting and is equipped with a reflector that gives a very wide diffusion. The maximum spread of the direct beam is 38 to 40 degrees.

#### CONSTRUCTION

Hood. The hood is a one-piece spinning of No. 20 gauge Armeo auto body stock with wire beaded edge for strength. It has an adjustable arm which moves the lamp bulb backward or forward to secure the proper illumination. This adjustment is hand operated from the outside of the lamp.

Reflector. The reflector is made of glass, silvered and copper plated. It is 13% inches in diameter and inch thick and is held in place by four brass lugs which are quickly removable.

Door. The door hinges from the bottom and is locked in position at the top by a special cam.

Universal. The universal is arranged so that the lamp may be adjusted in a vertical plane, also in a horizontal plane. When once adjusted the lamp can be rigidly locked into position.

#### MOUNTING

Pipe and Base. The portable type is supplied with 1 inch pipe 18 inches long. One end of the pipe screws into a round cast iron base 14 inches in diameter. The upper end of the pipe fits into a socket on the universal casting.

Bracket. For mounting on building or poles these flood lamps can be furnished with a strong bracket

triangular in shape like the illustration above.

Finish. The finish is dark gray. Before the final coat of gray is put on the lamp is first treated with Japan and baked to a high temperature. This will prevent the lamp from rusting.

Weight. With pipe and base and bracket, 27 lbs. Hood alone 20 lbs.

Height. Overall, with pipe and base, 38 inches; from bottom of universal to top of hood, 20½ inches.

Depth. From back to front of case, 8½ inches.

Bulbs. It can be used with three bulbs. With 500 or 400 watt type P. S. 40 Mazda lamp or 300 watt

Type P. S. 35 Mazda lamp.

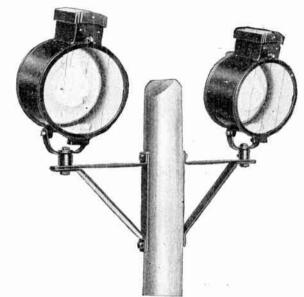
List No.		List Price
500 watt	Western Electric Portable Type, Davis Flood Light	\$60.00
500 watt	Western Electric Bracket Type, Davis Flood Light	60.00
• • • • • • • • • • • • • • • • • • • •	Type 400 Watt P. S. 40 bulb	
	Type 500 Watt P. S. 40 bulb	
	Type 300 Watt P. S. 35 bulb	6.50

Price of lamps of other voltages upon request.

# Western Electric DAVIS FLOOD LIGHTS



Flood Lamp with Base



Flood Lamp with Brackets

# Davis Flood Lights

The Western Electric Davis Flood Lights are designed for use with 750 watt or 1000 watt Type C Mazda Lamps and they are supplied with reflectors of a special design which diffuse the light over large and other work where it is advantageous to have a powerful light distributed early work, bathing beaches

and other work where it is advantageous to have a powerful light distributed evenly over a large area.

If so ordered the Western Electric Davis Flood Lamps can be supplied with a searchlight type of reflector. This reflector concentrates the light into a solid and **powerful beam**. Flood lamps with this style of reflector are used on boats and for other work in place of are searchlights.

Reflectors. The reflectors are of glass, silver plated and treated with heavy heat resisting backing.

Cases. The eases are furnished either of steel or cast iron. Both are heavily black enameled. The case is hinged for opening both front and rear. Ample ventilation is provided by ducts in the chimney.

Portable Type. The portable type is mounted on a 214 foot horizontal provided by ducts in the chimney.

Portable Type. The portable type is mounted on a 3½ foot heavy pipe standard, with an 18 inch round base, which is amply large to give stability.

Bracket Type. For pole mounting the bracket type is recommended.

	of the ingreeouth item (ed.		
List	Weight	Packed	
No.	Portable	Bracket	List Price
410439	Western Electric Davis Flood Light steel Type	Type	Each
		72	\$100.00
410441	1000 watt Mazda type lamp bulb, P. S. 52, regular, clear, 105 to 125 volts.	95	100,00
Deli	very F. O. B. Factory, Chicago III For warehouse delice 125 volts.		14.00

Delivery F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.

The following GE apparatus is required where flood lamps are operated on an alternating current series system:

		- A SHILL DOLL IN
Oil Switch       4500       F.P.7         Horn Arrester       144119         Compression chamber arrester       79218         Control Panel       154592 & 154628         Regulators       8. J. & 1         Series Transformer 1L—6.6 Amperes       197328         Multiple Transformers       A (1 and         Specify when each in the contract of the contrac	Section 2612. 1 TPST 4640 4610 3750 R. O. Listed elsewhere Pole Type 1 2 K, W.)	Prices on application

Specify when ordering whether portable or bracket type is desired.

# Western Electric VICTOR SPOT LIGHTS





No. 180 Spot Lamp Windshield Attachment

For safe driving, for convenience in reading road signs and street numbers, and for a dependable trouble light, every automobile should be equipped with a spot light. This spot light clamps on the windshield or may be fitted with a bracket for attaching to the foredoor. It is always within easy reach of the driver and can be tilted to any angle or position for reading signs along the road, or for gauging the width of the road when passing other cars.

When used as a trouble lamp it is only necessary to remove one nut and lift the spot light from its bracket. These lamps are finished in all black, except door and hexagon nuts on brackets, which are furnished

in either brass or nickel finish.

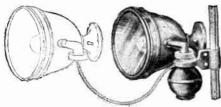
Twenty-one C. P. nitrogen bulbs are used. They are shipped with 6 volt double contact unless other-

wise specified. Throws 37,500 C. P. light.

Mirror Attachment. One of the chief advantages of the No. 50 Western Electric Victor Spot Light is the mirror which is mounted on the back of the lamp and furnishes the driver with a clear view of the road in back of the car during the day. The use of the Western Electric Victor Spot Light not only assures the car owner a maximum of safety at night, but, by means of the mirror attachment, during the day as well

T !-L		Retail	List Price
List		Price	Each
No.	The state of the s	\$6,00	\$6.00
50	Western Electric Victor Spot Light with mirror attachment.	7.50	8.00
180	Electric Spot Lamp, diameter of lamp 6½ inches, with windshield attachment.	7.50	8.00
181	Same as No. 180, except foredoor attachment	7.50	0.00

#### Model B Autoreelite



Model "B" Autoreellte

This is known as the 3 inch 1 lamp spot light. Trouble light—pleasure light. This light is always electrically connected with the battery, thereby eliminating trouble-some extension cords and romections. Simply loosen the round knurled nut above the bracket and withdraw the lamp with its 12 foot extension cord and relieve towing of one of its most disagreeable features—the fear of a breakdown on a dark road. A handy lamp for picnies, camping trips, etc., by hanging on a convenient tree. Makes tire changing as easy by night as by day.

Operation. The adjustable cord reel is located in the ball casing just back of the lamp. To use as a "trouble" or "inspection-light" simply unscrew the knurled nut and withdraw the lamp to the desired length; it enables the motorist to carry light exactly where he wants it. The cord reel winds and unwinds just like an ordinary curtain roller.

Clamps. Three pairs of windshield clamps—round, oval and rectangular—included with each lamp—

to insure minimum trouble in mounting.

Construction. Lamp and bracket in black enamel, fitted with clear or "non-glare" lens, backed by a Mazda C (nitrogen) lamp in a silvered parabolic reflector of carefully determined contour to increase and direct the light rays. Switch conveniently located at the back of the lamp. A 3½ inch reducing mirror giving complete view of the road behind is an added feature if desired.

giving	MODEL B—6 21 C. P. LAMP	Retail	W. E.
List	MODEL B-6 21 C. F. LAWI	Price	List Price
No.			\$11.25
3130	6 inch lens, without mirror for rear view	8.00	12.00
3140	e inch lone with mirror for rear View	0.00	12.00
0110	MODEL B—7.30 C. P. LAME		\$12.76
3131	7 inch lens, without mirror for rear view	9.00	13.50
3141	7 inch lens, with mirror for rear view. 7 inch lens, with mirror for rear view.		
1	Add "L" to catalog number and \$0.50 to retail price for "Non-Glare" Lens.	\$1.00	\$1.50
]	Add "L" to catalog number and 50.50 to Retail proceed from Flat base brackets for attaching to closed cars or trucks frame	2.00	3.00
]	Mounting stands for motor boats.	2.00	
]	Mounting stands for motor poats.  Note: Prices are complete with 6 volt lamp; 12 or 18 volt lamp supplied if specified	01160	
	NOTE: Prices are complete with a void lamp, 12 of loss deliveries write nearest he Delivery F. O. B. Factory, Cincinnati, O. For warehouse deliveries write nearest he	Gane.	

#### **AUTOMATIC FLASHERS**



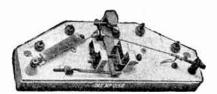
No. 005R Thermo-Wynk



No. 005P Wynk-A-Lyte Flashing Plug



No. 005V Vertical "Baby" Thermo-Wynk



No. 0152 Thermo-Wynk-Tu-Way Size 21/4 x 33/8 x 93/8 Inches

#### Automatic Motorless Thermo-Wynks

No. 005R Receptacle. For 20 to 60 watts. Adapted for small window transparencies.

No. 005P Wynk-A-Lyte Flashing Plug. Operates on a 20, 25, 40 or 60 watt lamp on 50 to 220 volts inclusive. Can be adjusted without removing from socket and is compensated for temperature changes.

No. 005 Vertical "Baby" was brought out for use where it is impractical to install other types.

List		Capacity	Watts	List Price		Capacity	Watts	List Price
No.	Volts	per Čircuit	per Circuit	Each	Volts	per Circuit		
						per Circuit	per Circuit	Each
005R	110	½ amp.	60	\$1.44	220	¼ amp.	60	\$1.68
005P	110	17 0 mm	60					
		½ amp.		1.60	220	¼ amp.	60	1.60
005 V	110	½ amp.	60	1.20	220	1/2 amp.	60	1.44
				1.50	2217	/4 amp.	00	1.44

#### Thermo-Wynk-Tu-Way

The Tu-Way will flash two lamps or two circuits of lamps alternately, one set remaining lighted while the other is out, and so on. It is useful for flashing colored sets of lamps alternately, for switching two portions of a sign, for illusion where the face lights up through the back of the sign, etc.

List No. 0052 0152	. Volts 110 110	Capacity per Circuit ½ amp. 1½ amp.	Watts per Circuit 60 165	List Price Each \$16.44 19.76	Volts 220 220	Capacity per Circuit ¼ amp. ¾ amp.	Watts per Circuit 60 165	List Price Each \$19.20 22.40
						/4 *******	100	22.70



No. 030 Thermo-Wynk



Vacu Type

#### Automatic Motorless Thermo-Wynks

Nos. 005, 015, 020 and 030 Flashers are wound with special resistance wire, and Nos. 020 and 030 have a spark eliminator. Like the Vacu Type, Thermo-Wynks are compensating and will work in zero weather the same as in a temperature of 100 degrees F.

#### Vacu Type

An instantaneous breaking, single or double circuit, will operate on direct or alternating currents.

** .	Q				List Pr	rices
List	Capacity				Single	Double
No.	per Circuit	Watts	Volts	Size	Circuit	Circuit
51 <b>V</b>	5 amps.	550	110	3 1 × 7 × 14	\$36,40	\$39.20
101 V	10 amps.	1100	110	3½ x 7 x 14	39.20	42.00
151 <b>V</b>	15 amps.	1650	110	31/4 x 7 x 14	46.20	49.00
201 V	20 amps.	2200	110	314 x 7 x 14	40.00	10,00

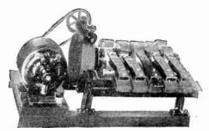
The Vacu Type prices are based on 110 volts. If used on 220 volts, reduce rating 50 per cent. and add \$1.40 each to the single circuit, and \$2.80 to double circuit.

Delivery F. O. B. Factory, New York, N. Y. For warehouse deliveries write nearest house.

#### **ELECTRIC SIGN FLASHERS**







No. 4 H. H. S.

# On and Off or Spelling Type CAPACITY—1 TO 550 WATTS PER SWITCH AT 110 VOLTS

					st Prices	For Each
List	No. of	Size	Shpg. Wt.,	With	Steel	Additional
No.	Switches	Inches	Lbs.	Motor	Cabinet Only	Switch Add
51	1	11 x 12 x 14	60	\$55.50	\$16.50	\$3.00
52	2	11 x 12 x 14	60	58.50	16.50	3.00
	CAPACIT	TY-550 TO 1100	WATTS PER	SWITCH AT	110 VOLTS	
101	1	$11 \times 12 \times 14$	64	\$60.00	\$16.50	\$4.50
102	2	$11 \times 12 \times 15$	65	64.50	16,50	4.50
	CAPACIT	Y-1101 TO 1620	WATTS PER	SWITCH AT	110 VOLTS	
151	i	$11 \times 12 \times 14$	64	\$64.50	\$16.50	\$6.00
152	2	$11 \times 12 \times 15$	65	70.50	17.40	6,00

Do not allow more than 15 amperes (1650 watts) at 110-220 volts for any one switch. Heavier loads should be divided among two or more switches. Where several switches are used there is an extra charge for feeders, etc.

No. 4 Heavy Highspeed Type

Usually wired in four circuits or a multiple of four viz.: 1, 2, 3, 4-1, 2, 3, 4, etc. All the 1's on one circuit, 2's on the second circuit, 3's on the third circuit and 4's on the fourth circuit.

CAPACITY—PER SWITCH 110-120 VOLTS, 330 WATTS—10-13 COLTS, 150 WATTS 4HS  $\frac{11 \times 12 \times 15}{4} = \frac{70}{11 \times 12 \times 15} = \frac{70}{11 \times 12 \times 15} = \frac{864.50}{11 \times 12 \times 15} = \frac{83.76}{11 \times 12 \times 15} = \frac{11 \times 12 \times 15}{11 \times 12 \times 15} =$ 

#### No. 35 Script Type

CAPACITY—PER SWITCH 100-120 VOLTS, 110 WATTS—10-13 VOLTS, 50 WATTS

208 20 11 x 12 x 22 90 \$85.50 \$18.00 \$1.50 Note: Carrying capacity of 220 volts, 50% less. Add on for 220 volt motors, \$3.00. A. C. motors are 60 cycles. For 25 to 50 cycles, add \$9.00. An extra charge of \$6.00 per switch is made for 3 pole machines.

#### No. 6 Lightning Type

CAPACITY—PER SWITCH 330 WATTS, 3 AMPERES—150 WATTS, 15 AMPERES 4L 4 11 x 12 x 15 70 \$64.50 \$16.06 \$3.76

No. 12 Snake Chaser Type

The number of circuits should be a multiple of the number of snakes or objects employed, viz.; 60 lamps, 3 snakes would require 20 circuits. Wire accordingly.

#### Waving Flag Type

CAPACITY—PER SWITCH 330 WATTS, 3 AMPERES—150 WATTS, 15 AMPERES 4WF 4  $11 \times 12 \times 15$   $70 \times 64.50 \times 17.40 \times 3.76$ 

#### INSTRUCTIONS FOR ORDERING

- 1st. Number and candle power of lamps to be controlled by each switch.
- 2d. Whether Mazda (Tungsten) or carbon lamps.
- 3d. If Mazda (Tungsten) lamps whether they are to be used on low voltage transformers,
- 4th. If direct or alternating current. If alternating, the frequency (number of cycles.)
- 5th. If two or three-wire system.
- 6th. Voltage.
- 7th. If design is complicated, give complete description of the sign, and preferably a sketch showing number of lamps for circuit and how they are to be flashed.
  - 8th. Shipments: express or freight.
  - \*Delivery F. O. B. Factory, New York, N. Y. For warehouse deliveries write nearest house.

#### METAL CASE TIME SWITCHES





#### Hartford Time Switches

This is a device by which electric current is automatically turned on and off at such times as desired with no further attention than the weekly winding.

It consists of a high-grade Seth Thomas marine clock movement, and a Standard Switch, so arranged that each in its operation is independent of the other. This permits of perfect regulation of the clock and assures accuracy of operation.

The switching mechanism is positive in operation; in the lower capacity-switches, it being a high-

grade rotary switch, and in the larger capacity, a high-grade standard knife switch.

The mechanism is enclosed in a dust and weatherproof japanned iron case supplied with a Sub-Treasury lock and rubber gasketted door.

#### STANDARD TYPES

Type "B"—Throws the current on and off once each day, seven days per week.

Type "C"—The same as type "B," excepting that it automatically disconnects the switch one day each week, designed to omit Sunday operation.

Type "D"—Similar to type "B," but arranged to throw light on and off two periods each day (this type requires winding twice a week).

Type "E"—Two rate meter service control.

Type "G"—Designed to control apartment house lighting.

All switches are provided with hand trip, by which the switch can be tripped independently by hand, and are also, with the exception of Type "C," equipped with a cut-out, permitting the disconnecting of the clock and switch, without stopping the clock.

Dimension—The enclosing cast-iron case up to 50 amperes, Double Pole, measures approximately 12

inches high, 71/2 inches wide, 31/2 inches deep.

# SMALL TYPE

For use on circuits up to 250 V.—A. C. or D. C.

	_	——List Price	e Each	
Description	Type B	Type C & D	Type E	Type G
10 Amperes Single Pole	<b>\$</b> 38.40	\$41.60	\$40.00	\$43.20
10 Amperes Double Pole	38.40	41.60		43.20
10 Amperes Triple Pole	40.00	43.20		
20 Amperes Single Pole	40.00	43.20	41.60	
20 Amperes Double Pole	40.0 <b>0</b>	43.20		
20 Amperes Triple Pole	41.60	44.80		
35 Amperes Single Pole	41.60	44.80	43.20	<b>67</b> .20
35 Amperes Double Pole	41.60	44.80		<b>67</b> ,20
35 Amperes Triple Pole	43.20	46.40		
50 Amperes Single Pole	46.40	49.60		
50 Amperes Double Pole	46.40	49.60	• • • • •	• • • • •

#### LARGE TYPE

For use on circuits up to 250 V.—A. C. or D. C.

	—-List Pr	ice Each-
Description	Type B	Type C & D
50 Amperes Triple Polc		<b>\$</b> 89.6 <b>0</b>
100 Amperes Single Pole	91,20	94.40
100 Amperes Double Pole.	91.20	94.40
100 Amperes Triple Pole	96.00	100.80
200 Amperes Single Pole.	100.80	105.60
200 Amperes Double Pole	100.80	105.60
200 Amperes Triple Pole	110.40	115.20

Note: When ordering specify type by letter.

Delivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.

# "NEWGARD" RECEPTACLES AND GUARDS









Type B Bracket Type



Type C Flange Type



Wire Guard



Portable Lamp Guard

# Combined Receptacle and Waterproof Globe

This receptacle is made entirely of non-absorbinb and non-corrosive material, and will last indefinitely in any climate.

Style A. Pendant Type

The pendant type hangs suspended by its conducting wires. Unless otherwise specified 8 inch wires are provided.

List No. 4337	Ed. base pendant type	Watts 40 or 60	per case			*List Price per Doz. \$19.80 39.60	
4337X	Ed. base pendant type	100	30	100	4.00	00.00	

Style B. Bracket Type

The bracket type cover is threaded to serew on regular 1/2 inch iron gas pipe or conduit.

List No. 4347	Ed. base, bracket type	Watts 40 or 60	per case			*List Price per Doz. \$23 . ) 43.56
4347X	Ed. base, bracket type	100	30	120	4.20	40.70

Style C. Flange Type

The flange type cover is flanged and can be screwed to wall, 31/4 Rd. outlet box, ceiling or other support.

List No. 4349	Ed. base, flange type	Watts 40 or 60	per case 60	per case 140	Each <b>\$2.45</b>	*List Price per Doz. \$25.08 44.88
4349X	Ed. base, flange type		30	120	4.35	44.88

Separate Parts for Receptacles

	Ear 40 Watt	Size		1		LOL OF TO TAN	wall	8	
19044	CapsClear globesB iron fittingsC iron fittingsC iron fittingsGubber gasketsGenuine colored	Std. Pkg. 60 60 60 60 60	List Price Each \$0.90 1.10 .65 .75 .42	*List Price per Doz. \$9 00 11.00 6 00 7.00 4.00	19041X 19044X 19045X 4350X 19042X	Caps	Std. Pkg. 30 30 60 60 30	List Price Each \$1.80 2.20 .65 .75 .84	*List Price per Doz. \$18.00 22.00 6.00 7.00 8.00
19042	globes	60	2.10	21.12		globes	30	4.55	47.52

#### "Newgard" Wire Guard

Fits tightly over globe and is secured at top.

1.109	digitaly over globe and is seement in		** * * * *	#T 1 4 TO 1	
List		Std.	List Price	*List Price	
		Pkg.	Each	per Doz.	
No.		60	\$1.10	\$11.00	
4351	Wire guard for 40 watt size	60	•		
4351X	Wire guard for 60 to 100 watt size	30	1.80	18.00	
TOUL A	Who guard for do to zoo mitter				

\*Delivery F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.

#### BENJAMIN MOISTURE AND DUST-PROOF FIXTURES

# SENAME.

No. 662

No. 665



No. 672



No. 628



No. 634

#### Sockets Are National Electrical Code Standard

These fixtures are for use in damp places, such as refrigerating plants, engine rooms, plating rooms, etc. They are also protective lighting units in powder mills and other places where there is an accumulation of explosive dust.

The fixtures are so made that lamp and socket are completely enclosed. A heavy glass, threaded globe screws into hood. Asbestos gasket between globe and hood makes fixture tight.

Fixtures 660-665 have weatherproof hood of either aluminum or copper regularly tapped for ½-inch stem; ¾-inch will be furnished without change in price if so specified. Socket is two-piece porcelain, easy-to-wire type. For Benjamin Lamp Grip, add \$0.22 to list price.

T 1.4	Kind of	Size of Globe		Size of	Mfrs. Li	st Price	W. E. List Price	
List No.	Hood	Diam.	Depth	Lamps, Watts	Globe Only	Com- plete	Globe Only	Com- plete
660	Aluminum	31/4	11/4	25, 40	\$0.40	\$1.30	\$0.83	\$2.70
662	Aluminum	4	5	50, 60	. 50	1.50	1.04	3.11
664	Aluminum	5	6	75, 100	.80	1.90	1.66	3.94
661	Copper	31/4	$4\frac{1}{4}$	25, 40	.40	1.55	.83	3.20
663	Copper	4	5	50, 60	.50	1.75	1.04	3.78
665	Copper	5	6	75, 100	.80	2.20	1.66	4.55

Wire guarded type fixtures 672-673 have strong wire guard which screws on outside of hood and encloses globe.

T !-L	Kind of		Globe Size of					W. E. List Price		
List No.	Hood	Diam. Ins.	Depth Ins.	Lamps, Watts	Only	Only	plete	Only	Only	plete
$\overline{672}$	Aluminum	4	5		\$0.50	\$1.00	\$2.50	\$1.04	\$2.07	\$5.18
673	Copper	4	5	50,60	.50	I 1.00	2.75	1.04	[-2.07]	5.18

Fixtures 617-631 have weatherproof porcelain-lined socket and non-corroding globe holder. Tapping for ½-inch stem is regularly furnished, but 3%-inch may be ordered without change in price. For Benjamin Lamp Grip add \$0.22 to list price.

Size of Globe		Color of	Size of	Mfrs. List Price		W. E. List Price	
Diam. Ins.	Depth Ins.	Globe	Lamps, Watts	Globe Only	Com- plete	Globe Only	Com- plete
$\frac{-31/4}{}$	41/4	Clear	$\frac{25,40}{}$	\$0.40	\$1.30	\$ .83	\$2.70
4	5	Clear	40, 60	. 50	1.50	1.04	3.11
5	6	Clear	100	.80	1.90		3.94
4	5	Ruby	40,60	2.40		4.97	7.04
631 4 5 Ruby 40, 60 2.40 3.40 4.97 7.04 1415 Screw Wire Guard for 4x5 inch Globe 1.00 2.07							
	Diam. Ins. 31/4 4 5 4	Diam. Depth Ins. 31/4 41/4 5 6 4 5	Diam.   Depth   Ins.   Color of Globe	Diam. Ins.         Depth Ins.         Color of Globe         Lamps, Watts           3/4         4½         Clear         25, 40           4         5         Clear         40, 60           5         6         Clear         100           4         5         Ruby         40, 60	Diam.   Depth   Ins.   Ins.   Clor of Globe   Lamps, Watts   Globe   Value   Only	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

Moisture-proof Outlet Box Units 634-648 have galvanized cast-iron outlet box with pipe openings tapped either ½ or ¾ inch, as specified, and non-corroding globe holder, and porcelain receptacle. List prices apply to two-way outlet box; for three-way box, add \$0.22 list; for four-way, add \$0.41 list.

			( *1	OF 40 00	20 50	01 50	21 01	1 20 11
634	4	5	Clear	25,40,60	\$0.00	\$1.50	\$1.U±	\$33.11
		ă	Clear	100	.80	1.90	1.66	3.94
646	- 5	0	l Clear					
		2	Ruby	25,40,60	2.40	3.40	4.97	7.04
647	4	O O	Luby		2.10		1.01	
640	2 11 0	Roy loss	Globe and	Holder		.80		1.66
040	2-11 0	y 150X, 1633	1.000	1. C1-1-				2.07
1415	Screw	· Wire Gu	ard for 4x5	inch Globe		1.00		2.07
エエエ・リ	* ICICI							

Prices do not include wires or lamps.

# MATTHEWS LAMP SPECIALTIES







For G. E. Split Socket



For Porcelain Socket



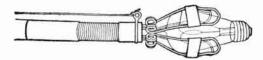
Holdfast Adjustable

# Matthews Holdfast Lamp Guards

Guards for Protecting 6, 8, 10,	and 16 C. P. Carbon and 15, 25 and 40 Watt Mazda L	amps
List No.	Size of Wire	Per
	B. W. G.	Doz.
*114		\$7.92
*112		$\begin{array}{c} 9.36 \\ 10.56 \end{array}$
Guards for Protecting 3	32 C. P. Carbon and 40 and 60 Watt Mazda Lamps	
017		\$9.36 10.08
Guard for Protecting 50 C. P	. Carbon, 75 and 100 Watt Type C Pear Shaped Lamp	ps \$11.52
	ype C Pear Shaped Mazda Lamps and 100 Watt O	
S	ype C rear Snaped Mazda Lamps and 100 Watt O	ld Style
*714	traight Side Mazda Lamps and 100 watt O	<b>\$</b> 19.68
Guard for Protecting	150 Watt Old Style Straight Side Mazda Lamps	\$23,52
	500 Watt Type C Pear Shaped Mazda Lamps, with	
914—14 b. w. g.	Weatherproof Mogul Socke's	h Brass
C 16 B 1 1 mm		\$33,60
W	0 Watt Type C Pear Shaped Mazda Lamps, with E eatherproof Mogul Sockets	
All guards will be furnished with a	trap to prevent the unauthorized removal of lamps.	40.32
List Prices for	Extra Trap-locks for Renewal Purposes	
Traps	16	<b>\$</b> 0.72
*The letter "B" should be adde sired, and the letters "WP" if want	ed after the trade number if guards for brass sockets ed for weatherproof sockets.	are de-
Prices are the same for brass or diameter; for weatherproof socket guard	Weatherproof socket quards College for bruse sockets 11	4 inches
Matth	ove Heldfort Adirect 11	

#### Matthews Holdfast Adjustable

moved with one hand and stops where it is put,	on a rivet.	
	Carton	List Price per Doz.
Matthews Holdfast Adjustable	10	\$14.40



List No.	Matthews Easy Lamp Changers	List Price Each
1 2 3	For 2 and 4 C.P. Sign Lamps and lamps up to 5 watts  For 6, 8, 10 and 16 C.P. Lamps and lamps from 5 watts to 60 watts.  For 32 to 50 C. P. Carbon Lamps and 100 to 150 watt Mazda Lamps.  No poles are finished.	. \$6.00

#### LAMP GUARDS





Loxon Reflector







otector "H" Protector "A"

#### "LOXON"

Protects against loss by breakage, by fire caused by the breakage of lamps or by lamps coming in contact with inflammable material.

with milaningine material.	
List Pric	ce
No. per Doze	en
1425 For 25-60 watt 110 volt with standard	
socket\$6.0	)()
1426 For 40–60 watt 220 yolt with standard	
socket	80
1427 For 25-60 watt 110 volt with W. P.	
socket	10
1428 For 40-60 watt 220 volt with W. P.	
socket	0
Note: 1 key with every dozen guards. Extr	'n
keys, 10 cents each, net 80 cents per dozen	

#### "LOXON" REFLECTOR

Can be used among machinery parts where reflected light is needed. A substantial combination guard and reflector.

List No. 1442		ist Price r Dozen \$8,50
1443	For 40 watt, standard brass socket	9,00
1444	For 40 watt, weatherproof socket	9.00
	PROTECTOR "A"	
1441	For 15 watt lamp only	\$2.80

PROTECTOR	"O"
-----------	-----

	PROTECTOR "O"		PROTECTOR "H"	
List	Li	st Price   List	Lis	t Price
$N_0$ .	per	r Dozen   No.	per	Dozen
1429	For 40 watt lamp, standard socket	\$4.00   1431	For 40 watt lamp, standard socket	\$3.40
1430	For 60 watt lamp, standard socket	4.40   1432	For 60 watt lamp, standard socket	3.70
1432	For 40 watt lamp, weatherproof socket	-4.00   2532	For 40 watt lamp, weatherproof socket	3,40
1434	For 60 watt lamp, weatherproof socket	$4.40 \parallel 2533$	For 60 watt lamp, weatherproof socket	3.70

## Adaptable Lamp Changer

The only—changer made which naturally adjusts itself to any style, shape or size of lamp, including tungstens and mazdas, slips on and grips lamp without jar or breakage of filament. Removes broken bases of lamps.

Constructed with spiral spring and sliding ring to which cord may be attached, enabling it to be used at any angle in removing or inserting lamps.

Works on any length of pole and is furnished with or without steel poles, in five foot sections as desired.

In ordering, specify clearly as to length of poles.

	List Price
	Each
Changer only	\$6.50
Steel poles up to thirty feet, in sections of 5 feet, 6 inches	4.50

#### HUBBELL LAMP GUARDS

Every joint of the Hubbell lamp guards is electrically welded through and through. No solder or tie wires, spring catches, clamps or other devices are used. This method of welding insures strength and durability. They are made entirely of heavy steel wire.





No. 5485 For Standard Sockets

#### For Standard Sockets

#### Schedule "E"

List No.	Size	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List per 100	W. E. List Price per Carton
5691▲ 5692▲	For 15-25-40-60 watt Tungsten lamps	150 150	42 52	$\$29.50 \\ 32.25$	\$6.37 6.97	
	For Weatherproof So	ckets			Sched	ule "E"
5693▲ 5694▲	***   ***   40   400   80					
	For Standard Sock	ets			Sched	ule "E"
5485 <sup>4</sup> 5487 <sup>4</sup>	For 15–25–40–60 watt Tungsten lamps.	12 12	150 150	45 50	\$31,50 34,25	\$6.80 7.40





No. 5766 With Half Reflector

#### For Standard Sockets

List No.	Size	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List per 100	W. E. List Price per Carton
5573 <sup>4</sup>	For 15-25-40-60 watt Tungsten lamps	15	150	60	\$34.00	\$9,18
5578 <sup>4</sup>		15	150	85	38.75	10,46
5766 <sup>4</sup>		15	150	65	48.00	12.96

<sup>\*</sup>National Electrical Code Standard.

#### HUBBELL LAMP GUARDS







No. 5634 Tubular Lamp Guard

For Use with Hubbell Reflector

	Open Bottom Guards	1			Sched	ule "E"
List No.	Size	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.		W. E. List Price per Doz.
5534 <sup>▲</sup> 5536 <sup>▲</sup>	For 15, 25, 40 and 60 watt Tungsten lamps For 75 watt Type C	15 15	150 150	48 55	\$31.50 34.25	\$5.30 6.00

Open bottom guards can be used with either flat or cone type tin reflectors.

- 1	Closed Bottom Guard	8		Schedule "E"		
5632▲ 5633▲	For 15, 25, 40 and 60 watt Tungsten lamps For 75 watt Type C	15 15	150   55 150   70	\$34.00   \$5.30 38.75   6.00		
Closed bottom guards can be used with flat tin reflectors only. The above prices do not include						
reflectors.	T 1 1 T	1				

Tubular Lamp Guard Schedule "E" | \$34.00 | \$5.30 5634<sup>4</sup> | 25 watt tubular lamp guard..... |5 doz.| 20



For Standard Sockets



No. 5730 For Weatherproof Sockets



No. 5764 With Half Reflector

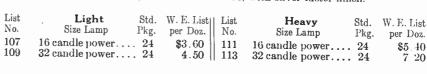
# Locking Guards For Standard Sockets

	Tor Standard Societies	•				
List No.	Size	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List per 100	W. E. List Price per Doz
5685*	For 15, 25, 40 and 60 watt Tungsten	15	150	60	\$43.75	\$7.45
5635*	For 75 watt Type C	15	150	85	55.00	9.35
6410	150 and 250 watt lamp for standard socket		60	120	112.00	22.56
	For Weatherproof Socke	ets				
<u>5730</u> ▲	For 15, 25, 40 and 60 watt Tungsten	15	150	60	\$43.75	\$7.45
5731	For 75 watt. Type C	15	150	85	55.00	9.35
6411	150 and 250 watt lamp for weatherproof socket		60	120	112.00	22.56
	For Weatherproof Socket No	. 60666				
5810^	For 15, 25, 40 and 60 watt Tungsten lamps	15	150	60	<b>\$43.75</b>	\$7.45
5818 <b>^</b>	For 75 watt Type C	15	150	85	55.00	9.35
	For Long Base Tungsten I	amp				
5762	For 100 watt Type B, 100-200 watt Type C Tungsten					
0	lamp for standard socket	15	75	70	\$72.50	\$12.00
5820▲	For 100 watt Type B, 100-200 Type C	15	75	70	72.50	12.00
	For Standard Sockets with Hal	f Reflect	or			
5764▲	For 15, 25, 40 and 60 watt Tungsten	1 15	150	65	\$58.25	\$9.85
	For Weatherproof Sockets with H	alf Refle	ctor			
5765▲	For 15, 25, 40 and 60 watt Tungsten	15	150	65	\$58.25	\$9.85
-Nat	ional Electrical Code Standard.					

#### MORSE LAMP GUARDS

#### New "Never-Break" Guards

Are made of steel wire, neat and attractive, with silver luster finish.



No. 107



Style C

# Standard Self-locking Guards

#### With Cushion

	For Brass Sockets			For	Weatherproof	Soc	kets
List No. C D		W. E. List per Doz. \$3.60 4.05	No. G	16 o 32 o	candle power	Std. Pkg. 24 24	W. E. List per Doz. \$3.60 4.05

#### Open Bottom Guards

With Cushion Ring

			ror Brass	Soci	kets		
List No. 161 162	Light Size Lamp 16 candle power 32 candle power	Pkg. 24	W. E. List per Doz. \$4.50 5.40	No. 163	Heavy Size Lamp 16 candle power 32 candle power	Std. Pkg. . 24 . 24	W. E. List per Doz. \$6.30 8.10

#### For Weatherproof Sockets

	16 candle power 32 candle power		\$4.50    167 5.40    168	16 candle power 32 candle power	$\begin{array}{c} 24 \\ 24 \end{array}$	\$6.30 8.10
--	---------------------------------	--	------------------------------	---------------------------------	---	----------------

## Weatherproof Socket Guard

List No.			W. E. List   List per Doz.   No.		Std. Pkg.	W. E. List per Doz.
5 6	16 candle power 32 candle power	24	\$3.60   7 4.50   8	16 candle power 32 candle power	. 24	\$5.40 7.20

No. 5

No. 161



# Combination Reflector and Guard

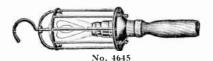
#### For Brass Sockets

List	<b>Light</b>	Std.	W. E. List   List	<b>Heavy</b> Ste	
No.	Size Lamp	Pkg.	per Doz.   No.	Size Lamp Pk	
13 14	16 candle power 32 candle power	12	\$6.30   15 8.10   16	16 candle power 13 32 candle power 15	2 \$8.10

#### For Weatherproof Sockets

17 16 candle power.... No. 13 12 \$6.30 | 19 16 candle power.... 12 \$8,10

#### PORTABLE LAMP GUARDS



# CRESCENT PORTABLE GUARDS

Are especially adapted for use where a portable will receive hard usage. Strong, light and convenient. Socket not included.

List	List Price
No.	Each
$\frac{4645}{4676}$	For 40 watt lamp. \$2.50 For 60 watt lamp. 2.50

#### CRESCENT REFLECTING PORTABLE LAMP GUARD

	-
List	List Price
No.	Each
5555	For 40 watt lamp

#### MONITOR PORTABLE LAMP GUARDS

A substantial open-bottom portable guard.

List No.		-									]	List Price Each
$1453 \\ 1454$	For 40 For 60	watt watt	lamp . lamp .	  	 					,		\$1.70 1.80

#### BULLDOG PORTABLE LAMP GUARD

#### For 60 Watt Lamp

Are copper plated on Bessemer steel. Standard key socket securely imbedded in handle, giving the lamp a firm, rigid base. Will take any size cord.

List	L	ist Price
No.	ė.	Each
4675	Complete with key socket imbedded in handle	\$3.50
2590	Complete with keyless socket imbedded in handle	3.50



No. 1453

#### LOXON PORTABLE LAMP GUARDS

#### For 40 Watt Lamp

Are made with chonized handle and Loxon guard attached, Furnished both in plain wire guard and with half guard reflector, Key socket included,

List No.	I	List Price Each
1447 1448	Key socket, without reflector	\$1.80



No. 1447

#### STANDARD PORTABLE LAMP GUARDS

A substantial guard for heavy service made with Bessemer steel rods and stamped metal rings, copper-plated, with mica weatherproof socket, firmly imbedded in handle.

List		List Price
No.		Each
4672	Complete for 40 watt lamp	. \$2.80
4673	Complete for 60 watt lamp	3.50



No. 1451

#### NATIONAL PORTABLE LAMP GUARDS

Are of heavy construction with open bottom, made of steel heavily tinned, with mica weatherproof socket firmly imbedded in handle.

List		List Price
No.		Each
1451	Complete for 40 watt lump	\$2.50
1452	Complete for 60 watt lamp	2.50

#### LAMP GUARDS



No. 2000 Cable Rack Portable

Cable Rack Portable Lamp Guard

A very handsome portable with black enamel handle. The cage portion of this portable is half guard
and half reflector so as to direct the reflected light where it is needed. The handle is equipped with a hook. This portable is designed principally for use around telephone switchboards. Furnished with key or keyless socket securely embedded in handle giving a firm and rigid base. Takes a 60 watt 110 volt Mazda lamp. Cage and reflector portion heavy tinned finish.

List No. Key Cable Rack Portable Lamp Guard\$2.80Keyless Cable Rack Portable Lamp Guard2.80 2000 2001

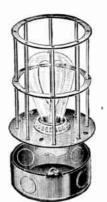
No. 3001 Safety Vaporproof Portable Guard

This guard is just what its name describes, and is designed to neet the requirements of the garage or wherever gases or inflammable materials may be used. A heavy steel frame, strong handle, handy grip hook, and vaporproof receptacle make this the best vaporproof guard on the market. Takes a 25 watt standard Mazda lamp. Heavy tinned finish.

Safety Vaporproof Portable Guard.....



No. 4000





No. 1437 Style B



No. 1440 Style D

No. 4000 Dreadnaught Portable Lamp Guard

A very strong portable guard made of Bessemer steel built to withstand hard usage and can be recommended to give unusual service. Has a porcelain keyless socket fitted with spring contact firmly embedded Takes a 60 watt lamp. Metal part copper plated finish. Made only in one size and finish. in handle. List Price Each List No. 4000

A device for which there is a demand in every theater, warehouse or outside platform, wherever a stationary outlet box socket is in use. Very strongly constructed of Bessemer steel wire ribs, stamped rings and plate or cover which will fit either a 3 or 4 inch outlet box and will take standard outlet box receptacles. The plate or box cover forms the lower part of the guard itself forming a combined cover and guard. It 

Style B Wall Guard

For use in theaters, docks, warehouses and outdoor work where a stationary socket is used. Very strongly constructed of Bessemer steel wire ribs and stamped rings. Has a removable base ring which is attached to the wall. Key hole slots in base ring make them easy to attach and detach. Copper plated finish. Diameter 3½ inches, depth 6½ inches. Style B Wall Guard..... 1437

No. 1440-D Wall Guard
This device is the same as above excepting that it is fitted—ith a trap or cover which is equipped with a key locking arrangement, thus preventing theft of lamps as well as breakage. Ileavy tinned finish. Diameter  $3\frac{1}{8}$  inches, depth  $5\frac{5}{16}$  inches. 1440-D Wall Guard.....

\*Delivery F. O. B. Factory, Valparaiso, Ind. For warehouse deliveries write nearest house.

#### BENJAMIN WIRE GUARDS

Schedule 2 "F"



No. 1400

Outlet Box Lamp Guards 1400 are particularly adapted to low ceilings, side walls, foot lights, etc., where lamps are used in outlet box receptacles, and require protection.

Guard bases are slotted to fit either 3 or 4 inch boxes, and will take 60 watt lamps. Guards are of strong steel wire, and are tinned after manufacture.

	Size	Size		
List	Diam.	Depth	Mfrs.	W.E.
No.	Inches	Inches	List Price	List Price
1400	4	$5\frac{3}{4}$	\$0.80	\$1.62

#### PENDENT LOCK GUARDS

Have a grooved band and eyebolt for attaching to the bead of an enameled steel reflector. This band has hinged connection and catch for holding guard in position. Padlock may be passed through the rim and eyebolt for locking.



	1 1 1 1 1 1 1 1 1
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	1
	1
THE RESERVE	1
1	1
1/1/2	1
1777	1
	1
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	Size	Size		
List	Diam.	Depth	Mfrs.	W. E.
No.	Inches	Inches	List Price	List Price
1377	6	11/4	\$0.90	\$1.87
1378	7	11/4	1.00	2.07
1380	8	11/2	1.10	2.28
1382	9	$1\frac{3}{4}$	1.20	2.48
1383	10	$2\frac{3}{4}$	1.30	2.70
1384	11	13/4	1.40	2.90
1386	12	$2\frac{3}{4}$	1.50	3.13
1388	14	4	1.60	3.31
1390	15	$6\frac{3}{4}$	2.00	4.14
1392	16	5 -	2.30	4.71
1394	18	$5\frac{3}{4}$	2.80	5.80
1396	20	$\frac{534}{7}$	3.60	7.45
1398	22	$7\frac{1}{2}$	4.20	7.94

#### CEILING LOCK GUARDS

Have hinge adapted for attaching to the ceiling by two wood screws, and a fastening plate opposite the hinge, likewise attached by screws. The plate is designed to receive a loop on the guard. Padlock may be used if desired.



No. 1356

List	Size	Size		
No.	Diam.	Depth	Mfrs.	W. E.
Inches	Inches	Inches	List Price	List
†1350	10	7	\$1.20	\$2.48
†1352	12	8	1.40	2.90
†1354	14	9	1.60	3.31
1356	16	$6\frac{3}{4}$	1.80	3.73
1358	18	834	3.00	6.21
1360	20	11	4.00	8.28

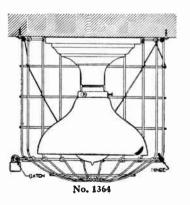
The two-piece ceiling lock guards Nos. 1362-1374 have strong cylindrical upper guard adapted for attaching to the ceiling by three or more screws, and a lower or shallower portion hinged to it at the bottom. They are particularly designed for single unit ceiling fixtures.

					Mlfrs.	W, E,
List	Cylindrical	Guard, Ins.	Hinged	Guard, Ins.	Price	List
No.	Diam.	Depth	Diam.	Depth	Each	Price
†1362	11	8	11	13/4	\$1.60	\$3.31
†1364	11	10	11	13/4	1.70	3.53
†1366	11	12	11	13/4	1.80	3.73
†1368	14	10	14	4	2.20	4.55
†1370	14	12	14	4	2.50	5.18
†1372	18	12	18	$5\frac{3}{4}$	4.20	8.69
†1374	18	16	18	$5\frac{3}{4}$	4.80	9.94

†These guards are furnished on special order only, and require two weeks' notice.

Wire parts are of strong steel, tinned after welding. Fittings are galvanized.

Prices for all of above lock guards are less brass padlock shown. For the latter with two keys, add \$1.04 to list.



#### BENJAMIN ADJUSTABLE CLUSTERS FOR STAND LAMPS

#### PULL CHAIN ADJUSTABLE CLUSTERS-FLAT TOP

Flat Top Adjustable Clusters for Stand Lamps consist of cluster body, pull chain sockets, malleable iron hickey, or double saddle, and six-inch stem with coupling, when indicated.

The top is in the shape of a cover instantly removable, exposing the interior for easy wiring. Wires lead straight into binding terminals at top of sockets.

This type of cluster is termed "semi-adjustable" because the sockets may be placed in any position from 35 degrees above to 60 degrees below horizontal.

Supporting bushings attached to main socket shell secure the sockets to the cluster body, so that there is no strain on the caps. Cluster includes  $\frac{1}{4}$  in, x  $\frac{1}{2}$  in, hickey or double saddle.



Standard finish is brush brass. Polished brass and dead black finish furnished without extra charge if specified. Prices on other finishes given on application.

#### CLUSTERS ONLY-WITHOUT MOUNTING PARTS

				Mirs.	W. E.
List	No. of		Std.	List	List
No.	Lights	Description	Pkg.	Price	Price
887	2	Cluster only	10	\$1.60	\$3.20
888	3	Cluster only	10	2.20	4.39
889	4	Cluster only	10	2.80	5.60

# CLUSTERS COMPLETE—WITH TOP ORNAMENTS AND 6-INCH STEMS

897	2	Cluster complete	10	\$2.20	\$4.39
898	3	Cluster complete			
899	4	Cluster complete			

Bottom coupling is tapped for 1/4 in. iron pipe.

#### PULL CHAIN ADJUSTABLE CLUSTERS—BALL TYPE

Ball Type Adjustable Stand Lamp Clusters have sockets which are adjustable to any angle from horizontal to vertical. This enables the lamp to be placed in that position which shows the shade to greatest advantage.

In connection with narrow or very flat shade designs the adjustable socket feature is made a part of the body shell. This relieves the socket cap of all strain and makes for strong, sturdy construction.

Top of cluster may be easily removed for wiring, and the wires lead straight into terminals at top of sockets.

Standard finish is brush brass. Polished brass and dead black finish furnished without extra charge if specified.

Prices on other finishes given on application.



# CLUSTER BODY WITH SHADE SUPPORT AND ORNAMENT ONLY

880	2	Cluster less bottom stem	10	\$1.90	\$3.89
881	3	Cluster less bottom stem	10	2.50	5.00
882	4	Cluster less bottom stem	10	3.10	6.19

# CLUSTER WITH SHADE SUPPORT ORNAMENT AND SIX-INCH STEM

890	2	Cluster complete	10	\$2.25	\$4.46
891	3	Cluster complete	10	2.85	5.69
892	4	Cluster complete	10	3.45	6.89

Bottom coupling is regularly furnished tapped for 1/4 in, iron pipe.

#### BENJAMIN ADJUSTABLE CLUSTERS AND ADAPTERS

\* National Electrical Code Standard



No. 952

#### ADJUSTABLE CLUSTERS

Schedule 3

Mfrs.

660 Watts, 250 Volts

Adjustable Plug Clusters 952-957 are used in connection with ceiling or pendent dome fixtures. Sockets turn in half-eircle for adjustment of lamps with reference to shape of dome or reflector. Two-and four-light clusers may be ordered wired two in series without change in price. Standard finish is brush brass.

#### **KEYLESS**

No. 952	No. of Lights	Wired	Std. Pkg.	Wt. Lbs. 5	List Price \$1.25	List Price
		Wired			\$1.25 1.55	$\frac{$2.50}{3.06}$
954		Wired		7	1.85	3.69
		PULL CHA	AIN			
955	9	Wirod	10	5	@1 05	69 60



955	$^2$	Wired	10	5	\$1.85	\$3.69
956	3	Wired	10	6	2.45	4.90
957	-4	Wired	10	7	3.05	6.10

Adjustable Socket Clusters 852–857 are for use with ceiling or pendent fixtures. Bushings tapped  $\frac{1}{2}$ 6 inch or  $\frac{1}{2}$ 6 inch may be ordered without change in price. Standard finish is brush brass.



No. 955

#### KEYLESS

					Mfrs.	W. E.
List	No. of	Size of	Std.	Wt.	List	List
No.	Lights	Bushing	Pkg.	Lbs.	Price	Price
*852	2	3% inch	10	5	\$1.00	\$2.00
*853	3	3/8 inch	10	6	1.30	2.59
*854	4	$\frac{3}{8}$ inch	10	7	1.60	3.20
		PULL	CHAIN			
*855	2	3/8 inch	10	5	\$1.60	\$3,20
*856	3	3/8 inch	10	6	2.20	4.39
*857	4	3% inch	10	7	2 80	5 60



#### WITH TOP AND BOTTOM BUSHING KEYLESS

Adjustable Socket Clusters 867-879 are for use in connection with stand or table lamps. General description follows that for Nos. 952-957 above. Top bushing tapped up to 3 s-inch size for iron pipe or solid studs for shade



No. 878

support	furnished	without change in	n price.	Stan	dard	finish is brush	brass.
*867	2	1/4 inch		10	5	\$1.20	\$2.29
*868	3	$\frac{1}{4}$ inch		10	6	1.50	-3.01
*869	4	$\frac{1}{4}$ inch		10	7	1.80	3,60

#### **PULL CHAIN**

*877	2	1/4 inch	10	5	\$1.80	\$3.60
*878	3	$\mathcal{V}_{1}$ inch	10	6	2.40	4.79
*879	4	1/4 inch	10	7	3.00	5.99

#### TWO-LIGHT ADAPTERS

Two-light Adapters 822-9221/2 are intended for doubling the outlets of a given socket, while adapting them for individual reflectors. They are furnished either with plug, wired, or with  $3\,\mathrm{s}$ -inch bushing for stem, not wired. In the former case they are attached by means of a swivel shell. Outlets are at an angle of 14 degrees with the vertical. Standard finish is brush brass.



No. 9221/2

List No.	Description	Std. Pkg.	Wt. Lbs.	List Price	List Price
*822	3/8-inch bushing, not wired	10	5	\$1.00	\$2.00
922	With plug wired, multiple	10	5	1.25	2.50
$922\frac{1}{2}$	With plug wired, series	10	5	1.25	2.50

Adjustable Clusters and Adapters with Lever Key Sockets instead of Keyless, furnished at an advance in list of \$0.05 per outlet.

#### BENJAMIN WIRELESS CLUSTERS FOR STAND LAMPS

NATIONAL ELECTRICAL CODE STANDARD

Schedule 3

There are no sockets to wire. The two lead wires are simply brought to the top terminals and fastened. The wireless method takes care of other electrical connections.

The entire mechanism is enclosed within the cluster shell; therefore there are no sockets or projecting parts to loosen or break off.

Lamps are always at the same angle and are grouped near the center; this gives perfect distribution

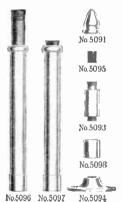
of light, and shows off the good qualities of the shade.

Clusters with one pull chain pull all lamps on or off with one motion. Clusters with two pull chains

operate either one and one or one and two lights at each pull.

Standard finish is brush brass. Polished brass and dead black furnished without extra charge, if specified. Other finishes are special.







		With One Pull Cha	in		
List	No. of	Description	Std.	Mfrs.	W. E.
No.	Lights		Pkg.	Price	Price
	8		0	Each	Each
836	2	Cluster only	10	\$1.40	\$2.79
837	3	Cluster only		1.65	3.29
		With Two Pull Chai			
846	$^2$	Cluster only	10	1.70	3.40
847		Cluster only		1.95	3.89

CLUSTER ONLY, WITHOUT MOUNTING PARTS

	With Two Pull Cha	ins		
846	2 Cluster only	10	1.70	3.40
847	3 Cluster only	10	1.95	3.89
1	Bottom tapped for $\frac{1}{4}$ -inch, top tapped	for 18-	inch iron	pipe.
MOU	NTING PARTS FOR BENJAMIN ST	ANDI	AMP CI	USTERS
5090	Top ornament, tapped 14/20	100	\$0.10	\$0.20
5091	Top ornament, tapped 1/8-inch iron		•	•
.,.,,,	pipe size	100	. 10	.20
5092	Top ornament, tapped 1/4-inch-27	100		.20
5093	Top shade support, of $\frac{1}{8} \times 1 \cdot 15/16$ -			
	inch iron pipe, 5/8 x 1 1/8-inch brass			
	sleeve, and cupped centering			
	washer, per set	100	. 15	.31
5094	Flange tapped ¼-inch iron pipe size	100	, 10	.20
5095	Close nipple $\frac{1}{8}$ x $\frac{1}{2}$ inch for use with			
	top ornament only	100	.05	.11
5096	Standard 6-inch bottom stem for wire-			
	less cluster only, consisting of 1/4-			
	inch iron pipe, 7 5/16 inches long,			
	threaded both ends, and 5 7/16			
	inches of 5/8-inch brass casing, one			
	$\frac{1}{4}$ x $\frac{5}{8}$ -inch finishing ring and $\frac{1}{4}$ x	100	25	.70
	1/4-inch coupling	100	.35	.70
	Extra length stem as above, per	100	.02	.04
5097	standard 6-inch bottom stem for ad-	100	.02	.04
9097	justable clusters only, consists of			
	1/4 x 6-inch iron pipe stem, threaded			
	both ends, and 5 7/16 inches of %-			
	inch brass casing to slip, ½ x 5/8-			
	inch finishing ring, and ½ x ¼-inch			
	coupling	100	.35	.70
	Extra length stem as above, per		,	
	inch	100	.02	.04
5098	Brass coupling 1/4 x 1/4 inch, each	100	.12	.23
5099	Brass coupling 1/8 x 1/4 inch, each	100	.12	. 23
1.3		1 1		

For top or bottom tappings other than standard, special quotations will be made on request.

WIRELESS CLUSTER STAND LAMP FIXTURES
Pull Chain Type

Benjamin Wireless Cluster Stand Lamp Fixtures consist of pull-chain cluster, top ornament, 6-inch stem and casing, finishing ring and coupling.

CLUSTER COMPLETE WITH ORNAMENT, STEM
AND FITTINGS
With One Pull Chain

				Mfrs.	W. E.
List	. No. of		Std.	Price	Price
No.	Lights	Description	Pkg.	Each	Each
839	$\tilde{2}$	Cluster complete	10	\$1.90	\$3.80
840	3	Cluster complete	10	2.15	4.30
		With Two Pull Chair	าร		
849	$^2$	Cluster complete	10	2.20	4.39
850	3	Cluster complete	10	2.45	4.90

Coupling at bottom of stem is tapped for ¼-inch iron pipe.

Coupling tapped ¼-inch furnished without extra charge if specified.

W. E.

List

Each

\$0.50

\$0.60

\$0.58

\$0.68

\$0.80

.90

90

1.00

.80

1.00

1.30 1.12

\$1.40

 $\frac{1.60}{1.40}$ 

1.60

\$0.60

.60

.80 .80

90

. 78

. 68

.60

#### Western Electric

# BENJAMIN PORCELAIN SOCKETS

#### MEDIUM BASE SOCKETS

Schedule 3

Mfrs.

Price

Each

\$0.25

.30

.35

.34

34

\$0.40

.45

.45

.40

.45

. 50

Wt.

Lbs.

69

26

25 25

25

27 27

 $\overline{27}$ 

27 27

Pkg.

100

250

100

100

100

100

100

100

100

100

20

20

g

12

12

5

.65

.80

.30

40

Medium base sockets have pendant cap with H-inch opening for accommodating re-enforced Keyless, 660 Watts, 600 Volts

No.	241

List

No.

256

257

241

 $\frac{1}{249}$ 

341

358

343

344

4414

4416

4418

4420

4421

4422

691

692



Without lamp grip. With lamp grip....

Without lamp grip.....

Without lamp grip.... With lamp grip. With lamp grip, less bead.

Description

Without lamp grip.....

With lamp grip....

WALL SOCKETS These sockets have wall base 2 inches in diameter for concealed wiring. Supporting screw holes are slotted, spaced for  $1\frac{1}{16}$  to  $1\frac{1}{16}$ -inch centers. For car lighting, lamp grip is an important Keyless, 660 Watts, 600 Volts

Lever Key, 250 Watts, 250 Volts

No. 342 BENJAMIN

With lamp grip..... COPPER CAP SOCKETS

Lever Key, 250 Watts, 250 Volts

These sockets have copper cap with threaded bushing. They can be used for either indoor or outdoor service. Standard finish on cap is natural copper. All are listed equipped with Benjamin Lang Cris. jamin Lamp Grip. Keyless, 660 Watts, 600 Volts



Without bead, ½-inch bushing
Without bead, ½-inch bushing
Without bead, ½-inch bushing
Without bead, ½-inch bushing
Without bead, ½-inch bushing
With bead, ½-inch bushing
With bead, ½-inch bushing
With bead, ½-inch bushing
With bead, ½-inch bushing 7 75 050 111

Lever Key, 250 Watts, 250 Volts				
4430 Without bead, 1/4-inch bushing 4431 Without bead, 1/4-inch bushing 4432 Without bead, 1/4-inch bushing 4433 Without bead, 1/2-inch bushing 4434 Without bead, 1/4-inch bushing 44425 With bead, 1/4-inch bushing 44427 With bead, 1/4-inch bushing 44427 With bead, 1/4-inch bushing 44428 With bead, 1/4-inch bushing 44428 With bead, 1/4-inch bushing 44428 With bead, 1/4-inch bushing 44430 Without Benjamin Lamp Grip, deduct \$0.09 list.	100 100 100 100 100 100 100 100	27 27 27 27 27 27 27 27 27	. 45 . 50 . 50 . 55 . 45 . 50 . 50	\$0.90 1.00 1.00 1.12 .90 1.00 1.00

No. 69

#### MOGUL BASE SOCKETS 1500 Watts, 600 Volts

Porcelain sockets are arranged for attaching to a surface or bracket by means of screws passing through the base. Wires in Nos. 69 and 691 lead in at the sides; in Nos. 169 and 692 through the base. The latter are used in Benjamin Reflector Sockets. Screw holes are spaced 1½ inches on centers. 69 Open terminals . .



Open terminals, with lamp grip.
Concealed terminals.
Concealed terminals, with lamp grip.

695

696

698

2571

2573

2575 2577

	Cast fron Fittings				
2569	Open fitting, tapped ½ inch. Open fitting, tapped ¾ inch. Weatherproof flange, tapped ½ inch. Weatherproof flange, tapped ¾ inch.	20 20 20 20	5 5 4 4	. 15 . 15 . 20	\$0.30 .30 .40

Two-piece porcelain sockets have means for attaching to a flange or surface. Wires are brought in through side outlets in upper base of Nos. 693 and 695, and screw holes are spaced 134 inches on centers; in Nos. 696 and 698, through central opening, with screw holes slotted for 11/2 to 134-inch centers. 693 Without lamp grip.....

With lamp grip...
Without lamp grip...

With lamp grip....

 Flange, tapped ½ inch.
 20

 Flange, tapped ¾ inch.
 20

 Flange, tapped 1 inch.
 20

 Flange, tapped 1¼ inch.
 20



SIGNAL SOCKETS 660 Watts, 600 Volts

Weatherproof Cast Iron Fittings for Nos. 696 and 698

These sockets are in keeping with the requirements of railway electric signal service. Furnished with Benjamin Lamp Grip. Have binding posts, as shown, adopted as standard by the Railway Signal Association. Type C thas round head brass machine series type of binding terminal. Base is 2% x 1½ inches; height, 1½ inches; serew holes spaced 2½ inches on centers. 2073 R. S. A. terminals. 50 90 \$1.19 2074 Type C Terminals. 50 60 1.20 Standard metal finish is brush brass. For bronze finish, add 10 per cent.

No. 2073

\$0.38

\$0.76

#### BENJAMIN SOCKETS

#### National Electrical Code Standard

#### UNIT SHELL SOCKETS

Schedule 3

Unit Shell Sockets 4320-4334 consist of one-piece brass shell with removable socket interior accessible from the bottom. Standard finish is brush brass.

List No.	Size of Bushing Inches	Description	Std. Pkg.	Wt. Lbs.	Mfrs. List Price	W.E. List Price
4320	1/8	Brass bushing	100	14	\$0.28	\$0.56
4322	1/4		100	15	.32	.65
4324	3/8		100	16	.34	.68
4326	112		100	14	.28	.56

Nos. 4328-4334 are expanded below into a threaded portion accommodating e "S" shade holders and screw-threaded shade holder reflectors. Standard Type finish is brush brass.

	Size of					
List	Bushing		Std.	Wt.	Mfrs. List	W.E. List
No.	Inches	Description	Pkg.	Lbs.	Price	Price
4328	1/8 1/4 3/8	Brass bushing	100	14	\$0.30	<b>\$0.59</b>
4330	1/4	Brass bushing	100	15	. 34	.68
4332	3/8	Brass bushing	100	16	, 36	. 72
4334	11	Insulated bushing.	100	14	. 30	. 59

#### ANGLE SOCKETS

250 Watts, 250 Volts 50

Angle Sockets 411-453 have supporting bushing attached to the main shell, relieving the cap of all strain. The wires lead straight in to the binding screws. Standard finish is brush brass.

5	453 433	% Key	. 50	8	. 43	.86
		660 Watts, 2	50 Volts	:		
List No.	Size of Bushing Inches	Description	Std. Pkg.	Wt. Lbs.	Mfrs. List Priee	W.E. List Price
$\frac{411}{451}$ $\frac{431}{431}$	1/8 1/4 3/8	Keyless	50 50 50	8 8 8	\$0.35 .40 .40	\$0.70 .79 .79
		PULL CHAIN AND				
		660 Watts, 2	50 Volts			
435 436 437	1/8 1/4 8/8	Pull Pull Pull	50 50 50	8 8 8	\$0.65 .71 .71	\$1.30 1.42 1.42

#### Pull....Pull ANGLE SOCKETS WITH SHADE HOLDERS

Angle sockets above are furnished with shade holders at advances in prices ndicated. Holders for full sockets have opening to pass chain and permit chain to some down insules the reflector. Standard finish is brush brass.

to come	down mais	te the remedior.	Standar	(1 IIIIIBII	18 171 4811	Advance	W. E.
Holder	Form of Holder			Std. Pkg.	Wt. Lbs.	in List Price	List Price
Inches 21/4 21/4	O H			50 50	12 12	\$0.10 .20	\$0.20 .40

#### FIBRE-LINED 660 Watts, 250 Volts

Twin Sockets 412-452 are especially adapted for economical show case, window or cove lighting installations. Series form will be furnished, if ordered, without change in price. Standard finish is brush brass.

List No.	Size of Bushing Inches	Description	Std. Pkg.	Wt. Lbs.	Mfrs. List Price	W. E. List Price
412	1/8	Multiple	50	- 8	\$0.65	\$1.30
452	1/4	Multiple	50	8	.70	1.40
432	3/8	Multiple	50	8	.70	1.40

#### PORCELAIN-LINED 660 Watts, 250 Volts

Twin Sockets 455-457 are porcelain-lined, brass shell sockets particularly adapted for use in damp places, and where high insulation is desired. Standard finish is brush brass.

ınısn	is brush	01 (188)				
455 456	1/8 1/4 3/6	Multiple	50 50 50	14 14 14	\$0.70 .75 .75	\$1.40 1.49 1.49

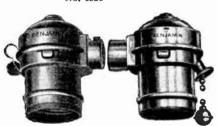
#### **PORCELAIN** 660 Watts, 600 Volts

Twin Sockets 424-427 are adapted for extra heavy duty and have Benjamin

Lamp Grip.  424 425 424 425 424 425 426 427 427	2-wire multiple. 2-wire multiple. 2-wire series. 2-wire series. 3-wire multiple. 3-wire multiple.	50 50 50 50 50 50	24 24 24 24 24 24 24	\$0.90 ,90 ,90 ,90 ,90 ,90	\$1.80 1.80 1.80 1.80 1.80
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No. 4328



No. 411

No. 435

413



Angle Socket with Shade Holder



No. 412



No. 455



#### BENJAMIN SOCKETS

#### National Electrical Code Standard BENCO MEDIUM BASE, KEYLESS SOCKETS

660 Watts, 600 Volts

Benco Sockets are strong, highly insulated, both indoor and outdoor lighting. Three kinds of enclosing shell are furnished. Brass for interior lighting; aluminum for general weatherproof work; copper for severe outdoor service.

Benjamin Lamp Grip to prevent loosening and falling of lamps furnished at an advance of 20 cents list.

Standard finishes are frosted aluminum, brush brass and natural

Mfrs. No.	Description	Std. Pkg.	Mfrs. Price Each	W. E. List Each
4200 4201 4202 4203 4204 4205	Alum. shell, ½ in. bushing. Alum. shell, ¾ in. bushing. Brass shell, ½ in. bushing. Brass shell, ¾ in. bushing. Copper shell, ½ in. bushing. Copper shell, ¾ in. bushing.	50 50 50 50 50 50	\$0.60 .60 .60 .60 .60	\$1.21 1.21 1.21 1.21 1.21

#### BENCO PULL CHAIN SOCKETS- WITH LAMP GRIP

	660 Watts, 250 Volts	3		
4225	Alum. shell, $\frac{1}{2}$ in. bushing	50	\$1.00	\$2.00
4226	Alum. shell, $\frac{3}{8}$ in, bushing	50	1.00	2.00
4207	Brass shell, ½ in. bushing	50	1.00	2.00
4208	Brass shell, $\frac{3}{8}$ in, bushing	50	1.00	2.00
4236	Copper shell, ½ in. bushing	50	1.00	2.00
4237	Copper shell, 3 in. bushing	<b>5</b> 0	1.00	2.00

#### TYPE "S" MEDIUM SCREW BASE HOLDERS Frosted Aluminum-Weatherproof

	i losted Aldillillilli Weat	itei bi d	101	
4215	2!4 in. Form O	$5\overline{0}$	\$0.20	\$0.40
4216	2½ in. Form H	50	.30	.59
4217	31/4 inch	50	.35	.70
4365	For 3 in, screw threaded globe	50	.30	.59
4366	For 4 in, screw threaded globe	50	.40	.79
4367	For 41/4 in. screw threaded globe	50	.50	
1001	Tot 4/4 m. serew unreaded globe,	1)()	.00	1.01
	Natural Copper—Weathe	rproof	F	
4370	21/4 in. Form ()	50	\$0.20	\$0.40
4371	21/4 in. Form H	50	.40	.79
*4372	31/4 in	50	.60	1.21
*4373	4 in	50	.70	1.40
*4374	5 in	50	1.00	2.00
*4375				
4070	6 in	50	1.20	2.39
	Brush Brass			
*4377	2½ in. Form O	50	\$0.20	\$0.40
*4378	2½ in. Form H	50	.35	.70
*4379	3½ in	50	.40	.79
*4380	4 in	50	.70	1.40
*4381	5 in	50	1.00	2.00
*4382		50	1.20	
4007	6 in	90	1.20	2.39

#### BENCO MOGUL BASE SOCKETS 1500 Watts, 600 Volts

	s, 4210–4299 for use with Mogul base 1	amps.	Standard	finishes
are brus	h brass and natural copper.	-		
4210	Brush brass, <sup>3</sup> / <sub>8</sub> in. bushing	20	\$1.40	\$2.79
4297	Brush brass, ½ in. bushing	20	1.40	2.79
4298	Natural copper, 38 in. bushing	20	1.40	2.79
4299	Natural copper, ½ in. bushing	20	1.40	2.79

#### Type "S" Screw Threaded Shade Holders

	-yp bolow lineaded blidd	C 110/dCI 3	
The	se shade holders are designed for use	e with Mogul Ben	cos
Nos. 421	0–4299. They are of proper depth and	adequately ventilat	ted.
B-4252	Brush brass, 3½ in	20 \$0.60 \$1	.21
B-4254	Brush brass, 4 in		.60
B-4256	Brush brass, 5 in 2	20 1.10 2	.20
B-4258	Brush brass, 6 in 2	20   1.30   2	.59
C-4252		2060 - 1	.21
C-4254		20 .80 1	.60
C-4256		20 1.10 2	.20
C-4258		20 1.30 2	. 59



No. 4200



No. 4207



No. 4370 No. 4366



RENJAMIN

No. 4210



No. B4252 No. C4252

\*Ventilated.

#### BENJAMIN ATTACHMENT PLUCS



No. 903



Bushing for 0034



903C







903F



No. 904



No. 903H

#### SWIVEL ATTACHMENT PLUGS

660 Watts, 250 Volts

Schedule 3

Plugs 903-904 have a rotating sleeve for attaching or removing. There are provided with cord-gripping rangs sub-soft navea rotating seeve for actualing of removing. There are provided with core-grapping means in the cap. No. 903A has a counter-bored bushing for accommodating heavy asbestos heater cord. No. 903C has a metal set screw with insulated tip for holding the outer braid. The entire cord is gripped—the ends thus kept from fraying. No. 903E is intended for use with small cord. No. 903F with heavy reinforced cord or flexible armored cable. No. 903G has insulated bushing with metal sleeve specially adapted for flexible armored cable.

				Mfrs.	W. E.
List		Std.	Wt.	List	List
No.		Pkg.	Lbs.	Each	Each
*903	With standard bushing		9	\$0.25	\$0.50
*903A	With counter-bored bushing	100	9	.25	.50
*903C	With insulated set screw tip	100	10	.28	. 56
*903E	With $\frac{9}{32}$ -inch bushing.	100	9	.25	. 50
903F	With ½-inch fibre bushing	100	10	.50	1.00
903G	With $\frac{15}{32}$ -inch steel bushing	100	10	. 50	1.00

No. 903H has five inches of flexible metallic tube attached to the swivel shell. This makes easy the attachment, particularly where deep, narrow style of glassware is used. The flexible handle also protects the cord against the pulling and hard wear that damages the insulation.

Attachment plug with 5-inch flexible handle..... 20 No. 904 is similar to 903, except that it has a molded ring instead of fibre washer, and bushing of smaller ontside diameter.

\*904 Attachment plug with molded ring...... \$0.56





No. 907

#### SEPARABLE ATTACHMENT PLUG

Schedule 3 "H"

This plug will break upon the application of a small force at any angle. An accidental jerk on the cord can therefore do no damage to fixture, wires or appliance.

List No.	Description	Std. Pkg.	Wt. Lbs.	Mfrs. List Price	W. E. List Price
919	Bushing 13/2-inch open- ing		10	\$0.25	\$0.45

#### SOLID ATTACHMENT PLUG

907	Bushing					
	ing	 	100	9	80.15	\$0.27

#### DIM-A-LITES AND DIM-A-LITE SOCKETS



No. 23

Devices for dimming or turning down a single incandescent lamp. May be used with either Carbon or Mazda lamps, 50 watts or less. Produces five changes of light, viz., Full, Half, Dim, "Nitelite" and Out. Suitable for either direct or alternating current. Saves current, 30% to 80%, depending upon degree of turn-down. United States Government test. Approved by Underwriters. The pull-chain may be made as long as desired. Guaranteed five years.

#### Dim-a-Lites



No. 34

Nos, 23 and 34 fit standard medium screw socket. Portable or interchangeable types. No. 23 furnished on all orders unless other types are specified.

#### Dim-a-Lite Sockets

Nos. 31 and 32, dimming socket. Standard construction throughout Combines standard pull-chain socket, Dim-a-lite, and husk or shade holder. Attached permanently to fixture stem by thread and set screw. Equipped with highest grade dumbbell unit brass chain.

No. 44 portable unit, Universal holder. Adjustable hinge bracket. Attaches to bed, crib, chair, etc. Equipped with 8-foot cord and plug. No lamp furnished.



No. 31



No. 32

List No.	Description	Carton Quantity	Std. Pkg.	*Std. Pkg. Ship. Wt., Lbs.	Mfrs. List Each	W. E. List Each
23	Brush brass or gun metal finish, 110 volts	12	48	18	\$1.25	\$1.88
34	Holder for 214 in, shade, brush brass or gun metal finish, 110 volts	1	50	17	1.35	2.02
31 32	Brush brass or gun metal finish, 110 volts	1	50	20	1.50	2.26
4.1	brush brass or gun metal finish, 110 volts Brush brass	1 1	50 24	22 40	$\frac{1.50}{3.75}$	2.26 5.62



No. 44

\*Standard package can be made up of only one style or List No. Special voltages to order and quotations made on foreign types of Dim-a-lites upon request. Add W. E. List \$0.15 (Mfrs. List \$0.10) list for 220 volts or 32 volts.

Special finishes add W. E. List \$0.39 (Mfrs. List \$0.25) list for Dim-a-lites and Dim-a-lite sockets.

Special finishes Dim-a-lite Portable, add W. E. List \$2.00 (Mfrs. List \$1.00) list.

#### HUBBELL SHADE HOLDERS



No. 5339 2¼ inch Shade Holder, Regular

No. 5594 2¼ inch Shade Holder, Solid

No. 6244 214 inch Locking Holder



Three Screw Shade Holders

Schedule "D"

		Timee Selew S	made mo	ideis			Scheat	lie D
List No.	Size Inches	Description	Finish	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List per 100	W. E. List per 100
5339 <sup>*</sup> 5339 <sup>*</sup> 5594 <sup>*</sup> 5594 <sup>*</sup> 5340 <sup>*</sup> 5340 <sup>*</sup> 5596 <sup>*</sup> 5596 <sup>*</sup>	21/4 21/4 21/4 21/4 31/4 31/4 31/4 4	As illustrated above. As illustrated above. Solid, as illustrated above. Solid, as illustrated above. As shown in illus. No. 5339. As shown in illus. No. 5339. Solid, as shown in illus. No. 5594. Solid, as shown in illus. No. 5594. As shown in illus. No. 5339.	Specify fin. Unfinished Specify fin. Unfinished Specify fin. Unfinished Specify fin. Unfinished Specify fin. Specify fin. Unfinished Specify fin.	50 50 50 50 25 25 25 25 25 25	1000 1000 1000 1000 250 250 250 250 250	65 65 70 70 27 27 27 30 30 20	\$6,25 5,20 7,70 6,50 14,85 13,05 15,90 14,20 20,55	\$12.50 10.40 15.40 13.00 29.70 26.01 31.80 28.40 41.10
5595 <sup>4</sup> 5597 <sup>4</sup>	4 4 4	As shown in illus. No. 5539. As shown in illus. No. 5339. Solid, as shown in illus. No. 5594. Solid, as shown in illus. No. 5594.	Unfinished Specify fin. Unfinished	25 25 25 25	100 100 100 100	20 20 20 20	18.35 23.45 21.65	36.70 46.90 43.30
		Locking Spring	Shade H	lolder			Schedu	le "D"
5528 <sup>4</sup> 5528 <sup>4</sup>	$\begin{vmatrix} 2\frac{1}{4} \\ 2\frac{1}{4} \end{vmatrix}$	As illustrated above	Specify fin, Unfinished	50 50	250 250	17 17	\$8.70 7.65	\$17.40 15.30
		DEEP SKIRTED—TH	REE SCREW	TYPE			Schedu	ıle "D"
6244 6244	$\frac{214}{214}$	Shade holder	Finished Unfinished	50 50	500 500		$  \$7.50 \   6.75 \  $	\$15.00 13.50
		DEEP SKIRTED-LOCK	CING SPRIN	IG TYPI	Ξ		Schedu	ıle "D"
6170 6170	$\begin{vmatrix} \frac{21}{4} \\ \frac{21}{4} \end{vmatrix}$	Shade holder     Shade holder	Finished Unfinished	50 50	$ \begin{array}{c c} 250 \\ 250 \end{array} $	20 20	$\begin{vmatrix} 89.25 \\ 8.20 \end{vmatrix}$	\$18.50 16.40
	4-11	NCH SHADE HOLDER FOR BRASS	S SHELL M	OGUL E	ASE S			ıle ''D''
6276	1 4	Shade holder, ventilated		20 1	100+	20	\$0.25	\$0.50
		HUBBELL DIRECT THREA	DING SHAD	E HOLI	DERS		Schedu	ıle "G"
6269 6269 6271 6271 6275 6275	21/4 21/4 31/4 31/4 21/4 21/4	Holder, ventilated, three serew type. Holder, ventilated, three serew type. Holder, ventilated, three serew type. Holder, ventilated, three serew type. Holder, ventilated, lockingspringtype Holder, ventilated, lockingspringtype	Finished Unfinished Finished Unfinished Finished Unfinished	50 50 25 25 25 50 50	500 500 250 250 250 250 250	30 37 37 20 20	\$6,25 5,20 12,50 11,10 8,70 7,65	\$12.50 10.40 25.00 22.20 17.40 15.30
$\begin{array}{c} 6269 \\ 6271 \\ 6271 \\ 6275 \\ 6275 \\ \hline \end{array}$	2½ 3½ 3¼ 3¼ 2¼ 2¼ 2¼	Holder, ventilated, three serew type. Holder, ventilated, three serew type. Holder, ventilated, three serew type. Holder, ventilated, three serew type. Holder, ventilated, lockingspringtype	Finished Unfinished Finished Unfinished Finished Unfinished	50 50 25 25 25 50	500 500 250 250 250 250 250	30 37 37 20 20	$\begin{bmatrix} 5.20 \\ 12.50 \\ 11.10 \\ 8.70 \\ 7.65 \end{bmatrix}$	1 2 2 1 1

ver, add to list per 100, \$1.75. Mfrs. list \$3.50. Goods shipped brush brass unless otherwise specified.

#### BRYANT SHADE HOLDERS



No. 501 Uno Screw Holder



No. 502 Uno Spring Holder



No. 440

Showing position of parts as holder is being attached to socket



No. 443



Showing position of parts when holder is attached to socket

#### Bryant Shade Holders

The spring shade fastening of Uno and New Wrinkle Shade Holders provides an improved means of securing the shade in the holder and has the following advantages: The locking wire expands and contracts uniformly at every point. The locking wire touches the shade at every point. The locking wire is free to expand as the shade expands from the heat of the lamp, without in any way lessening the security of the fastening. The shade is held absolutely central in the holder. The holder will support the heaviest shades with absolute security. Shades can be attached and removed in one tenth of the time required for holders with three screws. **UNO SHADE HOLDERS** Schedule "D"

A one-piece holder which threads directly on to Bryant-Perkins brass shell sockets and receptacles. Quickest and easiest to put on and stays put. The threading of the bead on the socket and receptacle shells does not prevent the use of other makes of shade holders. Mfrs. List W. E. List W. E. List Mfrs. List per 100 List per 100 Size Std. per 100 per 100 Description No. Inches Pkg. Finished Finished Unfinished Unfinished  $2\frac{1}{4}$ 501 Screw holder..... 50Ŏ \$6.25 \$11.25 \$5.20 \$9.36  $\frac{21}{4}$   $2\frac{1}{4}$ Solid..... 532 6.60 500 11.88 5.559.62502 Spring holder..... 7.65250 8.70 15.6613.77 Solid..... Form "H" screw holder..... 21/4 533 250 9.0516.298.00 14.40 503 250 9.40 16.928.85 15.93 Form "H" spring holder..... 504 100 11.85 21.3311.30 20.34 22.50505 Screw holder..... 250 12.5011.10 19.98 Solid....... 31/4 534 100 12.85 23.13 11.4520.61Spring holder..... 506 100 19.00 34.20 17.50 31.14 Solid...... 535  $3\frac{1}{4}$ 100 19,35 34.8317.85 32.13With screws.......... 511 100 16.3529.97 15.2527.45 536 4 100 17.0030.60 15.60 28.08

The above list prices cover brush brass, polished brass or rich gilt. Special finishes, except and sand blast, add \$2.10 extra per hundred list. Brush brass shipped unless otherwise ordered. Special finishes, except gold, silver

#### New Wrinkle Shade Holders

Schedule "H"

New Wrinkle Shade Holder is attached to the socket in a manner which is extremely simple and can be accomplished in a minimum time and yet with greater rigidity than is provided in many types of holders now on the market. Std. Wt., Lbs. Std. Pkg. Mfrs. List W. E. List List No. Style Carton Pkg. per 100 per 100 21/4 inch \$18.00 440 50 20020 **\$**39.60 25 Form H 100 441 15 24.00 52.80 $\overline{25}$ 442 31/4 inch 100 15 30.00

66.00New Wrinkle Emergency Shade Holder Schedule "H"

The New Wrinkle Emergency Shade Holder has the same method of securing the shade in the holder as described above. It is attached to the socket by means of a screw shell which, introduced between the screw shell and the porcelain wall of the lamp socket, engages with the screw shell of the lamp socket. The screw shell of the shade holder is thoroughly insulated from the holder itself.

It has always been impossible to make a satisfactory shade holder for use in connection with weatherproof and other porcelain sockets and receptacles, as not only do the porcelains vary in thickness but also they are frequently much away from a true circle. It has been mechanically impossible to make a practical holder that would fit porcelains of minimum and maximum thickness and all the various shapes. The New Wrinkle Emergency Shade Holder solves the problem.

11111110	mici gonoj pinaco zioneci	BOXYOG UIC PIOD	CIII.			
443	$2\frac{1}{4}$ inch	25	100	• •	\$20.00	\$44.00
444	Form H	10	50		25.00	55.00
445	3¼ inch	10	50		30.00	66.00

**World Radio History** 

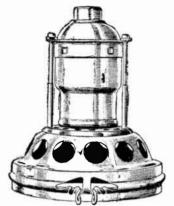
#### GLASS REFLECTOR SHADE HOLDERS



Form T Holder



Form O Holder



Form A Holder (New Type)



Form H Holder

## Holophane Holders for Electric Sockets

List Prices and Data

List No.	Designation	Finish	Diameter	Standard Quantity		W.E. List Each
421953	Form O Holder	Polished or brush brass	$\frac{314}{214}$ ins. $\frac{214}{4}$ ins.	30	\$0.25	\$0.12
421954	Form A Holder	Polished or brush brass		12	.60	.40
421955	Form H Holder	Polished or brush brass		30	.40	.16
421956	Form T Holder	Polished or brush brass		50	.20	.08

NOTE: Form T Holder for 15% inch neck reflector is an exclusive design, and is furnished only with Holophane glassware.

Special Finisnes: The following additional net charges are made for special finishes on Form II and O holders: Oxidized copper or black 8, cents each, net; when ordered in lots of 500 or more, one kind not assorted, 5 cents each, net. All other finishes, 13 cents each, net; when ordered in lots of 500 or more, one kind not assorted, 8 cents each, net.



P & S 119



Victor Shade Holder

#### P & S Shade Holders

For Porcelain Sockets and Receptacles

Schedule "XA"

List No.	Description	Carton Quantity		Pkg. Wgt.	Mfrs. List per 100	W. E. List per 100
119	Shade holder, 2½ inch polished brass	24	288	24 lbs.	\$8.50	\$12.24
1190		12	144	16 lbs.	16.25	23.40

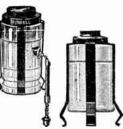
		Victor Shade Holders	Std. Pkg.	Weight	W. E. List per Gross
List No.	Size 21/4 inch	Victor shade holder, polished or brush brass		24 lbs.	\$13.15
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11/2 inch	Victor shade holder, polished or brush brass	144	25 lbs.	24.40
1795	1 inch	Victor shade holder, polished or brush brass	1.14	26 lbs.	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	21/4 inch	Victor shade holder, polished or brush brass Victor shade holder, polished or brush brass	144	24 lbs. 25 lbs.	$15.60 \\ 26.75$

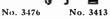
#### HUBBELL PORCELAIN SOCKETS AND GLOBE HOLDERS



With Extension Guide









Nos. 3453 314" overall, 3454 334" overall. 3455 41/8" overall, 3456 4%" overall



No. 3480

#### Medium Base Porcelain Sockets

Pull 250 Watts, 250 Volts; Key 250 Watts, 250 Volts; Keyless 660 Watts, 250 Volts

FOR F	REFLE	CTORS
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Schedule "C"

t 33' L'

List No.	Description	Carton Quantity		Wt. Lbs.	Mfrs. List	per Carton
3476	Pull 3/8 in, cast iron cap	10	50	35		\$27.00
477	Key, % in. cast iron cap.	10	50	40	. 85	17.00
3445	Keyless, 38 in. cast iron cap	10	50	30	.80	16.00
3478	Pull, ½ in. cast iron cap	10	50	35	1.35	27.00
3479	Key, ½ in. cast iron cap.	10	50	40	.85	17.00
3410	Keyless, ½ in. cast iron cap.	10	50	30	.80	16.00

All brass and aluminum porcelain socket caps listed elsewhere are interchangeable with above sockets. For sockets with either Nos. 150, 151, 152 or 153 caps listed elsewhere add to list \$0.10, Mfrs. List \$0.95. For sockets with either Nos. 154 or 155 caps listed elsewhere add \$0.66 to list. For sockets with No. 163 caps listed elsewhere add \$1.54 to list. For sockets with No. 173 caps listed elsewhere add \$1.10 to list. For sockets either Nos. 174,175, 176 or 177 caps listed elsewhere add \$1.54 to list.

# WITH VENTILATED CORRUGATED COVER FOR PAINT ENAMELED REFLECTORS— STRAP HOLDER ATTACHED

3412   Keyless, ¾ in. iron cap with lock nut.	10	50	55	\$1.20   \$24.00
3451   Keyless, ½ in. iron cap with lock nut.	10	50	55	1.20   24.00

#### FOR PORCELAIN ENAMELED REFLECTORS

3453	Keyless, 1/2 in. iron cap with lock nut, for reflectors with 5/8 in. L-extension.	2	50	60	\$1.22	\$5.37
3154	Keyless, 1/2 in, iron cap with lock nut, for reflectors with 1 1/2 in, L-extension.	2	50	65	1.24	5.46
	Keyless, 1/2 in. iron cap with lock nut, for reflectors with 1 1/2 in. L-extension.	2	30	70	1.26	
3456	Keyless, 1/2 in. iron cap with lock nut, for reflectors with 21/4 in. L-extension.	2	30	80	1.30	5.72
3459	Keyless, ½ in. iron cap with lock nut, for MB200 and MW200 reflectors	1	30	85	1.45	3.19

#### Mogul Base Porcelain Sockets

For Reflectors. 1500 Watts, 250 Volts

With Cast Iron Cap-Strap Holder Attached

3446   Keyless, 3/8 in. east iron eap.	$\frac{2}{2}$		\$1.80 1.80	

These sockets can be furnished with ¾ inch, ½ inch or ¾ inch aluminum caps instead of the standard cast iron. For soekets so equipped add \$1.00 to list.

#### WITH VENTILATED CORRUGATED COVER—STRAP HOLDER ATTACHED

3457   Keyless, 1/2 in. iron cap, lock nut, for reflectors with 11/2 in. L-extension	1	10		\$2.40	
3458 Keyless, ½ in. iron cap, lock nut, for reflectors with 2¼ in. L-extension	1	10		2.50	
3485   Keyless, ½ in iron cap, lock nut, for MD1000 and MW1000 reflectors	1	10	50	3.10	6.82

#### Corrugated Ventilated Globe Holders

Schedule	"C"
----------	-----

Schedule "C"

3480	3¼ in. holder and corrugated, ventilated cover for medium base porcelain			1	1	
	keyless soeket, for 3% in. pipe	1	30		\$1.85	\$4.07
3481	4 in, holder and corrugated, ventilated cover for medium base porcelain key-					
	less socket, for 3% in. pipe.	1	30		2.10	4.62
3482	less socket, for ¾ in. pipe	I	20		2.50	5.50
	keyless socket, for ½ in, pipe					
3483	keyless socket, for ½ in. pipe					
	½ in. pipe	1	10		3.00	6.60
3484	8 in, holder and corrugated, ventilated cover for porcelain Mogul socket.				1	
	for ½ in. pipe	1	10		3.50	7.70
						_

Standard finish, baked-on black Japan.

For holders, finished in Flemish brass, add the following to list price: No. 3480, \$4.10; No. 3481, \$4.20; No. 3482, \$5.50; No. 3483, \$6.60; No. 3484, \$7.70.

Glassware not furnished.

These globe holders are furnished complete with porcelain keyless sockets. Holders with medium base sockets tapped for ½ in. pipe or holders with Mogul base sockets tapped for ¾ inch pipe may be had without extra charge.

# Western Electric ELECTRIC GLASS SHADES









o 6012

No. 6050

No. 6019

#### Electric Shades

List			List Price	List Price
No.		Size	Each	per Doz.
173	Roughed inside or roughed outside	$4\frac{3}{8} \times 2\frac{1}{4}$ ins.	\$0.50	\$2.60
288	Roughed inside or roughed outside	$4\frac{3}{4} \times 2\frac{1}{4}$ ins.	.60	3,10
175	Roughed inside or roughed outside	$5\frac{1}{8} \times 2\frac{1}{4}$ ins.	.80	4,14
6012	Roughed inside or roughed outside	5 x $2\frac{1}{4}$ ins.	.80	4.30
6050	Roughed inside or roughed outside	4 x $2\frac{1}{4}$ ins.	.70	3.46
6019	Roughed inside or roughed outside	$4\frac{7}{8} \times 2\frac{1}{4}$ ins.	.70	3.46









No. 159

No. 6072

No. 295

No. 6140

#### Electric Shades

List			List Price	List Price
No.		Size	Each	per Doz.
159	Roughed inside or roughed outside		\$0.60	\$2.60
6072	Roughed inside or roughed outside	$5 \times 2\frac{1}{4}$ ins.	1,00	4.66
295	Roughed inside or roughed outside	$4 \times 2\frac{1}{4}$ ins.	1.00	5.16

## Nebulite Tungsten Electrics

#### A Dense White Glass of Great Purity and High Reflecting Power

List No.		Watts	Size	List Price Each	List Price per Doz.
6140	Roughed inside or roughed outside	25	$5\frac{1}{2} \times 2\frac{1}{4}$ ins.	\$0.80	\$4.30
6159	Roughed inside or roughed outside	40	$6\frac{1}{2} \times 2\frac{1}{4}$ ins.	1.10	5.50
6160	Roughed inside or roughed outside	60	7 x $2\frac{1}{4}$ ins.	1.20	6.20
6161	Roughed inside or roughed outside	100	8 x $2\frac{1}{4}$ ins.	1.30	6.88
6162	Roughed inside or roughed outside	250	10 $\times 3\frac{1}{4}$ ins.	2.00	11.18

Delivery F. O. B. Factory, Philadelphia, Pa. For warehouse deliveries write nearest house.

## OPAL PORCELAIN SHADES







Flat Crimped Edge



Fluted Deep Cone

#### Porcelain Shades

#### Flat Opal Shades

List No.	Diam. Inches	Holder Inches	List Price Each	List Price per Doz.	List No.	Diam. Inches	Holder Inches	List Price Each	List Price per Doz.	
255 255 255	6 7 8 10	$2\frac{1}{4}$ $2\frac{1}{4}$ $2\frac{1}{4}$ $2\frac{1}{4}$	\$0.40 .48 .63 .75	\$2.50 3.00 3.50 4.50	255	12 14 16 18	$ \begin{array}{c} 21/4 \\ 31/4 \\ 31/4 \\ 31/4 \\ 31/4 \end{array} $	\$1.25 1.40 2.00 2.88	\$6.00 7.50 12.00 16.00	
Flat Crimped, Edge Opal Shades										
4251	6 7	$\frac{21/4}{21/4}$	\$0.40 .48	$\begin{bmatrix} \$2.50 \\ 3.00 \end{bmatrix}$	$\begin{vmatrix} 4251 \dots \\ 4251 \dots \end{vmatrix}$	8 10	$\frac{2\frac{1}{4}}{2\frac{1}{4}}$	\$0.53 .65	\$3.50 4.50	
			Fluted	Deep Co	ne Opal Shad	es				
4184 4184	6 7	$\frac{21/4}{21/4}$	\$0.55 .68	$\begin{bmatrix} \$2.50 \\ 3.00 \end{bmatrix}$	4184 4184	8 10	$\frac{2\frac{1}{4}}{3\frac{1}{4}}$	\$0.89 1.13	\$3.50 8.00	



Deep Cone Shade Opal or Imported Green Glass and Opal Lined



Parabola Green Glass, Porcelain Lined and Plain and Opal Plain Angle Shade



No. 421435 Imported Half Shade

# Deep Cone Porcelain Shades Deep Cone Opal Shades | Imported Deep Cone

_	,	opui.	Jiiuucs		Imported Di		Shades	Glass Up	al Lined
List No. 258 258	Diam. Inches 7 10 10	Holder Inches $2\frac{1}{4}$ $2\frac{1}{4}$ $3\frac{1}{4}$	Each \$0.63 1.00 1.00	List Price per Doz. \$4.50 8.00 8.00	List No. 421428 421429 421430	Diam. Inches 7 10 10	Holder Inches $2\frac{1}{4}$ $2\frac{1}{4}$ $3\frac{1}{4}$	List Price Each \$1.80 2.47 2.47	List Price per Doz. \$8.75 12.00 12.00

#### Parabola Porcelain Shades

Green Plated Plain Angle					Opal Plain Angle Shades						
List No. 8516	Inches $4\frac{1}{4}$			Each \$1.96	List Price per Doz. \$10.00 18.00		Diam. Inches	Height Inches	Holder		List Price per Doz. \$6.60 12.00

#### Imported Half Shades

#### Opal Glass Porcelain Lined

For 16 C. P. Lamps. 21/4 inch Holder

List	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	List Price	List Price
No.	1	Each	per Doz.
421435	Opal Glass Lined fluted shade	\$1.50	\$6.60
423607	Opal Glass Lined plain shade	1.40	6.00
Deli	very F. O. B. New York City. For warehouse deliveries write nearest house	ıse.	0,00

#### HOLOPHANE GLASS REFLECTORS

FOR TYPE B LAMPS



Extensive Type XE



Intensive Type



Focusing Type

#### EXTENSIVE TYPE XTRAFICIENCY REFLECTORS

Schedule "R"
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List No.	Mazda Lamp Watts	Diameter Inches	Height Inches	Holder Inches	No. in Std. Pkg.	Wt. Std. Pkg.	Mfrs. List Price Each	W. E. List Price Each
XE- 20	15 or 20	57/8	378	21/4()	20	27	\$0.80	\$0.88
XE- 25	25	612	414	21/40	20	32	.90	,99
XE- 40	40	678	434	21/40	10	23	1.05	1.16
XE- 60	60	75/8	5	21/40	10	30	1.15	1.27
XE-100	100	834	534	21/11	10	37	1.50	1.65
XE-150	150	10	61/2	3½A	10	52	2.75	3.03
XE-200	200 "C"	978	73 8	3½A	10	62	3.25	3.58
XE-250	250	1134	734	31/4A	6	48	4.10	4.51
XE-500	400 or 500	$14\frac{1}{8}$	85%	31/4	4	54	9.35	10.29

#### INTENSIVE TYPE XTRAFICIENCY REFLECTORS

XI- 20	15 or 20	6	4	$  2\frac{1}{4}()$	20	28	\$0.80	\$0.88
XI- 25	25	63/4	41/8	21/40	20	36	.90	.99
XI- 40	40	73 8	45/8	21/40	10	23	1.05	1.16
XI- 60	60	734	5 ~	21/4()	10	29	1.15	1.27
XI-100	100	834	$5\frac{3}{4}$	21/4H	10	35	1.50	1,65
XI-150	150	105g	634	31/4A	iŏ	57	2.75	3,03
XI-200	200 "C"	$10^{\frac{2}{3}}$	$7\frac{1}{2}$	31/4.1	10	60	$\frac{1}{3.25}$	3,58
XI-250	250	115/8	71/	31/4.1	l ř <sub>ě</sub>	47	4.10	4.51
XI-500	400 or 500	143/4	81/2	31/4	4	55	9.35	10.29

#### FOCUSING TYPE XTRAFICIENCY REFLECTORS

XF- 20	15 or 20	1 65/8	37/8	1 21/40	1 20	+ 29	\$0.80	\$0.88
XF- 25	25	7	4	21/40	20	32	.90	.99
XF- 409	40	734	43/8	21/40	10	20	1.05	1.16
XF- 60	60	81/4	43/4	21/40	10	28	1,15	1.27
XF-100	100	93/8	51/8	2¼H	10	32	1,50	1,65
XF-150	150	115/8	$\frac{61}{2}$	31/4.1	10	56	2.75	3.03
XF-250	250	1314	73 8	$\frac{1}{3}\frac{3}{4}A$	1 6	49	4.10	4.51



No. 963 Plain Edge No. 8300 Crimped Edge

#### REFLECTORS FOR WINDOW LIGHTING

#### For Type C Lamps

Reflector 983 is used for windows of ordinary dimensions.

Reflector 963 is for very shallow windows.

Reflector 922 is used in corner, open, island, and mirror back windows.

983	100	10 <sup>3</sup> / <sub>8</sub>	$6\frac{1}{2}$ $5\frac{1}{4}$ $6\frac{1}{2}$ $5\frac{3}{8}$	21/11	15	65	\$2.00	\$2.20
963	100	10 <sup>1</sup> / <sub>2</sub>		21/11	15	65	2.00	2.20
922	100	9		21/11	10	65	3.50	3.85
8300	100	10 <sup>5</sup> / <sub>8</sub>		21/11	15	65	2.00	2.20

#### HOLOPHANE GLASS REFLECTORS

FOR TYPE C LAMPS



Extensive Type CSE



Intensive Type CSI

#### Superficiency Holophane Glass Reflectors

#### EXTENSIVE TYPE

#### Schedule "R"

List	Recom. "C"	Dim	ensions in Inc	hes	Approx.	No. in	Mfrs.	W. E.
No.	Lamp Watts	Diam.	Height	Holder	Shpg. Wt. Std. Pkg.	Std. Pkg.	List Price Each	List Price Each
CSE- 75VF CSE-100VF CSE-200VF CSE-500VF	75 100 200 400–500	7½ 8½ 8½ 9½ 13¼	$\frac{57/8}{6}$ $\frac{73/8}{85/8}$	2½() 2½11 3¼A 3¼	35 37 62 54	10 10 10 4	\$1.40 1.75 3.40 9.85	\$1.54 1.93 3.80 10.84

#### INTENSIVE TYPE

CSI- 75VF CSI-100VF CSI-200VF CSI-500VF	75 100 200 400–500	$\begin{array}{c} 8 \\ 85\% \\ 101/4 \\ 141/6 \end{array}$	$\begin{array}{c} 5\frac{7}{8} \\ 6\frac{1}{8} \\ 7\frac{3}{8} \\ 8\frac{1}{2} \end{array}$	21/40 21/4 H 31/4 A 31/4	35 37 60 55	10 10 10 4	\$1.40 1.75 3.40 9.85	\$1.54 1.93 3.80 10.84
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No. 02560 V.S.

#### HOLOPHANE-REALITE UNITS Large Units for Type C Lamps

Schedule "R"

These Holophane-Realite Units are furnished with velvet-finished reflectors and satin-finished bowls, smooth outside, but with a sunburst of prisms inside. They diffuse the light, are highly efficient, and do not change the color value of the lamps. The fixtures for these units are especially ventilated for use with the new high efficiency Type C lamp.

#### Complete Unit, Velvet Reflector and S. F. Bowl

Tint	Recom. "C"	Din	nensions in In	ches	Approx.	No. in	Mfrs.	W. E.
List No.	Lamp Watts	Diam.	Ileight	Holder	Shp. Wt. Std. Pkg.	Std. Pkg.	List Price Each	List Price Each
02560VS	100	105/8	151/4	31/4	70	4	\$16.40	\$7.04
02570VS	${100 \choose 200}$	123/4	161/4	31/4	72	3	21.00	16.80
06290VS	$\left\{ egin{array}{c} 300 \\ 400 \\ 500 \end{array} \right\}$	143/4	173/4	4	70	2	30.70	24.56

#### HOLOPHANE GLASS REFLECTORS

FOR TYPE C LAMPS







No. 2120 V. F.



Nos. 2130 V. F. and 2140 V. F. With Metal Clamps No. 02760 V. F. and No. 02750 V. F. With Hood and Mogul Socket

#### REFLECTOR-REFRACTORS

#### Schedule "R"

	Type C	Bow!			Wt., Lbs.		Mfrs.	W. E.
List	Bowl	Diam.	Length		Std.	Std.	List	List
No.	Lamp	Inches	Inches	Holder	Pkg.	Pkg.	Each	Each
2110 V.F.	75	73/8	47/8	21/4()	68	20	\$2.10	\$2.31
2110 V.F1	100	$7\frac{3}{8}$	47/8	21/4A	68	20	2.10	2.31
2120 V.F.	100	$9\frac{1}{2}$	61/4	31/40	76	12	4.50	4.95
2120 V.F2	200	$9\frac{1}{2}$	61/4	31/4A	76	12	4.50	4.95
2130 V.F.	300-400	$12\frac{1}{4}$	81/4	4 spec.	63	4	10.50	10.50
2140 V.F.	300, 400, 500	141/4	95/8	4 spec,	62	3	15.00	15.00

#### GLASS, HOOD AND SOCKET

02760 V.F. 02750 V.F.	300-400   300, 400, 500	121/4	12½ 13½	4 spec.	72	4 2	15.00 21.00	\$15.00
O24-00 1.1.	000, 400, 000	1774	10/8	4 spec.	1 10	0	21.00	16.80



No. 741

#### HOLOPHANE TOTAL INDIRECT UNIT

#### Schedule "I"

This unit is complete with 20 inch white A No. 1 porcelain enameled steel bowl holder; 3/4 inch conduit stem 21 inches long; Mogul porcelain socket with medium base adapter and canopy, holder, canopy and stem finished white enamel to match bowl.

Because of special contour of bowl and special white porcelain enamel, this unit has very high efficiency, efficiency of utilization approximately 42% for large rooms and light walls and ceiling. Will take any size lamp, 75–1000 watts, C or C-2, and by adjusting sliding collar of holder, the correct lamp position is obtained for each. It is not necessary to remove lamp for cleaning bowl, neither can the lamp be tipped when removing or replacing bowl, so the breakage of tip of lamp is climinated. Holder is designed on the ice hook principle—the harder the downward pull the stronger the grip. The bowl can be removed and replaced in a second's time.

		Bowl	Holder	Stem	Height	1	Wt., Lbs.	Mfrs.	W. E.
List	Diam.	Height	Height	Length	Overall	Std.	Std.	List	List
No.	Ins.	Ins.	Ins.	Ins.	Ins.	Pkg.	Pkg	Each	Each
741	20	61/2	13	21	24	5	100	\$11.00	\$18.70

#### For Industrial Illumination

Thoroughly efficient illumination is more than a humanitarian necessity in industrial plants. It secures and perpetuates economies apart from the beneficial effect upon employees. Scientifically correct illumination may be reckoned in terms of time saved in producing a given amount of work, in greater accuracy of operatives, in minimizing accidents and in promoting better working facilities by providing brighter and more cheerful surroundings.

The most important consideration in factory illumination is not to have more brilliant light but to make more and better use of the light available. Light runs its free course unless controlled at its source. The light effused from lamps should be diffused by reflectors, otherwise it is lost; also its cost. It should be directed from where it isn't wanted to where it is needed—guided without deviation from the lamp to the object of illumination. This may be accomplished with unerring precision by using reflectors selected with proper regard to their functional qualifications in association with various sizes and shapes of lamps.

The following reflectors are correctly designed for new installations and designed to correct existing faults in old lighting systems. They are shaped and finished to distribute light over extended areas, to concentrate it in a brilliant beam, or to give any intermediate distribution desired.

#### **FINISHES**

The bodies of reflectors are made of best quality open hearth steel, thoroughly annealed to insure uniform tensile strength and deep-drawing qualities. They are supplied in three standard inside finishes—matte aluminum, white porcelain enamel, white paint enamel. The standard color of the outside finish of all reflectors is green.

#### MATTE ALUMINUM FINISH

Before the aluminum is applied, the reflector bodies are immersed in a chemical bath which removes from the pores of the metal all dirt and greasy substances. They are then scrubbed in a special solution and quickly dried to prevent rust formation. A binding coat of aluminum is then applied by air brush and heat-dried, after which a heavier coat of aluminum is applied. They are then given a transparent coating which protects the aluminum and preserves its reflective qualities. The final coating forms a hard, smooth surface resistant to injury when reasonable eare is exercised in cleaning.

#### PORCELAIN ENAMEL FINISH

As the inside is the working side of a reflector it is most essential that the finish be smooth and uniform to prevent distorted reflection of light. The porcelain enamel finish is absolutely free from cracks, blowholes and indentations. The reflectors are given three coats of best quality, pure white enamel, all of which are baked on at high temperature, forming a finish with the gloss and hardness of glass.

#### WHITE PAINT ENAMEL FINISH

This finish, while closely resembling porcelain enamel, has individual characteristics which greatly enhance the appearance and service qualities of the reflectors. Several coats of pure white paint enamel are applied, and each is baked on at gradually increasing temperature in an automatically regulated oven. The reflectors are subjected to slow cooling after each baking to prevent formation of cracks, due to contraction of the metal. The finish in final form is smooth, tough, extremely durable and permanent in color.

#### KEY TO LETTERS AND NUMERALS

Light distribution: B, diffusing; D, distributing; E, extensive; F, focusing; I, intensive; N, angle; W, wide.

Size, numerals 25, 40, 60, etc., indicate the wattage of lamps.

Holders: H, Hubbell screw holder; P, porcelain socket holder; S, detachable screw casing; 3445, medium strap holder socket; 3413, Mogul strap holder socket; 3451, 3453, 3454, 3455, 3456, 3459, medium covered strap holders; 3457, 3458, 3458, Mogul covered strap holders.

Inside finishes: A, aluminum; M, porcelain enamel; T, paint enamel.

			<del></del>		
REFLECTORS FOR TYPE B LAMPS IN SIZES 10, 15, 20 AND 25 WATTS	These Reflectors had an angle of 30° c shown. Spacing d the distance the lam face to be illuminate.	GLE ing approximately at listributing light as istance is 11, times in hangs from the sur-d. Designed for lightes, presses and other flord eye protection.	WIDE These flat dome porcelain enamel reflectors are for spreading light over great areas where it is neither desired nor essential to have even illumination.	DISTINIBUTING These shallow dome porcelain enamel reflectors are for general lighting. They do not allow light to pass upward or horizontally Spacing distance should be three times the mounting height of lamp.  M-1  DISTINIBUTING	
	Purcelain Enameled Green Outside White Inside	Paint Enameled Green Outside Matte Aluminum Inside	Porcelain Enameled Green Outside – White Inside	Porcelain Enameled Green Outside—White Inside	
H — Hubbell Screw Collar Holder. For all brass shell, me- dium base sock- ets, beaded or threaded shells.	MN40H	AN40H	MW25H	MD40H	
P-Brass Clamp Holder. For most any make of porcelain socket.	MN40P	AN40P	MW25P	MD406,	
S—Hubbell Key- less Porcelain Socket with alu- minum detach- able screw cas- ing. For X" pipe.	MN40S	AN40S	MW25S	MD40S	
No. 3445—Hub- bell Keyless Por- celain Socket with strap hold- er. For 3s" pipe.	MN40 3445	AN40 3445	MW25-3445	MD40 3445	
Nos, 3451, 3453, 3454 — Hubbell Porcelain Sockets with strap holder and Japanned ventilated corrugated cover. For ½" pipe.	MN40 3454	AX10 3151	tr	MD40 3454	
L — Extension For any standard 2¼" Holder.	MN40	AN40	ÝI.	M240	

Ŧ	 Duina	 Data	

		L12	r rrces	allu Data Schedule "C				
List	Std.	Mfrs. List	W. E. List	List	Std.	Mfrs. List	W. E. List	
No.	Pkg.	Each	Each	No.	Pkg.	Each	Each	
MN-40H	50	\$1.65	\$3.63	MW-25H	<b>5</b> 0	\$1.13	<b>\$2.49</b>	
MN-40P	30	1.80	3.96	MW-25P	30	1.28	2.81	
MN-40S	20	2.20	4.84	MW-25S	20	1.68	3.70	
MN-40-3445	50	2.20	4.84	MW-25-3445	50	1.68	3.70	
MN-40-3454	50	2.64	5.81	MD-40II	50	1.51	3.32	
MN-40	50	1,40	3.08	MD-40P	30	1.66	3.65	
AN -40H	50	.80	1.76	MD-408	20	2.06	4,53	
AN -40P	30	1.10	2,42	MD -40-3445	50	2.06	4,53	
AN -40S	20	1.50	3.30	MID-40-3454	50	2.50	5.50	
AN -40-3445	50	1.50	3.30	MD-40	. 50	1.26	2.77	
AN -40-3451	50	1.90	4.18					
AN -40	50	.70	1.54					

# Western Electric

## **METAL REFLECTORS**

DISTRIBUTI These paint enameled reflectors lighting. They do not allow li or horizontally. Spacing dist imnation is three times the lamps. The shallow bowl refl um interior surface, is used fo as the shallow dome having s surface.  M-3  DISTRIBUTIS	sare used for general gibt to pass upward ance for general illumounting height of ector, matte aluming the same purposes white paint interior	These deep bowl terior and exterior plants. The eyes the light is reflect tion, lamps should distance of the n white paint enaminside use only.	ENSIVE reflectors are for in- reflectors are for in- reflectors are for in- reflectors are for in- reflectors are for in- state are protected while d. For even illumina- d be spaced twice the nounting height. The el interior finish is for  M-2 TENSIVE	INTENSIVE This deep bowl type is for even lighting of machines and benches and to shield the eyes from lamp glare. Spacing distance 134 times the mounting height.  M-14 INTENSIVE	FOCUSING This type used for local lighting where a strong concentration of light is desired Spacing distance 1, times mounting height for even illuming ation.  M-1 FOCUSING
Paint Enameled Green Outside—White Inside	Paint Enameled Green Outside	Porcelain Enameled	Paint Enameled Green Outside	Paint Enameled Green Outside	Paint Enameled Green Outside
OLEM OUTSIDE THIN MAKE	Matte Aluminum Inside	Green Outside White Inside	Green Outside White Inside	Matte Aluminum Inside	MatteAluminumInsid
TD40H	AD25H	ME40H	TE40H	AI40H	AF25H
TD40P	AD25P	ME40P	TEAOP TEAOP	AI40P	AF25R
TD40S	AD25S	ME40S	TE40S	AI40S	AF25S
TD40-3445	AD25-3445	ME40 3/45	TE40 3445	A140 - 3445	AF25 3445
TD40-3451	÷	ME40 3453	TE40-3451	A140-3451	AF25 -3451
TD40	☆	ME40	TE40	A140	AF25

		List	Prices	and Data		Schedule "C'				
List No.	Std. Pkg.	Mfrs. List Each	W.E. List Each	List No.	Std. Pkg.	Mfrs. List Each	W. E. List Each			
TD-40H TD-40P	50 30	\$0.90 1.20	\$1.98 2.64	TE-40P TE-40S	30 20	\$1.25 1.65	\$2.75 3.63			
TD-408	20	1.60	3.52	TE-40-3445	50	1.65	3.63			
TD -40-3445 TD -40-3451	50 50	1.60 2.00	3.52 4.40	TE-40-3451 TE-40	50 50	$\frac{2.05}{.85}$	4.52 1.87			
TI)-40	50	. 80	1.76	AI -40H	50	.95	2.09			
AD -25H AD -25P	50 30	. 65 . 95	1.43	AI -40P AI -40S	30 20	$egin{array}{c} 1.25 \ 1.65 \end{array}$	2.75 3.63			
AD-25S	20	1.35	2.97	AI -40-3445	50	1.65	3.63			
AD -25-3445 ME-40H	50 50	1.35 1.25	2.97 2.75	AI -40-3451 AI -40	50 50	2.05 .85	4.52 1.87			
ME-40P	30	1.40	3.08	AF-25H	50	. 76	1.67			
ME-408 ME-40-3445	20 50	1.80 1.80	3.96 3.96	AF-25P AΓ-25S	30 20	1.06 1.46	2.33			
ME-40-3453	50	2.22	4.83	AF-25-3445	50	1.46	3.21			
ME-40 TE -40H	50 50	1.00 .95	2,20 2.09	AF-25-3451 AF-25	50 50	1.86 .66	4.09 1.45			

REFLECTORS FOR	These Reflectors ha an angle of 30° d shown. Spacing di the distance the lamp	GLE  ng approximately at listributing light as istance is 1½ times hangs from the sur-	WIDE These flat dome porcelain enamel reflectors are for spreading light over great areas where it is neither desired nor essential to the control of the co	DISTRIBUTING These shallow dome porcelain enamel reflectors are for general lighting. They do not allow light to pass upward or
40 AND 50 WATT TYPE "B" LAMPS	ing surfaces of lathe	d. Designed for lighters, presses and other ford eye protection.	tial to have even illumination.	allow light to pass upward or horizontally Spacing distance should be three times the mounting height of lamp.
	ANGLE	ANGLE	WIDE	M-3 DISTRIBUTING
	Porcelain Enameled Green Outside White Inside	Paint Enameled Green Outside Matte Aluminum Inside	Porcelain Enameled Green Outside—White Inside	Porcelain Enameled Green Outside—White Inside
H — Hubbell Screw Collar Holder. For all brass shell, me- dium base sock- ets, beaded or threaded shells.	MN40H	AN40H	MW60H	MD40H
P-Brass Clamp Holder For most any make of porcelain socket.	MN40P	AN40P	MW60P	MD40P
S—HubbellKey- less Porcelain Socket with alu- minum detach- able screw cas- ing. For 3/8" pipe.	MN40S	AN40S	MW60S	MD40S
No. 3445—Hub- bell Keyless Por- celain Socket with strap hold- er. For ¾" pipe.	MN40-3445	AN40-3445	MW60-3445	MD40-3445
Nos. 3451, 3453, 3454 — Hubbell Porcelain Sockets with strap holder and Japanned ventilated corrugated cover For 52"	MN40- 3454	AN40-3451	☆	MD40-3454
L — Extension. For any standard 2¼" Holder	MN40	AN40	☆	MD40

## List Price and Data

List No.	Std. Pkg.	Mfr's. List Each	W. E. List Each	List No.	Std. Pkg.	Mfrs. List Each	W.E. List Each
AN -40H AN -40P AN -40S AN -40-3445 AN -40-3451 AN -40 MD-40 MD-40H MD-40P MD-40P MD-40S MD-40-3445 MD-40-3454	50 30 20 50 50 50 50 50 50 50 50 50 50	\$0.80 1.10 1.50 1.50 1.90 .70 1.26 1.51 1.66 2.06 2.50	\$1.76 2.42 3.30 4.18 1.54 2.77 3.32 3.65 4.53 5.50	M N -40H M N -40P M N -408 M N -40-3445 M N -40-3454 M N -40 M W -25H M W -25P M W -258 M W -25-3445	50 30 20 50 50 50 50 50 30 20	\$1.65 1.80 2.20 2.20 2.64 1.40 1.13 1.28 1.68	\$3.63 3.96 4.84 4.84 5.81 3.08 2.49 2.82 3.70 3.70

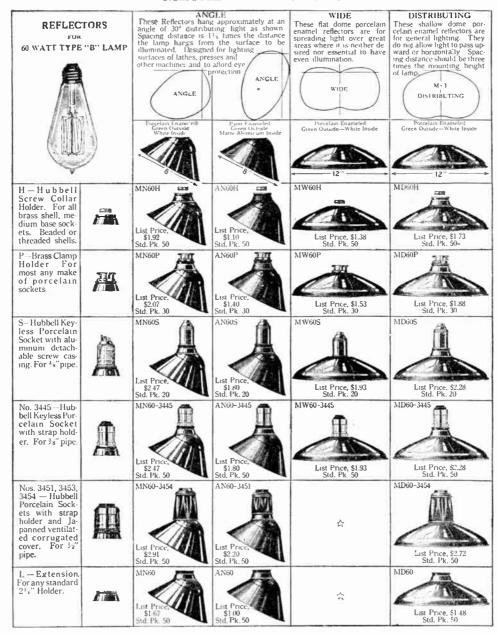
# Western Electric

# **METAL REFLECTORS**

DISTRIBUT These paint enameled reflected lighting. They do not allow or horizontally. Spacing dismination is three times the lamps. The shallow bowl return interior surface, is used as the shallow dome having surface.  M-3 DISTRIBUT	ors are used for general light to pass upward stance for general illumounting height of effector, matte aluminfor the same purposes; white paint interior	These deep bowl iffectors are for ir flectors are for ir lighting of industriare protected while For even illuminat spaced twice the disheight. The white finish is for inside u	ensive porcelain enamel re- terior and exterior all plants. The eyes the light is re-lected, ton, lamps should be tance of the mounting paint enamel interior se only.	INTENSIVE This deep bowl type is for even lighting of machines and benches and to shield the eyes from lamp glare. Spacing distance 11's times the mounting height.  M-1M INTENSIVE	FOCUSING This type used for local lighting where a strong concentration of light is desired. Spacing distance 34 times mounting height for even illumination.  M-4 FOCUSING
Paint Enameled Green Outside—White Inside	Paint Enameled Green Outside Matte Aluminum Inside	Porcelain Enameled Green Outside White Inside	Paint Enameled Green Outside White Inside	Paint Enameled Green Outside Matte Alummum Inside	Paint Enameled Green Outside Matte Aluminum Inside
TD40H	AD40H	ME 40H	TE 40H	AL40H	AF 40H
ТД40Р	AD40P	ME40P	TE40P	A140P	AF40P
TD40S	AD40S	ME40S	TE40S	AI40S	AF40S
TD40-3445	AD40-3445	ME40- 3445	TE40-	A140- 3445	AF40- 3445
TD40-3451	ά	ME40-3453	TE40 - 3451	A140 - 3451	AF-40* 3451
TD40	¢	ME40	TE40	A140	AF40

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		LIS	t Frices	and Data		Schedule "C"		
List No.	Std. Pkg.	Mfrs. List Each	W. E. List Each	List No.	Std. Pkg.	Mfrs. List Each	W. E. List Each	
TD-40H TD-40P TD-40S	50 30 20	\$0.90 1.20 1.60	\$1 98 2 64 3.52	TE-40P TE-408 TE-40-3445	30 20	\$1.25 1.65	\$2.75 3.63	
TD -40-3445 TD -40-3451	50 50	$\frac{1.60}{2.00}$	3 52 4 40	TE-40-3451 TE-40	50 50 50	1.65 2.05 .85	3.63 4.51 1.87	
TD -40 AD -40H AD -40P	50 50 30	.80 .80 1.10	1.76 1.76 2.42	AI -40H AI -40P AI -40S	50 30 20	1.25 1.65	2 09 2 75	
AD-408 AD-40-3445 ME-40H	50 50 50	1.50 1.50	3 30 3 30	AI -40-3445 AI -40-3451	50 50	$\frac{1.65}{2.05}$	3 63 3 63 4 51	
ME-40P ME-40S	30 20	1.25 1.40 1.80	2.75 3.08 3.96	AI -40 AF-40H AF-40P	50 50 30	.85 .84 1.14	1.87 1.85 2.51	
ME-40-3445 ME-40-3453 ME-40	50 50 50	1.80 2.22 1.00	3 96 4 88 2 20	AF-40S AF-40-3445 AF-40-3451	20 50	1.54 1.54	3 39 3 39	
TE -40H	50	.95	2.09	AF-40-5451 AF-40	50 50	$\substack{1.94\\.74}$	4.27 1.63	



#### List Prices and Data

List	Std.	Mfrs.	W. E.	List	Std.	Mfrs.	W.E.
No.	Pkg.	List	List	No.	Pkg.	List	List
MN60-H	50	81.92	\$4.22	AN60	50	\$1.00	\$2.20
MN60P	30	2.07	4.55	MW60H	50	1.38	3.04
MN60S	20	2.47	5.43	MW60P	30	1.53	3.37
MN60-3445	50	2.47	5.43	MW60S	20	1.93	4.25
MN60-3454	50	2.91	6.40	MW60-3445	50	1.93	4.25
MN60	50	1.67	3.67	M D60H	50	1.73	3.81
AN60H	50	1.10	2.42	MD60P	30	1.88	4.14
AN60P	30	1.40	3.08	MD60S	20	2.28	5.02
AN60S	20	1.80	3.96	M D60-3445	50	2.28	5.02
AN60-3445	50	1.80	3.96	M D60-3454	50	2.72	5.98
AN60-3451	50	2.20	4.84	MD60	50	1.48	3.26

WEIAL REFLECTORS									
These paint enameled reflect lighting. They do not allow horizontally. Sparing distancis three times the mounting shallow bowl reflector, matte also used for the same purpose having white paint interior su	ors are used for general light to pass upward or for general illumination height of lamps. The uminum interior surface, as as the shallow dome face.	These deep bowl ref and exterior lightin The eyes are protein reflected. For eve- should be spaced two mounting height. To interior finish is for	he white paint enamel	of machines and	FOCUSING This type used for local lighting where a strong concentration of light is desired. Spacing distance % times mounting height for even illumination.				
Paint Enameled Green Outside—White Inside	Paint Enameled Green Outside Matte-Aluminum Inside	Porcelan Enameled Green Outside White Inside	Paint Ename led Green Out sice White I raide	Paint Framsled Green Outside Matte Alumurum Inside	Paint Enameled Green Octaide Matte Ahmisum Inside				
TD60H	AD60H	ME60H san	TE60H EXE	AIGOH	AF60H				
TD60P	AD <sub>0</sub> OP	NE60P	TEGOP	Alsop	AF60P				
TD60S	AD60S	MEGOS	TEGOS	Aleos	AF60S				
TD60-3445	AD60-344	ME60- 3445	TE60- 3445	A160- 3445	AF60- 3445				
TD60-3451	ጵ	MEGO 3433	TE60- 3451	3431	AF60- 3451				
TD60	<b>ं</b> ग	MEG	TEGO TEGO	A160	AF60				
	Liet	Prices ar	ad Data		Schedule				

#### List Prices and Data

7	Q1.1	Mfrs.	W. E.		C4 1	Mfrs.	W. E.		CLI	Mfrs.	W.E.
List	Std.	List	List	List No.	Std.	List Each	List Each	List No.	Std.	List Each	List Each
No.	Pkg.	Each	Each		Pkg.	raen			Pkg,		
TD-60H	50	\$1.03	\$2.27	ME-608	20	\$2.04	\$4.49	AI -60S	20	\$1.80	\$3.96
TD -60P	30	1.33	2.97	ME-60-3445	<b>5</b> 0	2.04	4.49	AI -60-3445	50	1.80	3.96
TD -60S	20	1.73	3.81	ME-60-3453	50	2.46	5.41	AI -60-3451	50	2.20	4.84
TD -60-3445	50	1.73	3.81	ME-60	50	1.24	2.73	AI -60	50	1.00	2.20
TD -60-3451	50	2.13	4.69	TE -60H	50	1.06	2.33	AF -60H	50	1.10	2.42
TD -60	50	.93	2.05	TE -60P	30	1.36	2.99	AF -60P	30	1.40	3.08
AD -60H	50	.98	2.16	TE -608	20	1.76	3.87	AF -60S	20	1.80	3.96
AD -60P	30	1.28	2.82	TE -60-3445	50	1.76	3.87	AF -60-3445	50	1.80	3.96
AD -608	20	1.68	3.70	TE -60-3451	50	2.16	4.75	AF -60-3451	50	2.20	4.84
AD -60-3445	50	1.68	3.70	TE -60	50	.96	2.11	AF -60	50	1.00	2.20
ME-60H	50	1.49	3.28	AT -60H	50	1.10	2.42				
ME-60P	30	1.64	3.61	AI -60P	30	1.40	3.08				

REFLECTORS FOR 75 WATT TYPE "C" LAMPS		ese Reflectors h	GLE ang approximately distributing light as islance is 11, times impliangs from the inated	WIDE These flat done purcelain enamel reflectors are for spreading light over great areas where it is neither desired nor essential to have even illumination.  WIDE	DISTRIBUTING These shallow dome porcelain enamel reflectors are for general lighting. They do not allow light to pass upward or horizontally Spacing distance should be three times the mounting height of lamp.  M-3 DISTRIBUTING
(4)	<b>*</b>	rcelain Enameled Green Outside White Inside	Paint Enameled Green Outside Matte Aluminum Inside	Porcelain Enameled Green Oxtside—White Inside	Porcelain Enameled Green Outside—White Inside
	M	ITSH CIA	AN75H	MW75H	MD75H
P-BrassClamp Holder For most any make of medium base porceláin socket	MM	775P	AN75P	MW75P	MD75P
No 3445—Hub- belf Keyless Por- celain Socket with strap hold- er For 3s" pipe.	MN 34	175-	AN75- 3445	MW753445	MD75-3445
Nos 3451, 3454, 3455 - Hubbell Porcelain Sock ets with strap holder and Ja- panned ventilat- ed corrugated cover. For 32" pape	MIN 34	175-	AN75 JASI	MW75-3455	MD753455
C — Extension For any standard 24" Holder	MN	175	AN75	MW75	MD75

## List Prices and Data

List No.	Std. Pkg.	Mfrs. List Each	W. E. List Each	List No.	Std. Pkg.	Mfrs. List Each	W. E. List Each
No. MN-751I MN-751P MN-75-3445 MN-75-3455 MN-75 AN -751I AN -751P AN -75-3445 AN -75-3451	1ºkg. 50 30 50 50 50 50 50 50	\$2.20 2.35 2.75 3.21 1.95 1.22 1.52 1.92 2.32	\$4.84 5.17 6.05 7.06 4.29 2.68 3.34 4.22 5.10	MW-75H MW-75P MW-75-3445 MW-75-3455 MW-75 MD-75H MD-75-19 MD-75-3445 MD-75-3455	50 30 50 50 50 50 50 50 50	Each \$2,20 2,35 2,75 3,21 1,95 1,85 2,00 2,40 2,86	\$4.84 5.17 6.05 7.06 4.29 4.07 4.40 5.28 6.29
AN -75	50	1.12	2.47	MD-75	50	1.60	3.52

These reflectors are used for do not allow light to pass Spacing distance for general il the mounting height of lamps flector matte aluminum inside same purposes as the shalk inside surface.  M-3  DISTRIBUT	general lighting. They upward or horizontally, umination is three times. The shallow bowl re- surface is used for the ew dome, having white	These deep bowl retrior and exterior liplants. The eyes; the light is reflected, tion, lamps should distance of the mowhite paint enamel inside use only.	POSIVE reflectors are for inghting of industrial are protected while For even illuminabe spaced twice the unting height. The interior finish is for	INTENSIVE These deep bowl reflectors are for interior 1 ight in g where high mounting heights are necessary. Spacing distance 1½ times the mounting height.  M-14 INTENSIVE	FOCUSING This type used for local lighting where a strong light is desired. Spacing distance 3, 1 times mounting height for even illumination.  M-4 FOCUSING
Paint Enameled Green Outside—White Inside	Paint Enameled Green Outside Matte Aluminum Inside	Porcelain Enameled Green Outside White Inside	Paint Enameled Green Outside White Inside	Paint Enameled Green Outside Matte Alummum Inside	Paint Enameled Green Outside Matte Aluminum Inside
TD75H	AD75H	ME75H	TE75H	AI75H	AF75H
TD75P	AD75P	ME75P	TE75P	A175P	AF75P
TD75-3445	AD75-3445	ME75-3445	ГЕ75-3445	A175-3445	AF75-3445
TD75-3451	AD75-3451	ME75-3454	TE75-3451	A175-3451	AF75-3451
TD75	AD75	ME75	TE75	A175	AF75

# List Prices and Data

										- Dilludus	
List	Std.	Mfrs. List	W. E. List	List	Std.	Mfrs. List	W. E. List	List	Std.	Mfrs. List	W. E. List
No.	Pkg.	Each	Each	No.	Pkg.	Each	Each	No.	Pkg.	Each	Each
TD-75H	5Ö	\$1.14	\$2.51	ME-75H	50	1.59	\$3.50	AI -75H	50	1.20	\$2.64
TD -75P	30	1.44	3.17	ME-75P	30	1.74	3.83	AI -75P	30	1.50	3.30
TD -75-3445	50	1.84	4.05	ME-75-3445	50	2.14	4.71	AI -75-3445	50	1.90	4.18
TD-75-3451	50	2.24	4.93	ME-75-3454	50	2.58	5.68	AI -75-3451	50	2.30	5.06
TD-75	50	1.04	2.29	ME-75	50	1.34	2.95	AI -75	50	1.10	2.42
AD-75H	50	1.14	2.51	TE -75H	50	1.12	2.46	AF -75H	50	1.20	2.64
AD-75P	30	1.44	3.17	TE -75P	30	1.42	3.12	AF -75P	30	1.50	3.30
AD -75-3445	50	1.84	4.05	TE -75-3445	50	1.82	4.00	AF -75-3445	50	1.90	4.18
AD -75-3451	50	2.24	4.93	TE -75-3451	50	2.22	4.88	AF -75-3451	50	2.30	4.06
AD-75	50	1.04	2.29	TE -75	50	1.02	2.24	AF -75	50	1.10	2.42

	ANGLE	anaumetelu T	WIDE	DISTRIBUTING These shallow dome porcelain
REFLECTORS FOR 100 WATT	These Reflectors hang ar at an angle of 30° distribu shown. Spacing distance the distance the lamp hat surface to be illuminate lighting billboards, interio and show windows.	ngs from the it.	hese flat dome porcelain namelreflectors are for spread- ing light over great areas where is neither desired nor essen- al to have even illumination.	chamel reflectors are for general lighting. They do not allow light to pass upward or horizontally. Spacing distance should be three times the mounting height of lamp.
TYPE "C" LAMPS	ANGLE	ANGLE	WIDE	M-3 DISTRIBUTING
	Porcellan Enameled Green Outs de White Inside Matte	unt Enarreised ireen Outside Aluminum Ir.side	Porcelain Enameled Green Outside—White Inside	Porcetain Enameled Green Outside—White Inside
H — Hubbell Screw Collar Holder. For all brass shell, medium base sockets having either beaded or threaded shells.	MNI00H ANIO	00H	MW100H	MDI00H
P—BrassClamp Holder. For most any make of medium base porcelain socket	MN100P ANI	00P	MW100P	MDI00P
No. 3445—Hub- bell Keyless Por- celain Socket with strap hold- er. For 3/8" pipe.	MN100 3445 ANI 344		MW100 – 3445	MD100 – 3445
Nos. 3451, 3454, 3455, 3456—Hubbell Porcelain Sockets with strap holder and Japanned ventilated corrugated cover. For ½" pipe.	MN100-3454 AN1 345	100-	MW100-3456	MD100-3456
L — Extension. For any standard 2¼" Holder.	MN100 AN	100	MW100	MD100

#### List Prices and Data

List No.	Std. Pkg.	Mfrs. List Each	W.E. List Each	List No.	Std. Pkg.	Mfrs. List Each	W.E. List Each
MN-100H	30	\$2.75	\$6.05	MW-100H	30	\$2.35	\$5.17
MN-100P	18	2.90	6.38	MW-100P	18	2.50	5.50
MN-100-3445	30	3.30	7.26	MW-100-3445	30	2.90	6.38
MN-100-3454	30	3.74	8.23	MW-100-3456	30	3.40	7.48
MN-100	30	2.50	5.50	MW-100	30	2.10	4.62
AN -100H	30	1.64	3.61	MD-100H	30	2.75	6.05
AN -100P	18	1.94	4.27	MD-100P	18	2.90	6.38
AN -100-3445	30	2.34	5.15	MD-100-3445	30	3.30	7.26
AN -100-3451	30	2.74	6.03	MD-100-3456	30	3.80	8.36
AN -100	30	1.54	3.39	MD-100	30	2.50	5.50

### **METAL REFLECTORS**

These reflectors are used for ge not allow light to pass upward o distance for general illuminate mounting height of lamps. The matte aluminum inside surface purposes as the shallow dome surface.  M-3 DISTRIBUTI	These deep bow! reteror and exterior trial plants. The while the light is rillumination, lamp twice the distance height. The white rior finish is for ins	s should be spaced e of the mounting paint enamel inte- side use only	INTENSIVE These deep bowl reflectors are for in terior lighting where high mounting heights are necessary. Spacing distance 1%, times the mounting height  M-14 INTENSIVE	FOCUSING This type used for local lighting where a strong light is desired. Spacing distance 1, 1 times mounting height for even illumination.  M. & POCUSING	
Green Outside— White Inside	Pant Enamerd Green Ourside Matte Alumnium Inside	Pricelain Enamined Green Outside White Insule	Paint I nameded Green Outside Whate Inside	Paint Ersameled Green Oztasde Matte Atomieum Inside	Paint Enameled Green Outside Matre Alemanian Inside
TDI00P	AD100P	ME IOOP	TE TE TOOP	Al Al Indop	AF 100H
TD100-3445	AD100-3445	ME100- 3445 A	TE100- 3445	A1100- 3445	AF100- 3445
TD100-3451	AD100- 3451	ME 100-3455	TE100- 3451	A1100- 3451	AF100-
TD100	AD100	ME100	TE100	A1100	AF100

## List Prices and Data

#### Schedule "C"

List	Std.	Mfrs. List	W. E.   List	List	Std.	Mfrs. List	W. E. List	List	Std.	Mfrs. List	W. E. List
No.	Pkg.	Each	Each	No.	Pkg.	Each	Each	No.	Pkg.	Each	Each
TD-100H	30	\$1.36	\$2.99	ME-100H	30	\$1.75	\$3.85	AI -100H	30	\$1.30	\$2.86
TD-100P	18	1.66	3.65	ME-100P	18	1.90	4.18	AI -100P	18	1.60	3.52
TD-100-3445	30	2.06	4.53	ME-100-3445	30	2.30	5.06	AI -100-3445	30	2.00	4.40
TD-100-3451	30	2.46	5.41	ME-100-3455	30	2.76	6.07	AI -100-3451	30	2.40	5.28
TD-100	30	1.26	2.77	ME-100	30	1.50	3.30	AI -100	30	1.20	2.64
AD-100H	30	1.36	2.99	TE -100H	30	1.25	2.75	AF -100H	30	1.50	3.30
AD-100P	18	1.66	3.65	TE -100P	18	1.55	3.41	AF -100P	18	1.80	3.96
AD-100-3445	30	2.06	4.53	TE -100-3445	30	1.95	4.29	AF -100-3445	30	2.20	4.84
AD-100-3451	30	2.46	5.41	TE -100-3451	30	2.35	5.17	AF -100-3451	30	2.60	5.72
AD-100	30	1.26	2.77	TE -100	30	1.15	2.53	AF -100	30	1.40	3.08

### METAL REFLECTORS

REFLECT FOR 200 WATT TYPE "		ANGLE These porcelain enameled angle reflectors distribute light as shown. Spacing distance is 1½ times the distance the lamp hangs from the surface to be illuminated. Recommended for billboards, building fronts and as side wall units in factories where cranes or other apparatus interfere with the general overhead lighting.	DIFFUSING These reflectors are recommended for general illumination. When fitted with opal globes they spread a soft, diffused light. May be used in addition to local lights
		ANGLE	DIEFUSING
		Angle—Porcelain Enameled Green Outside—Witte Inside	Flat Dome with 6" Holder—Porcelaun Enameled Green Outside—White Inside
P-Brass Clamp Holder. For most any make of porcelain socket.		MN200P	MB200P
No.3445—Hubbell Keyless Porcelain Socket with strap holder. For ¾" pipe.	13 B	MN200-3445	MB200-3445
Nos. 3451, 3455 3456 and 3459— Hubbell Porce- lain Sockets with strap hold- er and Japanned ventilated cor- rugated cover. For ½" pipe.	10 To 3	MN200-3455	MB200-3459
L—Extension. For any standard 2¼" Holder.	<b>万</b> · ∖	MN200	MB200

### List Prices and Data

#### Schedule "C"

		Mfrs.	W. E.			Mfrs.	W.E.
List	Std.	List	List	List	Std.	List	List
No.	Pkg.	Each	Each	No.	Pkg.	Each	Each
MN-200P	18	\$3.00	\$6.60	MB-200P	18	<b>\$3.28</b>	\$7,22
MN-200-3445	30	3.40	7.48	MB-200-3445	30	3.68	8.10
MN-200-3455	30	3.86	8.49	MB-200-3459	30	4.33	9.53
MN-200	30	2.60	5.72	MB-200	30	2.88	6.34

## **METAL REFLECTORS**

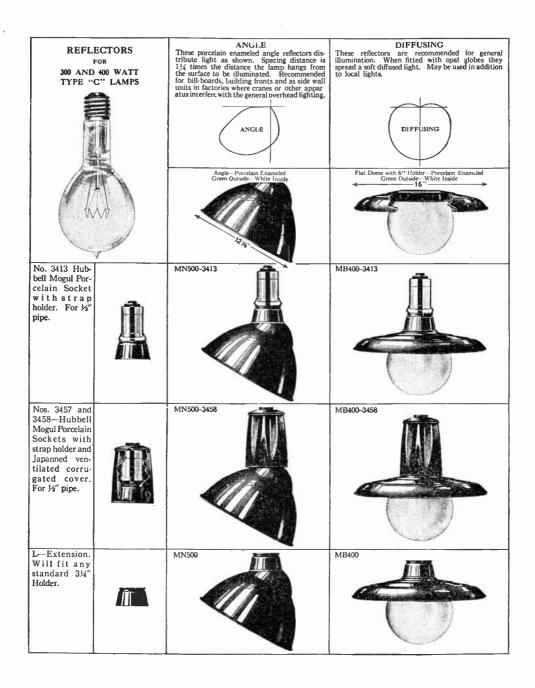
WIDE  These flat dome porcelain enamel reflectors are for spreading light over great areas where it is neither desired nor essential to have even illumination,	These shallow dome porcelain enamel re They prevent loss of light upward or ho general illumination three times the mou bowl reflectors with matte aluminum inside as the shallow dome with white inside surface.	EXTENSIVE These deep bowl reflectors are for interior and exterior lighting of industrial plants. The cyces are protected while the light is reflected. For even illumination lamps should be spaced twice the distance of mounting height.	
wips	M-3 DISTRIBUTI	M-2 EXTENSIVE	
Flat Dome—Porcelain Enameled Green Outside—White Inside	Shallow DomePorcelain Enameled Green Outside White Inside	Shallow Bowl—Paint Enameled Green Outside Matte Aluminum Inside	Deep Bowl—Forcelain Enameled Green Outside—White Inside
14	15"	10%	8 14 "
MW200P	MD100P	AD200P	ME200P
MW200-3445	MD100-3445	AD200-3445	ME200— 3445
MW200-3459	MD100-3456	AD200-3451	ME200- 3456
MW200	MDI00	AD 200	ME200

### List Prices and Data

Schedule "C"

List No. MW-200P MW-200-3445 MW-200-3459 MW-200 MD-100P MD-100-3445 MD-100-3456 MD-100-3456	Std. Pkg. 18 30 30 30 18 30 30	Mfrs. List Each \$2.88 3.28 3.93 2.48 2.90 3.30 3.80	W. E. List Each \$6.34 7.22 8.65 5.46 6.38 7.26 8.36	List No. AD -200P AD -200-3445 AD -200-3451 AD -200 ME-200P ME-200-3445 ME-200-3456	Std. Pkg. 18 30 30 30 18 30 30	Mfrs. List Each \$1.80 2.20 2.60 1.40 2.05 2.45 2.95	W. E. List Each \$3.96 4.84 5.72 3.08 4.51 5.39 6.49
MD-100	30	2.50	5.50	ME-200	30	1.65	3.63

#### **METAL REFLECTORS**



### List Prices and Data

Schedule "C"

		Mfrs.	W. E.			Mfrs.	W. E.
List	Std.	List	List	List	Std.	List	List
No.	Pkg.	Each	Each	No.	Pkg.	Each	Each
MN-500-3413	10	\$6.18	\$13.60	MB-400-3413	10	\$5.64	\$12.41
MN-500-3458	10	6.88	15.14	MB-400-3458	10	6.34	13.95
MN-500	10	4.38	9.64	MB-400	10	3.84	8.45

### **METAL REFLECTORS**

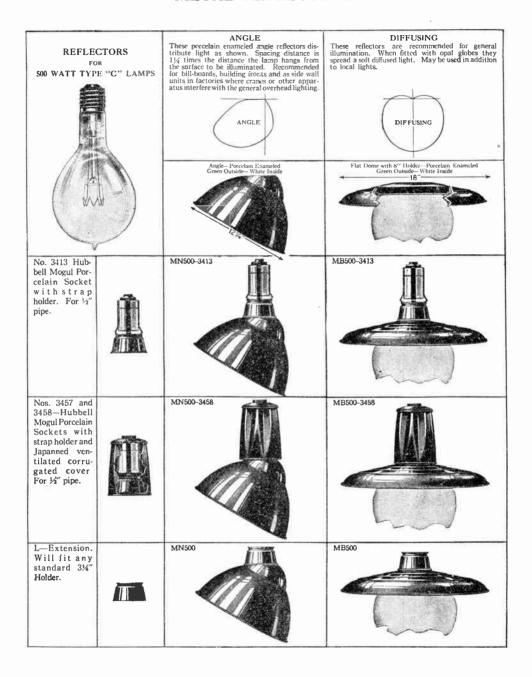
WIDE  These flat dome porcelain enamel reflectors spread light over great areas where even illumination is neither desired nor essential Especially suitable for warehouses, stock rooms and outside of buildings.	DISTRIBUTING These shallow dome porcelain enamel reflectors are for general illumination the same as the flat dome type. They do not allow light to pass upward or horizontally. Spacing distance should be three times the mounting height of lamp.  M-3 DISTRIBUTING	EXTENSIVE  These porcelain enamel deep bowl reflectors are for either interior or exterior illumination of industrial plants. Suitable for yards, wharfs, etc., requiring even illumination with high mounting heights. Spacing distance twice the mounting height  M-2  EXTENSIVE
Flat DomePorcelain Enameled Green Outside White Inside	Shallow Dume—Porcelan Enameled Green Outside —White Inside	Deep Bowl Porcelain Enameled Green Outside White Inside
MW400-3413	MD400-3413	ME500-3413
MW400-3458	MD400-3458	ME500-3457
MW400	MD400	ME500

### List Prices and Data

Schedule "C"

List No. MW-400-3413 MW-400-3458 MW-400 MD-400-3413	Std. Pkg. 10 10 10	Mfrs. List Each \$5.23 5.93 3.43 5.90	W. E. List Each \$11.51 13.05 7.55 12.98	List No. MD-400 ME-500-3413 ME-500-3457 ME-500	Std. Pkg. 10 10 10	Mfrs. List Each \$4.10 4.40 5.00 2.60	W. E. List Each \$9.02 9.68 11.00
MD-400-3413 MD-400-3458				ME-500	10	2,60	5.72
MLD -400-3408	10	6.60	14 52	I			

#### **METAL REFLECTORS**



### List Prices and Data

#### Schedule "C"

List No.	Std. Pkg.	Mfrs. List Each	W. E. List Each	List No.	Std. Pkg.	Mfrs. List Each	W. E. List Each
MN-500-3413 MN-500-3458 MN-500	10 10 10	\$6.18 6.88 4.38	15.14	MB-500-3413 MB-500-3458 MB-500	10 10 10	6.32 $7.02$ $4.52$	\$13.90 15.44 9.94

## **METAL REFLECTORS**

DISTRIBUTING These shallow dome porcelain enamel reflectors are for general illumination the same as the flat dome type. They do not allow light to pass upward or horizontally. Spacing distance should be three times the mounting height of lamp.	These porcelain enamel deep bowl reflectors are for either interior or exterior illumination of industrial plants. Suitable for yards, wharfs, etc., requiring even illumination with high mounting heights. Spacing distance twice the mounting height.
M-3 DISTRIBUTING	M-2 EXTENSIVE
Shallow Dome - Porcelain Enameled Green Outside Whate Inside	Deep Bowl—Porcelain Enameled Green Outside – White Inside
20"	124"
MD500-3413	ME500-3413
MD500-3458	ME500-3457
MD500	ME500
	These shallow dome porcelain enamel reflectors are for general illumination the same as the flat dome type. They do not allow light to pass upward or horizontally. Spacing distance should be three times the mounting height of lamp.  Shallow Dome—Porcelain Enameled Green Outside—Whate Inside  Shallow Dome—Porcelain Enameled Green Outside—Whate Inside  M-3  DISTRIBUTING  MD500-3413

## List Prices and Data

#### Schedule "C"

List No. MW-500-3413 MW-500-3458 MW-500-MD-500-3413 MD-500-3458	Std. Pkg. 10 10 10 10	Mfrs. List Each \$5.90 6.60 4.10 6.18 6.88	W. E. List Each \$12.98 14.52 9.02 13.60 15.14	List No. MD-500 ME-500-3413 ME-500-3457 ME-500	Std. Pkg. 10 10 10	Mfrs. List Each \$4.38 4.40 5.00 2.60	W. E. List Each \$9.64 9.68 11.00 5.72
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# Western Electric METAL REFLECTORS

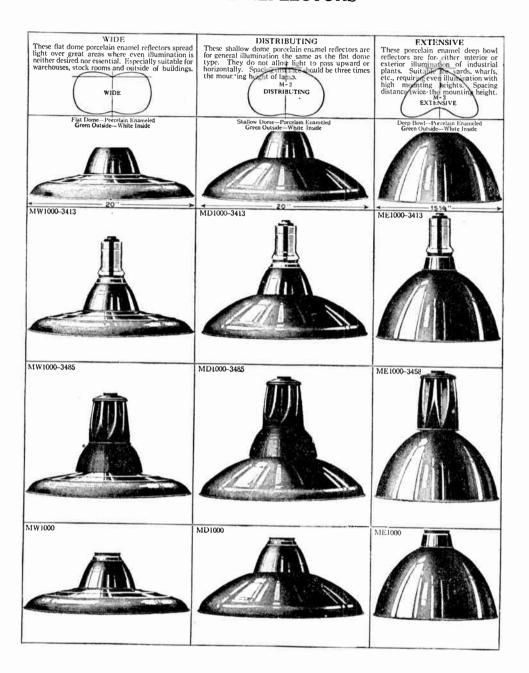


#### List Prices and Data

#### Schedule "C"

List No. MN-1000-3413 MN-1000-3458 MN-1000	Std. Pkg. 5 5 5	Mfrs. List Each \$8.65 9.35 6.85	W. E. List Each \$19.03 20.57 15.07	List No. MB-1000-3413 MB-1000-3458 MB-1000	Std. Pkg. 5 5 5	Mfrs. List Each \$7.70 8.40 5.90	W. E. List Each \$16.94 18.48 12.98
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### **METAL REFLECTORS**



### List Prices and Data

#### Schedule "C"

List No. MW-1000-3413 MW-1000-3485 MW-1000 MD-1000-3413	Std. Pkg. 5 5 5 5	W. E. List Each \$16.94 19.80 12.98 17.53	Mfrs. List Each \$7.70 9.00 5.90 7.97	List No. MD-1000 ME-1000-3413 ME-1000-3458 ME-1000	Std. Pkg. 5 5 5	W. E. List Each \$13.57 13.60 15.14 9.64	Mfrs. List Each \$6.17 6.18 6.88
MD-1000-3485	5 5	$\frac{17.53}{20.35}$	7.97 9.25	ME-1000	5	9.64	4.38

### HUBBELL METAL REFLECTORS



No. 5429 Half Tin Reflector



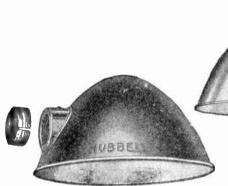
No. 6151

#### Half Reflectors

FOR 25, 40, 60, WATT LAMPS Tin. Brass, Steel and Aluminum

Schedule "C"

	Finish		Finish					
List No.	Description	Outside	Inside	Carton Quantity	Std. Pkg.	Pkg. Wt.	Mfrs. List Each	W. E. List Each
5429 <sup>4</sup> 5532 <sup>4</sup>	Steel Brass	Green White Frosted Alum.		1	50 50	20 20	\$0.50 ,90	\$1.10 1.98
		1	For 10 and 15 V	Vatt Lamp	8		Sched	ule "C"
6151 6152	Steel Brass	Green Old Brass	White Frosted Alum.	1 1	50 50	20 20	\$0.45 .85	\$0.99 1.87



No. 5461, 1/4 Actual Size



No. 6548, ¼ Actual Size



No. 6550, ¼ Actual Size

#### Parabola Reflectors WITH HOLDER AT SIDE

Schedule "C"

List No.	Description	Watts	Carton   Quantity	Pkg. Wgt. Lbs.	Std. Pkg.	Mfrs. List	W. E. List	
5564	6½ in. steel, green outside, frosted inside	25-40-60	1	40	50	\$0.65	\$1.43	
5571	161 a in brass, brush brass outside, frosted inside.	25-40-60	1 1	40 30	50 50	$\frac{1.50}{1.20}$	3.30 2.64	
5401   6½ in. aruminum, green ourside, rosted history 20 to 60   2								
WITH HOLDER AT TOP								
6548	6½ in. steel, green outside, frosted inside 6½ in. brass, brush brass outside, frosted inside. 6½ in. aluminum, green outside, frosted inside.	25-40-60 25-40-60 25-40-60	1	35 40 30	30 30 30	\$0.65 1.50 1.20	\$1.43 3.30 2.64	
WITH HOLDER AT 30° ANGLE								
6551	$6\frac{1}{2}$ in, steel, green outside, frosted inside $6\frac{1}{2}$ in, brass, brush brass outside, frosted inside $6\frac{1}{2}$ in, aluminum, green outside, frosted inside.	] 25-40-60	1 1	35 40 30	30 30 30	\$0.65 1.50 1.20	\$1.43 3.30 2.64	

Brass reflectors can be had in any desired special finish. Prices on application,

White interior furnished without extra charge.

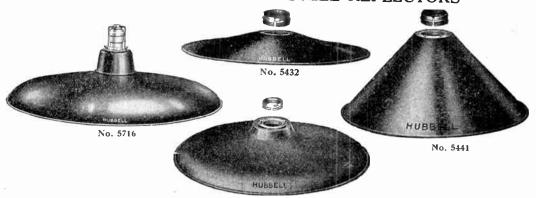
Aluminum reflectors cannot be furnished in a plated finish.

If reflectors are desired for weatherproof sockets, place the letter "P" after the List No., and add to W. E. list price \$0.29, to Mfrs. list \$0.13.

Parabola reflectors with perforated top, add to W. E. list price \$0.33, to Mfrs. list price \$0.15.

List No.

## PORCELAIN ENAMELED STEEL REFLECTORS



No. 6322

### Porcelain Enameled Steel Reflectors

WIDE DISTRIBUTING TYPE Schedule "C" Carton Mfrs W.E. Description Watts Quantity Pkg. Lha. List List 14 in. reflector, green outside, white inside. . . 60 130 \$2.35 14 in reflector, green outside, white inside.
18 in, reflector, green outside, white inside.
20 in, reflector, green outside, white inside.
14 in, reflector, green outside, white inside. \$5.17 100 2.75 3.00 3.65 5 5 30 75 95 6.05 30 6.60

30

150

200 - 250

5() 50 12) 1.80 The above reflectors, except 14 inch size, are equipped with a strain relief attachment which prevents weight of reflector working the socket shell apart.

Paint Enameled Reflectors 8 in, flat, green outside, white inside.
10 in, flat, green outside, white inside.
12 in, flat, green outside, white inside.
8 in, deep cone, green outside, white inside.
10 in, deep cone, green outside, white inside.
12 in, deep cone, green outside, white inside. Per 100-5431 \$37.50 49.00 100 5432 5433 25-40 56 107.80 154.00 10-60 70.00 46.00 52.00 10 100 80 58 544015 25 25-40 100 101.20 114.40 5441 10 100 100 80 115 100,00



No. 5860

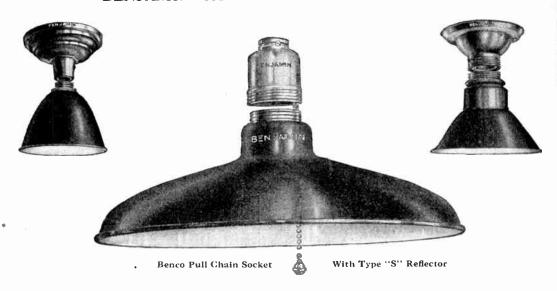
#### Porcelain Enameled Steel Reflectors

List No.	Description	Watts	Carton	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List	W. E.
6107	12 in, porcelain enameled steel, wide distribution, white outside.						
5604	white inside.  12 in porcelain enameled steel, distributing, white outside, white inside	40-60 40-60	5 5	50 50	75 105	\$1.35 1.60	\$2.97 3.52
5710	12 in. porcelain enameled steel, distributing, green outside, white						
*	Inside	40-60	10	50	90	1.75	3.95

## Bowl Type Extensive

5800   6 in. porceiain	enameled steel, green	outside, white inside	25-40	5	30	60	\$1.50	\$3.30	

#### BENJAMIN SHADE HOLDER REFLECTORS



Shade holder reflectors are scientifically designed in different shapes for correct illumination under various conditions in industrial plants and elsewhere.

In these reflectors, the shade holder is built in and forms a solid part of the reflector. This idea of reflector building insures that the shade holder reflector will always be placed on the socket in the correct position, and that the utmost efficiency will be obtained from the lamp for which it is recommended.

Four types of shade holder reflectors are provided. Three of them in order that Benjamin reflectors may be applied to any standard socket already installed and in use.

The fourth type, known as the Benjamin Type "S" screw thread, fits only Benjamin sockets and Benjamin fixtures with the screw threaded arrangement. This form of shade holder reflector is very convenient, as it is possible to quickly interchange on any Benjamin screw threaded socket, any size or design of Benjamin reflector.

In connection with the "Benco" pull chain socket, the pull chain comes down inside the reflector, thus eliminating side strain and providing a straight down pull.



Type B Holder

Type B holder for attaching to standard brass shell sockets.







Type N Neck

Type P holder for attaching to standard porcelain sockets.

Type S holder for Benjamin screw threaded devices.



Type P Holder



Type S Holder

Three reflector finishes are provided: Porcelain enameled steel, for weatherproof work and all around durability. Aluminum and paint enameled steel for interior installations.

Ventilation of reflectors for 75-watt lamps and smaller, except Type S, is provided by usual openings in the shade holders. All reflectors for 100-watt lamps and larger, except where noted in listing, have ventilating openings in the neck. Enameled steel Type "S" reflectors for outdoor use will be furnished less openings, when specified, without change in price, or with cap to shield ventilating openings at an advance of 20 cents list.

### BENJAMIN REFLECTOR SOCKETS



Flat Cone Reflector No. X5402



Shallow Bowl Reflector No. X5423



Deep Bowl Reflector No. 6168

#### BENJAMIN REFLECTOR SOCKETS

Schedule 2F

Benjamin reflector sockets are durable, high efficiency lighting fixtures for use under any kind of industrial condition, indoors or outdoors. Design and construction alike have been proven by successful service covering actual test in every imaginable kind of installation.

These fixtures have a one piece porcelain enameled steel reflector, furnished in the three styles as shown, together with an improved, extra heavy, separable fitting and easy-to-wire porcelain socket. Sockets have Benjamin lamp grip, a device which prevents the loosening and falling of lamps.

Wide bearing surfaces at top of reflector for the heavy fittings give maximum strength against side pressure or vibration. Reflectors may be raised on stem and socket wired in position. Standard finish is green outside, non-discoloring white porcelain enameled inside.

#### SHALLOW BOWL REFLECTORS

Designed for general lighting, and should be used with a moderately high ceiling. They are adapted to the lighting of machine shops, etc., where it is desirable to obtain an almost complete elimination of shadows. To meet special conditions, they may be ordered with ventilating openings for indoor use without extra charge; for outdoor use, with protecting hood, at an advance of .41 cents list.

List	Reflector	Lamp Size	Mfrs. Price	W. E. List
$N_0$ .	Diam., In.	Watts	Each	Each
X-5437	12	25, 40, 50, 60	\$2.50	\$5.18
X-5421	12	´ 75 ´	2.50	5.18
X-5423	14	100	2.80	5.80
X-5425	16	150, 200	3.40	7.04
X-5427	18	200	4.00	8.28
X-5509 Mogul	18	300, 400, 500	4.20	8.69

#### FLAT CONE REFLECTORS

Flat cone reflectors are best adapted to the lighting of warehouses, railroad platforms and yards, or where it is desired that one unit light a large area.

	and the second s			
$\tilde{X}$ -5431	14	25, 40, 50, 60	\$2.50	\$5.18
X-5401	14	75	$\frac{1}{2.50}$	5.18
X-5402	16	100, 150	2.80	5.80
X-5403	18	200	3.40	7.04
X-5405	20	200	4.00	8.28

#### DEEP BOWL REFLECTORS

Deep bowl reflectors are designed for localized and general illumination. All deep bowl reflectors are ventilated.

X-6166	7	40. 60	\$2.20	\$4.55
X-6161	8	75	2.30	4.77
X-6167	8	100	2.30	4.77
X-6168	9	150, 200	2.40	4.97
X-6171 Mogul	11	300	3.60	7.45
X-6172 Mogul	13	400, 500	4.90	10.15

#### REFLECTOR SOCKET RECEPTACLES—600 WATTS, 600 VOLTS



No. 88

Two-piece porcelain receptacles are designed for medium base reflector sockets and hood type fixtures. Nos. 87 and 88 have flat base, and have screws spaced 134 inches on centers. Nos. 89 and 109 have rounded base, and screws are spaced 115 inches.

List		Std.	Mfrs. List	W. E. List
$N_0$ .		Pkg.	Each	Price
87	Less lamp grip	100	\$0.40	\$0.83
15/15	with tamp grip	100	. 45	.94
89	Less lamp grip	100	.40	. 83
109	With lamp grip	100	.45	.94

## BENJAMIN SHADE HOLDER REFLECTORS

PORCELAIN ENAMELED STEEL

SHALLOW BOWL—DISTRIBUTING With Type B Holder for Brass Shell Socket







Extensive



Angle

Schedule 2R

				W7 12 1	1			Sched	W. E.
	Reflecto	r	Mfrs.	W. E. List		Reflecto	or	Mfrs.	List
List	Diam.	Lamp Size	Price	Price	List	Diam.	Lamp Size	Price Each	Price Each
No. 11040B	Inches 10	Watts 25, 40, 50	Each \$1.08	Each \$2.14	No. 11100B	Inches 15	Watts 100, 150	\$1.97	\$3.90
11040B	12	40, 50, 60	1.25	2.48	11200B	15	200	2.00	3.96
11075B	12	75	1.50	2.97					
					ard 214 Inch			\$1.96	\$3.88
11040N	10 12	25, 40, 50	\$0.98 1.16	\$1.94 2.30	11100N 11200N	15 15	110, 150 200	1.96	3.88
11060N 11075N	12	40, 50, 60 75	1,40	2.77	112007.4	10			
			e N Neck f		ard 3¼ Inch	Shade Ho	lders		
11300N	18	300, 400, 500	\$3.00	\$5.94	11750N	20	750, 1000	\$4.55	<b>\$</b> 9.18
		W	ith Type P		or Porcelair				24 10
11040	10	25, 40, 50	\$1.14	\$2.25		15 15	100, 150 200	\$2.10 2.10	\$4.16 4.16
11060P 110 <b>75</b> P	$\frac{12}{12}$	40, 50, 60 75	1,20 1,50	2.38 2.97	112(00P	10	200	2.10	1.10
110001		With Type S Hol			crew Thread	d Sockets a	nd Fixtures		
*110408	10	25, 40, 50	\$1.10	\$2.18	111008	15	200	\$2.00	\$3.96
*110608	12	40, 50, 60 75	$\frac{1.25}{1.50}$	$\frac{2.48}{3.97}$	$\left\{ \begin{array}{c} 113008\\ \mathrm{(Mogul)} \end{array} \right\}$	18	300, 500	3.00	5.94
*11075S 11100S	12 15	100, 150	2.00	3.96	(Mognity)				
		,		OWL-EX	KTENSIVE				
		Wi			r Brass She	Il Sockets			
12040B	614	25, 40, 50	\$0.86	\$1.71	12100B	81/4	100, 150	\$1.25	\$2.48
12060B	614 714 814	60	1.02	2.02	12200B	814	200	1.70	3.37
12075B	814	75	1.22	2.41	 	Shada Ha	ldere		
1.00.4037	037		\$0.78	or Stand	ard <b>2</b> ¼ Inch   12100N	814	100, 150	\$1.16	\$2.30
12040N 12060N	614	25, 40, 50 60	.94	1.85	12200N	814	200	1.64	3,24
12075N	714 814	75	1.12	2.02	ĺ				
		With Type	N Neck f	or Stand	ard 3¼ Inc	h Shade H	lolders .		***
	Re-	Size		W. E.	11	Re-	Size of Size of	Mfrs	W. E. List
List	fleet or Diam.	of Size of Fitter Lamps	Mfrs. Price	List Price	List	flector Diam.	Fitter Lamps	Price	Price
No.	Inches I	nches Watts	Each	Each	No.	Inches I	nches Watts	Each \$3.60	Each \$7.13
12300 N	12	3¼ 300, 400, 50			12750N	15	3!4 750, 1000	ψ0.00	φ. 10
		Wi	th Type P		for Porcelai	n Sockets			W.E.
	Reflect	0#	Mfrs.	W. E. List	}	Reflect	or	Mfrs.	List
List	Diam	. Lamp Size	Price	Price	List	Diam		Price Each	Price Each
No.	Inches		Each \$0,90	Each \$1.78	No. 12100P	Inches 81/4	s Watts 100, 150	\$1.30	\$5.28
12040P 12060P	$\frac{614}{7!4}$	25, 40, 50 60	1.08	2.14	12200P	814	200	1.76	3.49
12075P	814	75	1.26	2.50	<u> </u>		1 Et Assess		
		With Type S Ho				d Sockets	and rixtures	\$1.25	\$2.48
*12040S *12060S	$\frac{614}{714}$	25, 40, 50 60	\$0.90 1.00	\$1.78 1.98	121008    122008	81 <sub>4</sub>	200	1.75	3.47
*120758	814	75	1.20		155				
				AN	IGLE				
		Wi	th Type B	Holder f	or Brass She	ell Sockets		** **	00.00
15040B	$6\frac{1}{2}$	25, 40, 50	\$1.26	\$2.50	15100B	10 10	100, 150 200	\$2.00 2.10	\$3.96 4.16
15060B 15075B	8 8	60 75	$\frac{1.42}{1.56}$	$\frac{2.81}{3.10}$	15200B	10	2007		
1307315	ď				II land 21/ Incl	shade Ho	lders		
1504037	01/		\$1.16	29 30	ard 214 Incl    15100 N	10	100, 150	81.96	\$3.88
15040N 15060N	6½ 8	25, 40, 50 60	1.32	2.61	15200N	10	200	2.00	4,09
15075N	8	75	1.46	2.90		6 1 .			
					for Porcelai	n Sockets 10	100, 150	\$2.10	\$4.16
15040P	61/2	25, 40, 50 60	\$1.30 1.48	$\begin{array}{c} \$2.57 \\ 2.93 \end{array}$	15100P 15200P	10	200	2.20	5.36
15060P 15075P	8 8	75	1.62	3.20	H.				
		With Type S Ho	older for B	enjamin	Screw Threa	d Sockets	and Fixtures		00.00
*150408	61/2	25, 40, 50	\$I.26	\$2.50	15100S	10	100, 150 200	\$2.00 2.10	\$3,96 4,16
*150608	8 8	60 75	1.42 1.56	2.81 3.10	152008	10	2(1)	2.10	4.10
*150758	dard finish a	n above reflectors	is green out	side. Ho	lders have na	tural finish	and are furnished a	s follows:	Type B,

Standard finish on above reflectors is green outside. Holders have natural finish and are furnished as follows: Type B, brass; Types N, P and S, copper.

\*Not ventilating.

## BENJAMIN SHADE HOLDER REFLECTORS

PAINT ENAMELED STEEL







Deep. Bowl

SHALLOW BOWL



A	BENAMIN	
	MSS.	

				SHALLO					
		With	Type B	Holder fo	or Brass Sl	iell Socke	ets	Sched	ule 2 R
				W. E.					W. E.
	Reflector	Lamp Sizes	Mfrs.	List		Reflector	Lamp Sizes	Mfrs.	List
List	Diam.	Recommended	Price	Price	List	Diam.	Recommended	Price	Price
No.	Inches	Watts	Each	Each	No.	Inches	Watts	Each	Each
31020B	8	10, 20, 25	\$0.67	\$1.33	31075B	12	75	\$0.89	\$1.76
31040B	10	25, 40, 50	.73	1.44	31100B	15	100, 150	1.09	2.16
31060B	12	50, 60	.83	1.64	31200B	15	200	1.24	$\frac{2.10}{2.45}$
							_		2,10
		With Type					Holders		
31020N	8	10, 20, 25	\$0.58	\$1.15	31075N	12	75	\$0.80	\$1.58
31040N	10	25, 40, 50	. 64	1.26	31100N	15	100, 150	1.00	1.98
31060N	12	50, 60	. 74	1.46	31200N	15	200	1.15	2.28
					or Porcela		8		
31020P	8	10, 20, 25	\$0.71	\$1.40	31075P	12	75	\$0.93	\$1.84
31040P	10	25, 40, 50	.77	1.53	31100P	15	100, 150	1.13	2.23
31060P	12	50, 60	.87	1.73	31200P	15	200	1.28	2.54
	With	Type S Holde	er for Re	niamin 9	crow Thr	and Socke	te and Eister		
#01000G		* =		-					
*31020S	.8	10, 20, 25	\$0.68	\$1.35	*31075S	12	75	\$0.90	\$1.78
*31040S	10	25, 40, 50	. 74	1.46	311008	15	100, 150	1.10	2.18
*31060S	12	50, 60	.84	1.66	31200S	15	200	1.25	2.48
				DEEP B	BOWL				
		With	Type R		r Brass Sh	all Sooks	+0		
00040D	01/				_				_
32040B	$6\frac{1}{4}$	25, 40, 50	\$0.76	\$1.51	32100B	81/4	100, 150	\$1.01	<b>\$</b> 2.00
32060B	$7\frac{1}{4}$	50, 60	.85	1.69	32200B	81/4	200	1.16	2.30
32075B	$8\frac{1}{4}$	75	.94	1.85					
		With Type	N Neck f	for Standa	ard 2½ Ind	ch Shade	Holders		
2004037	61/		\$0.67	\$1.33	32100N			00.00	21 00
32040N	$\frac{61/4}{71/4}$	25, 40, 50	.76		32200N	81/4	100, 150	\$0.92	\$1.98
32060N	71/4	50, 60		1.51	32200IN	$8\frac{1}{4}$	200	1.07	2.12
32075N	$8\frac{1}{4}$	75	.85	1.69					
		Witl	n Type F	P Holder f	or Porcela	in Socket	8		
32040P	$6\frac{1}{4}$	25, 40, 50	\$0.80	\$1.58	32100P	$8\frac{1}{4}$	100, 150	\$1.05	\$2.08
32060P	$7\frac{1}{4}$	50, 60	.89	1.76	32200P	81/4	200	1.22	$\frac{2.41}{2.41}$
32075P	81/4	75	.98	1.75	0==0:71	0/4	200	1.22	2.41
020101				,,					
		Type S Holde	er for Be	enjamin S	crew Thre		ts and Fixtu	res	
*32040S	$6\frac{1}{4}$	25, 40, 50	\$0.77	\$1.53	32100S	81/4	100, 150	\$1.02	\$2.02
*32060S	$7\frac{1}{4}$	50, 60	.86	1.71	32200S	81/4	200	1.17	2.32
*32075S	$   \begin{array}{c}     7\frac{1}{4} \\     8\frac{1}{4}   \end{array} $	75	.95	1.89		, <u>-</u>			
				COI	JE.				
		*****							
				Holder fo	r Brass Sh	ell Socke	ts		
31608B	8	25, 40	<b>\$0.46</b>	\$0.92	31610B	10	60, 100	\$0.60	\$1.19
		*****			1.01/.		•		<b>V</b>
		With Type	N Neck	for Standa	ard 2⅓ In	ch Shade	Holders		
31608N	8	25, 40	\$0.42	\$0.83	31610N	10	60, 100	\$0.56	\$1.12
							,		
		With	ı Type F		or Porcela	in Socket	8		
31608P	8	25, 40	\$0.50	\$0.99	31610P	10	60, 100	\$0.64	\$1.26
	*****	m 0					•		
		Type S Hold	er tor B	enjamin S	ocrew Thr	ead Sock	ets and Fixtu	res	
*31608S	8	25, 40	\$0.47	\$0.94	*31610S	10	60, 100	\$0.61	\$1.21
		·					,		3-1

<sup>\*</sup>Not ventilated.

Standard finish on reflectors and holders is green enamel.

#### BENJAMIN REFLECTORS

Porcelain Enameled Steel



No. H-410



No. H-316

### For Standard Shade Holders

Nos. H-508 to H-518 and H-410 to H-418, inclusive, are porcelain enameled steel, green outside, white inside, and have heel to fit standard shade holders.

						Schedule 4
			Flat Cone			
List No.	Reflector Size, Ins.	Holder Size, Ins.	Std. Pkg.	Wt. Lbs.	Mfrs. Price Each	W. E. List Each
H-508	8	$2\frac{1}{4}$	10	õ	\$0.60	\$1.24
H-510	10	234	10	6	.70	1.46
H-512	12	$2\frac{1}{4}$	10	10	.90	1.88
H-515	15	$3\frac{1}{4}$	10	12	1.30	2.68
H-518	18	$3\frac{1}{4}$	10	26	1.70	3,52
		S	hallow Bowl			
H-410	10	$2\frac{1}{4}$	10	7	\$0.70	\$1.46
H-412	12	$2\frac{1}{4}$	10	13	. 90	1.88
H <b>-4</b> 14	14	$2\frac{1}{4}$	10	15	1.10	2.28
H-416	16	$3\frac{1}{4}$	10	19	1.50	3.12
H-418	18	$3\frac{1}{4}$	10	36	1.90	3.94

#### FOR BENJAMIN CLUSTER FIXTURES

Nos. H-10 to H-20, inclusive, are porcelain enameled steel, green outside, white inside, with hexagon fitting tapped for iron pipe stem.

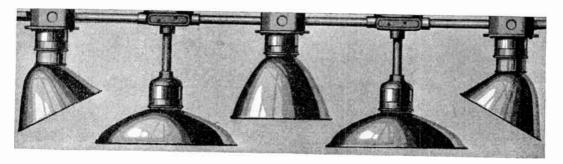
List No.	Reflector Size, Ins.	Stem Size, Ins.	Std. Pkg.	Wt. Lbs.	Mfrs. Price Each	W. E. Price Each
H-10	10	1/2	10	7	\$0.80	\$1.66
H-12	12	1/2	10	12	1.00	2.08
H-15	15	$\frac{1}{2}$	10	16	1.30	2.68
H-18	18	$\frac{1}{2}$	10	21	1.80	3.72
H-20	20	1/2	10	31	2.50	5.18

#### FOR BENJAMIN CLUSTER BODIES

Nos. H-813, H-115, H-215, H-118, H-316 and H-318 are porcelain enameled steel, white both sides, fit the wireless duster back, and require no holders. Nos. H-316 and H-318 have deep neck.

List No.	Reflector Size, Ins.	Type of Cluster	Std. Pkg.	Wt. Lbs.	Mfrs. Price Each	W. E. List Each
H-813	13	8	10	11	\$1.20	\$2.48
H-115	15	1,7 or K	10	12	1.20	2.48
H-215	15	2	10	12	1.20	2.48
H-118	18	1, 7 or K	10	14	2.00	4.14
H-316	16	3T	10	20	1.80	3.72
H-318	18	3Т	10	25	2.10	4.36

## CUTTER HOLDER-SOCKETS WITH SOL-LUX REFLECTORS



The use of the Cutter Holder-Sockets, which are combination holders for standard-heel reflectors and sockets for Mazda lamps, is an important factor in obtaining efficient illumination for industrial plants. The functions of Holder-Sockets, their simple construction and advantageous features recommend them for installations where utility and efficiency are the determining factors.

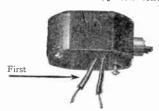


Holder-Socket with Cap for Attachment to 1/2-inch Conduit



Holder-Socket with 4-inch Outlet Box Cover

First



Only Two Operations Necessary

for Installing Holder-Sockets Direct to Outlet Box

Second

## ATTACHMENT TO OUTLET BOX

Two Operations

First—Trim wires and skin insulation from them; loosen screws on outlet box.

Second—Pull wires through holes in porcelain body of Holder-Socket, connect wires to terminals and tighten serews on outlet box.

The Holder-Socket is then wired complete, ready for reflector and lamp; no loose wires to stuff back; reflectors attached by adjusting one thumb-screw.



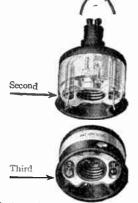
First-Serew hood flange on conduit. trim wires and skin insulation from them.

Second-Pull wires through holes in body of Holder-Socket and fasten the socket to the hood flange.

Third—Connect the wires to terminals. The Holder-Socket is then wired compiete, ready for reflector and lamp; no loose wires to stuff back; reflectors attached by adjusting one thumb-screw.

Cutter Holder-Sockets save 75 per cent.

of the cost of installation.



Method of Wiring Holder-Socket

	2½ Inch Medium Screw Holder Sockets	ior Atta	coment to (	ondult
List No. 30650	Description  Medium Screw Socket, with can for attachment to 1/ in the care 1. in	Std. Pkg.	Wt. Lbs. Std. Pkg.	List Price Each
$\frac{30651}{30652}$	stem and 2½ inch holder.  With cover for attachment to 4 inch outlet box.  With porcelam bushing for reinforced drop-cord suspension	$\frac{20}{20}$	30 25 30	\$1.25 1.25 1.25
	31/4 Inch Mogul Screw Holder Sockets			
30654 30655 30656	With cap for attachment to ½ inch conduit stem. With cover for attachment to 4 inch outlet box. With porcelain bushing for heavy drop cord suspension.  World Radio History	10 10 10	35 30 35	$1.75 \\ 1.75 \\ 1.75$

### CUTTER SOL-LUX INDUSTRIAL LIGHTING REFLECTORS With Standard Heels

One of the principal advantages of standard-heel reflectors is that different types of reflectors with the same size of heel may be used with the same holder, which permits changes in light distribution without disturbing the wiring. Other advantages are that reflectors may be removed easily for cleaning and that the heels prevent the chipping of the enameled surfaces, thus greatly lengthening

the life of the reflectors. Copper heels are furnished with Cutter porcelain enameled reflectors and spun-steel heels with enam-aluminum reflectors. The 21/4 inch heel is supplied on reflectors for 200-watt lamps and smaller, and the 31/4 inch heel on reflectors for 300-watt lamps and larger. Standard heel reflectors used with Cutter Holder Sockets are recommended for conduit and reinforced drop cord installations. Skeleton holders may be used for attaching 21/4 inch Standard 21/4-inch and standard heel reflectors to brass shell or porcelain sockets.



31/4-inch Heels

\$2.16

2.44

2.73

3.67

6.67

9.87

\$0.88

1.32

1.60

2.26

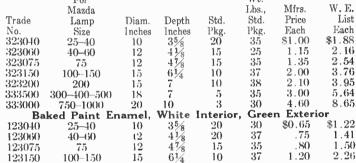
.70

.85

1.20

Dome or Distributing Type

#### Dome or Distributing Type Schedule "H" Porcelain Enamel, White Interior, Green Exterior Wt.





Bowl or Extensive Type

Extensive or

	DOWL	Q1	LIAC		- 7 P		
P	orcelain Enam	iel, W	Vhite	Interior,	Green	Exterior	
321060	25-40-60	71/4	43/4		50	\$0.95	\$1.79
321075	75	$-8\frac{1}{4}$	$5^{\frac{5}{4}}$	20	35	1,10	2.07
	100-150	$-8\frac{1}{4}$	$-6\frac{1}{4}$	20	35	1.15	-2.16
321200	200	$-8\frac{1}{4}$	7	20	35	1.60	3.01
331500	300-400-500	$12\frac{1}{4}$	$7\frac{1}{2}$	10	30	2.70	-5.08
331000	750-1000	$15\frac{1}{4}$	103/4	5	35	3.60	-6.77
En	am-aluminum	Inter	rior, Ĉ	Green Bal	ced Pair	nt Exterio	or
221060	25-40-60	$7\frac{1}{4}$	$5\frac{1}{4}$	50	40	\$0.70	\$1.32
221075	75	81/4	$6\frac{1}{4}$	20	35	.85	-1.60
221150	100-150	$-8\frac{1}{4}$	$7\frac{1}{4}$	20	35	. 87	1.64
221200	200	81/4	8	20	35	1.10	2.07



Focusing Type

				5	- 3 1			
	Enam	-aluminum	Interi	or, G	reen Bake	d Pai	nt Exteri	or
2250		25-40	$6\frac{5}{8}$	$4\frac{1}{4}$	50	35	\$0.47	\$0.88
2250	60	60	8	5	40	40	.70	1.32
2250	75	75	8	$5\frac{3}{4}$	20	35	.85	1.60
2251	50	100-150	10	$7\frac{1}{8}$	20	35	1.10	2.07

Focusing Type

Angle Type Porcelain Enamel, White Interior, Green Exterior  $6\frac{3}{4}$  $5\frac{1}{2}$ 40 \$1.15 25 - 4050 324040  $\frac{634}{71/2}$ 40 1.30 30 324060 60 8 324075 75 8 20 40 1.45 $9\frac{1}{4}$ 101/8 20 40 1.95 324200 100-150-200  $12\frac{1}{4}$ 300-400-500 115/8 5 20 3.55334500 30 5.25 $15\frac{1}{4}$  $15\frac{1}{2}$ 3 334000 750-1000 Green Baked Paint Exterior Enam-aluminum Interior,  $5\frac{1}{2}$ 63/4 50 40 \$0.47 22404025 - 4063/4 40 40 224060 60 8 71/2 35 8 20 224075 75 20 35 101/8 224100100 SCHEDULE "H" DISCOUNTS



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## CUTTER SOL-LUX INDUSTRIAL LIGHTING REFLECTORS

## With Snap Ring Holders for Brass Shell Sockets

The snap ring holder forms an easy and dependable method of attaching reflectors to brass shell sockets.



Snap Ring Holder with Clamp Strap

When attaching the snap ring holder to the socket, the socket shell is placed over the reflector at an angle. The snap ring is expanded to let the bead of the socket shell slip into the groove in the snap ring, and the tension holds the reflector firmly in place. The snap ring holder is substantial in construction and positive in operation. Reflector styles Nos. 313150, 313200, 113150, 314200 and 214200 are furnished with the clamp strap shown in the accompanying illustration. This strap is used on heavy reflectors and is recommended for use on those which are subjected to considerable vibration. When so ordered, clamp straps will be furnished with reflectors other than those specified above for \$0.13 list additional.

Cutter "Sol-lux" Reflectors equipped with snap ring holders are of the same quality and design as those equipped with standard heels.

Schedule "H"

## Dome or Distributing Type

## Porcelain Enamel, White Interior, Green Exterior

List No. 313040 313060 313075 313150 313200	For Mazda Lamp Size 25-40 40-60 75 100-150 200	Diam. Inches 10 12 12 15 15	Depth Inches 37/8 43/8 51/8 61/2 71/4	St4. Pkg. 20 15 15 10	Wt, Lbs. Std. Pkg. 35 25 35 37 38	Mfrs. Price Each \$1.03 1.18 1.38 2.10 2.20	W. E. List Each \$1.94 2.22 2.59 3.95 4.14
D <sub>~</sub> 1	I D						

#### Baked Paint Enamel, White Interior, Green Exterior 110070

113040	25-40	10	$3\frac{7}{8}$ $4\frac{3}{8}$ $5\frac{1}{8}$ $6\frac{1}{2}$	20	30	\$0.68	\$1.28
113060	40-60	12		20	37	.78	1.47
113075	75	12		15	35	.83	1.56
113150	100-150	15		10	37	1.30	2.44

## Bowl or Extensive Type

Porcelain Enamel, White Interior, Green Exterior

1311000	0 - 40			,			
311060		$7\frac{1}{4}$	- 5	50	50	80.98	31 01
-311075	~ = =	0.17			,,,,,	୍ଟପ : ୪୯	-\$1.84
		814	ti	20	35	1.13	2.12
-311150	100~150	017	0.17				کا ، ک
		$-8\frac{1}{4}$	61/2	20	35	1.18	2.22
-311200	200	017	717		,	1,10	4,44
OLIZION	200	$-8\frac{1}{4}$	$7\frac{1}{4}$	20	35	1.63	-3.06
	7 1 .	_ ^					0.00
	Enam-aluminun	1 Inter	rior C	roon Ral	lead Da	to a E a	

### Enam-aluminum Interior, Green Baked Paint Exterior

311000	0.00		, –			THIC DALE	LIOL
$\frac{211060}{211075}$	25-40-60 75	$\frac{7\frac{1}{4}}{8\frac{1}{4}}$	$\frac{5\frac{1}{2}}{6\frac{1}{3}}$	50	40	\$0.73	\$1.37
$\frac{211150}{211200}$	100-150	$81\frac{7}{4}$	$7\frac{1}{2}$	$\frac{20}{20}$	$\frac{35}{35}$	.88 .90	$\frac{1.65}{1.69}$
211200	200	$8\frac{1}{4}$	$8\frac{1}{4}$	20	35	1.13	2.12

## Angle Type

Porcelain Enamel, White Interior, Green Exterior

		•		,	O'CCII	Lxterior	
314040	25-40	63/1	53/4	50	40	\$1.18	20.00
314060	40-60	Q **					\$2.22
	20,		$7\frac{3}{4}$	30	40	1.33	2.50
314075	75	- 8	$7\frac{3}{4}$	20	40		
314200	100-500-200	101%		,		1.48	-2.78
017500	100-000-200	10,8	$9\frac{1}{2}$	20	40	2.05	3.85
F	nam-alumin.	I		C D		00	9.00

#### Enam-aluminum Interior, Green Baked Paint Exterior

		ann mice	rior,	Green	Baked	Paint Ext	erior
214040	25-40	63/4	53/4	50			
214060	40-60	5/4	11/4		40	\$0.50	\$0.94
	30,00		1	40	40	.73	1.37
214075	10	- 8	73/4	20	35	.88	1.65
214200	100-150-200	101/6	91/2	20	35		
	=	*17/8	0/2	20	- 90	1.30	2.44

### Focusing Type

## Enam-aluminum Interior, Green Baked Paint Exterior

0 0								
215040	25-40	$6\frac{5}{8}$	$4\frac{1}{2}$	50	35	\$0.50	@O 04	
215060	60	e´ °					\$0.94	
		0	$5\frac{1}{4}$	40	40	.73	1.37	
215075	75	8	-6	20	35			
215150	100-150	10	m2 /			.88	1.65	
210100	100-100	10	$7\frac{3}{8}$	20	35	1.13	2.12	
							2.12	

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Dome or Distributing Type



Bowl or Extensive Type



Angle Type



Focusing Type

#### X-RAY REFLECTORS

In the design of these reflectors sufficient room has been allowed for cleaning without removing lamos from reflectors, thus reducing the lamp breakage to a minimum.

The inside glass protection to the silver plating is easily cleaned by simply wiping (inside of reflector only) with a damp cloth. They need not be cleaned as frequently as other types, and should never be immersed water.



Jupiter No. 610



Jove No. 600

#### For 100 Watt Mazda C Lamps

The "Jupiter" is used for the brilliant illumination of show windows whose height equals about twice their depth.

The "Jove" is a scientifically correct window lighting reflector with a high temperature backing, designed especially for use with a 100 watt Mazda lamp.

List No.	Width Ins.	Depth Ins.	Height Ins.	Holder Ins.	Weight Each Lbs.	Std. Pkg.	Mfrs. List Each	W. E. List Each
610 600	10 10	$\begin{array}{c} 10\frac{1}{8} \\ 9\frac{13}{16} \end{array}$	75/8 75/8	21/4A 31/4A	$2\frac{1}{4}$ $2\frac{1}{4}$	12 12	\$4.00 4.00	\$6,80 6,80



Scoop No. 778



Hood No. 731

### For 75 Watt Mazda C Lamps

The scoop reflector was designed for windows of medium size where the depth is approximately equal to the height. This reflector gives a downward light of 450 candle power.

The hood reflector is designed to light low, shallow windows as efficiently as the Jupiter lights higher windows of the same type. The design of this hood reflector is such as to produce a high concentration in the window—cutting the light off sharply at the window plate.

the winde	ow—cutting	the light off	sharply at th	e window plat	ie.			
List No.	Width Ins.	Depth Ins.	Height Ins.	Holder Ins.	Weight Each Lbs.	Std. Pkg.	Mfrs. List Each	W. E. List Each
7 <i>l</i> 8 731	$7\frac{7}{16}$ $8\frac{7}{8}$	$6\frac{11}{16}$ $8\frac{7}{8}$	$6rac{5}{16} \ 6rac{3}{16} $ World R	$2\frac{1}{4}\mathrm{O}$ $2\frac{1}{4}\mathrm{H}$ adio History	1 1½	24 16	\$2.50 3.00	\$4.26 5.10

#### X-RAY REFLECTORS



Poke Bonnet No. 750



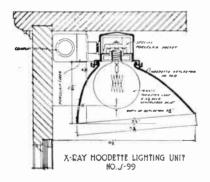
Midget No. 515

The Poke Bonnet is a sectional trough reflector with an adjustable holder which is easily attached to either the ceiling or transom bar. Two lamps are held in this reflector by a nickel plated twin socket. The largest lamp bulb which can be used in this reflector is a 60 watt Mazda lamp.

This reflector is especially adapted to the lighting of low, deep windows, where the reflectors cannot be placed more than 6 to 10 feet above the bottom of the window.

The Midget uses the 25 watt tubular Mazda lamp, and is the ideal reflector for lighting display eases, small store windows, wall cases, cornices, pictures, etc. Shade holder is supplied with this reflector.

List No.	Length Ins.	Depth Ins.	Holder Ins.	Weight Each Lb.	Std. Pkg.	Mfrs. List Each	W. E. List Each
750 515	$\frac{14}{6\frac{1}{4}}$	$\begin{array}{c} 7\frac{1}{2} \\ 2\frac{7}{8} \end{array}$	Special 15%	$\frac{3}{4}$	8 36	\$6.50 1.10	\$11.04 1.86





The Hoodette is placed at the inside upper front edge of the case where it is hidden by the framework. The socket which is the same type as used with the Scoopette, takes a small 15 watt lamp. We cannot overemphasize the great saving in cost the use of these lamps makes possible with Scoopette and Hoodette equipment.

### Description

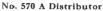
Height, including socket, 4½ inches. Depth, front to back, 5¾ inches. Width of reflector, 3¼ inches. For 15 watt G-16½ candelabra base lamp. Holder, special supplied with reflector. Standard package quantity 10. Shipping weight of standard package quantity, 10 lbs.

List No.	•	Mfrs. List Each	W. E. List Each
S-99	Hoodette unit including reflector socket, socket cover, shade holder	\$2.75	\$4.68

### X-RAY REFLECTORS

#### For Direct Lighting







No. 575 A Distributor



No. 54 Jumbo

The X-Ray reflectors, known as the Beehive type, are designed along the latest scientific lines. They give a wide spread of light and hide the lamp from view without sacrificing the efficiency. This line is especially well adapted for the illumination of factories, shops of all kinds, gymnasiums, armories, indoor ball and tennis courts, pressrooms, power houses, foundries, etc.

The Jumbo is designed for the illumination of very large interiors, such as armories, coliseums, erecting shops, etc.

List No.	—Dimensions, Diameter	Inches	Size of Holder Inches	Size of Lamp Watts	Weight Each Lbs.	Std. Pkg.	Mfrs. List Each	W. F. List Each
*535 570 575 580 54	$\begin{array}{c} 5\frac{3}{4} \\ 7\frac{7}{8} \\ 9\frac{3}{8} \\ 11\frac{7}{8} \\ 16\frac{1}{2} \end{array}$	5½ 67/8 8 93/8 133/8	2 <sup>1</sup> 4H 3 <sup>1</sup> 4A 3 <sup>1</sup> 4A Special Special	75 Mazda C 100B or C 200C 300, 400, 500C 750-1000C	$ \begin{array}{c} 3/4 \\ 11/4 \\ 13/4 \\ 41/2 \\ 10 \end{array} $	24 16 8 4	\$1.25 1.75 2.40 6.00 25.00	\$2.12 2.98 4.08 10.20 40.00

\*25, 40, 50 and 60 watt Mazda B lamps may be used in the No. 535 with 21/4 inch "O" holders.







### Semi-concentrating Reflectors

The No. 700 reflector, which is similar in design to the No. 696, as illustrated, is called a semi-concentrating reflector because it does not spread the light as far as the distributing reflectors, and yet does not confine the light into such a small area as do the concentrating reflectors shown. The No. 700 reflector is used with a 100 watt Mazda B or C lamps,

### Concentrating Reflectors

The concentrating reflectors should be used whenever a very intense light is wanted over a small area such as over desks, counters, special machinery, etc.

List No.	—Dimensions,	Inches-	Size of Holder Inches	Size of Lamp Watts	Std. Pkg.	Mfcs. List Each	W. E. List Each
700	10	$5\frac{1}{2}$	21/4H	100B or C	18	\$1.50	\$2.56
696 710	$\frac{8}{11\frac{1}{2}}$	$\frac{5}{6\frac{3}{4}}$	21/4O 31/4A	40, 50 and 60B or 75C 200C	$\frac{24}{6}$	$\frac{1.25}{2.50}$	2.12 4.26

#### SCOOPETTE FOR SHOW CASES

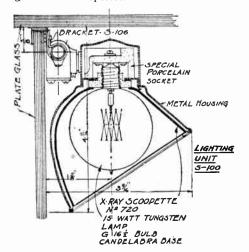
The Scoopette was designed primarily for show case lighting. It is used with the equipment, complete from floor outlet to lamp, as shown. Any show case can be lighted with Scoopettes.

The problems which have been successfully solved in the development of this equipment are: The least possible obstruction to a clear view of the interior of the case; even and efficient illumination with complete concealment of lamp; low current consumption and maintenance; smallest possible amount of heat in case; reasonable cost and expense of illumination; absolute safety from fire risks; com-

plete equipment, floor outlet to lamp.



Lighting Unit No. S-100



#### Scoopette Lighting Unit

Specifications: Heights, including socket,  $4\frac{11}{16}$  inches; depth, front to back,  $3\frac{7}{16}$  inches; width of reflector, 4 inches; for 15 watt G-16  $\frac{1}{2}$  candelabra base lamp; standard package, 10.

		Mfrs.	W. E.
List		List Price	List
No.		Each	Price
S-100	Scoopette lighting unit including reflector socket and cover housing for re-		
N 100	flector and special clip		\$4.68

### Complete Show Case Lighting Outfits

The list prices given are for finished material necessary for equipping square end cases of various sizes mentioned with number of Scoopettes specified. Material includes a special insulating joint, a push button switch, a special switch box, which is easily installed, all tubing elbows, T fittings, Scoopettes, straps or brackets for supporting tubing, cap for end of tubing and sufficient special flexible No. 18 stranded wire to wire entire case. Prices do not include assembling, wiring, installing or lamps.

#### TABLE OF LIST PRICES FOR COMPLETE OUTFITS

Wood frame or all glass cases having square ends.

Length of	Number of	Mfrs. List	W. E. List	Length of	Number of	Mfrs. List	W. E. List
Cases	Scoopettes	Price	Price	Cases	Scoopettes	Price	Price
3 to 5 ft.	$^2$	\$14.00	\$23.80	9 to 11 ft.	7	\$34.00	\$53.72
3 to 5 ft.	3	17.70	25.08	9 to 11 ft.	8	37.70	56.62
3 to 5 ft.	4	21.40	30.10	9 to 11 ft.	9	41.40	56.96
5 to 7 ft.	$^2$	14.75	30.94	9 to 11 ft.	10	45.10	57.80
5 to 7 ft.	3	18.20	32.14	11 to 13 ft.	5	27.30	58.66
5 to 7 ft.	4	21.90	36.38	11 to 13 ft.	6	30.80	69.50
5 to 7 ft.	5	25.60	37.24	11 to 13 ft.	7	34.50	64.10
7 to 9 ft.	3	18.90	38.08	11 to 13 ft.	8	38.20	64.94
7 to 9 ft.	4	22.40	39.28	11 to 13 ft.	9	41.90	65.80
7 to 9 ft.	5	26.10	43.52	11 to 13 ft.	10	45.60	70.30
7 to 9 ft.	6	29.80	44.38	13 to 15 ft.	6	31.60	71.24
7 to 9 ft.	7	33.50	45.22	13 to 15 ft.	7	35.00	72.08
9 to 11 ft.	4	23.10	46.42	13 to 15 ft.	8	38.70	76.68
9 to 11 ft.	5	26.60	50.66	13 to 15 ft.	9	42.40	77.52
9 to 11 ft.	6	30.30	52.36	13 to 15 ft.	10	46.10	78.38

### Wiring and Assembling

We can ship outfits wired and assembled for an additional 20% in price. This charge does not include the wiring or assembling of parts from the elbow to the switch box. Is easily done when the outfit is installed in the case.

#### BENDING AND FITTING TUBING FOR ROUND END CASES

We are especially prepared to accurately bend tubing for particular requirements.

The charge for bending tubing for a case with a single curved end is \$1.50, and for a case with two curved ends is \$2.00.

We can supply from stock equipment for curved and odd length cases.

#### LIGHTING SPECIALTIES



Wallace Portable Lamp

### Wallace Portable Lamps

This cut shows assembled and collapsed views of the Wallace portable lamp.

The collapsed view shows how readily it can be packed in a trunk or grip. It is equipped with a spiral spring concealed in the base by means of which the lamp may be hung or attached to any desired object and with a rubber suction cap for holding it to window panes, mirrors and other nonporous surfaces. The socket is connected to the base by a screw connection which allows an angle adjustment of 180 degrees. This makes it possible to keep the lamp vertical with the base in any position. It is equipped with a push button socket, gray button for "on," black button for "off." This lamp will stand anywhere or you can hang or stick it any place. Also the lamp and shade can be tilted up or down or sideways. It is finished in either brush brass, nickel or bronze finish. It is furnished with a 10 foot cord and Benjamin 903 plug.

				Retail	List
			Std.	Price	Price
	Finish	Carton	Pkg.	Each	Each
Wallace portable electric lamp	Brass	1	12	\$3,50	\$5,00
Wallace portable electric lamp	Nickel	1	12	3.75	5.30
Wallace portable electric lamp	Bronze	1	12	4.00	5.60



No. 2608



No. 4635



No. 5559

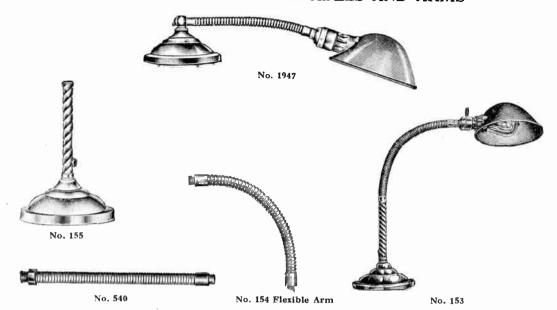


No. 5403

### Cord Adjusters

		——List F	rice
List No.		Each	Per 1000
1403	Black enamel, for 1/8 in. cord, ball adjuster	\$0.06	\$27.00
4635	Black enamel, for \( \frac{3}{8} \) in. cord or reinforced ball adjuster	.12	40.10
5044	Black enamel, for \( \frac{3}{6} \) in. cord (wood), dumb bell adjuster		49.50
2608	Shellac finish (wood), 1/8 in. cord, dumb bell adjuster	.12	40.50
<b>555</b> 9	Q. & S. cord adjuster, red fiber, for 1/8 in adjuster	.05	13.50
<b>54</b> 03	Stewart cord adjuster, for lamp cord		19.50
	Stewart cord adjuster, for show window cord	.12	67.50

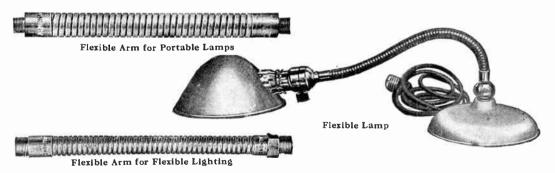
## FARIES FLEXIBLE PORTABLES AND ARMS



## Flexible Portables and Arms

List No.	Extends	Finish	Std. Pkg.	Mfrs.List Each	W.E.List Each
1947	Flexible Portable, 9 in, flexible tube	Brush brass	G	\$2.25	\$3.60
	If furnished with 9 feet reinforced silk cord, socket and plug, add to list			1.50	2.10
153	Flexible Portable	Brush brass	12	2.25	3.60
	For 1532 wired with 9 feet silk cord, socket and plug, add to list			1.50	2.10
155	Flexible, portable base, height 8 ins	Brush brass	12	1.20	1.96
540	Flexible arm 12 in., male thread each end, % in. iron	Brush brass		. 90	2.16
540	Flexible arm 15 in., male thread each end, 3 in. iron	Brush brass		1.10	2.64
540	Flexible arm 18 in., male thread each end, 3 in. iron	Brush brass		1.35	3.24
154	Flexible arm 9 in., male thread each end, 1/2 in. iron	Brush brass		.75	1 20
154	Flexible arm 12 in., male thread each end, 1/8 in. iron	Brush brass		. 90	1.40
154	Flexible arm 15 in., male thread each end, 1/2 in, iron	Brush brass		1.10	1.76
154	Flexible arm 18 in., male thread each end, 1/2 in, iron	Brush brass		1.35	2.16
154	Flexible arm 24 in., male thread each end, 1/2 in, iron,	Brush brass		1.80	2.88
Longe	er lengths per foot add			.90	1.40

†Prices do not include shades, lamps, shade holders, sockets or wiring.

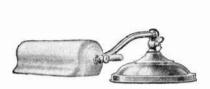


## Almond Flexible Portables and Arms

List No.
12 With 12 in Almond Flexible Arm
69 With 6 in, elevated stem, 9 in, Almond Flexible Arm
Flexible arms for portable lamps; 1/2 inch pipe thread each end. Has 1/4 inch hole all the way through.
Flexible arms for factory lighting; % inch pipe thread each end. Has % inch hole all the way through.
*List Price Each    *List Price Each
*List Price Each 6 in. Flexible arm\$1.30   15 in. Flexible arm\$2.20
9 in Flexible arm
12 in, Flexible arm
*Delivery F. O. B. Factory, Ashburnham, Mass. For warehouse deliveries, write nearest house.
Delivery F O B Factory, Decatur, Ill. For warehouse deliveries write pearest house

### FARIES VERDELITE PORTABLES

With adjustable green glass shades. White opal reflecting surface inside.





No. 3249

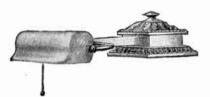
No. 3243

### Adjustable Portable

List No.			Finish	Std. Pkg.	List Each	List Each
324;	Swing portable	Extends 12 inches	Brush brass	6	\$7.50	\$11.24
	Wired with 9 ft. silk cord, key socket, plug and green glass shade.					
3249	Swing portable	Extends 11 inches	Brush brass	6	9.00	13.50
	Wired with 9 ft. silk cord, pull chain socket	, plug and green gla	ss shade.			



No. 3250



No. 3251

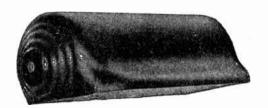
### Piano and Desk Portable

3250	Fancy cast portable	Extends 12 inches	Brush brass and black	6	\$12.00	\$18.00
3250	Fancy cast portable	Extends 12 inches	Statuary bronze	б	12.50	18.76
3251	Faney cast portable	Extends 12 inches	Brush brass and black	6	9.00	13.50
3251	Fancy east portable	Extends 12 inches	Statuary bronze	б	9.50	14.26

Wiring includes 9 feet re-inforced silk cord, key socket and plug and green glass shade.

Note: The above are for 25 to 60 watt lamp.

Prices include Pull Sockets, on Nos. 3250, 3251 and 3249. Key Sockets on balance.



No. 2917

			Mfrs.	W. E.
List		Std.	List	List
No.		Pkg.	Each	Each
	Green glass hood	12	\$3.00	\$4.80
MOII	Green Stand Hood.		,	

### FLOOR AND TABLE LAMPS



No. 100 Table Lamp

No. 200 Floor Lamp

## Western Electric Floor and Table Lamps

General. The Western Electric floor and table lamps are finished in either Verde Antique or real statuary bronze. They have a new split-ball adjusting joint between the shaft and 4 inch stem that carries the socket. A new design wing nut fits the finger for locking the joint which will not slip when starting to tighten.

No. 100 Western Electric table portable base is 5% inches in diameter. Height, 17 inches overall. The cord enters the base through a hard rubber bushing, it being concealed in the split ball adjusting joint.

No. 200 Western Electric floor lamp base is  $8\frac{1}{2}$  inches in diameter and the weight is distributed at the edge to give stability. The lamp is wired from the bottom with the cord coming up through the shaft, and then through a new and special split-ball joint and into the socket. The shaft is of heavy brass tubing (not plated iron pipe) 30 inches high. Telescoped inside of this is a smaller brass tube, arranged so that the lamp can be adjusted to different heights. These lamps can be adjusted from 3 feet high to 5 feet 5 inches. Then the lamp is adjusted to minimum height the cord is 9 feet long; when the lamp is raised to the maximum height the cord is 7 feet long. At the top of the shaft is a knurled brass collar which locks the stem after it has been adjusted to the right height. The shade is parabola in shape and throws the light just where wanted. Each portable is packed in a separate package. On the base appears a neatly etched name plate on which are two words. Western Electric.

			11120 1 1100
T 1-4 NT-		Height	Each
List No		17 :	\$8.00
100	Table lamp	17 ins.	
		3 ft. to 5 ft. 5 ins.	10.50
200	Floor lamp	5 [t, tt) 5 [t. 6 ms.	20100

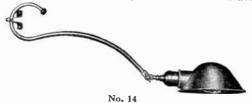
Packed one portable in each case.

## FARIES ADJUSTABLE FIXTURES Adaptable to Any Position



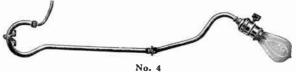
#### No. 1 FOR OFFICE, STORE, FACTORY OR RESIDENCE No. 1 ADJUSTABLE BRACKET

			DAVACI	XL!			
List No. 1	Adjustable bracket	Y 1	Length Inches 16	Finish Brush brass	Std. Pkg. 12	Mfrs. List Each \$0.60	W. E. List Each \$0.96



No. 14 ADJUSTABLE BRACKET

With hinged joint, without canopy...... 14 20Brush brass 12 \$1.10 \$1.76



No. 4 ADJUSTABLE BRACKET

4 With hinged joint . . . 40 Brush brass 12 \$1,60 \$2.56



No. 5

ADJUSTABLE BRACKETS Adjustable Bracket, length 5 ft., tubing ½ inch.. 5 Brush brass \$2,40 \$3.84



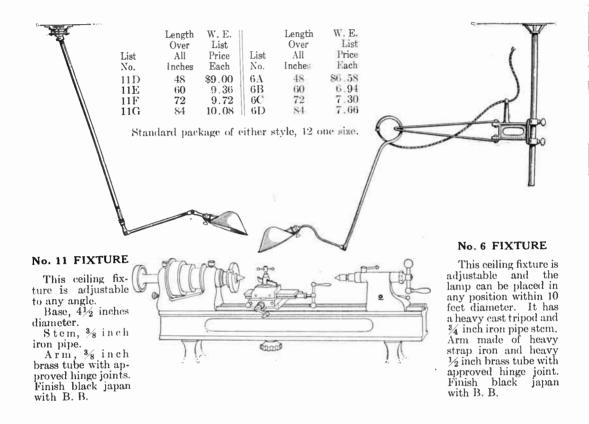
No. 3325

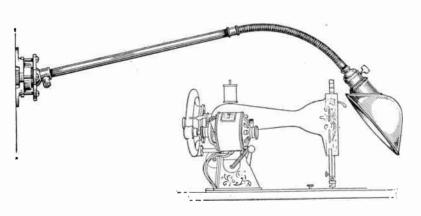
Especially adapted for office or residence and makes the best bath room bracket made. Concealed wiring. ADJUSTABLE BRACKETS

			-			
T					Mfrs.	W. E.
List		Extends		Chr		
No.				Sta.	List	List
		Inches	Finish	Pkg.	Each	Each
3325	Adjustable bracket	1917	D1. 1	100	214011	Dacii
0000	Trajastine blacker	10%	prush prass	12	81 50	\$2 4n

## FARIES ADJUSTABLE FIXTURES AND BRACKETS

FOR FACTORY LIGHTING





#### No. 11 BRACKET

This bracket is adjustable to any angle. Base,  $4\frac{1}{2}$  inches diameter.

Stem, 3/8 inch iron pipe.

Arn, % inch flexible tube, 18 inches long. Finish black japan with B, B.

Standard package, 12, one size.

	Extends	List
List	Over All	Price
No.	Inches	Each
11A	36	\$7.92
11B	48	8.28
11C	60	8.64

List prices do not include shades, lamps, sockets or wiring.

## FARIES ADJUSTABLE BRACKETS

#### ADJUSTABLE TO ANY POSITION





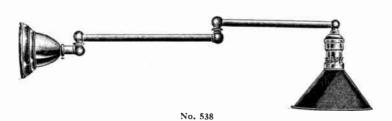
## Adjustable Brackets

List No. 1062 1052	Large tubing, crowfoot and 3 x 4½ inch canopy  Large tubing, heavy cast base	17	Finish Brush brass Brush brass	Std. Pkg. 12 12	Mfrs. List Each \$1.50 1.50	W. E. List Each \$2.40 2.40
77.0	te: Prices do not include shades, lamps, shade hol	lders, soc	kets or wiring,			

No. 537

## One Swing Wall Brackets

List No.		Extends Inches	Finish	Std. Pkg.	Mfrs. List Each	W. E. List Each
537	One swing, canopy 4½ inches  Prices do not include shades, lamps, shade holders, so	15	Brush brass	12	\$1.50	\$2.40



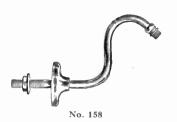
## Two Swing Wall Brackets

List No. 538	Two swing, canopy 4½ inches	Extends Inches 27	Finish Brush brass	Std. Pkg.	Mfrs. List Each	W. E. List Each
		21	orusn orass	6	\$2.75	\$4.40

Note: Prices do not include shades, lamps, shade holders, sockets or wiring.

<sup>\*</sup>Delivery F. O. B. Factory, Deeatur, Ill. For warehouse deliveries write nearest house.

### FIXTURE FITTINGS







No. 2239

. . . . . . . .

Switchboard Brackets	
----------------------	--

Tink				*Li	st Price Eac	h
List No.		Finish	Std.	Less	6 to	12 and
	0.74.11 11 1.4 1.5		Pkg.	than 6	12	Over
158	Switchboard bracket, extends 5 ins	Brush brass	12	\$0.90	\$0.53	\$0.57
158A	Switchboard bracket, extends 5 ins.	Ox. copper	12	1.00	.70	.63
1695	Switchboard bracket, extends 6 ins., spread 51/2 ins.	Brush brass	12	1.54	1.54	1.38
1695A	Switchboard bracket, extends 6 ins., spread 5½ ins.	Ox. copper	12	1.70	1.70	1.52

## Electric Bracket Tubes

							e Each		
T				I	<del>I</del> rush Bras <i>s</i>		Oxid	ized Coppe	r
List		Size	Std.	Less	12 to	24 and	Less	12 to	24 and
No.		Ins.		than 12	24	Over	than 12	24	Over
2239	Electric bracket tubes	5	24	<b>\$</b> 0.36	\$0.27	\$0.25	\$0.40	\$0.30	\$0.28

### **Bracket Plates**

				LIST I HEE	racn ——	
List			Brush	Brass	Oxidized	Copper
No.		Size	Less	10 and	Less	10 and
		lns.	than 10	Over	than 10	Over
95	Female, bracket plates, tapped 1/8 iron		\$0.10	80.07	\$0.11	\$0.08







No. 843



No. 842



No. 1000

	busnings	*List	Price per	100
List		Less	50 to	100 and
No.		than 50	100	Over
844	½ x ½ iron	\$8.00	\$6.00	\$5.60
843	3/8 X 1/4 iron	12.00	9.00	8.40
842	<sup>3</sup> ⁄ <sub>8</sub> x ½ iron	13.00	9.76	9.10
1000	½ x ¾ iron	18.00	13.50	12 60



No. 1756



No. 2911A



No. 161A



No. 143

Connectors	and	Bushin	gs
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	connectors and busi	uugs	*List	Price per 1	00
List		_	Less	50 to	
No.		Finish	than 50	100	Over
1756BB	45 angle, for clusters and ceiling fans	Brush brass	\$36.00	\$27.00	\$25.20
1756OC	45 angle, for clusters and ceiling fans.	Ox. copper	39.60	29.70	27.72
2911A 161A	1/8 iron to burner		40.00	30.00	28.00
101A 143	1/8 iron to burner	• • • • • • • • • • • • • • • • • • • •		4.50	4.20
*De	1/8 x 1/8 iron	ivariac writa	6.00	4.50	4.20
	Je se	TACITOS MITTO	nearest nu	iuse.	

#### FARIES CEILING FIXTURES







No. 8013

No. 2383







No. 1003

No. 635

No. 2385

### Ceiling and Porch Bands

With Four Screw Holes Used with Receptacle 6½ x 2 For 3½ Inch Glass					
List No. 635 635C 635A	Brush brassBlackUnfinished,	Mfrs. List per 100 \$30.00 30.00 25.00	*List Price per 100 \$45.00 45.00 37.50		
	No. 636 With Four Screw 6¼ x 2. For 4 Inch				
636 636C 636A	Brush brass,BlackUnfinished	\$34.00 34.00 29.00	\$51.00 51.00 43.50		

	6½ x 2. For 4 Inch		
BC BA	Brush brass	34.00	\$51.00 51.00 43.50
	No. 8013	01/ 0	

Used	with For		acle		x 3	3
	,			100	no	

8013C	Brush brass	100.00	\$150.00 150.00 135.00

#### No. 636D With Four Screw Holes $6\frac{1}{4} \times 2$ Made of Sheet Copper for Outdoor Work For 4 Inch Glass

		Mfrs.	*List
List		List	Price
No.		per 100	per 100
636E	Polished copper	\$39.00	\$58.50
636F	Black	39.00	58.50
636D	Unfinished	34.00	51.00

### No. 1003 Used with Receptacle 5 x 1½ For 3¼ Inch Glass

1003	Brush brass	\$30.00	\$45.00
1003C	Black	30.00	45.00
1003A	Unfinished	25.00	37.50

#### No. 637 Used with Receptacle 6 x 21/2 For 21/4 Inch Glass

/-		
Brush brass	\$35.00	\$52.50
Unfinished	30.00	45.00

#### No. 635D With Four Screw Holes $6\frac{1}{4} \times 2$ For 31/4 Inch Glass

637 637.1

635E	Polished copper	\$35.00	\$52.50    635D	Unfinished	\$30.00	<b>\$4</b> 5.00
635F	Black	35.00	52.50			

### Canopies

		14711.9+	13150
		List	Price
List No.	Finish	per 100	per 100
2383 Canopy 4½ x 3 in., with ring	Brush brass	\$28.00	\$42.00
2385 Canopy 4 <sup>3</sup> / <sub>4</sub> x 4 <sup>1</sup> / <sub>4</sub> in., with ring	Brush brass	35.00	52.50

Note: Do not fail to specify size of slip ring desired.

Brush brass finish always shipped unless otherwise specified.

\*Delivery F. O. B. Factory, Decatur, Ill. For warehouse deliveries write nearest house.

### MACALLEN INSULATING JOINTS

No. 7601 With Iron Hickey

No. 7621 With Brass Hickey

#### ELECTROLIER OR SEPARABLE JOINTS

List		*List	List		*List
No.	Size	Price	No.	Size	Price
7601	3/8 X 1/8	\$0.82	7607	$\frac{1}{2}$ x $\frac{1}{2}$	\$1.20
7603	3/8 X 1/4 3/8 X 3/8	.82 .85	7608 7609	3/4 X 3/8	3.10
7604	1/2 X 1/8	1.13	7610,	3/4 X 1/2 3/4 X 3/4	$\frac{3.10}{3.40}$
7605	1/2 x 1/4	1.13	7611	1 x 3/4	4.50
7606	$\frac{1}{2} \times \frac{3}{8}$	-1.15	7612	1 x 1	4.60

#### ELECTROLIER OR SEPARABLE JOINTS

#### With Brass Hickeys

7621	3 8 X 1/8 3/8 X 1/4 3/8 X 3/8 1/2 X 1/8	$ \begin{vmatrix} 81.00 \\ 1.00 \\ 1.10 \\ 1.40 \end{vmatrix} \begin{vmatrix} 7625 \\ 7626 \\ 7627 \\ $	1/2 X 3/8	\$1.40 1.40 1.75

#### ELECTROLIER OR SEPARABLE JOINTS

#### With Hickeys Tapped Brass Tube Sizes

7633	% iron x 1/6 brass 3/8 iron x 1/2 brass	.84	7636 7637	½ iron x 3/8 brass ½ iron x 7/16 brass ½ iron x ½ brass	1.15
7634	3/8 iron x 5/8 brass	.89 📙	7638	½ iron x 5% bruss	1 17

Brass tubing sizes given above are outside measurements, and are tapped to Macallen's standard sizes.

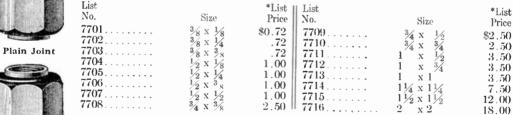
### ELECTROLIER OR SEPARABLE JOINTS

### With Malleable Iron Male Thread Hickeys

7681	3/8 X 1/8	\$0.85 L	7685	1/6 v 1/	\$1.13
$7682\ldots$	3/8 X 1/4	.85	7686	1/2 X 1/4 1/2 X 3/8	
7683	3/8 X 3/8	.87	7687	1/2 x 1/2	1 15
7684	1/2 X 1/8	1.13		/2 x /2	1.15

#### No. 7631 For Brass Tubing

### BLANK JOINTS FOR EXTERNALLY WIRED FIXTURES





With Hickey

-			2	
	Y	55		2
100	100		腦	H
	禮		1	
7		-		

Male and Female Thread

### BLANK JOINTS, MALE AND FEMALE

7721 7722 7723 7724 7225 7726 7727	38 F x 18 M 38 F x 14 M 28 F x 38 M 12 F x 18 M 12 F x 14 M 12 F x 38 M 12 F x 38 M 12 F x 12 M	$\begin{array}{c cccc} \$0.72 & 7728. \\ 72 & 7729. \\ 72 & 7730. \\ 1.00 & 7731. \\ 1.00 & 7732. \\ 1.00 & 7733. \end{array}$	 34 F x 38 M 44 F x 12 M 4 F x 34 M F x 12 M F x 14 M F x 1 M	\$2.90 2.90 2.90 4.00 4.00 4.00
7734 7735	3/8 M x 1/8 F 3/8 M x 1/4 F	$\begin{array}{c c} \$0.72 & 7736. \\ 7737. \\ 7738. \end{array}$	 2 M x ½ F 2 M x ¼ F 2 M x ¾ F	\$1.00 1.00 1.00

\*Delivery F. O. B. Factory, Boston, Mass. For warehouse deliveries write nearest house.

#### MACALLEN INSULATING JOINTS







Stud with Hickey

Insulated Fixture Studs

List No.	Size Malleable Iron	*List Price Each
1335	1/8	\$0.75
1339	1/4	
1340	38	,
Kurnicho	d to order in composition brass	

#### Insulated Fixture Studs With Hickeys

List No.	Size	Malleable Iron	*List Price Each
1329	1/8		\$0.85
1330	1/4		
1334	38		

These studs are secured to the box with four screws and are designed to fit the "Bossert" and other standard outlet boxes.

#### Hickeys

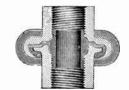
#### Malleable Iron

List No.	Size List	Price Each   List	No. Size	List Price Each		Size	List Price Each
1450	1/8 x 1/8	\$0.10   145			1597	3∕4 X	<sup>3</sup> / <sub>8</sub> \$0.40
1451	1/4 x 1/8	, 10   146		.18	1464		$\frac{1}{2}$ .42
1452	1/4 x 1/4	.10   146	$\frac{1}{2} \times \frac{1}{4}$	.18	1457		.50
1453	3/8 x 1/8	.13   146		.18	1465	1 x	$\frac{8}{4}$ , $55$
1454	3/8 x 1/4	.13    145	$\frac{1}{2} \times \frac{1}{2}$	,20	1458	1 x 1	,60

The above hickeys will not fit insulating joints the nipples of which are tapped with special straight threads.



Joints for Gas Mains and Interior Condults



Sectional View of Joint for Conduits

## Insulating Joints for Gas Service Mains and Interior Conduits

They are insulated on the interior surface to prevent moisture lodging around the mica insulation where they are used on gas service mains.

	Composition Bras	88		Malleable Iron	
List No. 1624 1625 1626 1627 1628	Size 3/4 x 3/4 1 x 1 1 1/4 x 1 1/4 1 1/2 x 1 1/2 2 x 2	*List Price Each \$7.50 12.60 21.00 33.00 61.00	List No. 1629 1630 1634 1635 1636	Size 2½ x 2½ 3 x 3 34 x 34 1 x 1 1¼ x 1¼	*List Price Each \$90.00 120.00 4.00 6.00 10.00

<sup>\*</sup>Delivery, F. O. B. Factory, Boston, Mass. For warehouse deliveries write nearest house.

#### MACALLEN INSULATING JOINTS

Malleable Iron







Iron Crowfoot



Insulated Crowfoot

#### Insulated Hooks and Eyes for Suspending Electric Fans, Etc.

	Insulated Hooks			Insulated Eyes					
List No. 1391 1392 1393	Size  3/8 in			Size 3/8 in	. 1,50				
	Insulated Crowfoot								
1401 1402 1403	1/8 in 1/4 in 3/8 in	.90	1404 1405	½ in ¾ in	\$1.20 2.50				



Double Separable Electrolier Joint



Separable Electrolier Joint



Combined Electrolier Joint with Hickey

List Price
Each
\$1.20
1.20
1.30
1.30
1.30
1.30
1.30
1.40
1.50

Separable Electrolier Tripod Joints

For conduits, with passage for wires through in-

Double	8	bla	Floatro	liar	Ininte
Double	Separa	ıbie	Liectro	ner	Joints

These joints are designed to use with straight electric fixtures in places where fixtures cannot be turned.

For eo sulation. List

turned.	•	List	
List	List Price		Siże
No.	Size Each	1351	3/8 x 1/8 in
1341	3/8 x 1/8 in		3/8 x 1/4 in
1342	$\frac{3}{8} \times \frac{1}{4} \text{ in} \dots 1.30$	1353	3/8 X 3/8 in
1343	$\frac{3}{8}$ x $\frac{3}{8}$ in	1354	1/2 x 1/8 in
1344	$\frac{1}{2}$ x $\frac{1}{8}$ in	1355	$\frac{1}{2} \times \frac{1}{4} \text{ in}$ .
1345	$\frac{1}{2}$ x $\frac{1}{4}$ in		½ x 3/8 in
1346	$\frac{1}{2} \times \frac{3}{8} \text{ in} \dots 1.40$	1357	½ x ½ in
1347	$\frac{1}{2} \times \frac{1}{2} \text{ in} \dots 1.60$	1359	3/4 x 1/2 in

#### Combined Electrolier Tripod and Hickey Separable Joints

With double outlets for wires and no passage through insulation.

1361	3/8 x 1/8 in	\$1.30    1365	½ x ¼ in	\$1.40
1362	3/8 x 1/4 in	1.30   1366	$\frac{1}{2} \times \frac{3}{8}$ in	1.40
1363	3/8 x 3/8 in	1.30   1367	½ x ½ in	1.60
1364	1/2 x 1/8 in	1.40		

Iron Crowfoot			Iron Tripod			Iron Dupods					
List			List Price	List			List Price	List		-	List Price
No.	Tapped	Diam.	per 100	No.	Tapped	Diam.	per 100	No.	Tapped	Diam.	per 100
591	1/8	$2\frac{1}{4}$	\$5.60	586	1/8	$2\frac{3}{4}$	\$5.60	597	1/8		\$7.50
592	1/4	$2\frac{1}{4}$	5.60	587	1/4	$2\frac{3}{4}$	5.60	598	1/4		7.50
593	3/2	$2\frac{1}{4}$	5.60	588	3/2	$2\frac{3}{4}$	5.60	599	1/2		7.50

Delivery F. O. B. Factory, Boston, Mass. For warehouse deliveries write nearest house.

### MACALLEN CANOPY INSULATORS



Square Canopy Insulator



Hexagonal Canopy Insulator



Double Groove Canopy Insulator

#### Square Canopy Insulators

List No. Sq-B-12 Sq-B-13 Sq-B-14 Sq-B-16 Sq-B-17 Sq-B-19 Sq-B-19 Sq-B-20 Sq-B-21 Sq-B-21	STANDARD BROWN COMPOUND  Size  3 ins. 334 ins. 334 ins. 334 ins. 4 ins. 4 ins. 4 ins. 4 ins. 4 ins. 4 ins. 5 ins. 5 ins. 5 ins. 5 ins. 5 ins. 5 ins.	Each No. 80.40 Sq-W Sq-W Sq-W Sq-W Sq-W Sq-W Sq-W Sq-W	Size   Size	Each \$0.50 .56 .62 .68 .74 .80 .86 .92 .98
Sq-B-21	51/4 ins.	.80   Sq-W	7-21 5 1/4 ins. 7-22 5 1/2 ins. 7-23 5 3/4 ins.	

### Hexagonal Canopy Insulators

HX-B-16 HX-B-17 HX-B-18 HX-B-19 HX-B-20 HX-B-21 HX-B-21 HX-B-22 HX-B-23 HX-B-24	4 ins. 4 14 ins. 4 12 ins. 4 24 ins. 5 ins. 5 ins. 5 1/2 ins. 5 24 ins. 6 ins.	\$0.56   HX-W-16 .60   HX-W-17 .64   HX-W-18 .68   HX-W-19 .72   HX-W-20 .80   HX-W-21 .88   HX-W-22 .96   HX-W-23 1.04   HX-W-24	4 ins. 4 14 ins. 4 15 ins. 4 16 ins. 5 ins. 5 14 ins. 5 18 ins. 5 18 ins. 6 ins.	\$0.74 .80 .86 .92 .98 1.06 1.14 1.22 1.30
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### Old Style or Double Groove Canopy Insulators

1291 1292 1293 1294 1295 1296 1297 1298 1299 1247 1248 1290	4 ins. 4 ½ ins. 5 ½ ins. 6 ins. 6 ½ ins. 7 ½ ins. 7 ½ ins. 8 ins. 8 ½ ins. 9 ins.	\$0.32   1301 .36   1302 .40   1303 .50   1304 .60   1305 .70   1306 .80   1307 .90   1308 1.04   1309 1.18   1316 1.32   1317 1.64   1318	4 ins. 4 ½ ins. 5 ins. 5 ½ ins. 6 ½ ins. 6 ½ ins. 7 ½ ins. 7 ins. 7 ins. 8 ins. 8 ins. 9 ins. 10 ins.	\$0.50 .55 .60 .70 .80 .90 1.08 1.26 1.44 1.62 1.80
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No. 7501 For Combination Fixtures

## Macallen Joints for Combination Fixtures

List No. 7501 7502 7503 7504 7505 7506 7507	Size 86 x 1/6 96 x 1/6 96 x 1/6 1/62 x 1/6 1/62 x 1/6 1/62 x 1/6 1/62 x 1/6	List Price Each No.  \$0.72 7509 .72 7510 .72 7511 1.00 7512 1.00 7514 1.00 7515	Size  34 x 1/4  34 x 3/4  1 x 1/2  1 x 3/4  1 x 1 4  1 1/4 x 1 1/4  1 1/2 x 1 1/2	List Price Each \$2.56 2.50 3.50 3.50 3.50 7.50
7508	3√4 x 3√8	2.50 7516	2 x 2 2	18.00



No. 7521 With Male and Female Thread

### Combination Joints, Male and Female

7521 7522 7523 7524 7525 7526 7527	% F x ½ M % F x ¼ M % F x ¾ M ½ F x ¼ M ½ F x ¼ M ½ F x ¼ M	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$egin{array}{cccccccccccccccccccccccccccccccccccc$

With male end same size as or larger than female end, same price.

### BENJAMIN OUTLET BOX FITTINGS



No. 1402

### National Electrical Code Standard

### **OUTLET BOX FITTINGS**

660 Watts, 250 Volts

Outlet box fittings are intended to provide a permanent seal for the outlet and render unnecessary any further disturbance of the wiring,

A threaded supporting means affords a method of attaching any one of the numerous sizes of Type S holders or reflectors, and fixtures with connectors Nos. 1412 and 1416. Interchange of holders, reflectors or fixture types is thus made easy.

These fittings consist of finished brass cover, lamp receptacle interior and attaching parts. The deep box type is usually connected direct to the ears on the box. Where offset box covers are plastered in, this type can be attached direct to the ears, if tapped, or to bottom of box or fixture stud by means of special stirrup listed below. The shallow box type is attached either direct or through a strap intended for central support. Benjamin lamp grip furnished at an advance of 11 cents list. Standard finish is brush brass.





### Deep Box Type

	Size				Mfrs.	W. E.
List	of Box		Std.	Wt.	Price	Price
No.	Inches	Description	Pkg.	Lbs.	Each	Each
1402	$3\frac{1}{4}$	Deep box fitting	50	25	\$0.60	\$1.21
1403	$3\frac{1}{4}$	Less brass cover	50	20	.40	.79
1:10:4	$3\frac{1}{4}$	Brass cover only	100	5	.20	.40
1405	4	Deep box fitting	50	27	.65	2.21
1406	4	Less brass cover	50	23	. 45	.83
1407	4	Brass cover only	50	4	.20	. 40
1420	Stirrup	for $\frac{3}{8}$ in. stud, extra	50	$3\frac{1}{2}$	.05	.18
1421	Stirrup	for ½ in. stud, extra	50	$3\frac{1}{4}$	.07	.23



Methods of Attaching

### Shallow Box Type

1410 1411	$\frac{4}{4}$	Shallow box fitting Less strap	50 50	$\$0.90 \\ .85$	
		•			

Diameter of Nos. 1402-1404, 33/4 inches; Nos. 1405-1407, 41/2 inches; Nos. 1410 and 1411,  $4\frac{5}{8}$  inches.

Holes of Nos. 1402–1404 are spaced 23/4 inches on centers; Nos. 1405–1407. 3½ inches; Nos. 1410 and 1411, 3½ inches.



### 660 Watts, 250 Volts

Fixture connectors are flexi-swivel, mechanical and electrical couplings. They adapt a stem or chain fixture for quick attachment to or interchange on any of the outlet box fittings above. Where required, a 3/8 x 3/8 inch hollow insulating joint can be inserted between connector and stem. Standard finish is brush brass.





No. 1412

# BEN/AMIN

No. 1413

### CHAIN SUPPORTING RING

These rings offer a simple method of attaching chain fixtures to the screwthreaded portion of Benco sockets and ceiling units, or to outlet box fittings listed above. Standard finish is brush brass.

1413	Supporting ring	100	$^{2}$	\$0.30	\$0.59
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Type UD



Type TD

### TYPE TD

# Any Standard Finish. Satin Old Brass, Unless Otherwise Specified Reflector, White Enameled Steel With Panels of Opal Glass



Type OD

	io illuminate	Celling.	Adam t	Ltched	Bowl	
	Outside			Ship.	Mfrs.	W. E.
Size	Diam.	Bowl	Length	Wt.	List	List
Watts	Inches	Inches	Inches	Lbs.	Price	Price
3 light, 40-50-60	18	12	36	42	\$67.00	\$80.40

### TYPE TDC

Is Type TD	Without Chain Suspension of	or Glass Panels
Ship	Mfrs.	W. E.
Wt.	List	List
Lbs.	Price	Price
34	<b>\$</b> 51.50	\$61.80

### TYPE UD

# Any Standard Finish. Satin Old Brass, Unless Otherwise Specified Reflector, White Enameled Steel With Panels of Opal Glass to Illuminate Ceiling. Adam Etched Bowl



Type PD

	to mannate (	cenning.	Auaiii	stelled b	OWI	
Size	Outside Dian	Bowl	Length	Ship.	Mfrs. List	W. E. List
Watts	Inches		Inches	Lbs.	Price	Price
75-100	20	12	36	42	<b>\$5</b> 3.50	\$64.20

### TYPE UDC

#### Is Type UD Without Chain Suspension or Glass Panels Ship. Mfrs. W. E. List Wt. List Price \$39.00 Price \$46.80 34

### TYPE OD

## Body Compo. Any Standard Finish. Old Gold, Unless Otherwise Specified Reflector, Lumo-Vitro. Rose Decorated Bowl in Natural Colors

	Outside		Ship.	Mfrs.	W. E.
Size	Diam.	Bowl	Wt.	List	List
Watts	Inches	Inches	Lbs.	Price	Price
75-100-200 medium socket	18	$11\frac{1}{2}$	26	\$28.50	\$34.20
Pull switch \$1.80 additional					

### TYPE PD

## Standard Finish, Tusk Ivory. Reflector, Lumo-Vitro Forget-Me-Not Decorated Bowl in Natural Colors

	Outside		Ship.	Mfrs.	W. E.
Size	Diam.	Bowl	Wt.	List	List
Watts	Inches	Inches	Lbs.	Price	Price
75-100-200 medium soeket	19	111/2	24	\$21.50	\$25.80
Pull agritab \$1 &0 additional					•

### TYPE QD

## All White Finish. Reflector, Lumo-Vitro. Daisy Decorated Bowl in Natural Colors

Size Watts 50-60 or 75 medium socket Pull switch \$1.80 additional.	Outside Diam. Inches . 14½	Bowl Inches 10	Ship. Wt. Lbs. 13	Mfrs. List Price \$13.50	W. E. List Price \$16,20
Pull switch \$1.80 additional.					

### TYPE RD

## Band Finished Tusk Ivory. Reflector Lumo-Vitro. Wisteria

Decorated	DOW! III	Hacurai	Colors		
	Outside		Ship.	Mfrs.	W. E.
Size	Diam.	Bowl	Wt.	List	List
Watts	Inches	Inches	Lbs.	Price	Price
50-60-75 or 100 medium soeket	15	9	16	\$16.50	\$19.80
Pull awitch \$1 80 additional					

Delivery F. O. B. Factory, St. Louis, Mo. For warehouse deliveries write nearest house.



Type QD



Type RD



Type WD

### TYPE WD Band Finished Leather Bronze Reflector Lumo-Vitro

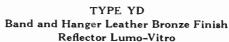
	Outside		onip.	Mirs.	W.E.
	Diam.	Bowl	Wt.	List	List
Size—Watts	Inches	Inches	Lbs.	Price	Price
40- 60- 75 Medium soeket	11	$6\frac{1}{4}$	7	\$8.00	\$9.60
100-150 Medium socket	15	$8\frac{1}{4}$	12	11.50	13.80
200 Medium socket	19	11	22	16.00	19.20
300 Mogul socket	19	11	22	16.80	20.16
400-500 Mogul socket	23	14	42	24.50	29.40



### Band and Hanger Leather Bronze Finish Reflector Lumo-Vitro

40- 60- 75 Medium socket	11	$6\frac{1}{4}$	11	\$12.50	\$15.00
100-150 Medium socket	15	$81\frac{7}{4}$	16	16.00	19.20
200 Medium socket	19	11	25	20.50	24.60
200 Mogul socket	19	11	25	21.30	25.56
400-500 Mogul socket	23	14	47	29.50	35.40
			_	_	

Standard length, 4 feet. Additional length, per foot, \$0.60.



40- 60- 75 Medium socket 100-150 Medium socket	11 15	$\frac{6\frac{1}{4}}{8\frac{1}{4}}$	12 17	\$13.50 17.00	\$16.20 20.40
200 Medium socket	19	11	26	21.50	25.80
300 Mogul socket	19	11	26	22.30	26.76
400-500 Mogul socket	23	14	47	30.00	36.00

Standard length, 4 feet. Additional length, per foot, \$0.90. For method of lengthening, see note elsewhere.

Pull switch furnished for any of above at \$1.80 additional.



Type YD

Type AD

### TYPE AD All White Lumo-Vitro Finish

40- 60- 75 Medium socket	101/4	$6\frac{1}{4}$	7	\$7.30	\$8.76
100-150 Medium socket	$14\frac{1}{4}$	81/4	12	10.00	12.00
200 Medium socket	18	11	22	14.00	16.80
300 Mogul socket	18	11	22	14.80	17.76
400-500 Mogul socket	22	14	42	22 00	26, 40

### TYPE AE Hanger Leather Bronze Finish Reflector Lumo-Vitro

40- 60- 75 Medium socket	101/4	$6\frac{1}{4}$	11	\$11.80	\$14.16
100-150 Medium socket.	$14\frac{1}{4}$	$8\frac{1}{4}$	16	14.50	17.40
200 Medium socket	18	11	25	18.50	22.56
300 Mogulsocket	18	11	25	19.30	23.16
400-500 Mogul socket	22	14	47	27.00	32.40
Standard length, 4 feet.	Additiona	d lengtl	h, per fo	ot, \$0.60.	

### TYPE BE Hanger Leather Bronze Finish Reflector Lumo-Vitro

40- 60- 75 Medium socket 100-150 Medium socket	$10\frac{1}{4}$ $14\frac{1}{4}$	$\frac{6\frac{1}{4}}{8\frac{1}{4}}$	17	\$12.80 15.50	\$15.36 18.60
200 Medium socket	18	11	26	19.50	23.40
300 Mogul socket	18	11	26	20.30	24.36
400-500 Mogul soeket	22	14	47	27.50	33.00
Standard langth A foot	Additions	1 1 an at l.	non foot	@A 00	

Standard length, 4 feet. Additional length, per foot, \$0.90. For method of lengthening, see note elsewhere.

Pull switch furnished for any of above at \$1.80 additional. Delivery F. O. B., St. Louis, Mo. For warehouse deliveries write nearest house.



Type BE



Type CE



Type IB



Type KB

# TYPE CE All White Finish Solid White Porcelain Reflector

SizoWatts	Outside Diam. Inches	Bowl Inches	Ship. Wt. Lbs.	List	W. E. List Price
50- 60- 75 Medium socket 100-150 Medium socket	11	$\frac{614}{811}$	11 14	\$10.50 13.00	\$12.60 15.60
300 *MoguI socket .	1712	11	25	21.00	25.20
***************************************	4 1	: 1	C	13/13/1	1

\*To reduce mogul socket to medium base for 200 watt lamp use adapter at \$0.72 list additional,

### TYPE DE

### Hanger Leather Bronze Finish Solid White Porcelain Reflector

50- 60- 75 Medium socket	11	$6\frac{1}{4}$	15	\$15.00	\$18.00
100-150 Medium socket	1.4	$8^{1}_{4}$	18	17.50	21.00
300 *Mogul socket .	$17\frac{1}{2}$	11	31	25.50	30.60
4 to 1 to 1 1 to 14 to 4 th 14 to 14	A .1 1242 To	.1.1		L 50 00	

Standard length, 4 feet. Additional length, per foot, \$0.60.

\*To reduce mogul socket to medium base use adapter at \$0.72 list additional.

### TYPE EE

### Hanger Leather Bronze Finish Solid White Porcelain Reflector

50- 60- 75 Medium socket	11	614	16	\$16.00	\$19.20
100-159 Medium socket	14	$81_{4}^{\circ}$	19	18.50	22.20
300 *Mogul socket .	1716	11	31	26.50	31.80
*To reduce mogul socket	to media	ını base	use .	adapter at \$0.	72 list

additional.
Standard length, 4 feet. Additional length, per foot, \$0.90.

Standard length, 4 feet. Additional length, per 100t, 80.90. For Method of Lengthening, see note elsewhere. Pull switch furnished for any of above at \$1.80 additional.

### TYPE 1B

### Band Finished Leather Bronze Reflector Lumo-Vitro

40- 60- 75 Medium socket	11	$6^{1}4$	9	811.50	\$13,80
100-150 Medium socket	16	$81_{4}$	15	15.50	18.60
200 Medium socket	19	11	26	20.50	24.60
300 Mogul socket	19	11	$^{26}$	21.30	25.56
400-500 Mogul socket	23	14	45	29.50	35.40

### TYPE JB

### Band and Hanger Leather Bronze Finish Reflector Lumo-Vitro

Kei	lector L	uillo- vit	10		
40- 60- 75 Medium socket	1.1	$61_{4}$	1:3	\$16.00	\$19.20
100-150 Medium socket	16	81.1	19	20.00	24.00
200 Medium socket	19	11	31	25.00	30.00
300 Mogul socket	19	11	31	25.80	30.96
400-500 Mogul socket	23	1-4	50	34.50	41.40
Standard length 4 feet.	Addition	ual lengtl	i, per f	ot. \$0.60.	

### TYPE KB

### Band and Hanger Leather Bronze Finish Reflector Lumo-Vitro

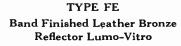
11	$6\frac{1}{4}$	1-4	\$17.00	\$20.40
16	8!4	20	21.00	25.20
19	11	31	26.00	31.20
19	11	31	26.80	32.16
23 -	14	50	35.00	42.00
Addition	al lengtl	ı, per fe	oot, \$0. <b>90</b> .	
	16 19 19 23	$ \begin{array}{cccc} 16 & 814 \\ 19 & 11 \\ 19 & 11 \\ 23 & 14 \end{array} $	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

For method of lengthening, see note elsewhere.

Pull switch furnished for any of above at \$1.80 additional.

Delivery F. O. B., St. Louis. Mo. For warehouse deliveries write nearest house.





	Outside		Ship.	Mfrs.	W. E.
	Dia.	Bowl	Wt.	List	List
Size-Watts	Inches	Inches	Lbs.	Price	Price
40- 60- 75 Medium soeket	11	$6\frac{1}{4}$	9	\$10.00	\$12.00
100-150 Medium socket	16	81/4	16	14.50	17.40
200 Medium socket	19	11	25	20.00	24.00
300 Mogul socket.,	19	11	25	20.80	24.96
400-500 Mogul socket	23	14	46	30.00	36.00

### TYPE GE

### Band and Hanger Leather Bronze Finish Reflector Lumo-Vitro

40- 60- 75 Medium socket	11	$6\frac{1}{4}$	13	\$14.50	\$17.40
100-150 Medium soeket	16	$8\frac{1}{4}$	20	19.00	22.80
200 Medium socket	19	11	30	24.50	29.40
300 Mogul socket	19	11	30	25.30	30.36
400-500 Mogul socket	23	14	50	35.00	42.00
Standard length, 4 feet.	Addition	al length	ı, per fo	ot., <b>\$0.60</b> .	

### TYPE HE

### Band and Hanger Leather Bronze Finish Reflector Lumo-Vitro

40- 60- 75 Medium socket	11	$6\frac{1}{4}$	14	\$15.50	\$18.60				
100-150 Medium soeket	16	81/4	21	20.00	24.00				
200 Medium socket	19	11	30	25.50	30.60				
300 Mogul socket	19	11	30	26.30	31.56				
400-500 Mogul socket	23	14	50	35.50	42.60				
Standard length, 4 feet. Additional length, per foot, \$0.90.									
For method of lengthening, see note elsewhere.									
Pull switch furnished for	any of al	ove at \$	1.80 ad	ditional.					

### TYPE NB

# Band Finished Leather Bronze

40- 60- 75 Medium soeket	11	$6\frac{1}{4}$	8	\$9.00	\$10.80				
100-150 Medium socket	16	81/4	15	13.00	15.60				
200 Medium socket	19	11	24	18.00	21.60				
300 Mogul socket	19	11	24	18.80	22.56				
400-500 Mogul socket	23	14	44	27.00	32.40				

### TYPE OB

### Band and Hanger Leather Bronze Finish Reflector Lumo-Vitro

40- 60- 75 Medium socket	11	$6\frac{1}{4}$	12	\$13.50	\$16.20
100-150 Medium socket	16	81/4	19	17.50	21.00
200 Medium socket	19	11	29	22.50	27.00
300 Mogul soeket	19	11	29	23.30	27.96
400-500 Mogul socket	23	14	49	32.00	38.40
Standard length, 4 feet.	Addition	nal lengt	h, per fo	ot, \$0.60.	

### TYPE PB

### Band and Hanger Leather Bronze Finish Reflector Lumo-Vitro

40- 60- 75 Medium soeket 100-150 Medium soeket 200 Medium soeket 300 Mogul soeket.	11 16 19 19 23	$     \begin{array}{c}       6\frac{1}{4} \\       8\frac{1}{4} \\       11 \\       11 \\       14   \end{array} $	13 20 29 29 49	\$14.50 18.50 23.50 24.30 32.50	\$17.40 22.20 28.20 29.16 39.00
400-500 Mogul socket	23	14	49	34.00	39.00

Standard length, 4 feet. Additional length, per foot, \$0.90.

For methods of lengthening, see note elsewhere.

Pull switch furnished for any of above at \$1.80 additional.

Delivery F. O. B. Factory, St. Louis, Mo. For warehouse deliveries write nearest house.



Type HE





Type PB



					•	
•	Outside			Ship.	Mfrs.	W. E.
Size	Diam.	Bowl	Length	Weight	List	List
Watts	Inches	Inches	Feet	Lbs.	Price	Price
400-500 Mogul socket	. 20	$11\frac{1}{2}$	5	55	\$76.00	\$91.20
400-500 Mogul socket	. 24	$11\frac{1}{2}$	5	75	83.00	99.60
750-1000 Mogul socket		16	5	135	96.00	115.20
Silk-covered wire	include	d, Ade	litional	length, 1	per foot, \$1	.20.

TYPE SE
Body Compo. Rose Gold Finish. Reflector, Lumo-Vitro

# TYPE SEC Is Type SE Up to the Arrow

Outside	Ship.	Mfrs.	W. E.
Diameter	Weight	List	List
Inches	Lbs.	Price	Price
20	45	\$40.00	\$48.00
$^{24}$	65	47.00	56.40
28	120	61.00	73.20

### TYPE UE

### Is Same as Type TE, Except Body and Canopy Are of Compo Rose Gold Finish

	Outside Diam.	Ship. Weight	Mfrs. List	W. E. List
Size	Inches	Lbs.	Price	Price
Medium socket	16	55	<b>\$4</b> 6.50	\$55.80
Medium socket	19	90	57.50	69.00
Mogul socket	19	90	58.30	69.96
Mogul socket	23	120	79.50	95.40
Additional length, per for	ot, \$1.20.			

# TYPE UEC Is Type UE Up to the Arrow

	Outside Diam.	Ship. Weight	Mfrs. List	W. E. List
Size	Inches	Lbs.	Price	Price
Medium socket	16	55	\$22.00	\$26.40
Medium socket	. 19	60	30.20	36.24
Mogul socket	19	60	31.00	37.20
Mogul soeket	23	90	46.00	55.20

### TYPE TE Body, Cast Bronze, Hand Chased. Any Standard Finish Reflector, Lumo-Vitro

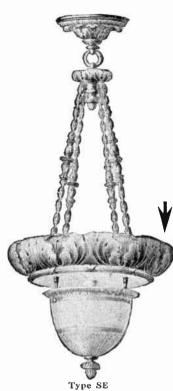
Size Watts	Outside Diam. Inches	Bowl	Length Inches	Ship. Weight Lbs.	Mfrs. List Price	W. E. List Price
100-150-200 medium socket 200 medium socket 300 Mogul socket 400-500 Mogul socket Additional lengtl	19 19 25	8 10 10 12 ot, \$8.4	42 48 48 60 40.	70 85 85 100	\$100.00 139.20 140.00 190.00	\$110.00 153.12 154.00 209.00

# TYPE TEC Is Same As Type TE Up to Arrow

Mogul socket	Medium socketMedium socketMogul socketMogul socketMogul socket.	Size Inches 16 19 19 25	Ship. Weight Lbs. 55 65 65 90	Mfrs. List Price \$61.00 98.00 98.80 128.00	W. E. List Price \$73.20 117.60 118.56 140.80
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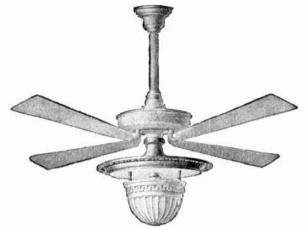
Any "sprayed bronze" finishes on Compo fixtures without extra charge. Old ivory, 10 per cent. additional. Burnished finishes, 25 per cent. additional.

Delivery F. O. B. Factory, St. Louis, Mo. For warehouse deliveries write nearest house.





World Radio History



Type JE

### TYPE JE Fan Not Included Band Leather Bronze or Any Standard Finish Reflector Lumo-Vitro



Type BC

	Outside		Ship,	Mfrs.	W, E.
	Diam.	Bowl	Wt.	List	List
Size-Watts	Inches	Inches	Lbs.	Price	Price
40- 60- 75	11	61/4	9	\$11,00	\$13.20
100-150	15	814	15	14.50	17.40

### TYPE KE

### Is Same as JE, Except Reflector is of A.D. Type

	Outside		Ship.	Mfrs.	W. E.
	Diam.	Bowl	Wt.	List	List
Size-Watts	Inches	Inches	Lbs.	Price	Price
40- 60:75	11	61/4	9	\$10.30	\$12.36
100-150	15	81/4	14	13.00	14.60

Pull switches for control of fan are furnished wired with terminals marked ready for connection to wires from fan and replace fan switches regularly supplied with fan, which may be omitted.

In ordering specify make and type of fan.

Pull switch for control of light only at \$1.80 additional.

Pull switches for separate control of single speed fan and light, \$6.00 additional.

Pull switches for separate control of two or three speed fan and light at \$6.60 additional.





Type GC

	Outside		Ship.	Mirs.	W. E.
	Diam.	Bowl	Wt.	List	List
Size-Watts	Inches	Inches	Lbs.	Price	Price
40- 60- 75 Medium receptacle	1134	8	11	\$12.00	\$14.40
100-150 Medium receptacle	1414	9	13	20.00	24.00
Pull switch furnished at \$1.80 ac	lditional.				

Additional sockets for signal and night lights provided at \$1.20 each.

### TYPE GC

# Price Fixture Only and Not Including Socket, as Its Purpose Is to Attach To Old Sockets by Means of Shade Holder

	Outside Diam.		Fitter	Ship.	Mfrs. List	W.E. List
Size—Watts 40- 60- 75			Inches	Lbs.	Price \$7.00	Price \$8,40
100-150 200-300	$\frac{14\frac{1}{2}}{17\frac{1}{2}}$	614 814 11	$\frac{2\frac{1}{4}}{3\frac{1}{4}}$	10 20	10.00 12.50	$\frac{12.00}{15.00}$

Any size will be furnished with either 214, 314 or 4 inch fitter at no additional cost if specified on order.

### TYPE BD

# Is NB with Wire Guard—All White Finish For Gymnasium or Other Locations Where Exposed to Possible Mechanical Injury

	Outside		Ship.	Mfrs.	W. E.
	Diam.	Bowl	Wt.	List	List
Size-Watts	Inches	Inches	Lbs.	Price	Price
40- 60- 75 Medium socket,	11	61/4	11	\$14.50	\$17.40
100-150 Medium socket	16	814	19	21,00	25.20
200 Medium socket	19	11	29	28.50	34.20
300 Mogul socket	19	11	29	29.30	35.16
400-500 Mogul socket	23	14	50	40.00	48.00

Pull switch furnished for any size at \$1.80 additional. Chain hangers may be applied to this type to form suspension fixture.

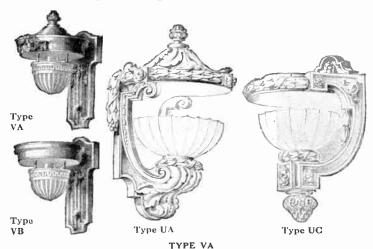
Delivery F. O. B. Factory, St. Louis, Mo. For warehouse deliveries write nearest house.



Type BD



Type NE



1 1 1 25 171									
Metal Bracket,	Brush Brass	Finish.	Reflector	Lumo-Vitro					
	Extends	Rowl	Ship W's	Mfn. List					

	Extends	Bowl	Ship. Wt.	Mfrs. List	W. E.
Size-Watts	Inches	Inches	Lbs.	Price	Price
60 or 100		614	15	\$12,00	\$14.40
For standard	finishes other than s	pecified add	10 per cent.		

### TYPE VB Metal Bracket, Brush Brass Finish Reflector Lumo-Vitro

	Extends	Bow1	Ship, Wt.	. Mfrs. List	W. E.
Size-Watts	Inches	Inches	Lbs.	Price	Price
60 or 100,	12	614	22	\$18.50	\$22.20
For standard finishes	other than	specified	add 10	Der cent.	

### TYPE UA Body Compo. Standard Finish, Rose Gold Reflector, White Enameled Steel

			neignt			
	Extends	Bowl	Over All	Ship. Wt.	Mfrs. List	W. E.
Size-Watts	Inches	Inches	Inches	Lbs.	Price	Price
100 or 200	15	10	29	55	\$27.50	\$33,00

# TYPE UC Body Compo. Standard Finish, Rose Gold Reflector, White Enameled Steel

			Height			
	Extends	Bow1	Over All	Ship. Wt.	Mfrs. List	W. E.
Size Watts	Inches	Inches	Inches	Lbs.	Price	Price
60 or 100	13	8	21	43	\$24.50	\$29.40

# TYPE NE Body Compo. Standard Finish Rose Gold. Reflector, Lumo-Vitro Mogul Socket in Bowl, Candles Medium Sockets

	Out. Dia.	Bowl	Length			W. E. List
300 Watt Size	1nches	Inches	Feet	Lbs.	Price	Price
Four candle	23	1119	5	115	\$78,00	\$93,60
Without candles	23	$11\frac{1}{2}$	5	100	59.00	70.80
440-500 Watt S	ze					
Six eandles	28	16	5	250	109,00	119.90
Without candles	28	16	5	270	81.00	97,20
750-1000 Watt 8	Size					
Eight candles.	40	20	5	390	176.00	193.60
Without candles	. 40	20	.5	370	139.00	152,90
171 1 1 1		1 211	1	Sec. 1 . 1 . 1		

14 inch insulating joint and silk-covered wire included. Additional length, per foot, \$2.40.

### TYPE ED Body Compo, Rose Gold Finish. Reflector Lumo-Vitro

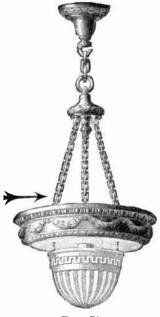
	Out.				Mfrs.	W, E.
	Dia.	Bowl	Length	Ship. Wt	List	List
Size-Watts	Inches	Inches	Feet	Lbs	Price	Price
200 Medium socket	23	1.1	5	85	\$50,00	\$60,00
300 Mogul socket	23	1.1	5	85	50.80	60.96
400-500 Mogul socket	29	1.4	5	131	62.50	74.40
Silk-covered wire include	u-l					

Silk-covered wire included. Additional length, per foot, \$0.90. Pull switch, \$1.80 additional.

TYPE FD
Is Type ED Up to the Arrow

	Out, Dia.	Ship, Wt.	Mfrs. List	W. E. List
	Inches	Lbs.	Price	Price
Medium socket	23	65	\$28,80	\$34.56
Mogul socket		65	29,60	35.52
Mogul socket	29	100	41.00	49,20

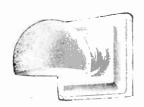
Delivery F.O.B.Factory, St. Louis, Mo. For warehouse deliveries write nearest house.



Type ED

## Western Electric

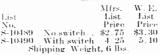
## Western Electric **AGLITES**



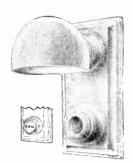




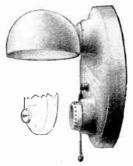
List		Mirs. List	W. E. List
No. S-10494	No switch	Price	Price \$3.48
8-10492	With switch hipping Weight	4.40	5.28
	nipping weight	, o ms.	



Mfrs List List List No. 8-10801 Price Price No switch.... \$2.90 With switch... 4.40 Shipping Weight, 6 lbs. \$2.90 4.40  $\frac{$3.48}{5.28}$ 8-10805







No switch ... \$4 40 With switch .. 5.96 Shipping Weight, 7 lbs ... \$4 40 h... 5.90  $\frac{85.28}{7.08}$ 8 - 10498For Flush Plug Receptacle add \$1.20 and Specify on Order

S-10808 No switch , \$2.90 | \$3.48 S-10809 With switch | 4.40 | 5.28 Shipping Weight, 6 lbs,

8-10915 No switch. \$4.40 \$5.28 5.90 7.08 



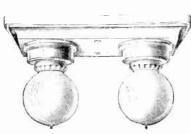




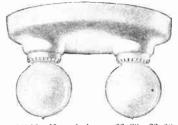
No switch... \$5.10 With switch... 6.60 S-10495 With switch . . 6.60 Shipping Weight, 7 lbs. 8-10496

7 No switch. . \$1.70 8 With switch 3.20 Shipping Weight, 5 lbs. 8 - 104878-10488

7 No switch..., \$5.10 \ \$6.12 8 With switch... 6.60 7.92 Shipping Weight, 8 lbs. S-10917 8-10918







8-10493 No switch... 83.00 \$3.60 S-10806 No switch... \$1.70 \$2.04 S-10919 No switch... \$3.00 \$3.60 S-10494 With switch... 1.50 5.40 S-10807 With switch... 3.20 3.84 S-10920 With switch... 4.50 5.40 Shipping Weight, 6 lbs. Shipping Weight, 5 lbs. Shipping Weight, 6 lbs. Shipping Weight, 5 lbs. Shipping Weight, 6 lbs. Shipping Weight, 6 lbs. The Aglite fixture with its rich marble-like appearance is the ideal lighting unit for use in bathrooms, hospitals, or wherever sanitation or cleanliness are essential. All visiole parts are made of white glass. It harmonizes perfectly with hospital or bathroom furnishings and fittings, and is absolutely permanent as to finish.

The method of installing is simple, no insulating joint, canopy insulator or splicing of wires being required. All necessary parts are furnished with the fixture; a complete unit.

### BENJAMIN GAS AND VAPOR-PROOF FIXTURES

Sockets Are National Electrical Code Standard

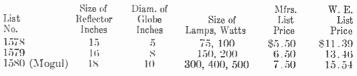


Schedule 2 "F"

Gas and vapor-proof fixtures are single units with the lamp tightly enclosed as a protective measure. They are safety lights for industrial plants, such as powder mills, benzol plants, paint factories, and other places subjected by exposed lights to danger from explosive gases or dust accumulation. They are protected units for use on steam vessels, around wharves and other marine service. The lamp is tightly enclosed, an asbestos gasket between globe and hood makes the fixture tight.

### WITH SHALLOW BOWL REFLECTORS

Fixtures 1578-1580 have cast-iron hood tapped for ½ inch stem, two-piece, easy-to-wire porcelain receptacle with lamp grip to prevent loosening of lamps, screw threaded enclosing globe, aluminum globe holder, and non-discoloring white porcelain enameled steel reflector. Iron parts are galvanized. No. 1580 is for Mazda "C" lamps only.





Fixtures 1553-1558 are the same as above with flat cone reflector substituted.

15	4	25, 40, 50, 60	\$4.00	\$8.28
16	5	75, 100	5.00	10.75
18	$6\frac{1}{2}$	<b>1</b> 50	6.00	12.42
18	8	200	6.50	13.46
	16 18	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	16 5 75, 100 5.00 18 6½ 150 6.00

### WITHOUT REFLECTOR

Fixtures 1563-1570 are without reflectors, otherwise the same as above. No. 1570 is for Mazda "C" lamps only.

	Diam. of					
List	Globe	Size of	-Mfrs. Lis	st Price -	-W. E. Lis	t Price-
No.	Inches	Lamps, Watts	Globe Only	Complete	Globe Only	Complete
1563	4	25, 40, 60	\$0.50	\$1.04	\$0.85	\$1.76
1565	5	75, 100	.80	1.66	1.36	2.81
1566	$6\frac{1}{2}$	150	1.50	3.22	2.55	5.27
1568 -	8	150, 200	2.00	4.14	3.40	7.04
1570	10	300, 400, 500	2.50	5.18	4.25	8.80

### WIRE GUARDS—TINNED

## Adapted to Gas- and Vapor-proof Fixtures

List No.	Diameter Inches	Depth Inches	Mfrs. List Price	W. E. List Price
1390	15	$6\frac{3}{4}$	\$2.00	\$4.14
1392 1394	16 18	$\frac{5}{5}$	$\substack{2.30\\2.80}$	$\frac{4.77}{5.80}$

For standard stem for above fixtures, with suspension fitting No. 6028, and with wires scaled in, add \$1.76 to list.

Prices are less wires and lamps.



No. 1555



No. 1566

No. 701-C

### BENJAMIN FIXTURES

SOCKETS ARE NATIONAL ELECTRICAL CODE STANDARD FOR STORE AND OFFICE LIGHTING



Schedule 2-C

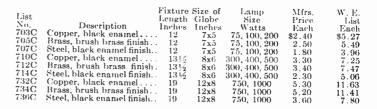
Nos. 703C-736C include ventilated hoods and holders of material as listed, stalactite globe of correct density, and two-piece, easy-to-wire porcelain socket with lamp grip. Flange is securely attached to hood so that support of fixture does not depend on socket. 100-200-watt fixtures have one-piece hood, while 300-1000-watt fixtures have two-piece hood to provide for greater ventilation. Fittings are regularly supplied for ½-inch pipe. ¾-inch may be ordered without change in price, or ¾-inch at an advance of 22 cents list.



No. 752-C



No. 734-C



### Nos. 738C-779C

Nos. 738C-779C are like the above, with suspension. Nos. 772C-779C have chain suspension, 5x4-inch canopy, crowfoot and ½-inch brass loop.

Nos. 738C-739C have 12-inch stem of %-inch iron pipe and 74-inch brass casing, 5½x4-inch canopy and crowfoot. Additional lengths list at \$1.10 cents per foot. For chain suspension on Nos. 738C-739C instead of stem, add 22 cents list. Stem and fittings take No. 14 asbestos covered wire.

772C	Brass, brush brass finish.	$   \begin{array}{c}     26 \\     26 \\     27 \\     27 \\     \hline{2} \\     31 \\     31   \end{array} $	7x5	75, 100, 200	\$3.60	\$7.50
773C	Steel, black enamel finish.		7x5	75, 100, 200	2.90	6.98
778C	Brass, brush brass finish.		8x6	300, 400, 500	4.50	9.88
779C	Steel, black enamel finish.		8x6	300, 400, 500	3.40	7.74
738C	Brass, brush brass finish.		12x8	750, 1000	6.20	13.61
739C	Steel, black enamel finish.		12x8	750, 1000	4.60	10.10

### Nos. 747C-787C

Nos. 747C-787C are substantially Nos. 703C-736C with flat cone enameled steel reflector added. For 18-inch reflector with Nos. 785C-787C add \$1.10 cents list. Reflectors are finished black.

List		Size of Reflecto	Size of	Lamp Size	Mfrs. Price	W. E. List
No.	Description	Inches		Watts	Each	Each
781C	Copper, black enamel		7x5	75, 100, 200	\$3.40	7.47
783C		1. 12	7x5	75, 100, 200	2.80	6.16
785C	Copper, black cnamel	. 15	8x6	300, 400, 500	4.80	10.55
	Steel, black enamel finish.		8x6	300, 400, 500	3.80	8.35
	Copper, black enamel		12x8	750, 1000	7.50	16.47
749C	Steel, black enamel finish.	20	12x8	750, 1000	5.80	13 75

Ventilation.—Globes are regularly furnished with hole in bottom, in line with general practice, although globe ventilation is rarely necessary on account of the adequate provision made in Benjamin Fixture Hoods. Globes without hole will be furnished when specified, without change in price.

Globes list as follows: 7x5-inch, \$1.76; 8x6-inch, \$1.80; 12x8-inch \$4.82. Spherical globes of same dimensions may be ordered without change in price. Trutint 8x6-inch stalactite globes giving noonday sunlight effect, will be furnished with 300-500-watt fixtures at an advance of \$3.29 list: Trutint 12x8-inch spherical globes for 750-1000-watt fixtures at an advance of \$6.80 list.

For white enamel finish, add 20 per cent. list to price of fixture, less glassware.



### Nos. 751C-754C

Nos. 751C-754C have Beneo percelain-lined socket, tapped  $\frac{1}{2}$  inch, ventilated deep holder, and stalactite diffusing globe. Socket tapped  $\frac{3}{2}$  inch furnished without change in price. Globes are furnished with bottom opening.

Lamp grip, to prevent loosening of lamps, furnished at an advance of 22 cents list.

Corresponding sizes of ball globes furnished without change in price. Standard finish is brush brass.

W. E. List Each Globe Mfrs. Price Each-List Length of Size of Lamp Size Globe No. 751C 752C 753C Globe, In. 6x4 Complete \$1.70 2.00 Watts 25, 40, 60 Fixture, In. only Complete \$3.73 4.39 5.06 10 \$0.70 7x5 100, 200 12 Sx6 200 .90  $\frac{2.30}{2.90}$ 754C Mogul 300, 400, 500 13 8x6 .90 6.37



No. 747-G

W. E. List

Price

10.35

5.00

Mfrs.

Price

Mfrs.

### BENJAMIN REFLECTORS SOCKET FIXTURES

Reflector

Diam.

Reflector



No. 5412

### Sockets Are National Electrical Code Standard

Reflector socket fixtures consist of reflector sockets completed by the addition of suspensions. Sockets are equipped with lamp grip to prevent loosening and falling of lamps.

Standard finish on reflector is green outside. Iron parts are galvanized.

### BRACKET FIXTURES

Nos. 5412-5521 have reflector socket, gooseneek bracket of 12 inch pipe overhanging 30 inches, and wall fitting. For 48 inch gooseneck of 34 inch iron pipe, overhanging 40 inches, and pole fitting, add 80.83 list.

	Flat	Cone	Reflectors
'n		La	
		ורו	ze

No.	Inches	Watts	Each	Each
5443	14	25, 40, 50, 60	\$3.40	\$7.04
5412	16	75, 100, 150	3.70	7.67
5413	18	200	4.30	8.91
5415	20	200	4.90	10.15
	Shal	low Bowl Reflector	rs	
5449	12	25, 40, 50, 60	\$3.40	\$7.04
5420	14	75, 100	3.70	7.67
5422	16	150, 200	4.30	8.91
5424	18	200	4.90	10.15
5521 Mogul	18	300, 400, 500	5.10	10.57

### PENDENT FIXTURES

Nos. 6005-6149 have reflector socket, 12 inch stem of 3% inch iron pipe and shock absorber. Additional length stems list at \$0.41 per foot. For absorber with either top strap or suspension loop add \$0.11 list. No. 6031 fitting will be substituted at an advance of \$0.72 list.



6053 16 75, 100, 150 3.30	
No. Inches Watts Each 6005 14 25, 40, 50, 60 \$3.00 \$ 6053 16 75, 100, 150 3.30	Price
6005 14 25, 40, 50, 60 \$3.00 \$ 6053 16 75, 100, 150 3.30	Each
6053 16 75, 100, 150 3.30	6.21
	6.84
	8.08
6057 20 200 4.50	9.32
Shallow Bowl Reflectors	
	6 21

	- Sn	allow Down Kellech	21.9	
6007	12	25, 40, 50, 60	\$3.00	\$6.21
6061	14	75, 100	3.30	6.84
6063	16	150, 200	3.90	8.08
6065	18	200	4.50	9.32
6149 Mogul	18	300, 400, 500	4.70	9.74

Nos. 6025-6139 have reflector socket, 12 inch stem of  $\frac{5}{8}$  inch brass tubing,  $5 \times 4$  inch canopy, and crowfoot. Additional length stems list at \$0.63 per foot.



No. 6063

No. 6047

### Flat Cone Reflectors

	Reflector	Lamp	MITS.	W. Fa. 1480
List	Diam.	Size	Price	Price
No.	Inches	Watts	Each	Each
6025	14	25, 40, 50, 60	\$3.30	\$6.84
6037	16	75, 100, 150	3.60	7.45
6038	18	200	4.20	8.69
6039	20	200	4.80	9.94
	Sha	llow Bowl Reflect	ors	
6027	12	25, 40, 50, 60	\$3.30	\$6.84
6046	$\tilde{14}$	75, 100	3.60	7.45
6047	16	150, 200	4.20	8.69
6048	18	200	4.80	9.94

Prices do not include wires or lamps.

18

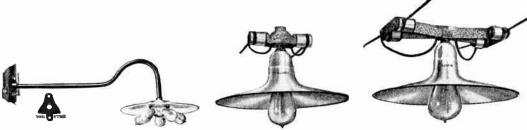
Pull chain medium base sockets with lamp grip may be ordered at an advance of \$1.24 list.

300, 400, 500

6139 Mogul

### BENJAMIN CLUSTER FIXTURES

CLUSTERS ARE NATIONAL ELECTRICAL CODE STANDARD



No. 5015

No. 802

No. 815



Nos. 5012/5016 have  $^{\rm T}_2$  x 30-inch gooseneck and wall fitting.

Schedule 2 "F"

1.ist	No of	Reflector	Lamp Size	Mfrs. Price	W. E. List
No.	Lights	Size, Inches	Watts	Each	Price Each
5012	2	15	25-100	\$3.80	\$7.87
5013	3	15	25-100	4.05	8.39
5014	1	15	25-100	4.30	8.91
5015	õ	15	25-100	4.55	9.41
5016	6	15	25-100	4.80	

TYPE 1 BODY, GOOSENECK

Brush brass is standard finish for brass parts. Prices are less wires and lamps.

### MULTIPLE STREET UNITS

Nos. 802-807 are standard reflector sockets with flat cone reflector, metal cross-arm, porcelain knobs, separable connection with weatherproof outlet for line wires, and lamp grip. Top of fitting is tapped for ½ inch iron pipe. They are intended for outdoor lighting on low voltage multiple circuits. For fixture with shock absorber add \$0.22 to list. Iron parts are galvanized.

List	Reflector	Lamp Size	Mfrs. Price	W. E. List
No.	Size, Inches	Watts	Each	Price Each
802	1.1	25, 40, 50, 60	<b>\$</b> 3.30	\$6.84
803	16	100, 150	3,60	7.45
804	18	200	4.20	8,69
807	20	200	4.80	9.94

Fixtures Nos. 814–819 are substantially those described above, except that they have special fitting for center suspension. The latter is provided with porcelain outlets for line wires. Other specifications there given apply.

814	1.1	25, 40, 50, 60	\$3.80	\$7.87
815	16	100, 150	4.10	8.50
816	18	200	4.70	9.74
819	20	200	5.30	10.98

### HOODED ENAMELED STEEL REFLECTOR STYLE

Nos. 0532-0535 have 3T cluster body, standard 12 inch stem of  $^3\S$  inch iron pipe and  $^3\S$  inch brass casing, deeply hooded white enameled steel reflector, 5 x 4 inch eanopy, and crowfoot. Socket outlets are at an angle of 18° with the vertical. Fixtures will 18 inch reflectors for 100 watt lamps will be furnished at an advance of \$0.62 list. Additional length stems list at 1.04 per foot.

		Reflector	Length	Lamp	Mfrs.	W. E. List
l.ist	No. of	Diam.	Inches	Size	Price	Price
No.	Lights	Inches	Less Lamps	Watts	Each	Each
0532	2	16	17	25-100	\$4.55	\$8.91
0533	3	16	17	$25 \cdot 100$	4.80	9.41
0534	-1	16	17	25-100	5.05	10.46
0535	5	16	17	25-60	5.30	10.98

Nos. 6032-6035 have 3T cluster body with shell of aluminum, standard 8 inch stem of ½ inch iron pipe and separable suspension fitting, and deeply hooded white enameled steel reflector. Reflector and cluster are made weatherproof by gasket and flange. Additional length stems list at \$0.52 per foot. For fixture with gooseneck and wall fitting, add \$0.72 list. For suspension with shock absorber, add \$0.22 list. Iron parts are galvanized.

Darragic	an anneu.					
6032	2	16	14	25 - 100	\$4.20	\$8.69
6033	3	16	14	25-100	4.45	9.22
6034	-1	16	14	25-100	4.70	9.74
6035	5	16	14	25− 60	4.95	8.48

INDUSTRIAL CLUSTERS

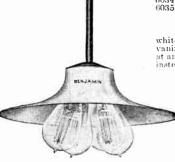
Industrial clusters Nos. 0632L-0635½ have 18 inch deeply hooded flat cone white enameled steel reflector, 3T wireless cluster body, 12 inch stem of ¾ inch galvanized iron pipe, and shock absorber. Suspension fitting No. 6021 may be substituted at an advance of \$0.62 list. For 16 inch reflector, suitable for lamps below 100 watts, instead of 18 inch, deduct \$0.62 list. Additional length stems list at \$0.41 per foot.

W. F.

		Reflector	Length Inches		Type	Mirs.	W. E. List
List	No. of	Diam.	Less	Size	of	Price	Price
No.	Lights	Inches	Lamps	-44	Wiring	Each	Each
06321,	2	18	181/2	60-200	Mult.	\$4.40	\$9.11
0633L	3	18	181/2	60-200	Mult.	4.65	9.63
06341	4	18	181/2	60-200	Mult.	4.90	10.15
0635L	5	18	1814	60-100	Mult.	5.15	10.66
06321/4	2	18	181/2	60-200	Series	4.40	9.11
063413	<u>.</u>	18	181/2	60-200	Series	4.90	10.15
063514	5	18	1813	60-100	Scries	5.15	10.66
No	ть: Зег	ies or mul	ltiple at	same prices.			



No. 6034



No. 0634L

### BENJAMIN SINGLE UNIT FIXTURES



No. 4306

No. 4340



No. 4345



No. 4318



No. 1413

### Sockets are National Electrical Code Standard

Ceiling fixtures with 3¼ inch holder will accommodate 200 watt Mazda C lamps, but it is necessary that 12 inches of No. 14 asbestos covered wire be inserted between house wires and fixture terminals to prevent high temperatures in the former. When specified, proper length of wire will be furnished, unattached, without extra charge. Where No. 14 approved wire is used, no insulating joint or ring is required on account of the high insulation of the sockets. For lamp grip add \$0.22 list.

### **Enameled Steel Base**

Fixtures Nos. 4302–4306 have easy-to-wire porcelain socket and white enameled steel base held by screw threaded ring on outside of socket shell, making it unnecessary for screws to pass through the enamel. Shade holders are covered by white enameled cap.

List No.	——Size, Base	lnches— Holder	Form Holder	Lamp Size Watts	Mfrs. Price Each	W. E. List Price Each
4302	10	$2\frac{1}{4}$	0	25, 40, 50, 60	\$4.25	\$8.80
4304 4306	10 10	$\frac{21}{4}$ $3\frac{1}{4}$	Η	75, 100 200	$\frac{4.35}{4.40}$	9,00 9,11

### Brush Brass Base

Fixtures Nos. 4312–4342 have easy-to-wire socket, brass base and beavy steel strap for attaching to outlet box or ceiling. Benjamin Type S interchangeable shade holders and reflectors can be used with these units.

1312	10	Less 1	older		\$2.60	\$5.38
4340	10	$2\frac{1}{4}$	()	25, 40, 50, 60	2.75	5.69
4341	10	$2\frac{1}{4}$	H	75, 100	2.90	6.01
1342	10	$3\frac{1}{4}$		200	2.95	6.10

Fixtures Nos. 4314–4345 are essentially those above, with 8 inch instead of 40 inch bases,

1314	8	Less 1	older		\$2,00	84.14
4343	8	$2\frac{1}{4}$	0	25, 40, 50, 60	2.15	4.45
4344	8	$2\frac{1}{4}$	H	75, 100	2.30	4.77
1345	8	3!4		200	2.35	4.86

Fixtures Nos. 4316–4319 have brass base with Benco porcelain-lined socket permanently attached. Unlike the units listed above the socket is uncovered.

4316	6	Less l	nolder		\$1.35	\$2.79
4317	6	$2\frac{1}{4}$	0	25, 40, 50, 60	1.55	3,20
4318	6	$2\frac{1}{4}$	$\mathbf{H}$	75, 100	1.70	3,53
4319	6	$3\frac{1}{4}$		200	1.75	4.02

Benco pull chain sockets with Benjamin lamp grip will be supplied with any of the above fixtures at an advance of \$0.83 list.

Prices do not include wires or lamps.

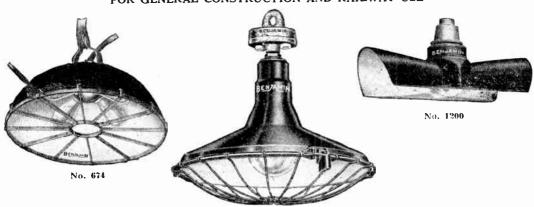
### CHAIN SUPPORTING RINGS

Chain supporting ring No. 1413 offers a simple method of attaching chain fixtures to the serew threaded portion of sockets and Benjamin ceiling units above. Standard finish is brush brass.

List	Std.	Weight	Mfrs. Price	W. E. List
No.	Pkg.	Lbs.	Each	Price Each
1413	100	2	\$0.30	\$0.59

Benjamin ceiling units embody the principles of fixture uniformity plus expansibility. Uniformity is secured through a fixed type of base, and expansibility through the variety of sizes offered by Type S screw threaded interchangeable shade holders.

### BENJAMIN WEATHERPROOF FIXTURES FOR GENERAL CONSTRUCTION AND RAILWAY USE



No. 5491 CARGO LIGHTS

Schedule 2 "F"

The Cargo Light is intended for heavy out-of-door service, particularly around wharves, dry docks, in

steamship holds, in building and general construction work.

It is furnished with a fitting for suspension by rope. This permits shifting the fixture from one location to another quickly, so that the light can be directed most effectively on the work. The reflector bowl can be adjusted to throw the light at various angles—directly below or sidewise by tipping bowl with rope attached to loop on the guard.

The fixture consists of a 16-inch hood, non-discoloring white paint enameled inside, black outside, with eluster body, and a strong galvanized iron guard. All metal parts are non-corrosive and durable.

With Paint Enameled Steel Reflector

	***	Ittl I will Dilame	<b></b>	3.67	117 12
		Reflector		Mfrs.	W. E.
List	Number of	Diameter	Lamps Recommended	List	List
	Lights	Inches	Sizes in Watts	Price	Price
No. 677	4	16	25, 40, 50, 60	\$10.75	\$20,70
	$\hat{\bar{5}}$	16	25, 40, 50, 60	11.00	21.19
678 679	5	16	25, 40, 50, 60	11.25	21.67
019	W		d Copper Reflector		
674	4	16	25, 40, 50, 60	\$12.00	\$23.11
675	5	16	25, 40, 50, 60	12,25	23.60
676	6	16	<b>25</b> , 40, 50, 60	12.50	24.08
010	· ·	YARD LIGHT	, , ,		
		I AND LIGHT	ING CITIES		_

Fixtures 5490-5493 are complete units for outdoor lighting. They are supplied with a weatherproof fitting for suspension by rope or cable. The reflector is equipped with a strong steel wire guard.

These fixtures have one piece, porcelain enameled steel reflector and easy-to-wire porcelain socket

with Lamp Grip to prevent loosening and falling of lamps. Prices are less padlock shown.

List	Reflector Diameter	Lamps Recommended	Mfrs.	W. E.
No.	Inches	Sizes in Watts	List Price	List Price
5490	1:4	100, 150	\$5.05	\$10.46
5491	16	150, 200	6.35	13.14
5492	18	200	7.45	15.43
5493	18	300, 400, 500	7.65	15.84
011/0		PARABOLITES		

Parabolites give proper distribution of light for the lighting of railroad platforms, passage-ways, streets, alleys, etc. A two-way porcelain enameled reflector distributes the light effectively.

Multiple Fixtures 1200-1203 are intended for low voltage multiple circuits, and are arranged for either open or concealed wiring. Units have cast-iron top, two piece easy-to-wire porcelain socket with Lamp Grip, and enameled steel reflector. Regularly supplied tapped for ½ inch stem, but furnished with ¾ inch tapping without advance in price. Finish is black enamel.

without advail	ee m buce. Tru	ISH IS DIACK CHAI		3.44	*** **
List	Size of Reflector		Size of Lamps,	Mfrs.	W.E.
No.	Inches	Kind of Wiring	Watts	List Price	List Price
1200	20	Concealed	100, 200	\$7.00	\$14.49
1201 (Mogul)	20	Concealed	300, 400, 500	7.50	15.53
1201 (Mogal)	20	Open	100, 200	7.50	15,53
	20	Open	300, 400, 500	8.00	16.56
1203 (Mogul)	20		<b>a</b> .		

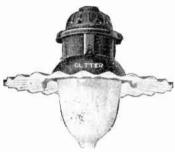
Series Fixtures 1224-1225 have porcelain series film cutout socket with Lamp Grip. They have copper hoods, and fitting tapped for 34 inch pipe stem, but will be furnished tapped 1 or 114 inch at an advance of \$0.22 list. Finish is black enamel.

OI OO. aa nace	I IIIIOII ID MICHOLI				
List	Size of Reflector	Candle Power		Mfrs.	W. E.
No.	Inches	of Lamps	Amperes	List Price	List Price
1224	20	60, 80, 100	7.5	\$9.40	\$19.04
1995	20	250, 400, 600	7.5	9.70	19.64

Wires, lamps or ropes are not included.



20 Inch Radial Bowl Streethood Body, with Extension



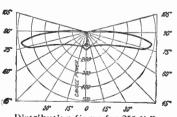
18 Inch Radial Bowl Streethood Body with Large Sel-Lux Diffuser



24 Inch Radial Bowl Streethood Body with Acorn Diffuser



20 Inch Concentric Dome Streethood Body with Large Refractor



Distribution Curve for 250 C.P. Lamp and Inch Radial Bowl Reflector with Large Refractor

# CUTTER STREETHOOD BODIES Radial and Concentric Schedule A

For 250, 400 and 600 C.P. Series and Large Multiple Type C Mazda Lamps

Streethood bodies listed on this page are similar to those listed on the previous page, but the reflectors are designed for larger lamps. The 20 inch radial bowl reflector with extension is used without refractor or diffuser. Other reflectors shown on this page are equipped with hinged holders and are listed with large Holophane refractor or Sol-Lux diffuser. Where list prices include sockets, Cutter lamp grip multiple sockets or Regent film series sockets will be supplied.\*

# 20 INCH RADIAL BOWL STREETHOOD BODIES WITH EXTENSION

For 250, 400 and 600 C.P. Series and 400 Watt or Larger Multiple Type C Mazda Lamps

		, ,,			
List	List			Ship.	
No. for	No. for			Wt	List
34 In.	11/4 In.		Std.	Lbs.	Price
Pipe	Pipe		Pkg.	Each	Each
20017	20018	Medium screw soeket	20	157%	\$10.72
20019	20020	Mogul screw socket	20	1614	11.20
20021	20022	*Regent film socket	20	161%	12.80
20023	20024	Without socket	20	15	9.92
10 TNI	CII DA	DILL DOUG DODGE			0.02

## 18 INCH RADIAL BOWL BODIES WITH LARGE HOLO-

THANE REFRACIOR										
For	· 250, 4	00 and 600 C.P. Type C Serie	s M	azda I ar	nne.					
20049	20050	Medium screw socket	20	9114	800 (0					
20051	20052	Mogul screw socket.	20	$\frac{2137}{2}$	22.80					
20053	20054	*Regent film socket.	20	1717	24.40					
20055	20056	Without socket	20	21	$\frac{24.40}{21.52}$					
40 1110			- ()	للشد	21.02					

# 18 INCH RADIAL BOWL BODIES WITH LARGE SOL-LUX DIFFUSER

ro	r 250, 4	100 and	600 (	C.P. T	ype C	Serie	s Ma	azda Lar	mne
22199 -	22200	-Mediur	n sere	w sock	et		20		\$13.52
22201	22202	Mogul	serow	sockot			20	$17\frac{3}{4}$	
22203	99904	*Regen	+ 61	goolest			20	/ 12	14.00
22205	22204	William	4 1111111	SOCKEL	····			18	15.60
2200	22200	Withou	T SOCI	:et			20	1.7	10 70

# 24 INCH RADIAL BOWL STREETHOOD BODIES WITH ACORN DIFFUSER

For 250, 400 and 600 C.P. Series and 400, 500, 750 and 1000 Watt Multiple Type C Mazda Lamps

20025	-20026	Medium	screw	socket		20	2676	\$19.12
20027	2000	Mounta				20		
20021	20020	Mogul se	TUW SC	рекец		20	2744	-19.60
20029 -	-20030	*Regent	film e	rokat -				
00001	00000	1177	111111111111111111111111111111111111111	JUNCO		20	$27\frac{1}{2}$	21.20
2003 I	20032	Without	socket			20	26	17.12
16	Agara	diffuser is			1	20		17.12
11	ZYCOLIL	unituser is	HOL W	antea a	orinot Six	IMI Inc	•+	

### 20 INCH CONCENTRIC DOME BODIES WITH LARGE HOLO-PHANE REFRACTOR

Fo	r 250, 4	100 and 600 C.P. Type C Serie	s M	azda I ar	mpe
22207	22208	Medium screw socket.	20	915.4	\$21.92
22209	22210	Mogul screw socket	20	າກໍັ	$\frac{921.32}{22.32}$
22211	22212	*Regent film socket	20	$\frac{22}{22}$ 14	
22213	22214	Without socket	20		24.00
		THE BOCKES	ώU	$20\frac{3}{4}$	-21.12

### 20 INCH CONCENTRIC DOME BODIES WITH LARGE SOL-LUX DIFFUSER

000.0	230, 400 and 600 C.F. Type C Serie	es Ma	zda Lar	nps
22219	22216 Medium serew socket	20	175/8	\$15.52
22217	22218 Mogul screw socket	20	18	16.00
22219	22220 *Regent film socket	20	181/4	17.60
22221	22222 Without socket	20	1634	14.72
	PARTS FOR STREETHOOD	B∩DI	ES.	* 1.1~
20097	20008 Canony and	DOD		
	20098 Canopy only		$1\frac{3}{4}$	\$0.56
20750	Porcelain housing.		$6\frac{1}{4}$	
21502	19 in multi-1 kmml mid 1 1 11		0.74	3.36
	18 in, radial bowl with holder		734	6.40
21505	20 in, radial bowl with extension		7 2	
22225	94 is small 11 to male 2/1 to 11			6,00
	24 in. radial bowl with holder		9	9.20
21503	20 in, concentric dome with holder		713	
20023	Large Halmbers - Court		mar .	6.00
	Large Holophane refractor		$-5\frac{1}{2}$	-11.20
22224	Large Sol-Lux diffuser		11/4	2.40
	0		1 74	∠.·i∪

Simple crossarm No. 20752 with 34 inch locknut may be attached to canopy for 34 inch gooseneck suspension. Add 48 cents to list price.

\*Standard film socket will be furnished in place of Regent when so ordered.

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Delivery F. O. B. Factory, South Bend, Ind. For warehouse deliveries write nearest house.

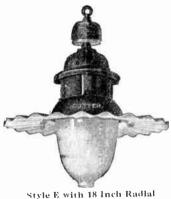
# CUTTER CENTER SUSPENSION STREETHOODS



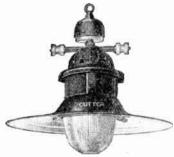
Style E with 18 Inch Radial Bowl Reflector



Style EX with 18 Inch Radial Bowl Reflector and Simple Crossarm



Bowl Reflector and Sol-Lux Diffuser



Style EX with 18 Inch Concentric Dome Reflector and Small Refractor

# Style E Insulated Loop Suspension

Consists of Style D, with a Cutter high voltage insulator between the arc ring and adapter. Recommended for circuits of over 2300 volts.

volts.	THE TAX PROPERTY OF THE PARTY O	DADIAI	DOW	DEELE	СТОР	
,	WITH 18 INCH	RADIAL	BOML	KEFLI	Wt.,	List
T				Std.	Lbs.	Price
List	Descr	iption		Pkg.	Each	Each
No.	Medium serew s			20	161/2	\$10.96
21571	Mogul serew soc	kot		20	17	11.44
$\frac{21572}{21573}$	*Regent film soc	ket		20	171/4	13.04
21070	18 INCH RADIA	I BOWL	AND L	ARGE		ACTOR
	Medium serew s			20	$24\frac{1}{2}$	\$24.16
$\frac{21574}{21575}$	Mogul serew soe			20	$25^{\circ}$	24.64
21576	*Regent film soc	ket		20	$25\frac{1}{4}$	26.24
WITH	18 INCH RADIA	L BOWL	AND S	OL-LU	X DIF	FUSER
21568	Medium serew s	ocket		20	$20\frac{1}{2}$	\$15.36
21569	Mogul screw soc	ket		20	21	15.84
21570	*Regent film soc	ket.,		20	$21\frac{1}{4}$	17.44
	WITH 20 INCH	RADIAL	<b>BOWL</b>	REFL	ECTOR	
21580	Medium screw s			20	$17\frac{3}{4}$	\$11.76
21581	Mogul screw soc	ket		20	$18\frac{1}{4}$	12.24
91589	*Regent film soc	ket		20	$18\frac{1}{2}$	13.84
WIT	TH 20 INCH RA	DIAL BO	WL, W	ITH E	XTENS	ION
21583	Medium screw s	oek <b>e</b> t		20	18%	\$12.00
21584	Mogul screw soc	ket	, ,	20	1914	13.04
21587	*Regent film so	:ket		20	191/2	14.64
	WITH 24 INCH	RADIAL	BOWL	REFL	ECTOR	010 70
21588	Medium serew s	ocket		20	203/4	\$13.76 14.24
21589	Mogul screw soc	eket		20 20	$\frac{21\frac{1}{4}}{21\frac{1}{9}}$	15.84
21590	*Regent film so	eket				
V, ITH	24 INCH RAD	IAL BOW	L AND	ACOR 20	293/4	\$20.96
21591	Medium serew s	ocket			$\frac{20\frac{74}{4}}{30\frac{1}{4}}$	21.52
21592	Mogul screw soc	eket			$301_{2}^{4}$	23.04
21593	*Regent film so TH 20 INCH F	KAT DAD	TAT W/			
	TH 20 INCH F	LAI KAD	IAL W	20	151/4	\$9.76
21594	Medium screw s Mogul screw so	SOCKEL			$16\frac{1}{2}$	10.24
21595	*Regent film so	eket okot			$16\frac{3}{4}$	11.84
21596		CENTRIC	DOMI		LECTO	R AND
WITH	18 INCH CON SMALL H	OLOPHAI	NE REF			
91801	Medium screw s	socket		. 20	$19\frac{1}{2}$	\$16.16
$\frac{21601}{21602}$	Mogul serew so	eket		. 20	20	16.64
21603	*Regent film so	eket		. 20	$20\frac{1}{4}$	18.24
WITH	20 INCH CON	CENTRIC	: DOMI	E REF	LECTO	R AND
** 1 1 1 1	LARGE H	OLOPHA	VE REF	RACT	OR	***
21607	Medium screw	socket		. 20	$24\frac{1}{2}$	\$23.76
21608	Mogul screw so	cket		. 20	25	$\frac{24.24}{25.84}$
21609	*Regent film so	eket		. 20	25½	
WITH	20 INCH CON	CENTRIC E SOL-LU	X DIFE		LECTO	K AND
01.110	Medium screw	eneket		. 20	$20\frac{1}{4}$	\$17.20
$\frac{21613}{21614}$	Mogul screw so	eket		. 20	$20\frac{3}{4}$	17.84
$\frac{21014}{21615}$	*Regent film so	eket		. 20	21	19.44
	STVIE FX-IN	ISULATEI	LOOP	SUSP	<b>ENSIO</b>	N
C	onsists of Style E	with simple	crossari	n No. 2	0751.	In order-
( (	ARRIVATION TO THE PARTY OF THE			. samafixe	14 P. X. 11	1 444 40

mg, use List Nos. for Style E fixtures with prefix "EX." Add 40 cents to list prices and 1½ lbs. to shipping weights.

SUSPENSION PARTS

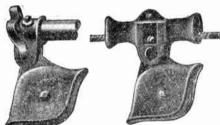
20751 Simple crossarin. 1½ 80.40

ordered.

Delivery F. O. B. Factory, South Bend, Ind. For warehouse deliveries.

## CUTTER STREET FIXTURES

## Pulleys and Windlasses



Plain End Pulley

Medium Pulley



Pole Housing



Tail Pulley



Combination Pole Windlass



Combination Wall Windlass



Pinion Handle

### PLAIN END PULLEYS

Schedule "D"

A plain weatherproof pulley with an end clamp to fit ast arm pipes.

mast ar	m pipes					*List
List				Std.	Wt.	Price
No.			Description	Pkg.	Lbs.	Each
20823	For 11/4	in.	(hore) pipe	 100	$6\frac{1}{2}$	\$1.58
20824	For 11/2	in.	(bore) pipe	 100	$6\frac{3}{4}$	1.58

### MEDIUM PULLEYS

A center suspension pulley with long supporting clamp and weatherproof casing, but with no safety features. Takes any size rope up to ½ inch in diameter and is second only to the Cutter Lamp-Supporting Pulley.

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20825				 									100	$5\frac{1}{2}$	\$1	.32

### POLE HOUSING

The pole plate and pulley easing are made in one piece, with the sheaves placed so the rope can run though the pipe, as with the Cutter Inner-Rope and Corporal Mast Arms.

				*List
List		Std.	Wt.	Price
No.	Description	Pkg.	Lbs.	Each
20826	For $1\frac{1}{4}$ in. (bore) pipe	 75	$6\frac{1}{2}$	\$2.11
20827	For 112 in. (bore) pipe	 75	$63\frac{7}{4}$	2.11

### TAIL PULLEYS

A companion to the pole housing for use with Cutter Inner-Rope and Corporal Mast Arms.

		territ i trafficient minimi			
20828	For	$1\frac{1}{4}$ in. (bore) pipe	 75	$6^{3}4$	\$1.58
20829	For	$1\frac{1}{2}$ in. (bore) pipe	 75	7	-1.58

### COMBINATION POLE WINDLASSES

These are self-locking safety windlasses which can be used either as plain or geared windlasses at the option of the trimmer. C in be used as plain windlass to lower the lamp quickly, and then by inserting the handle further into the drum, changed to a geared windlass to raise the lamp. These windlasses are perfectly safe for heavy lamps, the whole device being made as fool-proof as possible.

The pinion handle is detachable so that it can be used with any number of windlasses.

The drum will hold 60 feet of  $\frac{1}{4}$  inch Ebony Wire Rope or 40 feet of  $\frac{3}{8}$  inch Banner Core Rope.

Prices below do not include handle.

				*List
List		Std.	Wt.	Price
No.	Description	Pkg.	Lbs.	Each
20830	For wood poles	25	22	\$7.92
20831	For 5 in. (bore) pipe	25	24	8.36
20832	For 6 in. (bore) pipe	25	25	8,80
20833	For 7 in. (bore) pipe	25	27	7.92

### COMBINATION WALL WINDLASSES

Similar to the combination pole windlass, but with a side plate for fastening to walls.

20834									_						 	25	$^{24}$	9	57	. 4	31	ŝ

### PINION HANDLES

For combination pole and wall windlasses.

For galvanizing any of the above, add 88 per cent. to list price.

\$2.64

\*Delivery F. O. B. Factory, South Bend, Ind. For warehouse deliveries write nearest house.

### **CUTTER STREET FIXTURES**

Schedule "E"





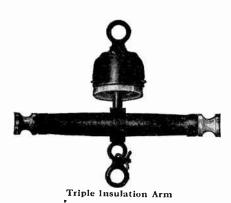












HIGH VOLTAGE INSULATORS

High voltage insulators have a double petticoat porcelain bell, which forms a good watershed and gives high insulation even in wet weather. The rivets which fasten the metal cap to the porcelain pass under the elongated head of the bolt which supports the hood, so that this could not drop out even if the porcelain were broken with a hammer. The cap is sealed with insulating material and the extra petticoat gives a large surface insulation, making the device well suited for use on arc circuits exposed to weather, smoke or fumes.

While designed especially for use on arc circuits of high voltage, the extra protection and the elimination of leakage afforded by this insulator make it a desirable one, even for

circuits of comparatively low voltage.

List		Std. V	Wt., Lbs	. *List
No.	Description	Pkg.	Each	Each
20836	With ring above and sister hook	6		2000
	below	100	4	\$1.58
20837	With ring above and ring below		4	1.41
20838	With clamp for wire rope above	100	•	1.11
	and with sister hook below.	100	4	1.94
20839	With clamp for wire rope above		-	
	and with ring below	100	4	1.76
20840	With clamp for chain above and			
00011	sister hook below	100	4	1.94
20841	With clamp for chain above and			
10	ring below	100	4	1.76
For	galvanizing all iron parts, add 4	2 cents	each	to list
price.				

JUPITER INSULATORS

Built on the same lines generally as high voltage insulators, but with a greatly enlarged series of petticoats to give higher surface insulation. Therefore it has the same high breakdown insulation (ample for 12000-volt circuits) and an extra large surface to reduce the leakage in wet weather.

20844 With ring above and sister hook below.... \$2.38 20845 With ring above and ring below 75 ճ 2.20For galvanizing all iron parts, add 42 cents each to list price.

### TRIPLE INSULATION ARMS

Triple insulation arms have a high voltage insulator above an enameled wood arm, thus giving a triple insulation between the line wire and the supporting ring.

The arm is coated with a baked enamel, which outwears paint in the weather, and has its ends bound by strong metal ferrules to prevent their splitting. Every part of the whole device is built for fine wear and high insulation, making it a fine insulating arm for all high voltage lamps, and the only low priced one adapted for use with alternating series lamps. It is second only to the Jupiter Cross-Arm.

List	***	Std.	Wt., Lbs.	*List Price
No.	Finish	Pkg.	Each	Each
20852	Enameled	75	5	<b>\$</b> 2. <b>3</b> 8
20853	Galvanized	75	5	2.48

### JUPITER CROSS-ARMS

An insulating cross-arm having both the wire supports and the lamp hook insulated from the support by Cutter Jupiter Insulator. The cross-arm is enameled and metal-bound and has deep grooved knobs at each end.

The ideal insulating arm for use on high voltage circuits.

List No.	Finish	Std. Pkg.	Wt., Lbs. Each	*List Price Each
$20856 \\ 20857$	EnameledGalvanized	50	7 7	\$3.17 3.61

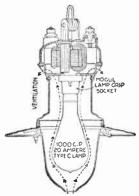
\*Delivery F. O. B. Factory, South Bend, Ind. For warehouse deliveries write nearest house.

### **CUTTER SOL-LUX PENDANTS**

FOR TYPE C LAMPS
Standard Package Quantity, 10 of One Style or List Number Schedule "G"



Style C Pendant with Sol-Lux Diffuser



Sectional View Sol-Lux Style C Pendant



Style C Pendant Showing Hinged Holder

Cutter Sol-Lux Style C pendants are lighter in weight than the ordinary are lamp, but of sufficient weight to prevent excessive swaying in the wind. Sturdy and simple construction, minimum number of parts, ample ventilation, external binding posts and insulated suspension ring, make these pendants ideal for street lighting purposes. They are practically indestructible. The casing is made entirely of high quality gray cast iron, and finished with weatherproof baked enamel. Equipped with Mogul screw lamp grip socket for multiple lamps or with compensators (auto transformers) for 15 and 20 ampere Type C Series Mazda lamps. (Regent film sockets are furnished for straight series lamps.)

Shipped complete as listed, with 18 inch porcelain enameled steel reflector, hinged holder for refractor or Sol-Lux diffuser and with or without

glassware as ordered \*

## Sol-Lux Style C Pendants without Compensators

With Sol-Lux Diffuser
Mogul Screw Socket Regent Film Socket

1	MOSTI DOLEM DOCE		regent I mm Socket							
		List			List					
List	Wt., Lbs.	Price	List	Wt., Lbs.	Price					
No.	Each	Each	No.	Each	Each					
22101	42	\$21.60	22102	43	\$23,20					
	With Large Holophane Refractor									
22103	48	\$28.00	22104	49	\$29,60					
	V	Vith Band	Refract	or						
22105	46	\$28,00	22106	47	\$29.60					
	*	With Diffi	using Bo	wi						
22107	45	\$20.00	22108	46	\$21.60					
	With Hinged Refractor Holder, without Glassware									
22109	43	\$16.80	22110	4.1	\$18.40					

# Sol-Lux Style C Pendants with Compensators AND MOGUL SCREW SOCKETS

State on order how fixture is to be wired for line and lamp.



Style C Pendant with Large Holophane Refractor

Style C Pendant with Diffusing Bowl

100	With Sol-Lux Diffuser										
							r 1000	C.P.			
15 A	mpere	Lamp	20 A	mpere	Lamp	20 Ampere Lamp					
	Wt.,	List		Wt.,	List		Wt.,	List			
List	Lbs.	Price	List	Lbs.	Price	List	Lbs.	Price			
No.	Each	Each	No	Each	Each	No.	Each	Each			
22139	45	\$36,00	22140	47	\$38.00	22141	52	\$41,20			
With Large Holophane Refractor											
22142	51	\$42.40			\$44.40	22144	58	\$47.60			
			With E	Band R	efractor						
22145	49	\$42.40	22146	51	\$44.40	22147	56	\$47.60			
			*With	Diffusi	ing Bowl						
22148	48	\$34.40	22149	50	\$36.40	22150	55	\$39.60			
With Hinged Refractor Holder without Glassware											
22155	46	<b>\$</b> 31.20	22156	48	\$33,20	22157	53	\$36.40			
* [	*Diffusing bowls are fastened with thumb screws; all other glassware										
with hi	nged ho	olders.									

Delivery F O. B. Factory, South Bend, Ind. For warehouse deliveries write nearest house.

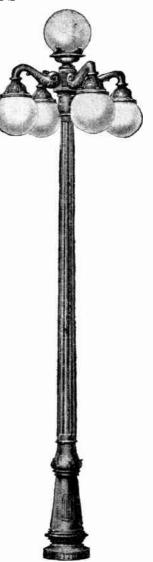


### COMMONWEALTH DESIGN

Base, 18 inches square, 2 feet high; provided with hinged door and sufficient space for locating switch and cutout in base. Column, 8 inches octagon above the base, tapering to 4 inches octagon near the top. Height from ground to bottom of pendent globes, 11 feet; to top of top globe, 14 feet 3 inches; to top of globe on the 1 light post, 13 feet 6 inches. Distance from center to center of opposite globes, 36 inches. Pendent globes, 6 x 12 inches; top globe, 8 x 14 inches; globe for 1 light post, 8 x 16 inches.

### **BOULEVARD DESIGN**

Base, 14 inches diameter, 2 feet 10 inches high; provided with two doors and sufficient space for locating switch and cutout in base. Column, 5½ inches diameter above the base, tapering to 3½ inches diameter near the top. Height, from ground to bottom of pendent globes, 10 feet; to top of top globe, 13 feet 2 inches; to top of globe on the 1-light post, 12 feet 7 inches. Distance from center to center of opposite globes, 32 inches. Pendent globes, 6 x 10 inches; top globe 6 x 12 inches; globe for 1-light post, 8 x 14 inches;



Schedule "I"

No. 21121

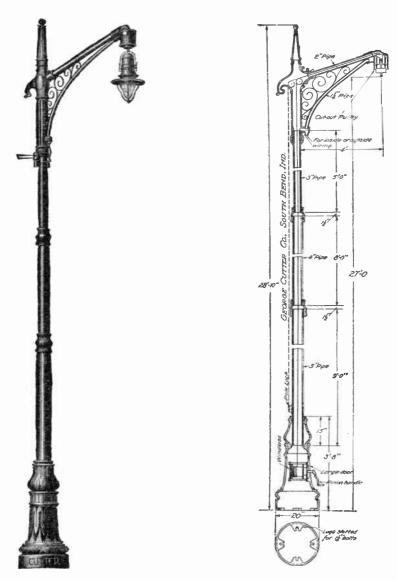
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,	COMMONWEALTH DESI	GIN	Schedule 1
			*List
No. of	Std.	Wt., Lbs	Price
Lights	Pkg.	Each	Each
ĺ	20	475	\$77.00
2	20	560	84.00
3	20	560	84.00
4	20	665	91.00
5	20	665	91.00
	BOULEVARD DESIGN	V	Schedule "I"
No. of	Std.	Wt., Lbs.	*List
Lights	Pkg.	Each	Price Each
ĭ	20	300	\$49.00
2	20	335	69.30
3	20		. 69.30
4	20		66.50
	20		66.50
	No. of Lights 1 2 3 4 5 No. of Lights 1 2 3 4	No. of Std. Lights Pkg.  1 20 2 20 3 20 4 20 5 20  BOULEVARD DESIGN  No. of Std. Lights Pkg.  1 20 20 3 20 4 20 4 20 4 20 4 20 4 20 4 20 4 20	Lights         Pkg.         Each           1         20         475           2         20         560           3         20         560           4         20         665           5         20         665           BOULEVARD DESIGN           No. of Std. Wt., Lbs.         Wt., Lbs.           Lights         Pkg' Each           1         20         300           2         20         335           3         20         335

COMMONWEALTH DESIGN

For ground sections see listing elsewhere. Prices include sockets and glassware holders, but not glassware or wiring.

\*Delivery F. Ö. B. Factory, South Bend, Ind. For warehouse deliveries write nearest house,



## Flaming Arc

A substantial and artistic pole for supporting modern arc lamps. The hoisting rope may be run inside or outside the column and the wires may be strung overhead or laid underground.

With Multiple	With Series				
Cut-Out Pulley	Cut-Out Pul	ey			
List	List		Std.	Wt., Lbs.	Price
No.	No.	Description	Pkg.	Each	Each
21147	21148	With pole lock outside	20	765	\$128.80
21111	21112	With hook in base	20	765	126 - 70
Pinion har	idle No. 2114	9, for windlass, \$1.74 extra list.			

With High Voltage Insulator in Place of Cut-Out Pulley and without Windlass or Pole Lock

Prices do not include rope, wiring or foundation bolts. Use four 114 inch bolts.

<sup>\*</sup>Delivery F. O. B. Factory, South Bend, Ind. For warehouse deliveries write nearest house.

SCHEDULE "I"-STANDARD PACKAGE QUANTITY, 20 OF ONE STYLE SINGLE-LIGHT POSTS FOR MAZDA C HIGH EFFICIENCY LAMPS



Continental, with Sol-lux Senior Top



Colony, with Egyptian Junior Top



Colony, with Sol-lux Junior Top

### DIMENSIONS

DI	MENSIONS	Sc	hedule ''I''
	Continental	Continental Medium	Colony
Base, diameter	20 inches	18 inches	16 inches
Base, height	31 inches	28 inches	21 inches
Column, diameter above base	$7\frac{1}{2}$ inches	7 inches	5¾ inches
Column, diameter near top	$5\frac{3}{4}$ inches	5 inches	$3\frac{3}{4}$ inches
Height to top of column	11 ft., 4 in.	10 ft., 4 in.	8 ft., 10 in.
Height to light center	13 ft., 3 in.	12 ft., 3 in.	10 ft., 6 in.
Number and size of foundation bolts	Four 1/8 or 1 inch	Four 34 inch	Three 3/4 inch
Prices below do not include lamps, compen-	sators, wiring or fou	indation bolts.	/ <b>T</b>

	Wit	:h Sol-lu	х Тор	Witl	n Egypt	gyptian Top	
Description	List	Wt., Lbs.	Price		Wt., Lbs		
Description	No.	Each	Each	No.	Each	Each	
Continental, Senior top, mogul multiple socket	22262	575	\$106.12	22269	565	\$108,22	
Same, with Regent film series socket	21263	576	107.52	22270	566	109,60	
Continental Medium, Senior top, mogul multiple socket	22264	495	103.60	22271	485	105.70	
Same, with Regent film series socket	22265	496	105,00	22272	486	107.10	
Colony, Junior top, medium screw multiple socket.	*22266	309	69.58	22273	294	69.86	
Same, with mogul multiple socket	*22267	309	70.00	22274	294	70.28	
Same, with Regent film series socket	*22268	310	71.40	22275	295	71.68	
*Includes casing No. 22171; if reactance coils or c	ompens	ators are	used order	Egypti	an Junio	or casing	
No 90110 Ald 91 00 list and price of sail adopted	-						

No. 22118. Add \$1.68 list and price of coil selected. Delivery F. O. B. South Bend, Ind. For warehouse deliveries write nearest house.

SCHEDULE "I"-STANDARD PACKAGE QUANTITY, 20 OF ONE STYLE SINGLE-LIGHT POSTS FOR MAZDA C HIGH EFFICIENCY LAMPS



Capitol, with Egyptian Senior Top



Capitol, with Sol-lux Senior Top



Capitol, with Octagonal Senior Top

The Capitol post is a standard of highly artistic design and is made in two heights. One has a base 20 inches in diameter, 2 feet 5 inches high. The height to top of columns is 12 feet, 4 inches; height to light center, 14 feet, 1 inch. The shorter post has a base 18 inches in diameter, 2 feet, 5 inches high. The height to top of column is 9 feet, 10 inches; to light center, 11 feet 7 inches. In both posts the diameter of the column is 7½ inches diameter above the base, tapering to 6 inches diameter near the top. Use four 76 inch or 1 inch foundation bolts.

Prices below governments approach with Cutter Operators 175.

Prices below cover posts complete with Cutter Ornamental Tops, Egyptian easing and sockets, but not the lamps, compensators, wiring or foundation bolts. See another page for prices of parts to make

other combinations.

				.50	nedule	
	12 f	t. 4 in. (	Capitol	9 ft.	10 in. C	apitol
	List	Wt., Lbs.	Price	List	Wt., Lbs	. Price
Description	No.	Each	Each	No.	$\operatorname{Each}$	Each
With Egyptian Senior top, mogul screw multiple socket	22276	550	\$106.40	22282	495	\$102.20
Same with Regent film series socket	22277	551	107.80	22283	496	103.60
With Sol-lux Senior top, mogul screw multiple socket.	22278	550	105.00	22284	495	100.80
Same, with Regent film series socket	22279	551	106.40	22285	496	102.20
With octagonal Senior top, mogul serew multiple socket	22280	555	106.40	22286	500	102.20
Same, with Regent film series socket	22281	556	107.80	22287	501	103.60

Delivery F. O. B. South Bend, Ind. For warehouse deliveries write nearest house.

SCHEDULE "I"—STANDARD PACKAGE QUANTITY, 20 OF ONE STYLE SINGLE-LIGHT STANDARD FOR MAZDA C HIGH EFFICIENCY LAMPS



Park View, with Sol-lux Junior Top



Park View, with Egyptian Junior Top



Villa, with 16-inch Ball Globe

The Park View post is designed especially for lighting parks, boulevards and entrances to public build-The Park view post is designed especially for igniting parks, bothevards and entrances to public buildings. Base, 16 inches in diameter, 17 inches high. Column, 5½ inches in diameter above the base, tapering to 3½ inches near the top. Height to top of column, 9 feet 5 inches; to light center, 10 feet 9 inches. Use three ¾ inch foundation bolts.

The Villa post has a base 17 inches in diameter, 18 inches high. Column, 5 inches in diameter above the base, tapering to 2½ inches near the top. Height to top of column, 9 feet 4 inches; to light center, 10 feet 8 inches. Use three ¾ inch foundation bolts.

Private below cover posts with sockets and with an uithout diageners, as listed. Private do not include.

Prices below cover posts with sockets and with or without glassware, as listed. Prices do not include lamps, compensators, wiring or foundation bolts. See another page for prices of parts to make other combinations.

		Park Vie	w		Villa	
Description	List	Wt., Lbs.	Price	List	Wt., Lbs.	Price
	No.	Each	Each	No.	Each	Each
With 8 inch globe holder, medium screw multiple socket	22125	784	\$51.38	22133	234	\$43.68
	22126	284	51.80	22134	234	44.10
	22127	285	53.20	22135	235	45.50
	22128	319	70.98	22136	252	60.48
Same, with mogul screw multiple socket	*22129	319	71.40	22137	252	60.90
Same, with Regent film series socket	22130	320	72.80	22138	253	62.30

\*For reactance coils and compensators order Egyptian Junior casing No. 22118 instead of the Park View globe holder No. 22171. Add \$1.681 list and price of coil selected.

Delivery F. O. B. South Bend, Ind. For warehouse deliveries write nearest house.

SCHEDULE "I"-STANDARD PACKAGE QUANTITY, 20 OF ONE STYLE







Arcadian, with Extension Capitol and Octagonal Senior Top



Arcadian, with Octagonal Senior Top

The Arcadian post has a 20-inch octagonal base. The height from ground to bottom of globe without extension capitol is 12 feet. The extension capitol adds 6 inches to the height. The height from ground to center of light source is 12 feet 8 inches without extension capitol and 13 feet 2 inches with extension capitol.

Prices cover posts with Sol-lux Senior and Octagonal Senior tops. Prices do not include lamps, wiring or foundation bolts. Use four 34 inch foundation bolts.

With Sol-lux Top With Octagonal Top

	with Soi-iux 10p			**1111	arrop	
	List	Ship.	Price	List	Ship.	Price
Description	No.	Wt., Lbs.	Each	No.	Wt., Lbs.	Each
With regent film socket for straight series lamp	24196	425	\$93.60	24212	430	\$98,00
Same, with extension capitol	24197	440	103.60	24213	445	105.00
With mogul screw multiple socket for 300 to 1000 watt						
lamps	24198	425	95.20	24214	430	-96.60
Same, with extension capitol	24199	440	102.20	24215	445	103.60
With extension capitol, mogul socket and compensator*						
for 400 C. P. 15 ampere lamps	24200	447	116.20	24216	452	117.60
Same, for 600 C, P, 20 ampere lamps	24201	449	117.60	24217	454	119.00
Same, for 1000 C. P. 20 ampere lamps	24202	454	120.40	24218	459	121.80
Execution Senior clobes, metal frames and ventilate	ors wil	l be substi	ituted for	Octagon	mi Senior	globes.

Egyptian Senior globes, metal frames and ventilators will be substituted for Octagonal Senior globes, metal frimmings and ventilators when so ordered, without additional charge. See another page for prices

of post tops.

\*Compensator coils and reactance coils are designed for use on 60-cycle circuits only. Price of posts with coils for operation on 25-cycle circuits will be furnished on application. Compensator coils have taps for either 6.6 or 7.5 ampere primary circuit.

Delivery F. O. B. South Bend, Ind.—For warehouse deliveries write nearest house.

SCHEDULE "I"-STANDARD PACKAGE QUANTITY, 20 OF ONE STYLE



Suburban, with Sol-lux Junior Top



Suburban, with Extension Capitol and Sol-lux Junior Top



Suburban, with Octagonal Junior Top

The Suburban post has a 16 inch octagonal base. The height from ground to bottom of globe without extension capitol is 10 feet. The extension capitol adds 6 inches to the height. The height from ground to extension capitol is 10 feet. The extension capitol and 11 feet with extension capitol.

Prices cover posts with Sol-lux Junior and Octagonal Junior tops.

Or foundation bolts. Use four 3/4 inch foundation bolts.

	With Sol-lux Top			With Octagonal To		
T)	List	Ship.	Price	List	Ship.	Price
Description	No.	Wt., Lbs.	Each	No.	Wt., Lbs.	Each
With regent film sockets for straight series lamps	24203	270	\$72.80	24219	273	\$74.20
Same, with extension capitol	24204	285	78.80	24220	$\frac{278}{278}$	
With medium screw multiple socket for 200 watt or	_ 12,71	2000	10.00	24220	210	81.20
smaller lamps	0.100=	074	=0.00			
Componish and a district of	24205	270	70.98	24221	273	72.38
Same, with extension capitol.	24206	285	77.98	24222	278.	79.38
With mogul screw multiple socket for 300 to 500 watt						10.00
lamps	24207	270	71.40	24223	273	~o. oo
Same, with extension capitol.	24208					72.80
With outonoing antital manual areas a let	24208	285	78.40	24224	278	79.80
With extension capitol, moguls crew socket and react-						
ance coil* for 100 c. p. 6.6 ampere lamps	24209	273	89.74	24225	278	91.14
Same, with reactance coil for 250 c.p. 6.6 ampere lamps	24210	275	91.70	24226	280	93.10
Same, with compensator for 400 c.p. 15 ampere lamps.	24211	277				
Fernation Junior alobour motal frames and south	24211	211	92.40	24227	282	93.80
Egyptian Junior globes, metal frames and ventila	ors will	De substi	tuted for	Octagon	al Junior	globes,
metal trimmings and ventilators when so ordered with	out add	litional ch	arce.	~		,

\*Compensator coils and reactance coils are designed for use on 60-cycle circuits only. Price of posts with coils for operation on 25-cycle circuits will be furnished upon application. Compensator coils have taps for either 6.6 or 7.5 ampere primary circuit.

## SCHEDULE "I"-STANDARD PACKAGE QUANTITY, 20 OF ONE STYLE SINGLE-LIGHT STANDARDS FOR NOVALUX TOPS









Continental, with Novalux Top

These posts are designed for use with the G-E Novalux Fixtures, but prices do not include the fixtures. The columns have threaded holes in the top to receive screws for holding the insulator or easing of the Novalux Fixtures. The dimensions are practically the same for all posts, except as to height, which is given in table below.

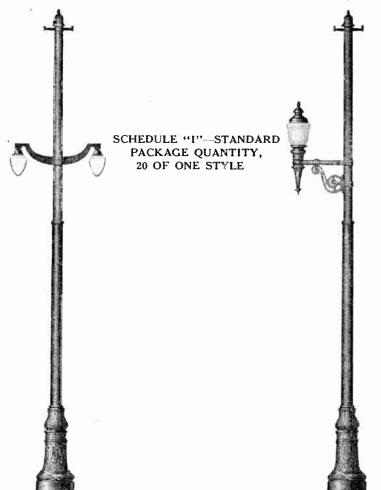
See another page for detailed dimensions of each standard.

List		Ship. J	List Price
No.	Description	Wt., Lbs.	Each
22095	Capitol, 12 ft. 4 ins. to top of column	217.12	\$72.80
22080	Capitol, 9 ft. 10 ins. to top of column	440	68.60
22439	Broadway, 12 ft. 3 ins. to top of column.	520	73.92
22438	Plaza, 10 ft. 4 ins. to top of column	450	66.92
22096	Continental, 11 ft. 4 ins. to top of column	510	74.20
22194	Continental Medium, 10 ft. 4 ins. to top of column	430	72.10
22195	Colony, 8 ft, 10 ins. to top of column	250	45.78

Use four 1 inch foundation bolts (except for Colony, use three 34 inch), or 5% inch heavy duty expansion bolts.

Delivery F. O. B. South Bend, Ind. For warehouse deliveries write nearest house.

### CUTTER ORNAMENTAL POSTS AND BRACKETS



oadway Trolley Bracket

Sol-lux Junior Trolley Bracket

### **BROADWAY TROLLEY BRACKETS**

The Broadway Trolley Bracket consists of bracket arm, 8 x 12 inch acorn globe and Regent Film Series Socket. Wiring and lamps are not included. \*Multiple sockets furnished when ordered. Distance from center of pole to center of globe 27 inches.

Single Arm					Do	uble Arm		
For 5 Inch Pipe 22151	List No For 6 Inch Pipe 22153	For 7 Inch Pipe 22158	Ship. Wt., Lbs.	Each	List No For 6 Inch Pipe 22160		Ship. Wt., Lbs. 150	List Price Each \$47.60

### SOL-LUX JUNIOR TROLLEY BRACKETS

The Sol-lux Junior Trolley Bracket as listed is a complete fixture less lamp and wiring. It is regularly equipped with globe holder, Sol-lux Junior Globe and ventilator, porcelain disc insulator and Regent film series socket. \*Multiple sockets furnished when ordered.

Distance from pole to center of globe, 30 inches. Height over all, 52 inches. Diameter of arm, 21/8 inches. Distance from center of arm to bottom of scroll, 18 inches.

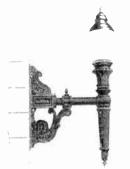
	– List No. —		List	1		- List No			List
For 21/2 Incl	For 3 Inch	For 4 Inch	Ship.	Price	For 5 Inch	For 6 Inch	For 7 Inch	Ship.	Price
Pipe	Pipe	Pipe	Wt., Lbs.	Each	Pipc	Pipe	Pipe	Wt., Lbs.	Each
22602	22603	22604	155	\$50,12	22605	22606	22607	160	\$50.12

\*If mogul multiple socket is used, deduct \$1.40 list for each socket; for medium screw socket deduct \$1.82 each list.

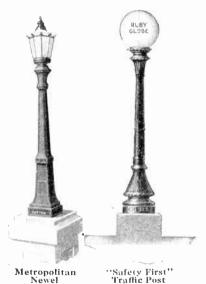
Delivery F. O. B. South Bend, Ind. For warehouse deliveries write nearest house.

## CUTTER BRACKETS, NEWELS AND TRAFFIC POSTS

SCHEDULE "I"-STANDARD PACKAGE QUANTITY, 20 OF ONE STYLE



Sol-lux Wall Bracket





Commerce Newel

SOL-LUX WALL BRACKETS

	I UI Mazda C Lamps		
Λ	massive bracket of highly artistic de	esign. Wall	plate, 2
feet hi	gh, 6 inches wide. Distance from wa	ll to center of	lamp, 3
feet.	Height from bottom of shaft to top of	ventilator on	Sol-Lux
Senior	globe 6 feet 6½ inches.	Ship.	List
List		Wgt., Lbs.,	Price
No.	Description	Each	Each
22544	With Sol-Lux Senior top, Mogul		
	socket	375	-\$95.20
22545	With octagonal Senior top, Mogul		
	socket	.380	98,00

For verde antique finish, add \$7.00 list. For weatherproof bronze paint add \$14.00 list.

METROPOLITAN NEWELS

A newel of simple but artistic design, adapted for lighting the entrances of buildings or for bridges and public places. Base 14 inches square, 2 feet high. Column 5 inches octagon above the base, tapering to 3½ inches octagon near the top. Height from base to bottom of globe 7 feet; to top of ventilator on octagonal

<ul> <li>Junior globe 8 feet, 9 inches. Globe holder</li> </ul>	has 8 n	ich fitter.
Use four 34 inch foundation bolts.		
22446 With octagonal Junior top,		
medium screw socket	225	\$67.76
22447 Same, with Mogul screw socket	226	68.18
22448 Same, with Regent film socket	227	69.58
22449 With Sol-Lux Junior top, medium		
serew socket	220	66,36
22450 Same, with Mogul screw socket	221	66.78
22452 Same, with Regent film socket	222	68.18
For verde antique finish, add \$7.00 list	; for wes	therproof
bronze paint, add \$14.00 list.		
"SAFETY FIRST" TRAFFIC	POSTS	
By marking the centers of intersecting	streets fl	ae rule of

By marking the centers of intersecting streets the rule of "keep to the right" is always enforced. These traffic posts are silent watchmen, always on the job.

Base, 14 inches in diameter, 24 inches high. Column 5 inches in diameter above the base, tapering to 3½ inches in diameter near the top. Height from base plane to bottom of globe on the 1 light newel, 6 feet.

Prices of newels do not include globes, lamps, wiring or foundation bolts. These are listed separately below.

27000	6 in. holder, medium multiple		
	socket	175	\$45.08
27001	8 in. holder, medium multiple		
	socket	176	45.08
21825	6 in, holder, Mogul multiple		4= =0
	socket	176	45.50
27003	8 in holder, Mogul multiple		4= =0
	socket	177	-45.50
27004	6 in, holder, Regent film socket	177	-46.90
27005	8 in, holder, Regent film socket	178	-46.90
27006	6 x 12 in, ruby globe, extra	8	14.00
27007	8 x 14 in, ruby globe, extra	14	16.80
21831	6 x 12 in, diffusing ball, extra	8	5.90
22489	8 x 14 in, diffusing ball, extra	1.4	7.70
	Set of three $\frac{3}{4}$ x 12 in. foundation		
	bolts		1.34
20938	Fixed pin clamp arm	- 6	1.12
20942	Pinless clamp arm	$6\frac{1}{2}$	1.12
	COMMEDCE MEUTELS		

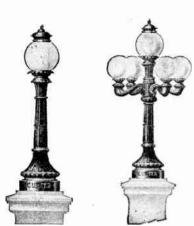
COMMERCE NEWELS A massive newel designed especially for bridges and entrances to large buildings, etc. Base,  $21 \times 35 \frac{1}{4}$  inches. Height from ground to bottom of pendent globes 4 feet 6 inches; to top of eagle ornamentation on top globe 9 feet 6 inches; to top of eagle ornamentation on 1 light newel, 8 feet. Pendent globes, 8 x 14 inches; top globe, 8 x 20 inches; globe for 1 light newel 8 x 20 inches. Prices below include medium screw base sockets, glassware as above specified and eagle oramentation, but not foundation bolts. Use four  $\frac{7}{8}$  inch foundation bolts.  $\frac{22556}{1}$  light.  $\frac{475}{1}$  \$175.00

189.0022558 3 light..... 550 210,0022560 5 light..... 625

# CUTTER ORNAMENTAL NEWELS

For Type C Lamps

Schedule "I"



Sol-lux Gate Post Newels

### SOL-LUX GATE POST NEWELS

These newels are made of the highest quality gray iron. They are of distinctive design and very appropriate for the lighting of gateways and private grounds, entrances of buildings, etc.

Base, 14 inches in diameter, 24 inches high. Column, 5 inches in diameter above base, tapering to 3½ inches in diameter near the top. Height from base plane to bottom of side globes, 3 feet 8 inches; to bottom of center globe, 4 feet 6½ inches; to bottom of globe of 1 light newel, 3 feet 8 inches. Distance from center to center of opposite globes, 30 inches. Designed for 6 x 9 inch or 6 x 10 inch side globes, and 6 x 12 inch or 6 x 14 inch top globe.

Prices below include medium screw sockets for side lamps and Mogul screw sockets for center lamps, unless otherwise specified. Prices do not include globes, ventilators, lamps, wiring or foundation bolts. Use three ¾ inch bolts.

List	No. of	Std.	Wt., Lbs.	List Price
No.	Lights	Pkg.	Each	Each
21817	1	20	125	\$35,00
21818	$^2$	20	175	49.00
21819	3	20	175	49.00
21820	4	20	215	56.00
21821	5	20	215	56,00

### SOL-LUX BRIDGE NEWELS

Similar in design to Sol-lux Gate Post Newel but higher. Base, 14 inches in diameter, 24 inches high. Column, 5 inches in diameter above the base, tapering to  $3\frac{1}{2}$  inches in diameter near the top. Height from base plane to bottom of side globes, 6 feet; to bottom of center globe, 6 feet  $10\frac{1}{2}$  inches; to bottom of globe on the 1 light newel, 6 feet. Distance from center to center of opposite globes, 30 inches. Designed for 6 x 9 inch or 6 x 10 inch side globes and 6 x 12 inch or 6 x 14 inch center globes.

Arms may be reversed for pendent clusters.

Prices below do not include globes, ventilators, lamps, wiring or foundation bolts. Use three ¾ inch bolts. Prices include medium screw sockets for side lamps and Mogul screw sockets for top lamps.



Sol-lux Bridge Newels

Delivery	F.	0.	В.	Factory,	South	Bend,	Ind.	
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List	No. of	Std.	Wt., Lbs.	List Price
No.	Lights	Pkg	Each	Each
21825	ĩ	20	175	\$45.50
21826	$^{2}$	20	225	59.50
21827	3	20	225	59.50
21828	4	20	265	66.50
21829	5	20	265	66.50

### **GLOBES**

		Wt.,	List
List	Std.	Lbs .	Price
No. Description	Pkg.	Each	Each
21830 6x9 in, diffusing ball	20	6	\$1.58
21842 6x10 in. diffusing ball	20	7	3.85
21831 6x12 in. diffusing ball (without			
top fitter)	20	8	5.95
22472 6x12 in, diffusing ball (with			
6 in. top fitter)	20	8	5.95
22473 6x14 in. diffusing ball (with			
6 in. top fitter)	20	9	7.70
21791 8x16 in, diffusing ball (with			
6 in. top fitter)	20	18	12.26

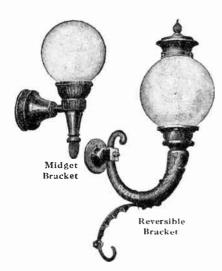
### **VENTILATORS**

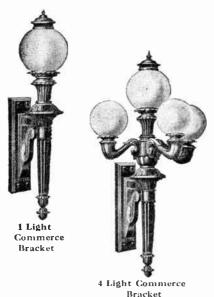
			Wt.,	List
List		Std.	Lbs.	Price
No.	Description	Pkg.	Each	Each
21792 With 6 in	i. fitter	2Ŏ	9	\$5.60

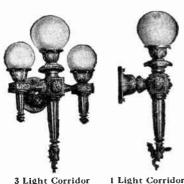
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World Radio History

### CUTTER ORNAMENTAL BRACKETS







1 Light Corridor Bracket

#### MIDGET BRACKETS Schedule "I"

A light cast iron bracket designed for small sizes of lamps which do not require ventilation. Has a threaded stem for attachment to crowfoot or conduit. Diameter of wall canopy, 51/4 inches. Distance from end of stem to center of globe, 6 inches. Equipped with 41/4 inch holder and medium screw socket, but not wired.

			Wt.,	List
List		Std.	Lbs.	Price
No.	Description	Pkg.	Each	Each
21835	With 4 x 8 in. diffusing globe	20	12	\$6.65
21836	Without globe	20	7	4.55

### REVERSIBLE BRACKETS

When ventilation is not necessary, this bracket may have the globe hang downward. In this position, the bracket has the same artistic lines and correct proportions as in the position illustrated. Distance from wall to center of globe, 2 feet. Distance between centers of wall plates, approximately 20 inches. Fitted with 8 inch globe holder.

Prices do not include globe, ventilator or wiring.

21248	Medium screw socket	20	65	\$21.00
	Mogul screw soeket	20	65	21.42
21791	8 x 16 in, diffusing ball (with 6 in.	00		10.05
	top fitter)	20	19	12.25
21792	Ventilator, with 6 in, fitter	20	9	5.60

### COMMERCE BRACKETS

A massive fixture of distinctly artistic and classical design. Particularly adapted for lighting fronts of fine structures, such

as banks and office buildings, clubs, libraries, etc.

Wall plate, 9 inches wide, 20 inches high. Distance from wall to center of top globe, 14 inches. Height to bottom of globe of 1 light bracket, 33 inches; to bottom of center globe of 3 and 4 light brackets, 41 inches. Distance from center to center of opposite globe, 30 inches.

For side lamps use 6 x 9 inch or 6 x 10 inch globe. For center

lamps use 6 x 12 inch or 6 x 14 inch globe.

Prices below do not include lamps, globes, ventilators or wiring. Medium screw sockets are furnished for side lamps, Mogul screw sockets for center lamps, unless otherwise specified.

21838 1 light. 21839 3 light. 21840 4 light. 21830 6 x 9 in. diffusing ball. 21842 6 x 10 in. diffusing ball.	20 20 20 20 20 20	90 145 155 6 7	\$28.00 42.00 45.50 3.15 3.85
21831 6 x 12 in. diffusing ball (without top fitter)	20	8	5.95
top fitter)	20 20 20	8 9 9	5.95 7.70 5.60

### CORRIDOR BRACKETS

Distance from wall to center of globe of the 1 light bracket, 10 inches. Distance from center to center of opposite globes of the 3 light bracket, 16 inches. Height over all, 40 inches. Globe holders have 6 inch fitters for 6 x 8 inch side globes and 6 x 10 inch center globes.

Prices below include globe holders and medium screw sockets,

but not the globes or wiring.

21245	1 light	20	65	\$21.00
21246	3 light	20	110	29.40
21247	4 light	20	135	33.00
21841	6 x 8 in. diffusing ball	20	5	2.10
21842	6 x 10 in. diffusing ball	20	7	3.85

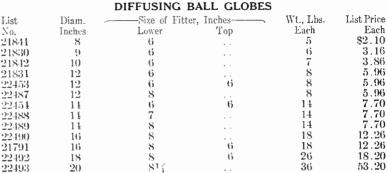
Delivery F. O. B. Factory, South Bend, Ind. For warehouse deliveries write nearest house.

### PARTS FOR CUTTER ORNAMENTAL POSTS

### SCHEDULE I-STANDARD PACKAGE QUANTITY, 20 OF ONE STYLE OR TRADE NUMBER



Park View Globe holder with 8x16x6-inch Ball Globe and Ventilator



For globes with top fitters, order ventilators.

### VENTILATORS FOR DIFFUSING BALL GLOBES

List		Wt., Lbs.	List Price
No.	Description	Each	Each
22557	For globe with 6 inch top fitter	9	\$5.60

### **POTHEADS**

With the smaller posts an iron bracket support should be imbedded in the concrete foundation, and the connections to the cable made before raising the column upon its foundation. The larger posts, however, may be furnished with a V-shaped groove in the base to receive the cast iron body of the pothead. Potheads are designed for cable up to  $1\frac{1}{2}$  inch diameter.

List		Wt., Lbs.	List Price
No	Description	Each	Each
2317	1 Simple pothead for cables 1 inch diameter or less	. 10	\$4.20
2317	2 Simple pothead for cables 114 to 1 inch diameter	. 10	4.20
2369	or less	. 12	8.40
2369	diameter	. 12	8.40
	66A Sealing compound for either of above (1 pound for each pothead)	. 1	.17 1.15

### FOUNDATION BOLTS

Prices cover round head machine bolts with hexagon nuts. Wrought washers are 14 per cent, list extra.

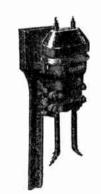
Length Bolt		Price, Each	Bolts-	
Inches	34 Inch	7 g Inch	1 Inch	11/4 Inch
8	\$0.34	\$0.39	\$0.56	\$1.05
10	.39	.48	.69	1.19
12	$\mathcal{A}5$	. 56	.78	1.48
15	.53	.67	,90	1.76
18	.62	.78	1.01	1.90
20	.67	.90	1.18	2.04
24	.78	1.01	1.34	2.46

### HEAVY DUTY EXPANSION BOLTS

These bolts may be used whenever posts are to be fastened to concrete sidewalks and when brackets are to be mounted on concrete, brick, or stone walls. Their holding power exceeds that of standard machine bolts. They save 50 to 75 per cent. of drilling costs. Furnished in sets of four.

0				
List	Length		Ship. Wt., Lbs.	Price
No.	Inches	Inches	per 100	per Set
21122	41-6	5 %	70	\$1.48
21123	6	5/8	80	1.76
21124	9	5/8	90	2.04
21125	12	5/8	100	2.42
22361		g sleeves extra	20	.21
22401	4 Second	lary expansive uni	ts 30	1.15

Delivery F. O. B. Factory, South Bend, Ind. For warehouse deliveries write nearest house.



Disconnecting Pothead with Ground Support



Bolt with Primary and One Secondary Expansive Unit



Sectional View Showing Bolt with Primary Expansion Sleeve, One Iron Spacing Sleeve, and one Secondary Expansive Unit

### PARTS FOR CUTTER AND WESTERN ELECTRIC POSTS



Sol-lux Senior Ornamental Top



Sol-lux Junior Ornamental



Western Electric Casing with New Style Sol-Iux Senior Top



Western Electric Casing with New Style Octagonal Senior Top

### SOL-LUX ORNAMENTAL POST TOPS FOR TYPE C LAMPS

Made in two sizes, designated Senior and Junior, respectively. The casings fit over cylindrical shanks 2½ inches in diameter and 5 inches high. Both have 8 inch globe fitters and accommodate compensators for 15 and 20 ampere Mazda C lamps. The Senior casing is made for poles with columns about 6 inches in diameter near the top; Junior casing, about 3½ inches. Sol-lux Senior tops may be used on Capitol, Continental, Broadway and Plaza columns; Junior tops on Chicago, Avenue, Riverside, Boulevard, Midway and Park View columns.

Height of Senior and Junior easing, 1414 inches. Height of Sol-lux Senior globe, 15 inches; Sol-lux Junior globe, 1212 inches. Height of Senior ventilator, 11 inches; Junior, 10 inches. Ventilators are equipped with white enameled reflectors which direct the maximum amount of light into useful planes.

### PART PRICE LIST OF CUTTER SOL-LUX SENIOR AND JUNIOR TOPS

					-Junior -	
	List	Wt. Lbs.	List Price	List	Wt. Lbs.	List Price
**************************************	No.	Each	Each	No.	Each	Each
Sol-lux easing with 8 inch globe holder	22175	40	\$9.10	22176	38	87.42
Porcelain disc insulator, without socket*	22166	3	.98	22166	3	.98
Sol-lux high efficiency globe.	22167	13	11.90	22169	11	7.70
Sol-lux ventilator with reflector	22168	9	10.50	22170	7	9.10

PART PRICE LIS	T OF	CUTTER	EGYPTIAN	SENIOR	AND	JUNIOR	TOPS
Egyptian casing with 8 inch globe holder Porcelain disc insulator without socket* Egyptian globe (one-piece) Trimmings for globe. Ventilator	· · · · · · · · · · · · · · · · · · ·	. 22166 . 22114 . 22115	30 3 15 5 5	9.80 .98 11.90 6.30 5.60	$\begin{array}{c} 22118 \\ 22166 \\ 22116 \\ 22117 \\ 22557 \end{array}$	20 3 11 5 5	\$6.30 .98 8.40 4.20 5.60
kadd following list unions for analysis.	N.C 12	20 70	7.6				0.00

<sup>\*</sup>Add following list prices for sockets: Medium screw \$0.70; Mogul Screw \$1.12; Regent Film \$2.52.

### WESTERN ELECTRIC SOL-LUX ORNAMENTAL POST TOPS

The Western Electric easing is equipped with 8 inch globe fitter and is designed for use with porcelain disc insulator, socket and compensator. Furnished with either the new style Sol-lux Senior or Junior globe with ventilator, or with the new style Octagonal lantern globes and ventilators in either the Senior or Junior sizes. The easing is 13½ inches high and fits a post column having a cylindrical shank 3½ inches outside diameter, 5 inches high. The globes are made of high efficiency glass and the ventilators are spun steel, porcelain enameled black outside, white inside. These new style globes and ventilators may be used with Cutter posts listed on previous pages by deducting parts listed above and adding corresponding parts below

	List	Shpt.	List Price	List	Shipt.	List Price
	No.	Wt.	Each	No.	Wt.	Each
Western Electric easing only, with 8 inch globe fitter	22165	35	\$9.10	22165	35	89.10
†Porcelain disc insulator without socket	22166	3	.98	22166	3	.98
Sol-Iux globe	22167	13	11.90	22169	11	7.70
Sol-lux ventilator with reflector	22168	9	10,50	22170	7	9.10
Octagonal globe (one piece)	22950	16	15.40	22558	11	10.50
Trimmings for octagonal globe (galvanized steel					**	10.00
enameled black)	22556	6	2.80	22559	5	2.10
Ventilator	22557	5	5.60	22557	5	5.60
Egyptian globe (one picce)	22114	15	11.90	22116	11	8.40
Trimmings for Egyptian globe (cast iron enameled		10	11.50	110	11	0.40
black)	22115	5	6.30	22117	5	4.20
Ventilator	22557	5	5.60	22557	5	5.60
						0.00

†A porcelain disc insulator should be used with each easing. Add to the price of the disc insulator \$0.70 for a medium serew multiple socket, \$1.12 for a mogul screw multiple socket, and \$2.52 for a Regent film series socket. When 6 cycle reactance coils or compensators are used, add to the price of the disc insulator, \$0.80 for mogul screw socket with the following: \$11.34 for 100 candle power, 6.6 ampere reactance coil; \$13.00 for 400 candle power compensator; \$15.40 for 600 candle power compensator, and \$18.20 for 1000 candle power compensator.

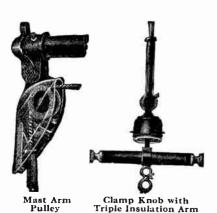
### **CUTTER STREET FIXTURES**

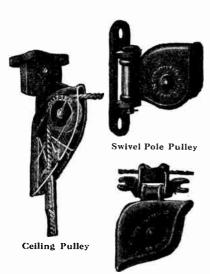
### Pulleys and Clamp Knobs

Schedule "D"









Interchangeable Pulley

### LAMP-SUPPORTING PULLEYS

Holds the lamp when raised and releases it when about to be lowered. Has a long swivel clamp to fit any size suspension wire or cable and a malleable iron clamp knob to hold the lamp. On raising the lamp, this knob is engaged by ridges on the sides of the pulley and takes all the strain off the rope. Another pull at the rope guides the knob out so that the lamp can be readily lowered. The action is entirely automatic. You pull the rope till it reaches a dead stop, and the pulley does the rest. There are no extra catches or fingers to bend out of shape or bind on the casing or to get clogged with sleet. It is the only weatherproof safety pulley that works every time. The clamp knob clamps any size rope up to 1/2 inch.

				*List
List		Std.	Wt.	Price
No.	Description	Pkg.	Lbs.	Each
20782	With clamp knob only	50	9	\$2.55
20783	With high voltage insulator	50	12	4.14
20784	With triple insulation arm	50	13	4.93
20785	With Jupiter crossarm	50	16	5.72
For	galvanizing, add 88 per cent. to list	pric	e.	

### MAST ARM PULLEYS

A modification of the lamp-supporting pulley, having an extra strong single piece clamp, which fits the iron pipe of a mast arm and which also forms the headpiece, so that the strain rods can be run direct to it.

For	11/4	inch	(Bore)	Pipe
-----	------	------	--------	------

20786	With clamp knob only	50	10	\$2.90
20787	With high voltage insulator	50	13	4.49
20788	With triple insulation arm	50	14	5.28
20789	With Jupiter erossarm	50	17	6.07

Can be furnished for 1½ inch at same list price. For galvanizing, add 88 per cent. to list price.

### CLAMP KNOBS

20802	With hook only 100	11/2	\$0.53
20803	With high voltage insulator 100	$4\frac{1}{2}$	2.11
20804	With triple insulation arm	6	2.90
20805	With Jupiter crossarm	9	3.70
For	galvanizing, add 88 per cer to list price	e.	

### CEILING PULLEYS

A form of the lamp-supporting pulley, with a plate for use on bridges or under beams in shops or yards. 20810 With clamp knob only...... 50 \$2.90 With triple insulation arm..... 50 20811 13 5.2820812 With Jupiter crossarm..... 50 16

### SWIVEL POLE PULLEYS

A weatherproof pole pulley, swiveled so that it can swing sideways and keep in line with the hoisting rope. Has a strong malleable iron pole plate. . . . . . . . . . . . . 100

### JUMBO POLE PULLEYS

Similar to the above, but larger, to take 34 inch rope. 516 \$1.94

### INTERCHANGEABLE PULLEYS

A weatherproof pulley with a universal clamp made of malleable iron, which will grip any standard size of suspension wire or cable. By taking out the two bolts the clamp can be opened out so as to form a wall plate, which fits the curved surface of a pole and which is easily fastened in place by lag screws. When so used, it makes a swiveled pole pulley similar in action to the Cutter Swivel Pole Pulley.

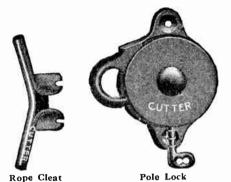
\*Delivery F. O. B. Factory, South Bend, Ind. For warehouse deliveries write nearest house.

### CUTTER POLE LINE MATERIAL

Schedule "F"

# POLE LOCKS Has the keyhole at the bottom and not at the top (where the rain and sleet would drive into it). The double catch makes

it non-pickable, the back fits either a wall or a pole, and the easting makes it weatherproof. Just the thing to prevent tampering with hoisting ropes. One key free with every ten



				*List
List		Std.	Wt.	Price
No.	Finish	Pkg.	Lbs.	Each
20868	Painted	100	$1\frac{1}{2}$	\$1.32
20869	Galvanized	100	11/2	1.50
20870	Extra key	25	1 oz.	35
	5055 01515	30		

ROPE CLEATS

### ROPE CLAMPS

Made of malleable iron, will readily clamp any size rope up to  $\Im_8$  inch, enabling the end of the hoisting rope to be locked at the pole. Can be used over and over again when the rope wears out.

20872	Painted	400	1/4	\$0.32
20873	Galvanized	400	$\frac{1}{4}$	.39
	½-Inch Rope Cla			
Sa	me as above, for $\frac{1}{2}$ -inch ropes.			
20874	Painted	400	3/4	\$0.35
20875	Galvanized	400	3/4 3/4	.44
	CHAIN CLAM	PS		

A neat, secure fastening, enabling the end of the hoisting chain to be locked to the pole. Made for No. 1 or No. 3 Oneida Chain.

 20876
 Painted
 400
 ½
 \$0.32

 20877
 Galvanized
 400
 ½
 35



A fine braided cotton rope with a weatherproof finish which keeps out the rain and makes it extra durable. We recommend the  $\frac{3}{16}$  and  $\frac{1}{2}$  inch sizes for hoisting are lamps, the  $\frac{1}{4}$  and inch for use with the swinging hoods and the  $\frac{3}{16}$  inch for the always level streethood.

-			Approx.	List
List	Size	Wt., Lbs.	Wt., Lbs.	Price
No.	Inches	Std. Pkg.	per 100 Ft.	per Lb.
22340	3 16	100	2	\$2.46
22341	1 2	100	212	2.46
22342	$\frac{\frac{1}{4}}{\frac{5}{16}}$	100	$3\frac{1}{8}$	2.46
22343	38	100	5	2.46
22344	1/2	100	8	3.08

EBONY WIRE ROPE

A ½ inch wire rope made of six flexible strands (each with soft center) around a flexible (black) center. The only wire rope really pliable enough to work freely with standard types of pulleys.

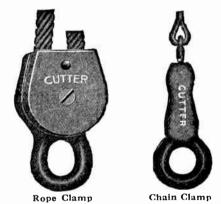
List	No. of Feet	Approx.Wt.,Lbs.	Price
No.	in Std. Pkg.	per 100 Ft.	per Ft.
20883	1000	5	\$0.10

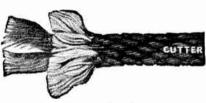
TRIMMER'S ROPE

Trimmer's rope is a 30-foot hoisting rope, with a snap hook at one end and six rings near the other end. The rings can be readily clamped at any desired intervals, so as to accommodate lamps hung at varying heights above the street. Just the thing for use with hoisting ropes, ending in a Cutter Rope Clamp and locked with a Cutter Pole Lock.

			*List
List	Std.	Wt.	Price
No.	Pkg.	Lbs.	Each
20884	25	4	\$4.40

\*Delivery F. O. B. Factory, South Bend, Ind. For ware-house deliveries write nearest house.

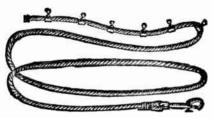




Banner Core Rope



Ebony Wire Rope



Trimmer's Rope

#### CUTTER INSULATORS AND CROSSARMS



Plain Arm



Grip Arm



Economy Arm



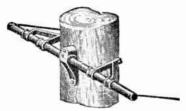
Featherweight Spreader in Use



Guide Spreader



Strain Arm



Double-braced Strain Arm

#### PLAIN ARMS

Schedule "E"

Enameled wood, with metal-bound ends and porcelain knobs. Holds the line wire 12 inches apart.

List	Std.	Wt., Lbs.	Price
No.	Pkg.	Each	Each
20862	200	11/2	<b>\$</b> 0.53

#### GRIP ARMS

Consists of the plain arm with a "U" bolt for clamping same to 1¼ inch (bore) iron piping as used on mast arms, outriggers and brackets.

List No.	Finish	Wt., Lbs. Each	
	Enameled	$\frac{1\sqrt[3]{4}}{1\sqrt[3]{4}}$	$^{\$0.70}_{.79}$

#### **ECONOMY ARMS**

A common sense crossarm for use where the insulation is not important. Similar to the grip arm, but with sister hook.

List No.	Finish	Wt., Lbs. Each	
	Enameled	$\frac{2}{2}$	\$0.88 1.06

#### FEATHERWEIGHT SPREADERS

Featherweight spreaders are readily fastened to the wires running to suspension lamps, so as to keep them at a distance of 18 inches from each other. Made of enameled wood, metal tipped, with porcelain insulators. Weighs less than 8 ounces.

List		Std.	Wt., Lbs.	Price
No.	Finish	Pkg.	Each	Each
20865	Enameled	200	3/4	\$0.44

#### **GUIDE SPREADERS**

Same as the above, with a collar to clasp the suspension cable. Keeps the line wires 18 inches apart and in line with the suspension strand.

List No.	Finish		Wt., Lbs. Each	
20866	Enameled	200	1	\$0.70
20867	Collar galvanized	200	1	.79

#### STRAIN ARMS

#### As Furnished on Junior and Cadet Mast Arms

Strain arms are made of wrought iron with a cast iron pole plate.  $\,$ 

List	Std.	Wt.,	Price
No.	Pkg.	Lbs.	Each
20746	100	81/2	\$2.11

#### DOUBLE-BRACED STRAIN ARMS

#### As Furnished on Long Junior Mast Arms

Double-braced strain arms are longer than the regular strain arms and have side braces to prevent rocking in high winds.

List	Std.	Wt.	Price
No.	Pkg.	Lbs.	Each
20747	50	10	<b>\$</b> 3.52

Delivery F. O. B. Factory, South Bend, Ind. For warehouse deliveries write nearest house.

#### WATERTIGHT JUNCTION BOX

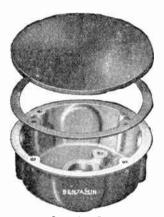
#### Standard Size with Plain Cover and Gaskets

Junction Box. Standard junction or outlet box 1 19/32 inches high, 41/2 inches in diameter. Furnished in brass or iron as listed. Used interchangeably with Benjamin Junction or Outlet Box receptacles and fixtures.

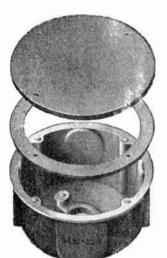
Tappings. Box will be furnished not tapped unless specifications accompany the order. An extra charge of 3 cents net, per outlet, will be made for tapping. All boxes have four conduit bosses spaced 90 degrees, which may be tapped for 12, 34 or 1 inch pipe. One outlet may be tapped, same sizes, in bottom of box. See page for drilling diagram listed elsewhere.

Cover. Brass or iron cover is fastened to box by four brass screws. Gasket. Standard merchant marine gasket makes the box watertight. Finish. Standard marine black.

GELLC Survey on South Charles on South C	$6541  \mathrm{K}$	Brass Cover only. Iron Cover only.	Prices on Reques
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Junction Box Nos. 6729-6556Y



Junction Box Nos. 6679-6556Y

#### WATERTIGHT JUNCTION BOX

#### Deep Box with Plain Cover and Gasket

Junction Box. Deep junction or outlet box, 23% inches high, 41% inches in diameter. Furnished in brass or iron as listed. Used interchangeably with Benjamin Junetion and Outlet Box receptacles and fixture.

Tappings. Box will be furnished not tapped, unless specifications accompany the order. An extra charge of 3 cents net, per outlet, will be made for tapping. All boxes have four conduit bosses spaced 90 degrees, which may be tapped for 14, 34 or 1 inch pipe. One outlet may be tapped, same size, in bottom of box. See page for drilling diagram listed elsewhere.

Cover. Brass or iron cover is fastened to box by four brass screws. Gasket. Standard merchant marine gasket makes the box watertight. Finish. Standard marine black.

List         Type of No.         Box         Material         Description           6679         Deep         Brass         Box complete with cover and gasket.           6680         Deep         Iron         Box complete with cover and gasket.           6678         Deep         Brass         Junction box only.           6595         Deep         Iron         Junction box only.           6541C         Brass         Cover only.           6541K         Iron         Cover only.           6556Y         Rubber         Gasket only.	n
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#### With Standard Watertight Junction or Outlet Box

Connecting Block. High heat molded insulating material. Fittings are brass. It is provided with extra binding posts for leading out branches. Screw holes are special 134 inches on centers.

Junction Box. Standard junction or outlet box 1 19/32 inches high, 41/2 inches in diameter. Furnished in brass or iron as listed.

Tappings. Box will be furnished not tapped, unless specifications accompany the order. An extra charge of 3 cents net, per outlet, will be made for tapping. Box has four conduit bosses spaced 90 degrees, which may be tapped for 12, 34 or 1 inch pipe. One outlet may be tapped, same sizes, in bottom of box. for drilling diagram listed elsewhere.

Gasket. Standard merchant marine rubber gasket makes the box watertight. Cover. Brass or iron cover is fastened to box by four brass serews. Finish. Standard marine black.

List No.	Kind of Box	Type of Box	Description	
6528	Brass	Standard	Box complete with cover and connecting block.	l Prices
6652	Iron	Standard	Box complete with cover and connecting block.	on Request
6528A	* * * * * *		Connecting block only.	) arequest

Note: When ordering, specify size of conduit and number of outlets required





Connecting Block Nos. 6528-6528A

#### Western Electric

#### MARINE SUPPLIES

#### DOUBLE POLE SWITCH

#### With Watertight Standard Outlet Box

Rating, 10 amperes, 125 volts. 5 amneres, 250 volts.

Structure. Heavy and sturdily constructed switch, with plunger key control. It has serew holes, spaced 134 inches on centers for use in standard watertight outlet

Switch. Positive, quick acting make and break, double pole switch, breaks on both sides of circuit at two points. There is ample separation between points of opposite polarity. Current carrying parts are heavy and there are extra binder posts to take off taps. Can be made Single Pole by jumper connection.

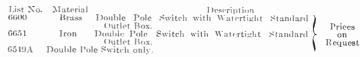
Insulating Parts. High heat molded insulating material. Fittings are brass.

Outlet Box. Standard junction or outlet box 1 19/32 inches high. 41/2 inches in diameter. Furnished in brass or iron as listed.

Tappings. Box will be furnished not tapped, unless specifications accompany the order. An extra charge of 3 cents net, per outlet will be made for tapping. All boxes have four conduit bosses spaced 90 degrees, which may be tapped for 1/2, 3/4 or 1 inch pipe. One outlet may be tapped, same sizes, in bottom of box. See page for drilling diagram listed elsewhere.

Gasket. Standard merchant marine rubber gasket makes the box watertight.

Cover. Brass or iron cover is fastened to box by four brass screws. Finish. Standard marine black.







#### TWO PLUG FUSE RECEPTACLE

#### And Connecting Block with Watertight Outlet Box

Receptacle. For Edison Plug Fuses only. Receptacle has approved rating for the use of plug fuses up to 30 amperes capacity. Fuses are not furnished.. Receptacle has base of high heat molded insulating material, with fittings of brass, and used only with Benjamin Connecting Block as shown in illustration.

Outlet Box. Standard junction or outlet box 1 19/32 inches high, 41/3 inches in diameter. Furnished in brass or iron as listed.

Tappings. Box will be furnished not tapped, unless specifications accompany the order. An extra charge of 3 cents net, per outlet, will be made for tapping. Box has four conduit bosses space 1 90 degrees, which may be tapped for 1/2, 3/4 or 1 inch pipe. One outlet may be tapped, same sizes, in bottom of box. See page for drilling diagram listed elsewhere.

Gasket. Standard merchant marine rubber gasket makes the box watertight. Cover. Brass or iron cover is fastened to box by four brass serews.

Finish. Standard marine black.

List No.	Kind of Be	Description	
6480	Brass	Box with two plug receptacle and connecting block	Daire
6657	Iron	Box with two plug receptacle and connecting block only.  Box with two plug recepatele and connecting block only.  Connecting block only.	on
$6528A \\ 6525A$		Connecting block only. Fuse receptable only.	Request



Attaching Plug No. 6537A

#### WATERTIGHT ATTACHING PLUGS

#### Swivel Connector for Screw Base Receptacle Capacity 660 Watts, 250 Volts

Metal Parts. Cast brass body and swivel ring.

Insulating Parts. High heat molded insulating material.

Cord Grip. Chuck jaw grip, 15/32 inch diameter closed, 1/2 inch open.

Finish. Standard marine black.

Gasket. Watertight cable gland is of soft rubber. Standard merchant marine gasket in swivel ring scals opening when attached to outlet.

List No. Description

6537A For screw base receptacle Prices on Request Note: When ordering specify size of conduit and number of outlets required.



Attaching Plug No. 6531A

# S ENAME OF STREET

Lever Key Receptacle Nos. 6658, 6537A



T. P. Plug Receptacle Nos. 6599, 6531A

#### WATERTIGHT ATTACHING PLUGS

#### Swivel Connector for Three Pole Receptacle

Metal Parts. Cast brass body and swivel ring.

Insulating Parts. High-heat molded insulating material.

Cord Grip. Chuck jaw grip, 15-inch diameter closed, 1/2 inch open.

Finish. Standard marine black.

Gasket. Watertight cable gland is of soft rubber. Standard merchant marine gasket is swivel ring seals opening when attached to outlet.

List No.	Description	
6531A	For three pole receptacle	Prices on request

#### SINGLE KEYLESS OR LEVER KEY RECEPTACLE

#### With Watertight Outlet Box

Receptacle. Lever key or keyless receptacle has base of high-heat molded insulating material. Fittings are brass. Serew holes are spaced 134 inches on centers to fit standard junction box.

Plug. Attachment Plug No. 6537A, listed elsewhere fits this receptacle.

Outlet Box. Standard junction or outlet hox 113 inches high, 414 inches in diameter. Furnished in brass or iron, as listed.

Tappings. Box will be furnished not tapped, unless specifications accompany the order. An extra charge of 3 cents net, per outlet, will be made for tapping. Box has four conduit bosses spaced 96°, which may be tapped for 14, 34 or 1 inch pipe. One outlet may be tapped, same sizes, in bottom of box. See page for drilling diagram listed elsewhere.

Gasket. Standard merchant marine rubber gasket makes the box watertight.

Cover. Brass or iron cover is fastened to box by four brass serews.

Finish. Standard marine black.

List	Kind of		
No.	Box		
6596	Brass	Box complete with keyless receptacle, no plug	D
6661	Iron	Box complete with keyless receptacle, no plug	Prices
6658	Brass	Box complete with lever key receptacle, no plug	on
6659	Iron	Box complete with lever key receptacle, no plug	request
6537A		Watertight swivel plug only	

#### THREE POLE PLUG RECEPTACLE

#### With Watertight Outlet Box

Receptacle. Three pole receptacle has base of high-heat molded insulating material. Fittings are brass. Catalog numbers do not include plug except as specified

Outlet Box. Standard junction or outlet box 11% inches high, 41% inches in diameter. Furnished in brass or iron as specified.

Tappings. Box will be furnished not tapped, unless specifications accompany the order. An extra charge of 3 cents net, per outlet, will be made for tapping. Box has four conduit bosses spaced 90°, which may be tapped for ½2, ¾ or 1 inch pipe. One outlet may be tapped, same sizes, in bottom of box. See page for drilling diagram listed elsewhere.

Gasket. Standard merchant marine rubber gasket makes the box watertight.

Cover. Brass or iron cover is fastened to box by four brass serews.

Finish. Standard marine black.

List No.	Kind of Box	Description	
6599	T)	Box with three pole plug receptacle,	Prices
6656 6531A	Iron	Box with three pole plug receptacle.  Three pole plug only.	request

Note: When ordering, specify size of conduit and number of outlets required,



Double Keyless Receptacle Nos. 6597-6537A

#### DOUBLE KEYLESS RECEPTACLE

#### In Watertight Outlet Box

Receptacle. Double keyless receptacle base is of high heat molded insulating material. Fittings are brass.

Plug. Attachment Plug No. 6537-A fits this receptacle.

Outlet Box. Standard junction or outlet box 1 12 inches high, 412 inches in diameter. Furnished in brass or iron, as listed.

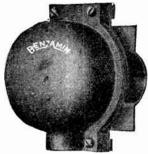
Tappings. Box will be furnished not tapped, unless specifications accompany the order. An extra charge of 3 cents net per outlet will be made for tapping. Box has four conduit bosses spaced 90°, which may be tapped for 12, 34 or 1 inch pipe. One outlet may be tapped, same sizes, in bottom of box.

Gasket. Standard merchant marine rubber gasket makes the box watertight.

Cover. Brass or iron cover is fastened to box by four brass screws.

Finish. Standard marine black.

List	Kind of	Di-ti-m	
No.	Box	Description	
6597	Brass	Box complete with double receptacle	Price
6653	Iron	Box complete with double receptacle	request
6537A		Watertight swivel plug only	request



Handrail Mounting

#### FLUSH PLATE AND RECEPTACLE

#### For Watertight Outlet Boxes

Structure. This is a large cast iron cover 6)4 inches in diameter, designed to completely cover outlet box openings and make with gasket a watertight joint with Denjamin junction or outlet boxes.

Receptacle. Receptacle is of high-heat molded insulating material. l'ittings are brass.

Finish. Standard marine black.

Description List No. Flush plate and receptacle only . . . . . . . . . . Prices on request 6605

#### WATERTIGHT MARINE BUZZER

#### Howler Type

Structure. Watertight, designed for heavy duty. Has extra load tone for use in erow's nest, or where other noises would seriously interfere with weaker signal.

Solid brass casing with heavy cold rolled steel front. Metal parts are heavily copper plated. Mechanism is impregnated with sterling varnish.

Binder screw connectors. Self-locking contact screw. Genuine coin silver contacts, 18 inch diameter. No contact required on A. C.

Mounting. Provided with flat surface for bulkhead mounting or with special bracket for attaching to hand rail.

Tappings. Furnished tapped for 12 inch pipe.

Circuits. Furnished for either A. C. or D. C.

Voltages. Standard: 10 and 20 volts. Special orders up to 110 volts, A. C. or D. C., inclusive, at no advance in price.

Finish. Standard Marine black.

List				Std.	Std.	
	Casing	Mounting	Type	Pkg.	Voltage	
No.		Hand rail	D. C.	10	10 & 20	Prices on
8402B 8402C	Prass Brass	Bulkhead	D. C.	10	10 & 20	request

Note: When ordering, specify size of conduit and number of outlets required.



Bulkhead Mounting

#### Western Electric

#### MARINE SUPPLIES



Watertight Breast Buzzer No. 8370B

# SALVO OR WATERTIGHT BREAST BUZZER

Navy Standard Type

Structure, Designed strictly for navy use. Absolutely watertight, compact, light, strong, durable.

light, strong, durable.

Solid brass body and cover. Attaching harness consists of adjustable leather neck and body straps and can be worn for extended periods without discomfort. Connecting cord enters case through specially designed stuffing box. Contacts are genuine coin silver, ½s inch diameter.

Circuits. Battery and D.C. only.

Voltages. Standard voltages for 6, 10 and 20 volts, D.C. Furnished for voltages up to 120 volts, D.C., inclusive, on special orders.

Finish. Standard marine black.

List No.	Type	Casing	Std. Voltage	Std. Pkg,	
8370B	Watertight	Brass	6, 10, 20	10	Prices on request

#### WATERTIGHT BELLS

#### Navy Standard Type

Structure. Watertight and rugged. Furnished in either vibrating or single stroke type. Tapper rod has watertight stuffing box. Mechanism of bells entirely insulated from case. Binder plate type connectors are easily accessible. Contacts are genuine coin silver, ly inch diameter. Springs are best grade phosphor bronze, mounted independent of armature. Contact screws on vibrator type are self-

locking.

Tappings. Furnished tapped for 14 inch pipe connections.

Circuits. Battery and D.C. circuits only. These bells operate on an exceedingly Circuits. B

Voltages. Standard for 6, 10 and 20 volts, D.C. Furnished, on special orders, for voltages up to 120 volts, D.C., inclusive, Finish. Bell finished in black nickel. Standard marine black case.





#### NON-WATERTIGHT BELLS

Similar in arrangement to watertight bells, except that gasket be-Structure. tween easing and cover and the watertight stuffing box for tapper rod are omitted.

Iron Casing. Three attaching lugs. Mechanism insulated from case, Bind

tween casing and cover and the wateringst stuffing oox for tapper rod are omitted.

Iron Casing. Three attaching lugs. Mechanism insulated from case. Binder plate connectors, easily accessible.

Coin silver contacts, 1\(\xi\) inch diameter. Contact springs are best grade of phosphor bronze, mounted independent of armature.

Contact springs are best grade of phosphor bronze, mounted independent of armature.

type.

Tappings. Furnished for ½ inch pipe connection.

Circuits. Battery and D.C. circuits. Benjamin bell mechanism operates on

very small current flow.

Voltages. Standard voltages are for 6, 10 and 20 volts, D.C. Furnished for up to 120 volts, D.C., inclusive, on special orders.

Finish. Bell finished in black nickel. Standard marine black case.

List No.	Size Gong	Type	Casing	Std. Voltages	Std. Pkg.	
8420-3 8420-6 8420-8 8421-3	3 ins. 6 ins. 8 ins. 3 ins.	Vibrating Vibrating Vibrating Single stroke	Iron Iron Iron Iron	6, 10, 20 6, 10, 20 6, 10, 20 6, 10, 20	10 10 10 10	Prices on
8421-6	6 ins.	Single stroke	Iron	6, 10, 20	10	request



#### Non-watertight

Structure. Rugged and powerful non-watertight vibrating bell. Special design Structure. Rugged and powerful non-waterlight vibrating bell. Special de and unit type mechanism, interchangeable in our standard casings. Movement i plunger type adjustable for rapid or slow vibration.

Casing. Iron, with three attaching lugs.

Tappings. Furnished tapped for ½ inch pipe connections.

Insulation. Mechanism is entirely insulated from case.

Connectors. Binder screw type and are easily accessible.

Contacts. Gennine coin silver, ½ inch in diameter.

Contact Springs. Best grade of phosphor bronze, independent of armature.

Contact Screw. Is self locking on the vibrator type.

Circuits. Battery and D.C. only. Renjamin hells operate on connections.

Circuits. Battery and D.C. only. Benjamin bells operate on economical consumption of current.

Voltages. Standard voltages are for 6, 10 and 20 volts, D.C., but they may be furnished wound for special voltages up to 120 volts, D.C., inclusive, on special order. Finish. Bell is finished in black nickel. Case is standard marine black.

#### MARINE GONG-MONITOR TYPE

List No.	Size of Gong	Casing	Std. Voltages	Std. Pkg.	
8418-3	3 ins.	Iron	6, 10, 20	10	Prices
8418-6	6 ins.	Iron	6, 10, 20	10	on
8418-8	8 ins.	Iron	6, 10, 20	10	request



Watertight Bells Nos. 8378-3-8415-8



Marine Gong-Monitor Type

#### WATERTIGHT BULKHEAD BUZZER

#### Navy Standard Type

Structure. Watertight and rugged, designed to withstand severest service from action of elements, vibration of ship and hard usage.

Casing and cover are solid brass or Navy Standard B. E. metal throughout. Standard merchant marine rubber gasket makes device watertight. Three attaching lugs.

Binder plate connectors. Genuine coin silver contacts, 1% inch diameter.

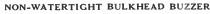
Tappings. Furnished tapped for 1/2 inch iron pipe connection.

Circuits. For battery and D.C. current only.

Voltages. Standard voltages for 6, 10 and 20 volts, D.C. Supplied on special orders for voltages as high as 120 volts D.C., inclusive.

Finish. Standard marine black.

Std. Pkg. List No. ('asing Voltage Type 81164 6, 10, 20 Prices on request Watertight Brass



#### Navy Standard Type

Structure. Non-watertight. Design is similar to No. 8416A watertight buzzer, but has no gasket between top plate and body.

Body and cover are iron. Cover fastened by four brass screws. Three attach-

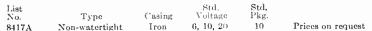
Binder plate connectors. Genuine coin silver contacts, 1% inch diameter.

Tappings. Furnished tapped for 15 inch pipe connection.

Circuits. For battery and D.C. current only.

Voltages. Standard voltages for 6, 10 and 20 volts, D.C. Supplied on special order for voltages as high as 120 volts, D.C., inclusive.

Finish. Standard marine black.



#### ANGLE BULKHEAD AND WALL FIXTURES

#### Watertight Type with Key Receptacles

#### Two-piece 90° Angle Mounting

Metal Parts. Brass or iron, as specified. Regularly furnished without junction box.

Fitting. Cast brass, watertight right angle flange. Fits standard junction box shown and listed elsewhere.

Receptacle. Key type. Base is high-heat molded insulating material. Fittings are brass.

Lamps. Lamps recommended are 40 to 60 watt Mazda B and 75 watt Mazda C, not furnished.

Globe. Heavy screw globe, clear, roughed inside, ruby or navy blue, as specified.

Guard. Extra heavy brass protecting guard. Navy standard.

Finish. Standard marine black.

List No.	Metal Parts	Kind of Receptacle	
6664	Brass	Įvey	Prices on
ece =	l ron	ls ox	request

#### ANGLE BULKHEAD AND WALL FIXTURES

#### Watertight Type with Keyless Receptacles

#### Tow-Piece 90° Angle Mouting

Metal Parts. Brass or iron, as specified. Regularly furnished without junction

Fitting. Cast brass, watertight, right angle flange. Fits standard junction box shown and listed elsewhere.

Receptacle. Keyless type. Base is high-heat molded insulating material. Fittings are brass.

Lamps. Lamps recommended are 40 to 60 watt Mazda B and 75 watt Mazda C, not furnished.

Globe. Heavy screw globe, clear, roughed inside, ruby or navy blue, as specified.

Guard. Extra heavy bross protecting guard. Navy standard.

Prices on request

Finish.	Standard marine black.	
List	Metal	Kind of
No.	Parts	Receptacle
6648	Brass	Keyless
6649	Iron	Keyless



No. 8416A



Angle Bulkhead and Wall Fixtures Nos. 6664, 6665



Angle Bulkhead and Wall Fixtures Nos. 6648, 6649





Angle Fixture Keyless Type Nos. 6584E, 6656

#### WATERTIGHT ANGLE FIXTURE

#### With Lever Key Switch for Bulkhead or Wall One Piece 90° Angle Mounting

Fixture Body. 90° angle, one-piece bracket body is of brass or iron, as specified. Fits standard junction box as shown. Receptacle. Lever key type. Bases are made of high-heat molded insulating material. Fittings are brass.

Lamps. Lamps recommended are 40 to 60 watt Mazda B and 75 watt Mazda C, not furnished.

Globe. Heavy, serew globe, clear, roughed inside, ruby or navy blue.

Guard. Extra heavy brass protecting guards, navy standard.

Finish. Standard marine black.

Ţ.ist	Metal	Kind of	Net Weight	
No.	l'arts	Receptaele	Each, Lbs.	
6584A	Brass	Key	(17)	Prices on
6663	lron	Key	(A)	request

#### WATERTIGHT ANGLE FIXTURES Keyless Type for Bulkhead or Wall ONE PIECE 90° ANGLE MOUNTING

Fixture Body. 90° angle one piece bracket body is of brass or iron, as specified. Fits standard junction box as shown. Receptacle. Keyless type. Bases are made of high heat molded insulating material. Fittings are brass.

Lamps. Lamps recommended are 40 to 60 watt Mazda "B" and 75 watt Mazda "C," not furnished.

Globe. Heavy, serew globe, clear, roughed inside, ruby or navy blue.

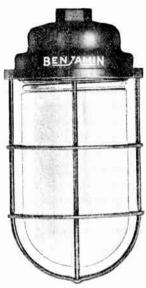
Guard. Extra heavy brass protecting guards, navy standard.

Tappings. Box will be furnished not tapped, unless specifications accompany order. Add 3 cents net, per outlet. extra for tapping. Box has four conduit bosses spaced 90° which may be tapped for ½, ¾ or 1 inch pipe. One outlet may be tapped, same size, in bottom of box. See listing elsewhere for drilling diagram.

Finish. Standard marine black.

List No.	Metal Parts	Rind of Receptaele	Each, Lbs.	
6584E	Brass	Keyless	00	Prices on
6650	Iron	Keyless		Request

When ordering, specify size of conduit and number of outlets required.



Guarded Drop Fixture Keyless Nos. 6575E, 6575G



Guarded Drop Fixture Key Type Nos. 6575N, 6575C



Key Type Watertight Fixture No. 6565, 6654

Prices on request

#### GUARDED DROP FIXTURE Watertight With Screw Globe Guard KEYLESS TYPE

Metal Parts. Brass or iron body, tapped for ½ or ¾ inch pipe, as specified.

Gasket. Keyless receptacle of molded insulating material. Fittings are brass.

Gasket. Standard merchant marine gasket makes fixture watertight.

Lamps. Lamps recommended are 40 to 60 watt Mazda B and 75 watt Mazda C, not furnished.

Globe. Heavy screw globe, clear, roughed inside, ruby or navy blue, as specified.

Extra heavy brass protecting guards, navy standard.

Standard marine black.

List	Metal Parts	Kind of Receptable	Net Weight, Each, Lbs.	
No. 6575E 6575G	Brass Iron	Keyless Keyless	00	Prices on request

#### KEY TYPE

Metal Parts. Brass or iron body, tapped for ½ or ¾ inch pine as specified.

Receptacle. Key receptacle of molded instlating material. Fittings are brass.

Gasket. Standard merchant marine gasket makes fixture watertight.

Lamps. Lamps recommended are 40 to 60 watt Mazila B and 75 watt Mazda C, not furnished Globe. Heavy screw globe, clear, roughed inside, ruby or navy blue, as specified.

Extra heavy brass protecting guards.

Finish. Standard marine black.

List	Metal	Kind of	Net Weight,
No.	Parts	Receptacle	Flach, Lbs.
6575A	Prass	Key Socket Type	00
6575C	Iron	Key Socket Type	00

#### WATERTIGHT FIXTURES

#### Key Type with Screw Globe and Guard Junction Box Type for Ceiling or Bulkhead

Junction Box. Standard junction box, of brass or iron, as specified. Brass or iron extension ring, threaded for globe and guar I, is fastened to box by four brass screws. Merchant marine rubber gasket makes fixture waterright.

Socket. Lever switch key type with base of high heat molded insulating material. Fittings are brass.

Lamps. Lamps recommended are 40 to 60 watt Mazda "B" and 75 watt Mazda "C," not furnished.

Globe. Heavy, screw globe, clear, roughed inside, ruby or navy blue.

Guard. Extra heavy brass protecting guard, navy standard.

Tappings. Box will be furnished not tapped, unless specifications accompany order. Add 3 cerus net. per outlet, extra for tapping. Box has four conduit bosses spaced 90 degrees, which may be tapped for \$\frac{1}{2}\$, \$\frac{3}{2}\$ or 1 inch pips. One outlet may be tapped, same sizes, in bottom of box. See listing elsewhere for drilling diagram.

List	Kind of	Type of	
No.	Box	Socket	
6565	Brass	Key	Prices on
6654	Iron	Key	Request

When ordering, specify size of conduit and number of outlets required.



Junction Box Type For Ceiling Nos. 6586—6655



Marine Hand Portable No. 6416-A

# WATER TIGHT FIXTURES Keyless Type with Screw Globe and Guard

Junction Box. Standard junction box of brass or iron, as specified. Brass or iron extension ring, threaded for globe and guard, is fastened to lox by four brass screws. Merchant marine rubber gasket makes fixture watertight.

Tappings. Box will be furnished not tapped, unless specifications accompany order. Add 3 cents net, per outlet, extra for tapping. Box has four conduit borses spaced 90 degrees, which may be tapped for ½, ¾ or 1 inch pipe. One outlet may be tapped same size in bottom of box. See listing elsewhere for drilling diagram.

Socket. Keyless type with base of high heat molded insulating material. Fittings are brass.

Lamps. Lamps recommended are 40 to 69 watt Mazda "B" and 75 watt Mazda "C," not furnished.

Globe. Heavy, serew globe, clear, roughed inside, ruby or navy blue.

Finish. Standard may'ne black.

 List
 Kind of No.
 Type of Socket
 Net Weight Each, Lbs.

 6586
 Brass
 Keyless
 00
 Prices on Request

 655
 Iron
 Keyless
 00
 Request

When ordering, specify size of conduit and number of outlets required.

#### MARINE HAND PORTABLE

Construction. Portable is substantially made in order to be used wherever safety demands a temporary waterproof light and protection against ignition or indammable gases and liquids.

Metal Parts. Metal parts are of brats.

Handle. Hardwood handle which cortains watertight stuffing gland for cable.

Socket. Base is of high heat molded insulating material. Fittings are brass. Keyless type.

Gaskets. Standard merehant marine rubber gasket.

Globe. Heavy glass, with navy standard thread. Furnished with clear glass, frosted inside, navy blue or ruby as specified.

Lamps. Lamps are not furnished. 40 to 60 watt Mazda "B" or 75 watt Mazda "C" may be used.

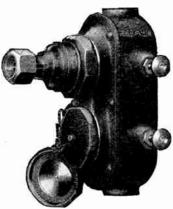
Finish. Standard marine black

List Type
No. Socket
6416A Keyless

Prices on Request

#### Western Electric

#### MARINE SUPPLIES



Lever Key Twin Receptacle Nos. 6488, 6537A

# LEVER KEY TWIN RECEPTACLE

With Watertight Outlet Box

Outlet Box. Special two receptacle box, brass only.

Tappings. Box will be furnished not tapped, unless specifications accompany the order. An extra charge of 3 cents net, per outlet, will be made for tapping. Box has two conduit bosses spaced 90 degrees, which may be tapped for ½ or ¾ inch pipe.

Gasket. Standard merchant marine gaskets make the fixture watertight.

Cover. Brass cover. Fastened to box by four brass screws. Closing caps are threaded and made tight by rubber gaskets.

Receptacle. Lever key receptacle bases are of high heat molded insulating material. Fittings are brass.

Plug. Attachment Plug No. 6537 A fits this receptacle.

Finish. Standard marine black.

List No. 6488 6660	Description  Complete with twin lever key receptacle, no plug. Complete with twin lever key receptacle, no plug. Swivel plug only
6537A	 Swivel plug only

II. V. Push Button Nos. 8374A, 8374B

#### HIGH VOLTAGE PUSH BUTTONS

#### Watertight, Single Gang

Casing. Box is of brass or iron as listed.

Cap. Hexagonal cap is threaded for connection to box.

Gasket. Waterproof raw-hide gasket covers button and renders the device completely watertight.

Mechanism. Button mechanism is heavy and sturdy in construction. Base is of high heat moded insulating material and fittings are of heavy brass. Action is of quick make and break type and is positive so that operator is never in doubt about the completion of signal. Mechanism is for high or low voltage circuits carrying inductive loads, and is interchangeable on all Benjamin High Values Buttons. Voltage Buttons.

Connectors. Binder serew type, easily accessible.

Tappings. Regularly furnished tapped for 14 inch pipe connections, one-way unless otherwise specified, but 34 inch tapping may be ordered without change in price. Boxes will be tapped 14 or 34 inch, two way, without change in price if so specified in order.

Finish. Standard marine black.

List No. 8374A 8374B	Casing Brass Iron	Connection 14 inch pipe 12 inch pipe	Prices on Request



II. V. Push Button No. 8434A, 8434B

# HIGH VOLTAGE PUSH BUTTONS

#### Non-watertight

For Side and Rear Conduit Entrance, Single Gang Only

Casing. Brass or iron as listed.

Cap. Brass eap, threaded for connection to box.

Mechanism. Button mechanism is heavy and sturdy in construction. Base is of high heat molded insulating material and fittings are of heavy brass. Action is of quick male and break type, and is positive so that operator is never in doubt about the completion of signal. Mechanism is for high or low voltage circuits carrying inductive loads, and is interchangeable on all Benjamin High Values. Buttons Voltage Buttons.

**Plunger.** Plunger is normally below the surface of the cap so the button cannot be accidentally operated.

Connectors. Binder screw type, easily accessible.

Tappings. Side entrance box is regularly furnished tapped for 1/2 inch pipe connections, but 3/4 inch tapping may be ordered without change in price. Side entrance box will be tapped 1/2 inch or 3/4 inch, two-way, without change in price if so specified ir order. Box with rear entrance will be furnshed tapped price if so specified ir order, for 1/2 inch pipe connection.

Finish. Standard marine black.



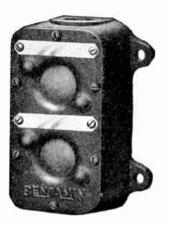
H. V. Push Buiton No. 8413A, 8413B

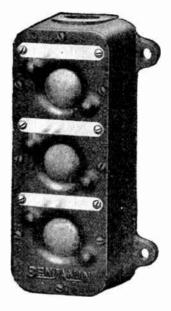
A \$11.0000				
List No. 8434A 8434B 8413A 8413B	Casing Prass Iron Prass Iron	Entrance Side Side Rear Rear	Connection 12 inch pipe 12 inch pipe 14 inch pipe 14 inch pipe 15 inch pipe	Prices on Request

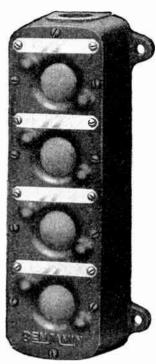
#### Western Electric

# MARINE SUPPLIES

# High Voltage Push Buttons WATERTIGHT







2, 3, and 4 gang

Casing. Brass or iron as listed.

Cover. Brass or iron cover is fastened to box with brass screws

Gasket. Waterproof raw-hide gasket covers button and renders the device completely watertight.

Mechanism. Button mechanism is heavy and sturdy in construction. Base is of high heat molded insulating material and fittings are of heavy brass. Action is of quick make and break type and is positive so that operator is never in doubt about the completion of signal. Mechanism is for high or low voltage circuits carrying inductive loads, and is interchangeable on all Benjamin high voltage buttons.

Connectors. Binder screw type, easily accessible.

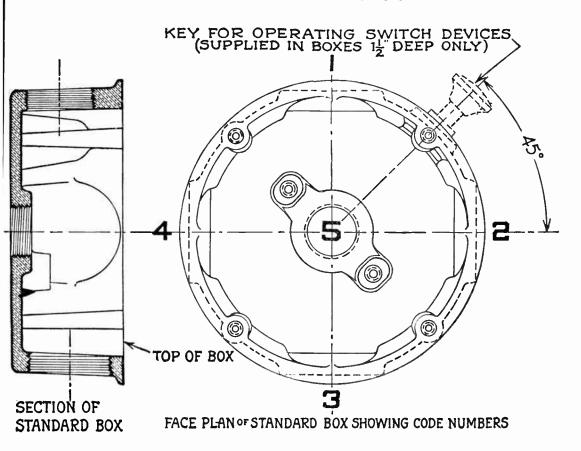
Tappings. Regularly furnished tapped for ½ inch pipe connections, one way, out ¾ inch tapping may be ordered without change in price. Box will be tapped by inch or 34 inch, two way, without change in price if so specified in order.

Finish. Standard marine black

List No. 8374C 8374D 8374E 8374F 8374G 8374H	Unit 2 gang 2 gang 3 gang 3 gang 4 gang 4 gang	Casing Brass Fron Brass Fron Erass Fron	Connection  14 inch pipe 15 inch pipe 15 inch pipe 17 inch pipe 17 inch pipe 18 inch pipe 18 inch pipe 18 inch pipe	Prices on Request
--	--	---	---	-------------------------

When ordering specify size of conduit and number of outlets required

DRILLING DIAGRAM AND TAPPING CODE



Tapping. Benjamin Junction or Outlet Boxes are furnished not tapped unless so specified. Boxes have four bosses, spaced 90 degrees, which can be tapped for 12, 34 or 1 inch pipe. One outlet may be tapped, same sizes, in bottom of box.

Code. For convenience in specifying, a simple code has been adopted, under which, outlets as shown in diagram above, are marked for position only as 1, 2, 3, 4 and 5. It is important that the position of these numbers, relative to the position of the key, be kept in mind when specifying sizes of outlets for junction boxes listed with key receptacle. Code is as follows:

	,	 	
1½ inch		 	. 2
<sup>3</sup> , inch		 	. 3
t inch		 	. 1
No tapping.		 	. ()

We have shown here, by illustration, a typical tapping arranging which would be specified in an order as Tapping 32012. A moment's study of this small diagram, in connection with the information given at top of page, will show that this method is much more simple than the usual manner of writing out the sizes. In specifying, start code numbers with the top or number 1 position around clockwise, giving bottom outlet last.

Charges. As stated above, Benjamin Junction or Outlet Boxes are furnished not tapped unless so specified. For this work, an extra charge of 3 cents net, per outlet, will be made.

When ordering, specify size of conduit and number of outlets.

# MARINE FIXTURES AND PORTABLES







No. 1527



No. 1600

	CONDUIT TYPE	List Price Each
List No. 1525 465 522 397 357 360 1622 1626 1630	For 2 inch diameter ball lamp, brass base and gnard.  For 25 watt lamp, brass base and gnard.  For 60 watt lamp, iron base, brass gnard.  For 100 watt lamp, iron base, brass gnard.  For 150 watt lamp, iron base, brass gnard.  For 250 watt lamp, iron base, brass gnard.  For 60 watt lamp, with switch, iron base, brass gnard.  For 100 watt lamp, with switch, iron base, brass gnard.  For 150 watt lamp, with switch, iron base, brass gnard.	\$4,66 5,36 5,84 8,16 10,52 11,12 8,76 11,12
	JUNCTION BOX TYPE	
1527 1464 524 398 358 361 1650 1654 1658	For 2 inch diameter ball lamp, brass base and guard For 25 watt lamp, iron box, brass guard For 60 watt lamp, iron box, brass guard For 100 watt lamp, iron box, brass guard For 150 watt lamp, iron box, brass guard For 250 watt lamp, iron box, brass guard For 60 watt lamp, iron box, brass guard For 100 watt lamp, with switch, iron junction box, brass guard For 150 watt lamp, with switch, iron junction box, brass guard For 150 watt lamp, with switch, iron junction box, brass guard	5.84 8.16 10.52 11.12 8.76
	BRACKET TYPE	
1600 1671 1675 1679 1683 1687 1691	For 25 watt lamp, iron junction box and fixture base, brass gooseneck and guard.  For 60 watt lamp, iron junction box and fixture base, brass gooseneck and guard.  For 100 watt lamp, iron junction box and fixture base brass gooseneck and guard.  For 150 watt lamp, iron junction box and fixture base, brass gooseneck and guard.  For 250 watt lamp, iron junction box and fixture base, brass gooseneck and guard.  For 60 watt lamp, with switch, iron box and fixture base, brass gooseneck and guard.  For 100 watt lamp, with switch, iron box and fixture base, brass gooseneck and guard.  For 150 watt lamp, with switch, iron box and fixture base, brass gooseneck and guard.	12.60 14.94 15.54 12.04 15.54



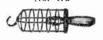
No. 422



No. 477



No. 473



No. 427



No. 446



No. 517



No. 445

#### Hand Portables

List No	WATERTIGHT	List Price Each
422	Cast brass base, flat brass wire guard, with screw globe, hard wood handle, with stuffing nut. For 10 wat	s7.66
519	lamp. Cast brass base, round wire guard, with serew globe, hard wood handle, with stuffing nut. For 40 wat lamp. Cast brass base, round wire guard, with flared lip globe, hard wood handle, with stuffing nut. For 60 wat	8.84
517	Cast brass base, round wire guard, with flared tip globe, hard wood handle, with stuffing nut. For do wat lamp.  Diving lamp, suitable for 100 watt lamp. Designed for continued submersion.	10.62
477 445	Diving lamp, suitable for 100 watt lamp. Designed for continued submersion.  Bunghole lamp, takes 16 C.P. lamp. 13% inch maximum diameter of postable. Designed for continue submersion.	-c1
	NON-WATERTIGHT	
473 474 427 446 Del	Extra strong, galvanized steel guard, for 40 or 60 watt lamp.  Brass base with brass round wire guard, 40 watt.  Brass base with flat brass guard. Key socket 40 watt.  Spun brass base, with tinned steel wire guard with key socket. Suitable for 25 watt lamp.  ivery F. O. B. New York City. For warehouse deliveries write nearest house.	4.12

# MARINE OR STEAMTIGHT FIXTURES With Screw Globes







No. 405

CONDUIT TYPE

All of the following have a heavy brass base, flat brass wire guard. Serew globe seats on rubber gasket.

List No. 411 1411 311 1311 430 1430 330 1330	For 40 watt lamp. For 100 watt lamp. With feet on side of base for fastening. For 40 watt lamp. With feet on side of base for fastening. For 100 watt lamp. Plain conduit, with switch. For 40 watt lamp. Plain conduit, with switch. For 40 watt lamp. With side feet and switch. For 100 watt lamp. With side feet and switch. For 100 watt lamp. With side feet and switch. For 100 watt lamp.	Price Each \$4.66 7.00 5.36 7.70 7.38 10.74 8.08 11.44
	JUNCTION BOX TYPE	
1	leavy brass base fixture mounted on 4 inch round iron junction box. Flat brass wire guard.	
405 *1405 431 1431	For 40 watt lamp. For 100 watt lamp. With switch on side. For 40 watt lamp. With switch on side. For 100 watt lamp.  Brass junction boxes can be furnished for the above.	\$5,26 7,60 7,94 11,34
	WALL BRACKET TYPE	
404 1404 434 1434 438 1438 439 1439	90° bracket for 40 watt lamp. With iron junction box. 90° brucket for 100 watt lamp. With iron junction hox. 90° key bracket for 40 watt lamp. With iron junction box. 90° key bracket for 100 watt lamp. With iron junction box. 45° bracket for 40 watt lamp. With iron junction box. 45° bracket for 40 watt lamp. With iron junction iox. 45° key bracket for 40 watt lamp. With iron junction box. 45° key bracket for 40 watt lamp. With iron junction box. 45° key bracket for 100 watt lamp. With iron junction box. 45° key bracket for 100 watt lamp. With iron junction box.	\$7,94 10,98 10,62 14,72 7,94 10,28 10,62 14,02







No. 1470



No. 470



No. 372



No. 467

List No.	BULKHEAD TYPE	List Price
416 414	Brass fixture on wood base with full basket guard. Brass fixture on wood base with half basket guard.	Each \$10.52 9.32
415	CEILING TYPE	
115	Similar to No. 105, without junction box. For 10 watt lamp. Similar to No. 1405, without junction box. For 100 watt lamp.	\$4.40 6.74
G	BATTERY ROOM TYPE	
()	Heavy porcelain base With screw globe	\$3,24
Hea 470	WATERTIGHT CEILING FIXTURES  Wy cast brass base, with frosted serew globe, seats on gasket. Gland nuts for wire.	
471 372 471	For 8 inch diameter globe. For 6 inch diameter globe. For 8 inch diameter globe. With brass round wire guard. With brass round wire guard. Without guard. Without guard.	15.58
470 467	For 6 inch diameter globe. Without guard.  Spun brass base for 8 inch diameter globe and gland outlets.  Spun brass base with fancy band. 8 inch diameter frosted globe.  very F. O. B. New York City. For warehouse deliveries write nearest house.	

# RECEPTACLES AND PLUGS



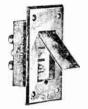
No. 121





No. 68





No. 14

# Receptacles and Plugs for Interior Use

10 AMPERES, 250 VOLTS

	10 AMPERES, 250 VOLTS	117 77
List		W. E. List Each
No.		
121	Fits all standard switch boxes. With plug	
12	Weatherproof receptacle in 3 inch iron box. With plug.	4.94
123 124	Weatherproof receptacle in 4 inch iron box. With plug.	. 0.78
125	00° angle type recentacle complete with plug	3.72
120	Plug only for all of the above fittings.	74
	15 AMPERES, 250 VOLTS	
65	Fits all standard switch noxes. With plug.	. 82.24
64	2 game recentagle for standard switch box. With plugs	. 4.48
66	2 gang receptacle for 4 inch round box cover to have 2% inch diameter opening. Complet	.e . 3.96
68	with plugs. Same as 65, only single. With plugs	
Un		
	30 AMPERES, 250 VOLTS	
80	Polarity type. Fits all std. switch boxes. With plug	. \$4.94
56	Plug only for No. 80 receptacle. 3 wire, polarity type. Fits std. switch box. With plug.	$\frac{1.68}{8.48}$
81 57	3 wire, polarity type. Fits std. switch nox. With plug	3.54
152	3 wire plug only. 3 wire, heavy non-reversible type. In large iron box with heavy brass overhang cove	r.
102	Complete with plug	
150	Plug only for No. 152	. , 4.374
	60 AMPERES, 250 VOLTS	
14	Non-reversible type. In iron box. With brass overhang cover, complete with plug	\$21.46
140	Plug only for No. 14	4.94
75	Fits 4 inch square outlet box. With plug.  3 wire, non-reversible. Heavy duty type in iron box with brass overhang cover. With plu	
153 151	Plug only	6.60
191	1 lug omy	



No. 170



No. 456



No. 82

## Floor Outlet Type

Nos. 61, 170 to 175 for Use With 1900 Fittings

W. E.
ist Price
180 1 1100
64 04
\$4.94
7.42
5.38
77.00
7.86
19 ସହ
12.38
14.86
4 500
5.78

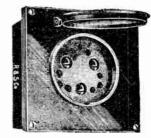
#### RECEPTACLES AND PLUGS







No. 72



No. 85

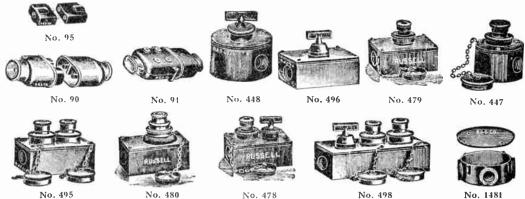




#### Weatherproof Heavy Duty Working Receptacles and Plugs 60 AMPERES, 125 VOLTS

List	60 AMPERES, 125 VOLTS List Price Each
143 144 140	Heavy non-reversible porcelain receptacle in iron box and cover for exposed work. With plug 816, 98 Two gang, similar to No. 143
71 72 70	hardwood handle
84 85	30 ampere, non-reversible slate receptable in iron box with cover for exposed work. With plug \$25.44
485	Heavy slate receptable in iron box with iron cover. For exposed work. Composition plug
232	with hardwood handle
$\frac{233}{235}$	Heavy slate receptacle in iron box with cover for exposed work. With plug\$45.68
	Floor Receptacles
List	
No. 142	
154	30 ampere, slate receptacle in from box with brass cover, cap and cone. Box 4 inches diameter. With plug
155	diameter. With plug
239	Slate receptable in iron box with brass cover, cap and cone. With plug
2	Heavy composition receptacles in iron box with brass cover, cap and cone, with non-revers-
22 23 24	Same as No. 2, in 4 inch square box with square cover. With plug. 9.98 3 wire receptacle, same as No. 2. With plug. 12.70 3 wire receptacle, same as No. 22. With plug. 12.70 50 AMPERES, 125 VO*TS
13 132	Stage pocket. Heavy porcelain receptacle in iron box and cover. With plug\$18.16

# CONNECTORS, MARINE SWITCHES AND RECEPTACLES



	No. 495	No. 480	No. 478	No. 498	No. 1481
		15 A	Connectors MPERES, 250 VOI	_TS	List Price Each
95	is very co roughest o particular	avy molded composition pact, measuring 33 of usage. It is suitable by adaptable for use in	n connector with heaf x 134 x 78, and had for stage connection garages where Under	vy brass, self aligning contacts been designed to withstacts, all kinds of industrial workerwriters forbid the use of or	ets. It and the ks, and rdinary
	receptacle	and plug			\$1.72
		60 A	MPERES, 125 VO	LTS	
90	Heavy comp	position body, with se	lf aligning, non-rever	sible contacts. Aluminum	casing.
91	Similar to N	or battery charging To, 90 for flat cable			\$13.20 11.56
1.49	Fits plugs u	sed with fittings 14, 14	2, 143 non-reversible	<del></del>	16.52
96 97				e handles. 2 wire	
		,	ERTIGHT CONNEC		,,,,,,
93	Heavy brass			o. 452. 10 amperes, 125 vo	lts \$8.26
94	Three wire,	similar to No. 93			11.56
		Marine Su	itches and R	Pecentacles	
		uiiiic Ov	SWITCHES	receptacies	
448	Special comp	position base, 10 amper	e, single pole, snap sw	itch in 2¾ inch diameter bra	ss box. \$6.36
520	Double pole	. 10 ampere snap swite	eh in 334 inch iron be	) X	5.30
$\frac{496}{627}$				neavy brass box, 4 x 234	
156	Double pole	, 10 ampere snap swite	ch in 4 inch square ir	on box	7.08
458	5 ampere, h	eavy composition non- liameter. With plug	-reversible receptacle	and plug in watertight bra	ss box. 5.52
459	Same as No.	. 458 receptacle in sma	ill rectangular box. –	With plug	5.52
447	= 10 ampere. s	strong composition nor	ı-reversible recentaele	and plug, in watertight bra	ss box.
484	Three wire	porcelain non-reversibl	e receptacle in water	tight brass box, 3¾ inch die	imeter.
479	Heavy coi	mposition plug		4 x 23/4 inches. Same rec	9.90
470	and plug a	as No. 447			7 . 08
495	Two gang, 10	0 ampere receptaele an	I plug in brass box, 4:	x $2\%$ inches. Complete wit	
$\frac{1485}{480}$				Complete with plug	
			SWITCH AND R		
478	In watertigh	t brass box, 4 x 237 in	ches. With plug		\$8.48
498	- Two gang re	ceptacle with switch in	i watertight brass bo:	$\kappa$ , $6 \times 2\%$ inches. With plu	gs $12.74$
1490	Two-gang sy			Complete with plug	12.74
1481	2 in als married		GHT JUNCTION B		ê0 00
1432	4 inch round	l, iron, japanned with	cover and gasket cover and gasket		\$0.98 1.48
481	3 inch round	l, brass with cover and	gasket		1 . 80
$\frac{432}{1433}$					
190 W	4 x 4 x 1½ i e furnish all si	nch, iron, with cover a zes and types of juncti	nd gasketon boxes. Prices giv		
170		Itow Tork Oity. I'd	n wateriouse deliveri	a write ficurest figuae.	

#### INSULATING MATERIALS

#### Insulating Tapes

VICTOR TAPES

These are commercial grades of tape which we furnish regularly in half-pound rolls, 34 inch wide. This weight sometimes varies, but very slightly. We furnish under this same brand both a friction tape and a rubber splicing compound. Therefore it is always necessary to specify whether friction tape or splicing compound is desired. The standard width of all tapes is 34 inch, but on special orders we can furnish the Victor friction tape either ½ inch, 1 inch, 1¼ inches, 1½ inches or 2 inches



VICTOR FRICTION TAPE		VICTOR SPLICING COMP	OUND
Description	List Price	Description L	ist Price
34 in. Black Tape, per lb	\$1.40	34 in. Rubber Tape, per lb. 34 in. Rubber Tape, per 50	\$1.50
34 in. Black Tape, per 501		34 in. Rubber Tape, per 50	
case		lb. case	60.00
34 in. Black Tape, per 10 lb. box		34 in. Rubber Tape, per 100	00.00
ID. DOA	000	lb. box	70.00

Note: Victor Splicing Compound, 34 inch wide, 35 mils thick, in 1/2 lb. rolls, contains 50 to 55 feet per lb. packed in foil and cartons. Shipped. 100 lbs. in wood case and 50 lbs. in fiber case.

#### AMAZON TAPES

These tapes are of excellent quality and meet the requirements of those desiring something better than a regular commercial product. The price is accordingly somewhat higher than our Victor tapes.

#### AMAZON FRICTION TAPE AMAZON SPLICING COMPOUND Description List Price Description

34 in. Black Tape, per lb. . \$1.70 34 in. Black Tape, per 50 lb. 34 in. Rubber Tape, per lb. \$2.00 34 in. Rubber Tape, per 50 63.00lb. case..... case..... ¾ in. Black Tape, per 100  $\frac{3}{4}$  in Rubber Tape, per 100 

Note: Amazon Splicing Compound, 34 inch wide, 40 mils thick, in 1/2 1b.rolls, contains 40 to 45 feet per lb. packed in foil and cartons. Shipped, 100 lbs. in wood case and 50 lbs. in fiber case.

#### STICKA FRICTION TAPE

34 in. black tape, per lb	\$1,40
34 in. black tape, per 50 lb, ease	58-00
34 in. black tape, per 100 lb. box.	92.00

WESTERN ELECTRIC "S" TAPE It will be wound on the Western Electric blue core, 8 oz. net to the 34 inch width, ½ lb. roll packed in tinfoil.

Description	I	ist Price
34 in. Western Electric "S" 34 in. Western Electric "S" 34 in. Western Electric "S"	Tape (Standard Case, 25 lbs), per case Tape, per 50 lbstape, per 100 lbs	$$33.50 \\ 61.00 \\ 120.00$

34 inch, ½ lb. Rolls

Black Friction.....





Western Electric "S" Tape

\$2.30

34 inch, ½ lb. Rolls

\$1.80 | Competition Rubber.....

GRIMSHAW TAPES		OKONITE TAPES	
¾ inch, ½ lb. Rolls		34 inch, 1/2 lb. Rolls	
	List Price	, , <u>-</u>	List Price
Description	per Lb.	Description	per Lb.
Black Frietion	\$3.00	Manson Black Friction	\$1.90
White Friction	3,00	Manson White Friction.	1.72
Splieing Compound	3.30	Okonite Splicing Comp	2.30
	P. & B.	ТАРЕ	
3	14 inch, 12	lb. Rolls	
Black Weatherproof		· · · · · · · · · · · · · · · · · · ·	<b>\$0.90</b>
COMPETITION FRICTION TAPE	Ξ	COMPETITION SPLICING COMPO	UND

#### SOLDERING ACCESSORIES





#### Western Electric Soldering Salts

Our soldering salt combines in soluble crystal form the most efficient soldering agents known to chemistry. It dissolves readily in water and does not give off any obnoxious odors or gases. Directions for dissolving in water to make a soldering agent of proper strength are included with each package.

Christian III	T 1 ( T) 1 T21.
The contract con-	List Price Each
Description	81.10
1/2 lb, cans	
72 m. cans	1.80
1 lb, cans	1.00
1 III. Cittles.	

#### Western Electric Soldering Stick

This soldering stick is made under the same formula as our paste and put up in a neat, substantial package. Its use is very convenient as it can be carelessly carried in the workman's tool kit or pocket. To apply this stick it is only necessary to heat the joint to be soldered and rub it with the bared end of the stick.

	St Tile	
		Per Doz.
Western Electric soldering stick	0.60	\$4.56

#### Western Electric Resin Core Solder

Resin core solder, in ½ lb. boxes.  Resin core solder, on 1 lb. spools.  Resin core solder, on 2 lb. spools.  Resin core solder, on 5 lb. spools.	
Resin core solder, on 4 th spools.	









#### Western Electric Soldering Paste

This is a superior quality of soldering paste. It will not corrode or injure in any way the material that is to be soldered. It takes the place of injurious acids and is equally effective. It may be applied with a rag, a stick or even with the fingers. It is particularly intended for those who prefer a soldering flux in paste form rather than the soldering stick, and in cases where it is inconvenient to heat the joint in order to apply the stick flux.

	I.IS	st Trice Each-	
	Less	12 to	50 and
	than 12	50	Over
2 oz. tin cans	\$0.50	\$0.32	\$0.25
4 oz. tin cans.	.70	.48	,40
4 Oz. till cans	Lis	st Price Each	
	Less than	5 to	25 Lbs.
	5 Lbs.	25 Lbs.	and Over
½ lb. tin cans	\$1.10	\$0.78	\$0.60
1 lb, tin cans	1.80	1.30	1.10
5 lb, tin cans.		6.00	5.20
5 in, tin cans	. 1 1	lisation	

Note: Other makes of soldering salts, paste, sticks, etc., can be furnished on application.

#### CENTRAL STATION SUPPLIES



#### Trotter's Commutator Compound

This compound is an article of merit. Particularly adapted as a lubricant for carbon or woven wire, dynamo or motor brushes. A very small application required.

	List	List
	Each	per Doz.
Small size sticks 4½ x 5% ins.		
Large size sticks $4^{1\frac{7}{2}}$ x $\frac{7}{8}$ ins.	1.00	10.00





Allen's Lubricant

List Price

List

#### Chatterton Compound

Chatterton Compound is made of a good serviceable quality of gutta-percha and has a high melting point. It comes in stick form and is applied by simply heating with a blow-torch to a soft stringy consistency and winding around the joint or other part to be insulated.

Description List Price
Description per Lb.
Domestic brand \$1.35



#### Allen's Commutator Lubricant

The Allen Commutator Lubricant contains no acid or destructive ingredient; is made of pure chemicals, and can be safely used on dynamos generating high potentials.

	List Price	List
	Each	per Doz.
Allen's Commutator Lubricant	\$0.60	\$2.70

# Early's Commutator Cement

	Each	per Doz.
Small size, 2½ x 5 ¾, wt. 1 lb	\$1.00	\$16.80
Large size, 5 x 10½, wt. 7 lbs	20.00	86.00

# Emery Cloth

					•		
List	Weight	Reams in	List Price		Weight	Reams in	List Price
No.	Ream	Bundle	per Quire	No.	Ream	Bundle	per Quire
Crocus	30 lbs.	$21_2$	\$4.98	1	45  lbs.	2	\$5.08
00	32 lbs.	$2^{1}_{2}$	4.98	11/2	47 lbs.	2	5.20
()	34 lbs.	$\frac{21}{2}$	4.98	2	52 lbs.	2	5.40
1.5	41 lbs.	$2\frac{1}{2}$	4.98	21/2	75 lbs.	$1\frac{1}{2}$	5.58

# Emery Paper

			Olicoto o .		•		
List	Weight	Reams in	List Price		Weight	Reams in	List Price
No.	Ream	Bundle	per Quire	No.	Ream	Bundle	per Quire
00	19 lbs.	5	\$3.80	11/2	33 lbs.	3	\$3.96
0	20 lbs.	5	3.80	2	37 lbs.	$\frac{21}{2}$	4.06
1/2	26 lbs.	5	3.80	$2\frac{1}{2}$	40 lbs.	$2^{-}$	4.16
í	21 lbe	.1	3.90				

#### Sand Paper—First Quality

			Sheets 9	x 11 inche	s		
List	Weight	Reams in	List Price	List	Weight	Reams in	List Price
No.	Ream	Bundle	per Quire	No.	Ream	Bundle	per Quire
00	15 lbs.	5	\$3.80	2	37 lbs.	2	\$4,04
0	17 lbs.	5	3.80	$2\frac{1}{2}$	43 lbs.	$^2$	4.12
1/2	20 lbs.	4	3.80	3	50 lbs.	$1\frac{1}{2}$	4.26
Ĭ	24 lbs.	3	3.90	$3\frac{1}{2}$	18 lbs.	$1\frac{1}{2}$	4.44
$1\frac{1}{2}$	27 lbs.	2	3.96				

#### INSULATING MATERIAL

#### Cotton Sleeving

Cotton Sleeving is used for insulating and protecting armature coils. It is regularly furnished in white, but can be supplied in red, blue, or black at a small additional cost.

		· Yards	List Price			Yards	List Price
List No.	For Wires	per Lb.	per Lb.	List No.	For Wires	per Lb.	per Lb.
1	11-12-13	230	i i	8	1-2	65	;
$^2$	7-8-9	180	.0	9	1-2	95	. 2
3	9-10	175	±	10	1-0	65	Ħ
4	5-6-7	225	ii ii	11	1-0	65	<u>:-</u>
5	5	100	<u>a</u>	12	2-No. 0	50	Tala
6	3-4	135	n = 1	13	6-7	150	ੜ
7	3-4	120	0				Ö

Put up in 10 lb, units and special 5 and 1 lb, units.

#### Plain Linen Tape

This is a good quality of calendered linen tape without friction or insulating compound. It is regularly furnished in rolls containing 36 lineal yards or will be furnished in other lengths when desired.

	Width	Thickness	Yards	List Price	1	Width	Thickness	Yards	List Price
List No.	Ins.	Ins.	per Roll	Gr.Yds.	List No.	Ins.	Ins.	per Roll	Gr. Yds.
11820	34	.007	72		8843	5/8	.005	72	GIII GOV
14002	1	.007	72	On	7703	3/1	.005	$7\overline{2}$	On
10470	1/4	.005	36	appl.	9298	$\frac{7}{8}$	.005	72	appl.
8769	3/8	.005	36	αμην.	8844	1	.005	72	
8841	1/2	.005	36				,	• -	

#### Extra Quality Linen Tape

A similar tape to that described above, but of extra fine quality and close texture. It is also regularly furnished in rolls containing 36 lineal yards, but will be furnished in other lengths when desired.

	Width	Thickness	Yards	List Price		Width	Thickness	Yards	List Price
List No.	Ins.	Ins.	per Roll	Gr.Yds.	List No.	Ins.	Ins.	per Roll	Gr.Yds.
4826	1,6	.007	72	()	4896	7/8	.007	72	On
3737	5/8	.007	36	On	10535	1 "	.007	72	appl.
4308	3/4	.007	36 and 72	appl.		-	, , , ,		appr.

No. 4308 can be furnished in varied winds if ordered in lots of 25 gross yards or more of a pattern.

## Standard Linen Tape

Is superior in quality to plain linen but not equal to extra quality, as it is not as closely woven and possesses somewhat less potential strength.

	Width	Thickness	Yards	List Price	Width	Thickness	Yards	List Price
List No.	Ins.	Ins.	per Roll	Gr.Yds.	Ins.	Ins.	per Roll	Gr.Yds.
13870	3/4	.007	36	On appl.	1	. 007	36	On appl,

# Star Cotton Tape or Webbing

A plain cotton tape of good quality without compound. It is furnished regularly in rolls containing 36 lineal yards or will be furnished in other lengths when desired.

List No. 5918 5821	Width Ins.	Thickness Ins013 .013	Yards per Roll 36 36	List Price Gr. Yds. On appl.	List No. 5906 9562	Width Ins. 1 1½	Thickness Ins. .013 .013	Yards per Roll 36 72	List Price Gr.Yds. On appl.
5727	3/4	.013	36	eel.lyii					

# Standard Cotton Tape or Webbing

A similar tape to that described above, but of extra fine quality and close texture. It is also regularly furnished in rolls containing 36 lineal yards or will be furnished in other lengths when desired.

	Width	Thickness	Yards	List Price		Width	Thickness	Yards	List Price
List No.	Ins.	Ins.	per Roll	Gr.Yds.	Liet No.	Ins.	Ins.	per Roll	Gr.Yds.
4254	1/4	.013	1000	On	13100	3/4	.013	36	On appl.
3736	1/2	013	72	annl					on alviva

#### BINDING TAPES

# Stay Binding or Webbing

This is a plain cotton webbing somewhat heavier and stronger than the ordinary cotton tape. It is used largely for field coil winding. Furnished in rolls containing 72 lineal yards. Made in two weights as listed below:

Regular							Heavy		
List No. 6291 6290 6289	Width Inches  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Thickness Inches .013 .013 .013	Yards per Roll 36 36 36	List Price Gr. Yds. On appl.	List No. 8730 9982 1613 9999	Width Inches  1 11/4 11/2	Thickness Inches .019 .019 .019	Yards per Roll 72 72 · 72	List Price Gr. Yds. On appl.

#### Surgical Web Tape

Surgical Web is a superior grade of stay binding, closely woven, herringbone weave, and possesses considerable tensile strength.

	Extra Quality											
List No. 7699 5281 5224 5298	Width Inches	Thickness Inches .022 .022 .022 .022	Yards per Roll 36 36 36 36	List Price Gr. Yds. On appl.	List No. 8870 9058 10449	Width Inches 1½ 2 2½	Thickness Inches .022 .022 .022	Yards per Roll 36 36 36	List Price Gr. Yds. On appl.			

# Non-Elastic Webbing

Non-Elastic Web is a good quality stay binding which is suitable for general use.

List	Width	Thickness	Yards	List Price	List	Width	Thickness	Yards	List Price
No.	Inches	Inches	per Roll	Gr. Yds.	No.	Inches	Inches	per Rolls	Gr. Yds.
4092 4094 10177 3862	1/2 3/4 7/8	.030 .030 .030 .030	36 36 36 36	On appl.	4096 3946 4098	$\frac{1}{1}\frac{1}{2}$	.030 .030 .030	36 36 72	On appl.

# Plain Silk Tape

Silk Tape is used for general insulating purposes, particularly when the available space is extremely limited. It is furnished in rolls containing 36 lineal yards, in black, white and colors. Unless otherwise specified, white tape will always be furnished.

List No.	Width Inches	Thickness Inches	Yards per Roll	List Price Gr. Yds.	List No.	Width Inches	Thickness Inches	Yards per Roll	List Price Gr. Yds.
$15841 \\ 12821$	1/4 3/8	.006 .006	1000 1000	On	12519 14734	5/8 3/4	.006	72 $72$	On On
$11216 \\ 16604$	$\frac{\frac{7}{16}}{\frac{1}{2}}$	.006 .006	$\begin{array}{c} 72 \\ 72 \end{array}$	appl.	16299	1	.006	$7\overline{2}$	appl

#### Varnished Tape

#### Also Known as Linotape or Oiled Linen Tape

An electrical insulating tape extensively used in coil winding, cable splicing and other high tension work, having high insulating and moisture resisting qualities. The coating consists of films of oxidized linseed oil, and is furnished straight or bias cut, in rolls containing 72 lineal yards, each roll coated with paraffine to exclude moisture.

Width	-List Price per 144 Yds. No. 10-L No. 10-B Cut Straight Cut Bias		-List Price per 144 Yds.— No. 10-L No. 10-B Cut Straight Cut Bias
58" 34" 1 " 114" 114" 116"	Oa application.	21/" 21/" 21/2" 23/4" 3 "	On application.

Note: The thickness is .010 in. Approximate weight 1 in, wide, 21% lbs. per gro. yds. Unless otherwise specified, biased tape will be furnished. Can be furnished .007 in, or .012 in, thick.

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#### **VULCANIZED FIBER** Sheet Fiber

Approximate size of sheets .005 to .120 inch thick, 48 x 80 inches.

| Approximate size of sheets .005 to .120 inch thick, 48 x 80 inches.
| Approximate size of sheets .005 to .120 inch thick, 48 x 80 inches.
| Approximate size of sheets .005 to .120 inch thick, 41 x 70 inches.
| Approximate size of sheets .105 size .105 siz

Manufacturer's List Special Discounts on Application

		Approx.	List			Approx.	1/131			Approx.	11130
List	Thickness	Lbs.	Price	List	Thickness	s Lbs.	Price	List	Thickness		Price
No.	Inches		per Lb.	No.	Inches	per Sheet	per Lb.	No.	Inches	per Sheet	per Lb.
460962	.005	2	\$0.75	460969	.075	11	\$0.59	460371	7/8	140	\$0.64
460963	.010	2	.65	460970	. 100	15	.50	460372	1	160	.71
460357	.015 (곮)	21/2	,55	460362	1,6	20	.50	460373	114	180	.85
460964	.020	4/2	.50	460363	(a)	30	.51	460971	11/4	200	1.00
460965	.025	41/2	.50	460364	1%	40	.51	460972	13%	215	1.20
460359	.030 (1)	7/2	.50	460365	5,	50	.51	460973	11%	240	1.45
		e e	.50	460366	3%	60	.51	460974	15%	255	1.75
460966	.035	9			7.8			460975	13%	275	2.25
460967	.040	$7\frac{1}{2}$	. 50	460368	/2	80	. 53				
460968	.015 (%)	8	. 50	460369	5/8	100	. 56	460976	1 7/8	295	3.25
460360	.060	10	.50	460370	3/4	120	. 59	460980	2	315	4.25

# Hard Vulcanized Fiber Rods COLORS, RED, BLACK AND GRAY

Western Electric List Special Discounts on Application

List	Diameter	No. Ft.	List Price	List	Diameter	No. Ft.	List Price	List	Diameter	No. Ft.	List Price
No.	in Ins.	per Lb.	per Ft.	No.	in Ins.	per Lb.	per Ft.	No.	in Ins.	per I.b.	per Ft.
461048	3,	241	\$0.30	461383	5/8	5.4	\$0.84	460390	13/8	1.1	\$5.00
461049	1%	136	,30	461384	41	4.5	1.00	461391	$1\frac{1}{2}$	. 9.1	6.00
460376	32	60	.30	461385	3/4	3.8	1.20	461392	15/8	.80	7.00
461377	12	31	.32	460977	41	3.2	1.44	461393	134	. 69	10.00
461378	3"	22	.36	460386	7%	2.8	1.68	460979	1 7/8	.60	16.00
461379	3%	15	.40	460978	42	2.4	2.00	460394	2	. 53	24.00
461380	4	ii	.48	460387	1.0	2.0	2.40	461059	$2\frac{1}{4}$	. 42	36.00
461381	1%	8.5	.60	460389	11/9	1.7	3,00	461060	$2\frac{1}{2}$	. 34	50.00
461382	9,	6.7	.72	461054	11/4	1.4	4.00				

75 1.1 2010 $^{37}$  1.2 1.1 2010 $^{37}$  1.2 1.1 2.00 1.1 Intermediate sizes at price of next larger size. Rods turned from glued up stock  $1\frac{1}{2}$  inch diameter and over will take one half the list price of rods from solid stock.

FIBER TUBING

FIBER TUBING  Manufacturer's List Special Discounts on Application											
Inside Diam.	116	335	1/8	332		Thickness of	Wall———	32	16	11	3/8
1/8	\$0.20	\$0.30	\$0.40								
1	. 20	.30	.40								
1/4	. 10	. 14	. 18	. 22	.26						
16	. 10	.15	. 19	. 24	.28						
3/8	.11	. 16	.21	. 26	.31						
16 17 4 6 8 7 6 7 2 6 8 4 6 7 7 6 7 8 1 6 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	.11	. 17	.22	.28	. 33		40				
1/2	. 12	. 18	.24	.30	. 36	.42	.48				
16	. 13	. 20	. 26	. 32	. 39	.46	.52 $.56$				• • • • •
5/8	. 14	.21	. 28	.35	.42	$.49 \\ .52$	.60				
18,	.15	.23	. 30	.37	$.45 \\ .48$	.56	.61				
3/4	. 16	.24	.32	.40 .42	.51	.60	.68				
16	.17	. 26	.34 $.36$	.45	.54	.63	.72				
/8	.18	. 27 . 29	.38	.47	.57	.66	.76				
.16	.19	.30	.40	.50	. 60	.70	.80				
1	$^{.20}_{.22}$	.33	.44	. 55	. 66	.77	.88				
11/8	.24	.36	.48	.60	.72	.84	.96				
1 1/4	.24	.39	.52	.65	.78	.91	1.04				
13/8	.28	.42	. 56	.70	.84	.98	1.12				
15/8	.30	.45	.60	.75	.90	1.05	1.20				
134	.32	.48	.64	.80	.96	1.12	1.28				
1 7/8	.34	.51	.68	.85	1.02	1.19	1.36				
2 8	.36	,54	.72	.90	1.08	1,26	1.44	\$1.62	\$1.80		
$\frac{5}{2}\frac{1}{16}$	.38	. 57	.76	.95	1.14	1.33	1.52	1.71	1.90		
213	.40	.60	.80	1.00	1.20	1.40	1.60	1.80	2,00		
93%	.42	. 63	.84	1.05	1.26	1.47	1.68	1.89	2.10		
212	. 4.1	. 66	.88	1.10	1.32	1.54	1.76	1.98	2.20		
253	.46	. 69	.92	1.15	1.38	1.61	1.84	2.07	2.30		
234	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.40		
$2\frac{7}{8}$	.50	.75	1,00	1.25	1.50	1.75	2.00	2.25	2.50	60.00	40 10
3	.52	. 78	1.04	1.30	1.56	1.82	2.08	2.34	2.60	\$2.86 2.97	\$3.12 3.24
31/8	. 54	.81	1.08	1.35	1.62	1.89	$\frac{2.16}{2.24}$	$\frac{2.43}{2.52}$	2.70	3.08	$\frac{3.24}{3.36}$
$3\frac{1}{4}$	, 56	.81	1.12	1.40	1.68	1.96		2.61	$\frac{2.80}{2.90}$	3.19	3.48
338	.58	.87	1.16	1.45	1.74	$\frac{2.03}{2.10}$	$\frac{2.32}{2.40}$	$\frac{2.61}{2.70}$	3.00	3,30	3.60
$3\frac{1}{2}$	.60	.90	1.20	1,50	$\frac{1.80}{1.86}$	2.17	2.48	$\frac{2.70}{2.79}$	3.10	3.41	$\frac{3.00}{3.72}$
35/8	.62	.93	1.24	$\frac{1.55}{1.60}$	1.92	$\frac{2.11}{2.24}$	2.56	2.88	3.20	3.52	3.84
$3\frac{3}{24}$	. 64	.96	$\frac{1.28}{1.32}$	1.65	1.98	2.31	2.64	2.97	3.30	3.63	3.96
$3\frac{7}{8}$	.66	$\frac{.99}{1.02}$	1.36	1.70	2.01	2.38	2.72	3.06	3.40	3.71	4.08
4	.68 .70	1.02	1.40	1.75	2.10	2.45	2.80	3.15	3.50	3.85	4.20
41/8	.72	1.08	1.44	1.80	2.16	2.52	2.88	3.24	3.60	3.96	4.32
4 1/4	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44
4.78	.76	1.14	1.52	1.90	2.28	2.66	3.01	3.42	3.80	4.18	4.56
45/8	.78	1.17	1.56	1.95	2.34	2.73	3.12	3.51	3.90	4.29	4.68
4 3/4	.80	1.20	1.60	2.00	2,40	2.80	3.20	3,60	4.00	4.40	4.80
478	.82	1.23	1.64	2.05	2.46	2.87	3.28	3.69	4.10	4.51	4.92
5	,84	1.26	1.68	2.10	2.52	2.94	3.36	3.78	4.20	4.62	5.01
51/4	,86	1.29	1.72	2.15	2.58	3.01	3.44	3.87	4,30	4.73	5.16
51%	.88	1.32	1.76	2.20	2.61	3.08	3.52	3.96	4.40	4.84	5.28
53%	.90	1.35	1.80	2.25	2.70	3.15	3.60	4.05	4.50	4.95	5.40
513	.92	1.38	1.84	2.30	2.76	3.22	3.68	4.11	4.60	5.06	5.52
558	.94	1.41	1.88	2.35	2.82	3.29	3.76	4.23	4.70	5.17	5.64
$5\frac{3}{4}$	.96	1.44	1.92	2.40	2.88	3.36	3.84	4.32	4.80	5.28	5.76
578	.98	1.47	1.96	2.45	2.91	3.43	3 92	4.41	4.90	5.39	5.88
6	1 00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5,00	5.50	6.00

# ELECTRICAL INSULATING MICA

#### CUT INDIA AND DOMESTIC ELECTRICAL MICA

#### Cut Mica

===							
Size	W. E. List Price per Lb.	Size	W. E. List Price per Lb.	Size	W. E. List Price per Lb.	Size	W. E. List Price per Lb.
1 x 3 1 x 4 1 x 4½ 1 x 5½ 1 x 6½ 1 x 6½ 1 x 6½ 1 x 7 1 x 8 1 x 9 1 x 10 1¼ x 3 1¼ x 4½ 1¼ x 4½ 1¼ x 5 1¼ x 6 1¼ x 7 1¼ x 8 1¼ x 10 1¼ x 8 1¼ x 10 1¼ x 3 1¼ x 6 1¼ x 6 1¼ x 6 1¼ x 6 1¼ x 6 1¼ x 6 1¼ x 7 1¼ x 8 1¼ x 10 1¼ x 3 1¼ x 6 1¼ x 6 1¼ x 6 1¼ x 6 1¼ x 6 1¼ x 7 1¼ x 8 1¼ x 10 1¼ x 2 1¼ x 3 1¼ x 8 1¼ x 2 1¼ x 3 1¼ x 3 1¼ x 6 1¼ x 2 1¼ x 2 1¼ x 3 1¼ x 3 1¼ x 3 1¼ x 3 1¼ x 3 1¼ x 6 1¼ x 2 1¼ x 3 1¼ x 3 1¼ x 3 1¼ x 3 1¼ x 3 1¼ x 3 1¼ x 6 1¼ x 3 1¼ x 3	\$4.00 7.00 8.00 10.00 12.00 14.00 16.00 18.00 20.00 22.00 7.50 8.00 10.00 12.00 14.00 16.00 18.00 20.00 22.00 24.00	1½ x 4½ 1½ x 5 1½ x 5½ 1½ x 6½ 1½ x 6½ 1½ x 7 1½ x 8 1½ x 10 1½ x 10 1½ x 12 1¾ x 4½ 1¾ x 5½ 1¾ x 5½ 1¾ x 6 1¾ x 6 1¾ x 6 1¾ x 6 1¾ x 6 1¾ x 6 1¾ x 6 1¾ x 6 1¾ x 6 1¾ x 7 1¾ x 8 1¾ x 10 1¾ x 12 2 x 2 2 x 3 2 x 3½	\$9.00 11.00 12.50 14.50 16.50 21.00 23.00 26.00 35.00 9.00 11.50 13.00 15.50 17.00 19.00 24.00 27.00 36.00 6.00 7.50 8.00	2 x 4½ 2 x 5 2 x 6½ 2 x 6½ 2 x 6½ 2 x 7 2 x 8 2 x 9 2 x 10 2 x 12 2¼ x 3 2¼ x 4½ 2¼ x 4½ 2¼ x 6½ 2¼ x 6½ 2¼ x 6½ 2¼ x 6½ 2¼ x 7 2¼ x 8 2¼ x 8 2¼ x 10 2¼ x 10 2¼ x 3 2¼ x 4½ 2¼ x 5 2¼ x 6 2¼ x 6 2¼ x 6 2¼ x 7 2¼ x 8 2¼ x 3 2¼ x 3 2¼ x 3 2½ x 3 2½ x 3 2½ x 3 2½ x 3 2½ x 3 2½ x 3 2½ x 3	\$10.50 12.00 13.50 16.00 17.00 19.00 22.00 24.00 27.00 36.00 8.50 9.50 10.00 12.50 14.00 16.50 18.00 19.50 22.50 24.50 29.00 9.50	21\2 x 41\2 21\2 x 5 21\2 x 5 21\2 x 5 21\2 x 61\2 21\2 x 61\2 21\2 x 8 21\2 x 8 21\2 x 8 21\2 x 10 23\4 x 4 23\4 x 4 23\4 x 5 23\4 x 5 23\4 x 6 23\4 x 6 23\4 x 7 23\4 x 8 23\4 x 8 23\4 x 8 23\4 x 8 23\4 x 8 23\4 x 8 23\4 x 8 23\4 x 8 23\4 x 10 3 x 3 3 x 4	\$11.00 13.00 14.50 16.50 18.00 20.00 23.00 25.00 29.00 11.00 11.50 12.50 14.00 15.00 17.00 19.00 20.50 23.50 29.50 14.00 15.50 14.00
$1\frac{1}{2} \times 4$	8.00	2 x 4 <sup>2</sup>	9.00	$2\frac{1}{2}x - 4$	10.00	$3 \times 4\frac{1}{2}$	14.50

Size	W. E. List Price per Lb.	Size	W. F. List Price per Lb.	Size	W. F. List Price per Lb.	Size	W. E. List Price per Lb.
3 x 5 3 x 51/2 3 x 6 3 x 61/2 3 x 7 3 x 8 3 x 9 3 x 10 31/4 x 31/4 31/4 x 31/2 31/4 x 4 31/4 x 51/2 31/4 x 5 31/4 x 6 31/4 x 6 31/4 x 7 31/4 x 8 31/4 x 9	\$15.00 16.00 17.50 19.00 21.50 23.00 26.00 30.00 13.50 14.00 15.50 16.50 17.50 19.50 22.00 23.50 26.00	314 x 10 315 x 315 315 x 4 315 x 4 315 x 5 315 x 5 315 x 6 315 x 6 315 x 7 315 x 8 315 x 8 315 x 7 315 x 8 315 x 7 315 x 8 315 x 10 4 x 4 4 x 5 4 x 5 4 x 6 4 x 6 4 x 6 4 x 6 4 x 7	\$30.00 14.00 14.50 15.50 16.00 17.00 18.00 19.50 22.50 24.00 27.00 32.00 16.50 17.00 17.50 18.50 20.50	4 x 8 4 x 9 4 x 10 4 12 x 4 12 4 12 x 5 4 12 x 5 4 12 x 6 4 12 x 6 4 12 x 6 4 12 x 8 4 12 x 8 4 12 x 9 4 12 x 10 5 x 5 5 x 6 5 x 7 5 x 8 5 x 9 5 x 10 5 12 x 6	\$24.00 28.00 33.00 17.00 18.00 18.50 19.50 23.00 24.00 25.00 29.00 20.00 21.00 24.00 25.50 35.00 25.50 30.00 35.00	5½ x 7 5½ x 8 5½ x 9 5½ x 10 5½ x 11 5½ x 12 6 x 6 6 x 7 6 x 8 6 x 9 6 x 10 6 x 12 7 x 8 7 x 9 7 x 10 8 x 8 8 x 9 8 x 10	\$27.00 30.00 33.00 36.00 38.00 40.00 27.00 30.00 35.00 36.50 38.00 42.00 30.00 37.00 42.00 40.00 42.00 45.00

Special sizes will be cut to order and will take the list price of the next larger size. Cut Amber Electrical Mica prices on application.

#### INSULATING MATERIAL

#### Hard Rubber Sheets

Grade No. 1001. Black hard rubber sheet, designed for thin sheets only. Dimensions, 20 x 48 inches or 20 x 24 and 20 x 12 inches. Thickness, .014 inch to .047 inch inclusive.

Grade No. 1010. Black hard rubber sheet. Medium quality of sheet designed for miscellaneous uses. Standard dimensions, trimmed,  $24 \times 48$  inches. Thickness, .046 inch to 1.50 inch.

List No.	Chickness	Grade No.	Net Prices per Lb.	List No.	Thickness	Grade No.	Net Prices per Lb.
460981 460850 460851 460852 460854 460855 460856	1 nickness    1/64 in.   1/32 in.   1/62 in.   3/22 in.   1/62 in.   3/22 in.   1/62 in.   3/22 in.   1/62 in.   3/22 in.   3/22 in.   3/22 in.   3/24 in.   1/64 in.	1001 1001 1010 1010 1010 1010 1010	\$1.50 3.80 3.10 3.00 3.00 3.00 3.00 3.00	460859 460860 460861 460862 460863 460864 460865	3 k in.  7 in.  15 in.  15 in.  16 in.  16 in.  17 in.  18 in.  18 in.  18 in.	1010 1010 1010 1010 1010 1010 1010	\$3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.00
460857 460858	14 in. 15 in.	1010 1010	3.00 3.00	460866	1 111.	1010	3.00

#### Hard Rubber Rods

Grade No. 2000. Black Hard Rubber Rod. Standard length 2 foot rough; diameter 0.56 inch and less. Grade No. 2007. Black Hard Rubber Rod. Dimensions 0.56 inch to 1.50 inch diameter.

List No.	Diameter	Grade No.	Net Prices   per Lb.	List No.	Diameter	Grade No.	Net Prices per Lb.
460868 460869	$\frac{1}{16}$ in.	2000 2000	\$3.50 3.30	$\frac{460877}{460878}$	11 in. 34 in.	$\frac{2007}{2007}$	\$3.00 3.00
$\frac{460870}{460871}$	14 in. 56 in. 38 in.	2000 2000	3.00	460879 460880	13 in. 78 in.	2007 2007	3,00 3,00
460872 460873	$\frac{7}{16}$ in.	2000 2000 2000	3.00 3.00 3.00	460881 $460882$ $460883$	15 in. 1 in. 114 in.	2007 $2007$ $2007$	3.00 3.00 3.00
$\begin{array}{c} 460874 \\ 460875 \\ 460876 \end{array}$	12 in. 16 in. 16 in.	2000 2000 2007	3.00	460884	1)½ in.	2007	3.00

# Soft Rubber Tubing

List	Inside Diameter	Covers B. & S. Wire	Feet	List   Price per Lb.	List	Inside Diameter	Covers B. & S. Wire	Feet per Lb.	List Price per Lb.
No. 460890 460891	nameter nameter nameter in.	14 10	30 20	\$2.40	460892 460893	5 in. 3/8 in.	6 4	15 12	\$2.40 2.40

# Corrugated Rubber Matting

Grade No. 1 for dynamos and switchboards.

List	Thickness	Wt. per Sq. Yd.	List Price per Lb.		Thickness	Wt. per Sq. Yd.	List Price per Lb.
460937 460938 460939 460940	$\frac{3}{3}\frac{1}{2}$ in. $\frac{1}{8}$ in. $\frac{3}{16}$ in. $\frac{1}{4}$ in.	6 lbs. 8½ lbs. 13½ lbs. 18¼ lbs.	$egin{array}{c} 1.50 \ 1.50 \ \end{array}$	460941 460942 460943 460944	$ \frac{15}{16} $ in. $ \frac{7}{16} $ in. $ \frac{1}{2} $ in.	$\begin{array}{ccc} 23 & \text{lbs.} \\ 28 & \text{lbs.} \\ 32\frac{3}{4} & \text{lbs.} \\ 37\frac{1}{2} & \text{lbs.} \end{array}$	\$1.50 1.50 1.50 1.50

#### Improved Paper Sleeves

List No.	Style	Dimensions	List Price	List No.	Style	Dimensions	List Price per 1000
460894	2½A	$\frac{18 \times 234}{16} \text{ ins.}$	\$2.80	460897	18A	$\frac{1}{3}$ x 18 ins. $\frac{3}{16}$ x 18 ins. $\frac{7}{32}$ x 18 ins.	\$9.50
460895	3 B	$\frac{3}{16} \times 3 \text{ ins.}$	2.80	460898	18B		9.50
460896	3 C	$\frac{3}{12} \times 3 \text{ ins.}$	2.80	460899	18C		9.50

**World Radio History** 

# Western Electric AJAX INSULATING MATERIAL

# WESTERN ELECTRIC Ajax Insulating Varnish BLACK AIR DRYING

A jet black, lustrous moistureproof varnish, a good insulator, and possesses the maximum amount of elasticity possible to secure in a black, quick, air drying varnish. It is used for dipping new armature and field coils and also for repair work requiring a varnish which will dry quickly without baking. It air dries in one-half hour.

Downels (50 callon )	*List Price 1	Per Gal.
Barrels (50 gallons)		\$2.48
1 gallon cans.		4.50

# WESTERN ELECTRIC Ajax Air Drying Finishing Varnish

A lustrous, deep black spirit finishing varnish, oilproof, waterproof, durable, it keeps in perfect solution. It is used as a finishing coating for all kinds of electrical apparatus to prevent absorption of lubricating oils and moisture. It air dries in from 10 to 15 minutes independent upon method of application and thickness of coat.

Barrels (50 gallons)	85.60
5 millon cons	(F)
1 gallon cans.	9.60

#### WESTERN ELECTRIC Underwriters' Black

#### ACID RESISTING INSULATING PAINT

This paint gives a high gloss finish which is flameproof and impervious to moisture. It is used for meter boards, switchboards, moldings, aerial and underground cables, service boxes, street car trucks, motor frames and all kinds of electrical wiring. It air dries in one half hour.

Barrels (50 gallons)	\$9.56
5 gallon cans.	9 90
1 gallon cans	0.00
1 gallon cans.	4 40
½ gallon cans.	6.00

# WESTERN ELECTRIC Ajax Insulating Varnish CLEAR, QUICK BAKING

Designed expressly for quick repairs to motor, generator and transformer windings. For bare metal arriace and sheet fiber of every description. It is clear oil and weatherproof, extremely penetrative and elastic. It is a high insulator, and is acidproof and free from acids.

Barrels (50 gallons)	\$4.20
5 gallon cans.	 6 60
1 gallon cans	 0.00
- Bankar (and a contract of the contract of th	 7.20

# WESTERN ELECTRIC Ajax Oilproof Core Plate Baking Varnish

Elastie, heat resisting, clear enamel, proof against oil, water and acid. It is used for separating and insulating the metal laminations used in building up the cores of oilcooled transformers. Baked in 5 minutes at 250 degrees Fahrenheit.

Barrels (50 gallons)	\$3.68
o ganon cans	5.90
1 gallon cans	5.80

#### WESTERN ELECTRIC Ajax No. 1 Clear Air Drying Insulating Varnish

It is clear, clastic, extremely penetrative and oilproof. Is a high insulator, and produces a uniform homogeneous film. Especially adapted for use in electrical repair shops not equipped with baking facilities. Used for armature, field and magnet coils, molding, switch bases and fiber sheet insulation. Air dries in 6 hours.

Barrels (50 gallons).	\$3.68
oganon cans	5.20
1 gallon cans.	5.80

# WESTERN ELECTRIC Ajax No. 2 Clear Air Drying Insulating Varnish

Similar to No. 1, but is superior to it in flexibility, moisture proof and oilproof qualities and heavier in body. Air dries in 13 to 20 hours.

Barrels (50 gallons)	\$1.80
5 gallon cans	6.60
1 gallon cans	7.20

<sup>\*</sup>Delivery F. O. B. Cleveland or New York. For warehouse deliveries write nearest house.

per Gal. \$4.76

7.40 3.80 8.40

4.40

25 and

Over

\$2.66

10 to 25

Gallons

\$2.86

# Western Electric

# AJAX INSULATING MATERIAL

# WESTERN ELECTRIC Ajax Clear Air Drying Finishing Varnish

Ajax clear insulating varnish is oilproof, waterproof, durable and keeps in perfect solution. It is used as a finishing coating for all kinds of electrical apparatus to prevent absorption of lubricating oils and moisture. It air dries in from 10 to 15 minutes, dependent on method of application and thickness of coat. \*List Price

WESTERN ELECTRIC Ajax, Black Air Drying Core Plate Varnish Designed exclusively for the insulation of armature, field and air cooled transformer laminations against Eddy or Foucault currents. Coat of usual thickness will air dry in 5 minutes.

Barrels (50 gallons)... 1 gallon cans....

WESTERN ELECTRIC Ajax Insulating Varnish Coillac
A black baking insulating varnish for general coil work and insulating purposes. Combines high gloss
with great elasticity and puncture resistance. \$2.88
### ### ### ### ### ### ### ### ### ##
1 gallon cans
WESTERN ELECTRIC Ajax Black Acidproof Paint
This is an acidproof, waterproof and flameproof paint. Designed for use on battery boxes, switch-boards, switch handles, cable connections and connection boxes. Also adapted for use on armature and boards, switch handles, cable connections and connection boxes. It air dries in 8 hours.
Barrels (50 gallons)
5 gallon cans 4.40 1 gallon cans 7.1.2.37
WESTERN ELECTRIC Ajax Black Elastic Baking Insulating Varnish
Black, plastic, oilproof, suitable for insulating high voltage, generator windings, oil cooled transformer coils and street railway motor armature and field coils which are subjected to continued vibrations and vary-
coils and street railway motor armature and new colds will be a street railway motor and new colds will be a street railway motor and new colds will be a st
Barrels (50 gallons)
Barrels (50 gallons)
The state of the Clark Flastic Baking Insulating Varnish
A clear, tough, elastic, high heat resisting varnish. Designed expressly in instanged armatures armatures and field coils that are brushed while winding and as finishing—coat for completed armatures and field coils. Excellent material for treating automobile ignition cables, canvas linen, cotton tapes, etc.  \$4.90 Barrels (50 gallons)
WESTERN ELECTRIC Ajax Black Quick Baking Insulating Varnish Elastic, high gloss, quick baking varnish, oil and waterproof. Adaptable for quick repairs to motors, generators, transformers, and as insulator for high voltage windings of large cross sections.  \$3.22
\$3.22
WESTERN ELECTRIC Ajax Pot Head Compound or Filling Compound
Less than

\*Delivery F. O. B. Cleveland or New York. For warehouse deliveries write nearest house.

Pothead Compound or Filling Compound.....

3 Gallons

(24 Lbs.)

\$3.80

3 to 10

Gallons

#### INSULATING MATERIALS

#### Armalac

Armalac is a high-grade insulating compound used for insulation of armature and field coils. It consists of a high melting point paraffine in solution in petroleum naphtha. Being a plastic compound, it has met the requirements with perfect satisfaction. Vibration and heat cannot cause cracks or holes. Cracks or abrasions caused by workmen are self-healing; as machine warms up, no oxidation takes place. It is absolutely impervious to moisture, and lubricating oil does not affect the insulation resistance or cause acid reaction.

	List Price	ð
	per Gal	
In barrels	\$2.00	)
In cans, 1, 2, 5 or 10 gallons	2.50	)

#### Insullac

Insulae is a quick-drying transparent insulating varnish which has high non-conductive qualities. It is used for cementing mica, or mica and paper. When so applied the solvent should be pressed out under hydraulic pressure between plates upon which 40 to 60 lbs. steam is applied and allowed to remain for forty-cight hours. Dilute with insulae thinner only. Can be furnished in any color. Where no color is specified orange will be shipped. Black is used to render transformer coils oilproof.

	ist Price
	per Gal.
In barrels	\$4.14
In cans, 1, 2 5 or 10 gallons	3.70

#### Enamelac

Enamelac is a quick-drying glossy black insulating varnish for general use around the electric power station; used on moldings, switchboards, junction boxes, controller cases, etc. It can be applied on dirty surfaces, hot steam pipes or live boiler fronts with equal facility. This paint has no foul odor.

L.	ist Price
	per Gal.
In barrels	\$1.50
In cans, 1, 2, 5 or 10 gallons	1.90

#### P. & B. COMPOUND

No. 1 is used where an almost immediate drier and greatest amount of penetration possible is desired.



No. 2. P. & B. Compound

#### P. & B. No. 1 Compound

r. & B. No. 1 Compound	List Price
Description	per Gal.
One gallon cans	\$4.20
Five gallon cans	3.84
Barrel lots of about 50 gallons	2.90

#### P. & B. No. 2 Compound

]	List Price
Description	per Gal.
One gallon cans	<b>\$</b> 3. <b>38</b>
Five gallon cans	3.24
Barrel lots of about 50 gallons	2.50

#### INDIA MICANITE PLATE

# NO. 1 INDIA MICANITE PLATE For Molding

No. 1 India Micanite Plate is made of very thin films of India mica cemented together with pure shellac and carefully surfaced to a uniform thickness.

When heated it becomes flexible and in that condition can readily be formed into such shapes as conical and band rings for commutators, troughs for armature slots, spools for magnets, and the thinner sheets rolled into tubes. Upon cooling it regains its rigidity. It is also used for flat work where high temperature is not a factor, such as transformer insulation, etc.

It is not intended for insulation between the copper bars of commutators, and must not be used for that purpose.

For commutator bar insulation we furnish special Micanite Plate.

#### Stock Thicknesses of 18 x 36 Inch No. 1 Plate

				List					List
List	Thickness	Approx. Lbs.	Aver. Punct.	Price	List	Thickness	Approx. Lbs.	Aver. Punct.	Price
No.	Inches	per Sheet	Voltage	per Lb.	No.	Inches	per Sheet	Voltage	per Lb.
1200	.010	. 503	9540	\$3.00	1207	.040	$^{1}2.17$	3816Ŏ	\$2.00
1201	.015	.748	14310	3,00	1208	.045	2.25	42930	2.00
1202	.020	,946	19080	3.00	1209	3- 64	2.42	44645	2.00
1203	.025	1.21	23850	2.00	1210	.050	2.64	47700	2.00
1204	,030	1.53	28620	2.00	1213	16	3.32	59625	2.00
1205	1 32	1.64	29765	2.00	1216	16 3 32	4.92	89390	2.00
1206	. 035	1.68	33390	2.00	1217	1/8	6.22	119250	2.00

No. 1 Plate in standard size  $18 \times 36$  inch sheets can be furnished of any special thickness at following prices:

.025 in. thick or over........\$2.00 per lb. .024 in. thick or under......\$3.00 per lb. Sheets of special size or shape at slight increase over above prices.

#### NO. 11 INDIA MICANITE PLATE

#### For Molding

No. 11 India Micanite Plate is made of the same quality of India mica films and shellar that is used in the No. 1 plate, but is not quite as exact to thickness.

It becomes flexible when heated, is readily molded into form, and is suitable for all general purposes where a slight variation in thickness is permissible, except commutator segments. It is not intended for insulation between the copper bars of commutators.

#### Stock Thicknesses of 18 x 36 Inch No. 11 Plate

1218	.010	. 503	9540	\$2.72    1225	,040	2.17	38160	\$1.96
1219	.015	.748	14310	$2.72 \parallel 1226$	. 045	2.25	42930	1.96
1220	.020	.946	19080	$2.72 \parallel 1227$	3 6 4	2.42	44645	1.96
1221	.025	1.21	23850	$1.96 \parallel 1228$	050	2.64	47700	1.96
1222	. 030	1.53	28620	$1.96 \parallel 1231$	16	3.32	59625	1.96
1223	$\frac{1}{32}$	1.64	29765	$1.96 \parallel 1234$	3 2	4.92	89390	1.96
1224	$.0\bar{3}5$	1.68	33390	$1.96 \parallel 1235$	Īś	6.22	119250	1.96

No. 11 Plate in standard size 18 x 36 inch sheets can be furnished of any special thickness at following prices:

#### NO. 2 INDIA MICANITE PLATE For Commutator Segment Insulation

No. 2 India Micanite Plate is made of very thin films of India mica cemented together with the smallest possible amount of pure shellac, and carefully surfaced to a uniform thickness.

This plate is specially made to be cut into segments for insulating copper bars of commutators, and cannot be molded.

#### Stock Thicknesses of 18 x 36 Inch No. 2 Plate

1236	.010	.567	9550	\$2.92    12	44 ,045	2,55	42975	\$2.24
1237	.015	.85	14325	$2.92 \parallel 12$	$\frac{3}{64}$	2.65	44695	2,24
1238	.020	1.13	19100	2.92   12	46050	2.83	47750	2.24
1239	.025	1.41	23875	2.24   12	48 ,060	3.4	57300	2.24
1240	.030	1.70	28650	2 24   12	$\frac{1}{16}$	3.54	59685	2.24
1241	32	1.76	29800	2,24   12	$52 \frac{3}{32}$	5.3	89485	2.24
1242	.035	1.98	33425	2.24   12	$\frac{1}{8}$	7.05	119375	2.24
1243	.040	2.27	38200	2.24				

No. 2 Plate in standard size 18 x 36 inch sheets can be furnished of any special thickness at following prices:

.025 in. thick or over.......\$2.13 per lb. .024 in. thick or under......\$2.83 per lb. Sheets of special size or shape at slight increase over above prices.

#### INDIA MICANITE PLATE AND CLOTH

#### NO. 4 INDIA MICANITE PLATE

This plate is made for flat work and for purposes where extreme accuracy of thickness is not important. It is suitable for all kinds of bases, round and square washers, and for all kinds of apparatus not subjected to high heat.

Its non-liability to fracture under extreme vibration is a valuable feature for marine work. It does not take a screw thread, but can be drilled and turned.

No. 4 Plate is not furnished thinner than  $\frac{1}{16}$  inch.

#### Stock Thicknesses of 18 x 36 Inch No. 4 Plate

List	Approximate Thickness,	Approximate Lbs.	· Average Punct.	List Price
No.	Inches	per Sheet	Voltage	per Lb.
1296	16	$^{-2.95}$	50000	\$1.54
1297	3 3 2	4.3	75000	1.54
1298	i/o	5.9	100000	1,54
1299	(3)	9.85	150000	1.54
1300	i	13.2	200000	1.54
1301	3/2	19.1	300000	1.54
1302	1/2	25.7	400000	1.54
1002	4 Di 4 1 4 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2		abad of one amonial thinks	

No. 4 Plate in standard size 18 x 36 inch sheets can be furnished of any special thickness at following prices:

 $\frac{1}{16}$  in. thick or over..... Cheets of special size or shape at slight increase over above prices.

#### NO. 5 FLEXIBLE MICANITE PLATE

No. 5 Flexible Micanite is made of very thin films of India mica comented together with a special insulating cement of great flexibility and adhesiveness. This article in many ways presents mica in its most convenient and economical form for electrical insulation. It can be formed or bent to shape without the applica-

It is an excellent insulator for armature slots, armature, magnet and commutator cores, transformers,

It can be stripped up into narrow widths, and when used in conjunction with Linotape makes a most efficient insulation for all kinds of conducting wires and cables.

	C.		
Stock Thic	knesses of 36 x 36 Incl	No. 5 Plate	
* ( PD) 1 1	4	A D L	1 to A. Dodon

List	Approximate Thickness,	Approximate Lbs.	Average Punct.	LIST Price
Ne.	Inches	per Sheet	Voltage	per Lb.
1303	.005	.575	2940	<b>\$</b> 3.53
1304	.010	.967	5880	3.00
1305	.015	1.43	8820	2.10
1306	.020	1.84	11760	2.10
1307	,025	2.24	14700	2.10
1308	.030	2.64	17640	2.10
1309	$\frac{1}{32}$	3.04	18345	2.10
1313	16	6.03	36755	2.10
1314	i <sub>8</sub>	12	73500	2.10
		. 1 1 4 . 1	1. 1 6	

No. 5 Plate in standard size 36 x 36 inch sheets can be furnished of any special thickness at following prices:

. . . . \$3 . 00 per lb.

#### NO. 20 MICANITE CLOTH

No. 20 Micanite Cloth is made with 1, 2 or 3 layers of high-grade India mica films, carefully cemented together with overlapping edges into sheet form, the sheet being faced on one side with cotton cloth and on the other side with Japanese paper.

It is an excellent composite insulation, and is often used in conjunction with Empire cloth and paper,

fish paper, etc., for transformers, field magnets, armature cores, etc.

In strip form it is an efficient mica insulation for wrapping all sorts of conductors. When applied in this manner it is usual to bind it in position with Linotape or the ordinary friction tape.

#### Stock Thicknesses of No. 20 Micanite Cloth

List	Approximate Thickness,	Layers	Approximate Lbs.	List Price
No.	Inches	of Mica	per Roll	per Lb.
1315	.008	1	2.8	\$2.76
1316	.011	2	4.2	2.32
1317	014	3	5.4	2.00

#### NO. 21 MICANITE CLOTH

#### Extra Flexible

No. 21 Micanite Cloth is identical with No. 20 Micanite Cloth except that the material is made with a very thin rubber tissue as a binder between the layers of mica, cloth and paper.

Stock Thicknesses	of	No. 23	l M	icanite	Cloth
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Stock Thicknesses of No. 21 Wilcanite Cloth							
List	Approximate Thickness,	Layers	Approximate Lbs.	List Price			
No.	Inches	of Mica	per Roll	per Lb.			
1318	.008	1	2.1	\$3.74			
1319	.011	2	3.5	3.73			
1320		3	4.7	2.34			

#### INSULATING MATERIAL

#### NO. 24 MICANITE PAPER

No. 24 Micanite Paper is of the same nature as No. 20 Micanite Cloth except that the material is faced on both sides with Japanese tissue paper instead of cotton cloth, the object being to supply an insulation thinner than Micanite Cloth, but retaining the same thickness of mica film.

#### Stock Thicknesses of No. 24 Micanite Paper

List	Approximate Thickness,	Layers	Approximate Lbs.	List Price
No.	Inches	of Mica	per Roll	per Lb.
1321 1322 1323	.005 .008 .011	$\frac{1}{2}$	$\begin{array}{c} 2.1 \\ 3.3 \\ 4.4 \end{array}$	\$3,00 2,48 2,07

#### NO. 25 MICANITE PAPER

#### Extra Flexible

No. 25 Micanite Paper is similar to No. 24 Micanite Paper except that the material is made with a very thin rubber tissue as a binder between the layers of mica, cloth and paper, instead of an oil varnish, which is used as a binder in the No. 24 Micanite Paper.

#### Stock Thicknesses of No. 25 Micanite Paper

List	Approximate Thickness,	Layers	Approximate Lbs.	List Price
No.	Inches	of Mica	per Roll	per Lb.
1324	.005	1	1.8	\$3.73
1325	.008	2	3.	3.72
1326	.011	3	4.1	3.80

Any special thickness or size of the above materials made on order.

#### NO. 26 ROPE PAPER AND MICA

A composite insulation consisting of rope paper faced on one side with two layers of India mica films and tissue paper.

This material has a wide range of utility in the field of moderate voltages and temperatures.

It is furnished in sheets 36 x 36 inches in the following stock thicknesses:

List No.	Thickness of Raw Paper, Inches	Approximate Finished Thickness, Inches	Layers of Mica	Approximate Oz. per Sheet	List Price per Lb.
1327	.003	.007	2	$7\frac{1}{2}$ $12$ $15$	\$2.69
1328	.005	.010	2		2.00
1329	.010	.015	2		1.60

#### NO. 27 PRESSBOARD AND MICA

This material is composed of No. 1 pressboard faced on one side with two overlapping layers of India mica films and tissue paper.

Mechanically the sheet possesses greater rigidity than No. 26 rope paper and mica, otherwise, the insula-

tion is of the same order.

It is furnished in sheets 36 x 36 inches and the following thicknesses are kept in stock:

List	Thickness of Raw Pressboard,	Approximate Finished Thickness,	Layers	Approximate Oz.	List Price per Lb.
No.	Inches	Inches	of Mica	per Sheet	per Lu.
1330	.007 to .008	.012	2	$14\frac{1}{2}$	\$1.83
1331	.012	.017	$^2$	18	1.56
1332	.015	.020	2	$21\frac{1}{4}$	1.44

#### NO. 29 FISH PAPER AND MICA

This material consists of fish paper faced on one side with two overlapping layers of India mica films and tissue paper. The fish paper employed is also known as Fyberoid, Tarpon Paper, Peerless Paper, etc.

This insulation is recommended when a material stronger than rope paper or pressboard is desired as a base for the mica films.

It is furnished in sheets 36 x 47 inches, and the following thicknesses are kept in stock:

List No.	Thickness of Raw Fish Paper, Inches	Approximate Finished Thickness, Inches	Layers of Mica	Approximate Lbs. per Sheet	List Price per Lb.
1350	.005	.010	2	1.2	\$2.13
1351	,007	.012	2	1.4	1.89
1352	.010	.015	2	1.6	1.71
1353	.015	.020	2	2.	1.60

#### INDIA AND AMBER MICANITE PLATE

#### NO. 22 INDIA MICANITE PLATE

#### For Commutator Segment Insulation

No. 22 India Micanite Plate is made of the same quality of India mica films and shellac that is used in the No. 2 Plate.

This plate differs from No. 2 only in that the variation of thickness is not confined to such close limits. In practice it gives admirable service for commutator bar insulation, but cannot be molded.

#### Stock Thicknesses of 18 x 36 Inch No. 22 Plate

	Approx.			List	1	Approx.			List
List	Thickness,	Approx. Lbs.	Aver. Punct.	Price	List	Thickness	Approx. Lbs.	Aver. Punct.	Price
No.	Inches	per Sheet	Voltage	per Lb.	No.	Inches	per Sheet	Voltage	per Lb.
1254	.010	. 567	9550	\$2.60	1262	.045	2.55	42975	\$2.19
1255	.015	.85	14325	2.60	1263	3 64	2.65	44695	2.19
1256	.020	1.13	19100	2.60	1264	,050	2.83	47750	2.19
1257	.025	1.41	23875	[-2.19]	1266	.060	3.4	57300	2.19
1258	.030	1.70	28650	2.19	1267	16	3.54	59685	2.19
1259	32	1.76	29800	-2.19	1270	3 2	5.3	89485	2.19
1260	.035	1.98	33425	-2.19	1271	1/8	7.05	119375	2.19
1261	.040	2.27	38200	-2.19	}	. •			

Sheets of special size or shape at slight increase over above prices.

#### NO. 3 AMBER MICANITE PLATE

#### For Commutator Segment Insulation

No. 3 Amber Micanite Plate is made of very thin films of Canadian amber mica cemented together with pure shellae and carefully surfaced to a uniform thickness. This plate is in every way identical with the No. 2 India Plate, except in the mica. This being Canadian an ber, the plate is softer and presents less liability of failure to wear down evenly with the copper. For commutators containing a larger number of bars, or where the insulation is thicker than  $\frac{1}{3}$ 2, or where copper bars and brushes are softer than those usually employed, we recommend the use of No. 3 Plate instead of No. 2.

This plate cannot be molded.

#### Stock Thicknesses of 18 x 36 Inch No. 3 Amber Plate

1272	,020	1.17	16600	\$4,00 [	1278	.045	2.64	37350	\$3.50
1273	.025	1.47	20750	3,50	1279	3 <u>-</u>	2.74	38845	3.50
1274	.030	1.76	24900	3,50	1280	.050	2.94	41500	3.50
1275	1 2	1.83	25895	3.50	1282	.060	3.52	49800	3.50
1276	.035	2.05	29050	3.50	1283	16	3.67	51875	3.50
1277	.040	2.35	33200	3.50					

No. 3 Plate in standard size  $18 \times 36$  inch sheets can be furnished of any special thickness at following prices:

.025 in. thick or over........\$3.50 per lb. .024 in. thick or under......\$4.00 per lb. Sheets of special size or shape at slight increase over above prices.

#### NO. 33 AMBER MICANITE PLATE For Commutator Segment Insulation

No. 33 Amber Mie<br/>anite Plate is made of the same quality of Canadian amber mica films and<br/>shellae that is used in the No. 3 Plate.

This plate differs from No. 3 only in that the variation in thickness is not confined to such close limits. In practice it gives admirable service for commutator work.

This plate cannot be molded.

#### Stock Thicknesses of 18 x 36 Inch No. 33 Amber Plate

1284 1285 1286 1287 1288	.020 $.025$ $.030$ $.035$	1.17 1.47 1.76 1.83 2.05	16600 20750 24900 25895 29050	\$3.35    129 3.57    129 3.57    129 3.57    129 3.57    129	$\begin{array}{ccc} 1 & \frac{3}{64} \\ 2 & .050 \\ 4 & .060 \end{array}$	2.64 2.74 2.94 3.52 3.67	37350 38845 41500 49800 51875	\$3.57 3.57 3.57 3.57 3.57
$\frac{1288}{1289}$	.035	$\substack{2.05 \\ 2.35}$	29050 33200	$\begin{bmatrix} 3.57 &    & 129 \\ 3.57 &    & \end{bmatrix}$	$\frac{1}{16}$	3.67	51875	3.57

No. 33 Plate in standard size  $18 \times 36$  inch sheets can be furnished of any special thickness at following prices:

.025 in. thick or over.........\$3.57 per lb. .024 in. thick or under.........\$3.35 per lb. Sheets of special size or shape at slight increase over above prices.

#### INSULATING MATERIAL

#### Untreated Papers, etc.

Mico express paper is manufactured for us to micrometer gauge, thereby insuring uniform thickness. Special care is taken in preparing and beating the paper stock, and in calendering the sheets to provide a strong tough paper.

							_	
strong	ς, tough paper.		Width		Approx. Size	Approx.	Lbs,——	List
List			of Roll	Approx. Lbs.	of Sheets	per 100		Price
No.	Material	Thickness	Inches	of Roll	Inches	Sq. Yds.	per Sheet	per Lb.
2619	Express	.003	36	120		15		\$0.34
2620	Express	.005	36	125		25		.34
2621	Express	,009	36	125		45		. 34

Mico red rope paper is manufactured from an all hemp stock, free from pin holes, and is guaranteed to contain no wood pulp. The coloring pigment is carefully selected and is free from deleterious matter.

2629	Red Rope	.005	36	100	27	\$0,42
2630	Red Rope	.010	36	100	47	.42
2631	Red Rope	.015	36	100	69	. 42

Mico cement rope paper is an uncolored, high finished hemp rope stock paper, especially recommended for strength and freedom from pin holes.

2635	Cement R	.005	36	100	19	\$0.42
2637	Cement R	.007	36	100	27	.42
2638	Cement R	.010	36	100	38	. 42
2640	Cement R	.015	36	100	57	.42

Mico fullerboard is a smooth, tough, dense, yellow insulating board, more pliable and not as hard as fiber, and a better insulator. It can be furnished in rolls in thicknesses up to .017 at slight increase in prices.

2650	Fullerboard	.008	32 x 36	\$0.30
2651	Fullerboard	.010	$32 \times 36$	,30
2652	Fullerboard	.012	32 x 36	.30
2653	Fullerboard	.015	32 x 36	.30
2654	Fullerboard	.017	32 x 36	.30
2655	Fullerboard	. 020	$32 \times 36$	.30
2656	Fullerboard	.032	32 x 36	.30

Mico fish paper is somewhat similar to hard fiber, but is a much better insulator and has greater flexibility. High temperatures do not affect it to the same extent as they do other insulating papers.

2670	Fish Paper	.005	46	25		28	\$1.00
2671	Fish Paper	.007	46	$^{25}$		38	1,00
2672	Fish Paper	.010	46	25		53	1.00
2673	Fish Paper	.015	46	25		88	1.00
2674	Fish Paper	.020			$36 \times 48$		1.00
2675	Fish Paper	.025			$36 \times 48$		1.00
2676	Fish Paper	$\frac{1}{3}^{1}$ 2			36 x 48		1.00

Mico hard fiber is a tough, dense, hard, bonelike insulator of considerable value where it can be used in dry positions.

2681	Hard Fiber	$\frac{1}{32}$	$36 \times 48$	2.7
2682	Hard Fiber	16	36 x 48	5.3
2683	Hard Fiber	3 2	$36 \times 48$	8
2684	Hard Fiber	1/8	36 x 48	10.5 Price
2685	Hard Fiber	3 16	36 x 48	16 on
2686	Hard Fiber	$\frac{1}{4}$	36 x 48	21 application
2787	Hard Fiber	3/8	36 x 48	31.5
2688	Hard Fiber	$\frac{1}{2}$	36 x 48	42.5
2689	Hard Fiber	5/8	36 x 48	52.5
2690	Hard Fiber	3/4	$36 \times 48$	65

Mico horn fiber is not chemically treated. It is more flexible than ordinary hard fiber; more ductile and better for slot insulation.

2692	Horn Fiber	.005	42	150	21	Price on application
2693	Horn Fiber	.010	42	150	50	
2694	Horn Fiber	.015	42	150	60	
2695	Horn Fiber	.020	42	150	100	
2696	Horn Fiber	.025	42	150	112	

Mico paraffin coated papers are valuable for slot insulation as the paraffin coating acts as a lubricant, as well as a protection from moisture.

2700	Express Express Fish Paper Fish Paper	.005	36	100	35	\$0,80
2701		.007	36	100	50	.80
2702		.005	46	100	32	1,70
2703		.007	46	100	44	1,70
2703	rish Paper	.007	40	100	4-1	1.70

Mico fiber tubes and rods are furnished in either red or black. Special prices on receipt of specification.

#### Western Electric

#### INSULATING MATERIAL

#### Untreated Cloths

Mico Irish linen is a very thin imported linen cloth of high finish, free from nap, and considering its thinness, of considerable strength.

UIIIIII	ss, or considerable strength.			Approxima	to
List		Approximate		Yards	100
No.	Material	Thickness	Width	per Roll	
2715	Irish linen	,004	<b>3</b> 6	80	Prices
N	lico cambric is a good grade of cotton cloth with the	well-known sm	ooth cambi	ric finish.	
2717	Cambric	.005	37	100	on
N	lico muslin is a soft finished thin cotton cloth.				
2720	Muslin	.007	37	100	Application
7	lico sheeting is an exceptionally strong, soft-finished	cotton cloth m	ade up wit	hout starch	١.
2723	Sheeting	.011	36	50	
Λ	lico linen is a good grade of imported heavy Irish lin-	en somewhat c	oarsely wo	ven, but of	considerable
tensile	e strength.				Priceson
2726	Linen	.012	35	40	Application
7	lico drill is a weight between sheeting and 8 ounce du	ck. It has gre	eat strength	, of soft fin	ish and with-
out st	arch filling.				
2730	Drilling	.017	29	120	Prices
Λ	lico 8 ounce duck is a strong light duck of superior of	quality.			on
2735	Duck	.020	36	120	Application
7	lico $12\frac{1}{2}$ ounce duck is an exceptionally strong, heavy	duck, useful f	or armatur	e work, etc	•
2738	12½ oz. duck	. 030	36	120	
P	rices on untreated cloths quoted on application.				

#### Mico Cement

Mico Cement is a special cement of high insulating value, water repellent, waterproof and flexible. This is a most satisfactory cement for sticking together oily, glossy surfaces such as that possessed by Linotape, Empire cloths and papers.

For pasting labels onto oily or damp surfaces it has no equal.

The "setting up" of Mico Cement is hastened by the application of heat, but its adhesive qualities are equally as good without it.

Mico Cement has such excellent and unusual qualities that if trouble is being experienced with any other cement of whatever nature, we would advise giving Mico Cement a trial. New fields are continually being found for its use

Mico Cement requires a special solvent, which we also supply when it is necessary to reduce the consistency of the cement.

List No.	Material	How Furnished	List Price per Gal.
3075	Mico Cement	1 qt. cans	\$4.80
3076	Mico Cement	1 gal. cans	4.20
3077	Mico Cement	5 gal. cans	3.60

# Mico Liquid Insulating Glue

This is a special glue made for gluing tape ends and for similar purposes. Will not attract moisture and does not require heat for setting.

3090	Mico glue	1 gal. cans	\$3.24
	Mico glue	5 gal. eans	

#### Western Electric

#### INSULATING MATERIAL

#### MICANITE TUBING

We furnish square, oval, hexagonal and other special shaped tubing of any size for special insulating requirements; large round tubing for induction coils, specially treated tubes or bushings for apparatus immersed in oil, special heat-proof bushings rolled without cement for spark plugs, gas engines, etc. Net prices quoted on receipt of specification.

Round Micanite Tubing is manufactured in various grades as follows:

#### ENTIRE MICANITE TUBING

This tubing is made entirely of Micanite with no paper whatsoever in its construction. It is recommended for high potential work; for apparatus subjected to sufficient heat to render paper objectionable. For sleeves for small commutators; brush holder studs, grid rheostat rods, etc.

A thin covering of paper is applied, when requested, on the outside of the tube to guard against the scaling of the mica when mica washers or metal parts are to be assembled on the tubes. Such covering is less

than 2 per cent. of the material.

#### MICANITE AND RICE PAPER TUBING

This tubing is composed of 85 per cent. Micanite and 15 per cent. paper and is used universally where high-grade insulation is required. The small amount of paper does not materially affect the insulating qualities of the tube. It effects a saving in the cost of manufacture, enabling us to offer this grade at a lower price than the entire Micanite Tubing.

#### ROUND MICANITE TUBING

List price per foot in lengths of one foot and over. Lengths under one foot special prices.

Inside Entire Micanite Tubes						Inside Micanite and Rice Paper Tubes					
Diam.	Thickness of Wall						Diam. Thickness of Wall				
Ins.	$\frac{1}{32}$ In.	$\frac{1}{16}$ In.	$\frac{3}{32}$ In.	1/8 In.	$\frac{3}{16}$ In	$\frac{1}{4}$ In.	Ins.	$\frac{1}{32}$ In.	$_{16}^{1}$ In.	$\frac{3}{32}$ In.	1/8 In.
1/8	\$0.23	\$0.28	\$0.36	\$0.49	80.70	\$1.03	1/8	\$0.18	80.23	\$0.29	\$0.38
16	.24	.32	.40	. 54	.81	1.13	3	. 19	.25	.32	,43
14	.18	.27	.36	.49	.76	1.13	14	. 14	.21	.28	.39
5 16	.18	.30	.41	.56	.86	1.24	16	. 15	.23	.32	.45
3/8	.19	.30	.41	. 56	.92	1.35	3 8	. 16	.23	.33	.47
7	.22	.31	. 45	.62	.97	1.40	7 16	. 16	.25	.37	.54
$\frac{7}{16}$ $\dots$ $\frac{7}{12}$ $\dots$	.22	.36	.51	.70	1.08	1.51	1/2	.18	.29	.43	.59
9 16	.24	.39	.54	.76	1.19	1.62	9	.19	.31	.43	.61
5/8	.24	.41	. 59	.81	1.24	1.78	58	.21	.32	.49	.67
11	.26	. 43	.63	.86	1.35	1.89	11	.23	.35	.52	.71
$\frac{11}{16}$ $\frac{3}{4}$	.27	.45	.70	.92	1.46	2.00	34	.24	.36	. 56	.76
13	.28	.46	.72	.97	1.51	2.11	13	.25	.37	. 59	.81
7/8	.30	.49	.76	1.03	1.62	2.27	78	.27	.37	.63	.86
15	.32	.50	.81	1.08	1.67	2.32	15	.28	.39	.65	.92
1	.36	.54	.88	1.19	1.78	2.48	1	.30	.45	.73	.99
	.37	.58	.93	1.24	1.94	2.59	1.4	.32	.49	.76	1.03
$1\frac{1}{16}\dots$ $1\frac{1}{8}\dots$	.39	.60	.97	1.30	2.00	2.70	11/8	. 33	.51	.81	1.08
$1\frac{3}{16}\dots$	.40	.65	1.02	1.35	2.05	2.86	1 1 5	.35	.54	.84	1.13
1 1/4	.41	.67	1.05	1.40	2.16	2.97	1 1 4	.38	. 56	.86	1.19
$1\frac{5}{16}$	. 43	.69	1.13	1.51	2.27	3.08	1,5,	.38	.58	.92	1.24
13/8	.45	.71	1.13	1.57	2.32	3.19	13 8	.41	. 59	.95	1.30
1 7	.45	.73	1.16	1.62	2.43	3.35	$1\frac{7}{16}$	.41	.63	.99	1.35
$1\frac{1}{2}$	.49	.79	1.24	1.67	2.54	3.46	1½	.45	.67	1.05	1.40
$1\frac{9}{16}$	.50	.81	1.30	1.73	2.59	3.56	1 9		.70	1.08	1.46
15%	.52	.83	1.35	1.78	2.70	3.67	15/8		.72	1.13	1.51
$1\frac{5}{8}$	. 54	.86	1.40	1.84	2.81	3.78	114		.73	1.19	1.57
134	.54	.88	1.46	1.89	2.86	3.89	13/4		.76	1.21	1.62
$1_{16}^{\frac{1}{3}}$	.56	.92	1.46	1.94	2.97	4.00	113		.79	1.24	1.62
1 1/8	.57	.95	1.51	2.00	3.08	4.10	1 <sup>3</sup> / <sub>4</sub>		.81	1.27	1.73
1 15	.59	.97	1.62	2.11	3.13	4.21	113		.83	1.30	1.73
2	.65	1.03	1.73	2.16	3.24	4.43	2		.86	1.38	1.81

Above list price applies only on orders of 50 feet and over of a size. For orders less than 50 feet but over 24 feet add 10 per cent, to list. For orders less than 24 feet add 20 per cent, to list.

#### MICANITE AND ASBESTOS TUBING

This tubing is composed of 60 per cent. Micanite and 40 per cent, of asbestos. It is intended for apparatus subjected to moderate heating where a lower priced tube than the Entire Micanite Tubing will answer the requirements. It is used on grid rheostats, resistance boxes, etc.

#### MICANITE AND ROPE PAPER TUBING

This tubing is composed of 60 per cent. Micanite and 40 per cent. paper. It is recommended for apparatus which is not subjected to enough heat to affect the paper and where the insulating requirements are fully met by a composite material of this kind. This grade has been adopted by many street railway companies for grid rheostat rods.

#### SPECIAL FEATURES FOR SOCKETS-All Makes



Extra Long Keys



Metal Keys



Sockets for Special Metal Keys



Pull Sockets with Extension Chain Guides

Sockets with Extra Long Keys

SCHEDULE "B"

The key sockets listed in this Bulletin have keys 78 inch long, but can be fitted with longer keys on special order, which must specify distance desired between outside of shell and end of key.

The following lengths are carried in stock:

1 inch, same price and standard package as regular. Sockets with 78 inch and 1 inch keys may be assorted to make up standard package quantity. Sockets with keys longer than 1 inch may not be assorted with sockets having  $\frac{7}{8}$  inch and 1 inch keys to make up standard package quantity.

1\frac{1}{4}, \frac{1}{2}, \frac{2}{2} \text{ and } \frac{2}{2}\frac{1}{2} \text{ inches, add to list price of Standard sockets, 11 cents; to Mfrs. List, 5 cents.

Standard package, 100 of one length. On orders for sockets with extra long keys, where the length is not

given, we furnish 11/2 inch. ‡Sockets with Metal Keys

We are prepared to fit to any key socket in this Bulletin a metal key as shown in illustration. This key is detachable, so that it may be given the same finish as the socket or fixture. The standard metal key measures 34 inch from the end to the shell. Longer keys will be furnished on special order.

Sockets with metal keys not longer than 1 inch, add to list price of Standard sockets 15 cents; to Mfrs.

List. 7 cents.

Sockets with metal keys longer than 1 inch, add to list price of Standard sockets 26 cents; to Mfrs.

Standard package, 100 of one length,

We are prepared to furnish sockets, as shown in the illustration, designed to receive a special key furnished by the fixture manufacturer, to match the fixture. The threaded metal part of the key mandrel is thoroughly insulated from the other parts of the socket. The screw is  $\frac{21}{64}$  inch diameter, 26 threads. Add to list price of Standardsockets, 15 cents; to Mfrs. List 7 cents. Standard package, 100.

Pull Sockets with Extension Chain Guides

Pull sockets installed in husks or socket covers require extension chain guides to carry the chain free of cover and shade. The chain guide is not attached to the socket shell but to the socket mechanism. It is detachable and separable and can be removed for refinishing. By carrying a stock of various lengths of guides, it is possible to convert standard sockets into sockets with extension guides, making it unnecessary to carry a stock of completed sockets with various lengths of chain guides attached. The hole in the husk need not be more than  $\frac{1}{16}$  inch. The portion of the extension chain guide which is attached to socket extends less than  $\frac{1}{16}$  inch outside of socket shell, making it possible to insert the socket in any husk, no matter how closely it follows the outline of shell. Extension chain guides of following lengths furnished from stock: 3\cdot, 3\cdot, 11\cdot and 11\cdot inches. Additional list price either assembled on sockets or loose, 26 cents; to Mfrs. List, 12 cents. Standard package quantity, 50 of one length or 100 of assorted lengths. Sockets with extension chain guides may not be combined with sockets having regular chain guides to make up a standard package quantity

Pull Sockets with Chains of Special Lengths

The standard length of chain on all pull sockets, except miniature and candelabra is 8 inches. Sockets with chains shorter than 8 inches will be billed at the same price as regular. For sockets with chains longer than 8 inches, add to list price per foot, 22 cents; to Mfrs. List, 10 cents. For special finishes on chains longer than 8 inches, add to list price per foot 4 cents; to Mfrs. List, 2 cents.

Pull Sockets with Silk Cord

Pull sockets can be furnished with silk cord in any desired color instead of chain. For sockets with cords not longer than 8 inches, add to list price 11 cents; to Mfrs. List, 5 cents.

For sockets with cords longer than 8 inches, add to list price per foot, 33 cents; to Mfrs. List, 15 cents.

Pull Sockets with Linen Cord

Pull sockets can be furnished with a short chain and 3 feet of linen cord, complete with ball, similar to that regularly furnished with pull switch rosettes without extra charge. For cords longer than 3 feet, add to list price per foot, .022 cents; to Mfrs. List, 1 cent.

† Pull Sockets with Insulated Chain

Pull sockets can be furnished with insulated chain accomplished by inserting a piece of fiber rod in the chain about 2 inches below the chain guide. For sockets so equipped add to the list price, 33 cents; to Mfrs. List, 15 cents. The standard package quantity will be the same as for the Standard socket in

connection with which the insulated chain is ordered.

<sup>‡</sup>National Electrical Code Standard.



Pull Socket with Insulated Chain

Mfrs.

List

.025

.06

06

\$0.05

W. E.

List

7.50per Car 22.50per Car 22.50per Car

9.00 per Car

\$0.11 each

Price

Pkg. Wt.

Oz.

Std.

Pkg.

1000 ft.

# SPECIAL FEATURES FOR SOCKETS-Continued

\*Description

Pull Socket Chain and Parts

Carton

Quantity



List

No.







No. 513









Socket Cap with Special Bushing

or our information

Bead chain (per foot)..... Splicing link 510 200 14 12 200 Snap-lock ball... Snap-lock ball for Candelabra Chain... 512 250 250 250 250 Insulating link .... 513 100 6 Standard finish on the above is brush or old brass, which will be supplied when no other finish is specified. All other finishes will be special and will be charged extra as follows: Chain, \$0.04 list per foot; Mfrs. List \$0.02; balls and links, \$0.04 each list. Mfrs. List \$0.02.

All New Wrinkle and Wrinklet Pull Sockets are supplied with the No. 512 Ball listed above. It may be detached and attached with the utmost case, when necessary, but cannot be detached by any strain to which it will be subjected in service, no matter how severe.

Chain Guides

The Standard chain guide, when sold separately from the socket, will list at \$0.11. Mfrs. List \$0.05. Standard package, 250. Extension chain guides described on the opposite page, when sold separately, will list at \$0.26. Mfrs. List \$0.12. Standard package, 50 of one length or 100 of assorted lengths. For special finishes on chain guides, add to list price \$0.04. Mfrs. List \$0.02.

\*Sockets for Gas Filled Lamps
Sockets for gas filled lamps must be waxed with a compound which will not soften under heat.

Sockets for gas lined tamps must be waked with a compound which with not soften under neat. The Mogul base sockets listed are regularly so made. For medium base sockets to be used with gas filled lamps, add to list price \$0.07. Mfrs. List \$0.03.

All Mogul base sockets and most medium base sockets listed in this Bulletin can be equipped with a lamp grip, which effectually prevents the lamp from accidentally unscrewing. For sockets so equipped, add to list price \$0.11. Mfrs. List \$0.05.

Socket Caps with Special Bushings

Most caps of brass shell sockets can be furnished with insulated bushing, as illustrated. The purpose of this construction is to provide a passage for the conductors when the support for the socket is a rod instead of a pipe or tube. For sockets so equipped, add to list price \$0.04 Mfrs. List \$0.02. Sockets and Receptacles in Special Finishes

It is of great advantage to the electrical trade to be able to obtain on short notice sockets in various special finishes.

special Bushing

To nicet the demand for this class of goods we are now carrying in stock sockets in special finishes for which there is a large demand, such as polished brass, oxidized copper, polished nickel, etc.

In placing orders for special finishes which are not standardized, we suggest the submitting, at the same time, of a sample

LIST OF SPECIAL FINISHES

The standard finish of all brass shell sockets is brush brass, which will be supplied where no finish is specified.

Regular and special finishes of one List No. may be assorted to make up standard package quantity which will be the same as though all were regular finish.

List prices for devices bought knocked down will be as follows:

For caps and bases, one half the list given in column A. For bodies, deduct from lists in columns A, B, C or D, one half the list for the same finish in column A.

B
D

the libe for the same mine	m in corumn	Λ.		В				D
				Keyless	(		Pull Soc	kets and
T11 1 1	Key and			and Wall	Pull Soc	kets and	Pull We	Il Sockets
Finish	Socket	s and	Sockets w	ith Shade-	Pull Wa	Sockets	with Sha	de-Holder
	Wall S	ockets	Holder 1	Attached	Add t	o List		ched
	Add to	o I.ist	Add t	o List		0 11100	1.1.1.1	to List
	W. E. List	Mfrs. List	W. E. List	Mfrs. List	W. E. List	Mfrs. List		
Barff, bauer	\$0.04	\$0.02	\$0.09					Mfrs. List
Brass, antique	.09			\$0.04	\$0.07	\$0.03	\$0.11	\$0.05
Danco book	.09	.01	.13	.06	. 22	. 10	. 26	.12
Brass, brush	No advance	Noadvance	No advance	No advance	Noadvaned	No advance	No advance	No advince
Brass, Flemish	.00	. \/ X	. 13	, 00	.22	. 10	. 26	. 12
Brass, lemon	. 09	.04	. 13	.06	. 22	. 10	. 26	
Brass, old	No advance	No advance	No advance	Noadvance	No advance	No advance	No advance	· No advance
Brass, oxidized								
Brass, polished	Noadvance	No advance	No advance	No advance	No advance	No advance	Nondvana	No odunno
Bronze, acid		. 06	, 17	.08	. 22	.10	.26	. 12
Bronze, antique	.13*	.06	.17*	.08	. 22	.10	.26	. 12
Bronze, English	.13*	.06	.17*	. 08	. 22	. 10	.26	
Bronze, gold	.13*	. 06	.17*	.08	.22	. 10	.26	. 12
Bronze, hardware	.13*	.06	.17*	.08	.22	.10	.26	. 12
Bronze, Japanese	.13*	.06	.17*	.08	. 22	.10	. 26	.12
Bronze, old English	.13*	.06	.17*	.08	.22	.10		.12
Bronze, polished	.13*	,06	.17*	.08	. 22	.10	.26	. 12
Bronze, Pompeiian	.13*	.06	.17*	.08	.33	.15	. 26	. 12
Bronze, statuary	. 09	.01	.13	.06	. 22	.10	.37	. 17
Copper, acid	.09	. ()-4	.13	.06	.22	.10	. 26	. 12
Copper, antique	.09	.04	.13	.06	. 22	.10	. 26	.12
Copper, mettled	.09	.04	.13	.06	. 22		. 26	.12
Copper, old	.09	.04	.13	.06	. 22	. 10	. 26	.12
Copper, oxidized	.09	.04	.13	.06	.13		. 26	. 12
Copper, polished	.09	,04	.13	.06	. 22	.06	.17	.08
Enamel, white	.13*	.06	.17*	.08	. 22	. 10	. 26	.12
Gilt, burnished	.13*	.06	.17*	.08	. 22	. 10	. 26	.12
Gilt, Etruscan	.13*	.06	.17*	.08	. 22	. 10	, 26	.12
Gilt, Ormolu	.13*	.06	.17*	.08	. 22	. 10	. 26	.12
Gilt, polished	.04	.02	.09	.04	.07	. 10	.26	. 12
Gilt, rich	.04	.02	.09	.04	.07	.03	.11	. 05
Gold, Roman	.13*	.06	.17*	.08	.33	.03	. <u>11</u>	.05
Gold, satin	.09*	.04	17*	.08		. 15	.37	. 17
Gun metal	.13*	.06	.17*	.08	.33	. 15	. 37	.17
Iron, wrought	.13	.06	.09		. 33	. 15	.37	. 17
Nickel, brush	.13*	.06	.17*	.04	. 07	.03	.11	.05
Nickel, polished	.09	.01	.13	.08	. 22	. 10	. 26	. 12
Sand blast, any	.13*	.06	.17*	.06	. 13	.06	. 17	.08
Silver, butler's	.13*	.06	.17*	.08	. 33	. 15	. 37	. 17
Silver, ground	.13*	.06	.17*	.08	. 33	. 15	.37	. 17
Silver, oxidized	.13*	.06	.17*	.08	. 33	. 15	.37	. 17
Silver, polished	.13*	.06		.08	. 33	. 15	.37	. 17
Steel, polished	.13*	.06	.17* .17*	.08	.33	. 15	. 37	. 17
Verde-antique	.13*	.06		.08	. 22	. 10	. 26	. 12
			.17*	.08	. 33	. 15	.37	.17
*When ordered in lo	its of 500 of a	one List No.	and one fini	sh this list w	vill be reduce	~l @0.04		

When ordered in lots of 500 of one List No. and one finish, this list will be reduced \$0.04.







No. 32



No. 10, 11 and 12



No. 31



No. 14

#### New Wrinkle Sockets

#### Schedule "B"

List No.		Std. Pkg.	Carton	Mfrs. List Price Each	W. E. List Price per Carton
13	Keyless socket, 660 watts, 250 volts	500	${25}$	\$0.23	\$12.50
32	Keyless socket, with Spartan outlet, each outlet, 660 watts, 250				,
	volts	100	10	.48	10.60
10	S. P. key socket, 250 watts, 250 volts,	500	25	.26	14.50
11	D. P. key socket, 250 watts, 250 volts	500	25	.26	14.50
12	Q. T. key socket, 660 watts, 250 volts	500	25	.29	16.00
31	O. T. key socket, with Spartan outlet, each outlet 660 watts,	1			ļ
	250 volts	100	10	.51	11.20
14	Turn socket, 250 watts, 250 volts	100	25	.53	24.50



No. 15 and 35



No. 33



No. 16 and 17



No. 29

# New Wrinkle Sockets and Receptacles

#### Schedule "B"

List No.		Std. Pkg.	Carton	Schedule	Mfrs. List Price Each	W. E. List Price per Carton
15	Pull socket, 250 watts, 250 volts	250	25	13	\$0.53	\$29.00
35	High cap, pull socket, 660 watts, 250 volts	250	25	B	. 59	42.50
33	Pull socket with Spartan outlet, socket outlet 250					
	watts 250 volts, Spartan outlet 660 watts 250 volts.	100	10	В	.78	17.20
16	Twin pull socket, 250 watts, 250 volts (Both outlets)			1 1		
	operate on and off simultaneously)	20	10	B	1.08	19.80
17	Twin pull socket, 250 watts, 250 volts (bottom outlet),					
	660 watts, 250 volts (side outlet). Side outlet on all					
	the time. Top outlet, on and off	20	10	B	1.08	19.80
29	Spartan plug receptacle, 10 amperes, 250 volts	20	10	H	.38	6.46



No. 18



No. 19



No. 22



No. 24



No. 23

#### New Wrinkle Switches

#### Schedule "H"

List No.		Std. Pkg.	Carton		W.E.List Price per Carton
18	Key wall switch, 3 amperes, 125 volts, 1 ampere, 250 volts	50	10	80.26	\$4.80
19	Pull wall switch, 3 amperes, 125 volts, 1 ampere, 250 volts	50	10	. 53	9.80
22	Key candle switch, 3 amperes, 125 volts, 1 ampere, 250 volts	50	10	.26	4.80
24	Pull candle switch, 2 amperes, 125 volts, 1 ampere, 250 volts	50	10	.53	9.80
23	Turn candle switch, 3 ampere, 125 volts, 1 ampere, 250 volts	30	10	.68	12.60





No. 25









## New Wrinkle Rosettes and Switches

#### Schedule "H"

List		Std.	a .		W.E.List
No.		Pkg.	Carton	Price	Price per
		1 1.6.		Each	Carton
26	Rosette, 3 amperes, 250 volts	20	10	\$0.26	\$4.80
25	Pull switch rosette, 3 amperes, 125 volts, 1 ampere, 250 volts	50	10	1.06	19.60
20	S.P. pull ceiling switch, 3 amperes, 125 volts, 1 ampere, 250 volts.	50	10	1.06	19.60
27	Electrolier pull ceiling switch, 3 amperes, 125 volts; 1 ampere, 250				
	volts: operating 1-2-1 and 2 off	50	10	1.66	30.60
21	S.P. pull fixture switch, 3 amperes, 125 volts, 1 ampere, 250 volts.	50	10	1.36	25.00
28	Electrolier pull fixture switch, 3 amperes, 125 volts, 1 ampere, 250	]		1	
	volts; operating 1, 2, 1 and 2 off	50	10	1.96	36.00

## PARTS OF SOCKETS

#### Schedule "B"

	Mogul	Med. Cand.	Mogul		Med.Cand.	Med. Cand.
Description	Std.	Miniature	Mfrs.	Mogul	Miniature	Miniature
	Pkg.	Std. Pkg.	List	W.E. List	Mfrs. List	W. E. List
Shells, key, without lining		250			\$0.0712	\$0.17
Shells, keyless, without lining	50	250	\$0.45	\$1.00	$07\frac{1}{2}$	.17
Shells, pull, without linings		250			$.07\frac{1}{2}$	.17
Caps, \(\frac{1}{8}\) inch, without linings		250			.061/2	.15
Caps, ¼ inch, without linings		250			.151/2	.34
Caps, 3\'\exists inch, without linings	50	250	.63	1.38	.1212	.27
Caps, pendent, without linings		250			$06\frac{1}{2}$	.15
Linings, shell, all kinds	50	250	.09	. 20	.021/2	.06
Linings, eap, all sizes	50	250	.02	. 05	$.00\frac{1}{2}$	.01
Interiors, key and push		250			.16	.36
Interiors, key "Q. T." (660 watts)		250			. 19	.42
Interiors, keyless	50	250	.31	. 68	.13	.28
Interiors, pull, 250 watts, without chain or guide		250			.30	. 66
Interiors, pull, 250 watts, with chain, ball and guide		250			. 43	.94



			T	he N	lew W	rink	le Caps		S	chedu	le ''B''
				Mfrs.	W. E.		-			Mfrs.	
List		Std.		List	List per	List		Std.			List per
No.		Pkg.	Carton	ı Each	Carton	No.		Pkg.	Carton	Each	Carton
AA	½ in. cap	500	25	\$0.07	\$4.00	AE	$^{1}$ s in, male cap.	100	25	\$0.07	\$3.00
AB	½ in, cap	100	25	.16	7.50	$\Lambda F$	$\frac{1}{4}$ in, male cap.	50	25	. 16	7.50
AC	3/8 in. cap	250	$\overline{25}$	.13	7.00	AG	3 s in, male cap.	100	25	. 16	7.50
AD	½ in. cap		$\frac{25}{25}$	.19	8.50	AH	13 in, male cap.	50	25	. 22	10.00
AD	72 m. oap	0.,		,		AT	Pendent cap	500	25	.07	4.00

















WF

0. 11.11

The New Wrinkle Caps

List No.		Std. Pkg.	Carton		W.E. List per Carton			Std. Pkg.	Carton		List per Carton
AM AN AP	$\frac{1}{4}$ in. angle cap $\frac{1}{4}$ in. angle cap $\frac{3}{8}$ in. angle cap	100 50 50		$\frac{\$0.12}{.21}$	\$5.50 9.50 8.50	AS.	14 in, angle fixture cap 18 in, fixture cap. 14 in, fixture cap.	$\frac{50}{100}$	25 25 25	\$0.21 .13 .16	\$9.50 6.00 7.50
AR	1/8 in angle fix-		25	.18	8.50	ĀÜ	Strain relief cap	500	25	.07	4.00





No. AX









Mifee

New Wrinkle Plug and Bases

			Screw			Mfrs.	W.E
List		Outside	Holes	Std.	Carton	List	List per
No.		Diam.	Spaced	Pkg.		Each	Carton
$\frac{N_0}{\Lambda V}$	Attachment plug			50	10	\$0.27	\$5.00
XX	Slotted base	$2\frac{1}{16}$	11/8	100	10	.18	4.00
ΑΥ	Small concealed base		118	250	10	.18	4.00
ΛZ	Large concealed base	27%	2 5	100	10	.23	5.00
BA	Angle concealed base			100	10	.23	5.00
1117	Cleat base		$2\frac{5}{32}$	250	10	.23	5.00







No. BC



No. BW



No. BB

#### New Wrinkle Bases

List No.		Holes Spaced	Std. Pkg.	Carton	List Each	List per Carton
BY BC BX BW BB	Cleat base with covered connections.  Base for ½ in, condulets.  Base for ¾ in, condulets.  Base for ½ and ¾ in, taplets.  Wood molding base.	$\frac{1}{2\frac{9}{32}}$	100 100 100 100 100	5 10 10 10 10	\$0.36 .23 .23 .23 .18	\$4.00 5.00 5.00 5.00 4.00







No. BE



No. BR



No. BS

#### New Wrinkle Bases

Sc	hed	1	0	Б
	neu	uл	e	D

List No.		Outside Diam. Base	Screw Holes Spaced	Std. Pkg.	Carton	Mfrs. List Price Each	W. E. List Price per Carton
BD BE BR BS	One-way National base. Two-way National base. Concealed rosette base. Cleat rosette base.	27%	15/8 15/8	100 100 50 50	10 10 10 10	\$0.18 .18 .49 .49	\$4.00 4.00 9.00 9.00







No. BU



No. BV

					1.0.		
List No.		Outside Diam. Base	Screw Holes Spaced	Std. Pkg.	Carton	Mfrs. List Price Each	W. E. List Price per Carton
BT BU BV	2 wire molding rosette base 3 wire molding rosette base Combination rosette base		15 8 25 8 15 8	50 50 50	10 10 10	\$0.49 .49 .49	\$9.00 9.00 9.00



No. BZ



No. BH



No. BK



						1101 171	•
List No.		Outside Diam. Base	Screw Holes Spaced	Std. Pkg.	('arton	Mfrs. List Price Each	W. E. List Price per Carton
BZ	Canopy top.			20	10	80.22	\$4.00
304	Ring for attaching BZ to 3½ inch boxes			20	10	.05	
305	Ring for attaching BZ to 4 inch boxes				511		1.00
BH	Small commed by	1 372 1		20	10	.05	1.00
	Small covered base	$\frac{9}{16}$	134	250	10	.28	6.20
BK	Large covered base	3 3	2	100	10	.37	8.20
BL	34 inch box base	35%	2 and 237				
	/#	0.8	± amu ± ′′4	100	10	.37	8 20







No. BN



No. RP

					140. 1	),F	
List No.		Outside Diam. Base	Screw Holes Spaced	Std. Pkg.	Carton	Mfrs. List Price Each	W. E. List Price per Carton
$_{ m BN}^{ m BM}$	4 inch box base		234 and 314	100 50		\$0.67	\$7.40
$\overline{\mathrm{BP}}$	4 inch pancake base			50	5	.77	8.60 8.50

National Electric Code Standard, except BE, BT, BW, and BV.

## "NEW WRINKLE" SOCKETS

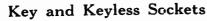






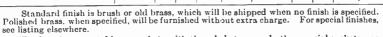
No. 13 660 Watts, 250 Volts

# TA CAP



Schedule "B"

A-B CAP			SP K	ey S	ocket	į.		Keyl	ess S	ocket		ATCAP
	Description	1	-			W. E.		ı_ l			W. E.	U
ACCAP	- •	List No.			List Com-	List	List No.	Car-	Pkg.	List Com-	List per	A-G CAP
3		1.0.			plete	Carton				plete	Carton	
-	Body, without cap or base.	10			\$0.26	314.30	13			\$0.23	\$12.65 16.50	(100000)
A-D CAP	With 1/8 in. cap	AA-10 AB-10		$\frac{500}{250}$	.33	18.15 23.10	AA-13 AB-13		500 250	.39		AHCAP
$\succeq$	With % in. cap	AC-10	25	250	.39	21.45	AC-13	25	250	. 36	19.80	
	‡With ½ in. cap	AD-10 AE-10		250 500	. 45	$\frac{24.75}{18.15}$			250 500	.42		
4277075	With 1/8 in. male cap	AF-10	25	250	.42	23.10	AF-13	25	250	. 39	21.45	A-H (AP
The same of the sa	With 3/8 in. male cap	AG-10		250	.42	23.10			$\frac{250}{250}$	.39		
	With 1/2 in. male cap	AH-10 AK-10		250 250	.48	$\frac{26.40}{21.45}$		25	250 250	.36		
0110113	With 14 in. fixture cap	AL-10	25	250	. 42	23.10	AL-13	25	250	.39	21.45	CCCCC
AN CAP	With 1/8 in. angle cap	AM-10	25 25	100	.38	$\frac{17.48}{21.62}$		25 25	100 100	.35		A-LCAP
	With 1/4 in. angle cap	AN-10 AP-10		100	.44	20.24	AP-13	25	100	.41	18.86	
	With 18 in. angle fixture cap	AR-10	25	100	.47	21.62	AR-13	25	100	.41		
AP (AP	With 1/4 in. angle fixture cap	AS-10 AT-10		100 500	.47	$\frac{21.62}{18.15}$		25 25	100 500	.44		ARCAP
911	tWith pendant cap	AU-10	25	500	.33	18.15	AU-13	25	500	.30	16.50	
<b>U</b>	With attachment plug	AV-10	10	50 250	.53	$\frac{9.75}{10.78}$		10	50 250	.50		_
000000	tWith cleat base	AW-10 AX-10	10	250	.49	9.68		10	250	41	9.02	000000
ATT CASE	With small concealed base.	AY-10	10	250	.44	9.68	AY-13	10	250	.41	9.02	
_	tWith large concealed base.	AZ-10† BA-10	10	$\frac{250}{100}$	.49			10	250 100	.46		
gnnngp	With base for % and ½ in.		1					1	1	1		GOODDO
AUCAP	condulets	BC-10	10	250	.49	ι0.78	BC-13	10	250	.46	10.12	AVPLUG
	‡With base for ¾ in. con- dulets	BX-10	10	250	.49	10.78	BX-13	10	250	.46	10.12	
20000	With base for 1/2 and 1/4 in.			1				1,0	050	1 40	10.19	-
A-X BASE	tapletstWith wood molding base	BW-10 BB-10	10	250 250	.49	$10.78 \\ 9.68$		10	250 250	.46		CODURED.
(A A)	With one way National	DD-10		1				1	1	1 .	l	
	base	BD-10	10	250	.44	9.68	BD-13	10	250	.41	9.02	AW BASE
G307330	‡With two way National	BE-10	10	250	.44	9.68	BE-13	10	250	.41	9.02	
	‡With small covered base	BH-10	10	250	. 54			10	250	.51	11.22	B-C BASE
A Y BASE	With large covered base	BK-10 BL-10		100	.63			10	100	.60		
	With 4 is ox base	BM-10	Ī	100	.93	2,04	BM-13	1	100	.90	1.98	[Zel
PERMEN	With 31/4 in. pancake base.	BN-10	5	100	.73			5	100	1.00		THE OWNER OF THE OWNER OWNER OF THE OWNER
0	With 4 in, pancake base With concealed rosette base	BP-10 BR-10	10	100	1.03			10	50	72	13.25	8-X BASE
A Z BASE	†With cleat rosette base	BS-10 <sup>s</sup>		100	.75			* 10	50	.75		1 (200)
2000	With 2 wire molding	B <b>T-</b> 10	10	100	.75	16.50	BT-13	10	50	.72	13.25	Geonne.
100000	with 3 wire molding	131-10	10	100		10.00	1		100	1		-
B-A BASE	rosette base	BU-10	10	100	.75	16.50	BU-13	10	50	.75	2 13.25	
	With combination rosette	BV-10	10	100	.75	16.50	BV-13	10	50	.72	13.25	Linear
6000000	With cleat base covered				1	1		1			1	Shone
	connections	BY-10 BZ-10	10	50	.68			10	50	.6		BBBS
B-H BASE	With canopy tap base	172-10	10	~0	.04	8.99	. 52-10	1.0	"	.0	7.20	



For long keys, metal keys, sockets with threaded stems and other special sockets, see listing elsewhere.

\*Approved rating 2 amperes, 125 volts.

†This base is suitable for attachment to No. 500 Adaptiboxes.

\*National Electrical Code Standard.



B-K BASE













8-D BASE

BE BASE

# NEW "WRINKLE" SOCKETS



Keyless Socket with Spartan Outlet. Each Outlet

Description

without cap or base

\*Body, without cap or base.

\*With ½ in. cap.

\*With ½ in. male cap.

\*With ½ in. male cap.

\*With ½ in. male cap.

\*With ½ in. male cap.

\*With ½ in. male cap.

\*With ½ in. fixture cap.

\*With ¼ in. fixture cap.

\*With ¼ in. angle fixture cap.

\*With strain relief cap.

\*With strain relief cap.

\*With attachment plug.

\*With attachment plug. .

Awith attachment prog.
Awith cleat base.
With slotted base.
With small concealed base.
Awith large concealed base.
With angle concealed base.
With base for % and ½ in.

With base for 1/2 and 3/4 in.

\*With one-way national base

With two-way national base With small covered base.

Awith large covered base...
Awith 3½ in. box base...
With 4 in. box base...
With 3½ in. pancake base...
With concealed rosette base

With cleat rosette base.... With 2 wire moulding ro-

With combination rosette base.... With cleat base, covered

connections.....

\*With large covered base. .

dulets

sette base

8



No. 31. O. T. Key Socket with Spartan Outlet. Each Outlet 660 Watts, 250 Volts

Car-Std

ton Pkg. plete

10 100

10 50

10

10

10

10 50

10 50 50

10

10

10 50

10

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10

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5 50 50

50

50

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50

50

50 50

50

50

50 10

50

20

List

No.

AB-31 AC-31

AD-31

AE-31 AF-31

AG-31

AH-31 AK-31

AR-31 AM-31 AN-31 AP-31 AR-31

AS-31

AT-31 AU-31 AV-31 AW-31

AX-31 AY-31 AZ-31

BA-31

BC-31

BX-31

BW-31

BB-31

BD-31 BE-31

BH-31

BK-31 BL-31

BM-31 BN-31 BP-31

BR-31

BS-31\*

BT-31

BU-31

BV-31

BZ-31

31 10 14161



# Key and Keyless Sockets Schedule "B"



Mfrs. W. E.

plete Carton

\$0.48 \$10.50

.50  $\frac{11.00}{11.78}$ 

.61 11.22

.67  $\frac{12.33}{10.12}$ 

.64

.64 .70

.61  $\frac{11.22}{11.78}$ 

64

. 60 11.04

.69  $\frac{12.70}{12.14}$ 

. 66 . 69

. 55 . 75 . 71

66  $\frac{12.14}{12.14}$ 

66

 $.71 \\ .71$ 

.71

.71

66 12.14 12.14 12.14

.66

66

.95 10.45

25

.97

.97

.97

.97

.97 17.85

.70

List List

per

11.78 11.78 11.78 12.88

 $\frac{12.70}{10.12}$ 

10.12

13 80

13.06

13.06

13.06

13.06

13.06

13.98

 $\frac{15.64}{9.35}$ 

17.85 17.85

17.85

17.85

. 53

14

Spartan Outlet

Std. Pkg. Com

100

50

50

50

50

50 10

50

50

50

50

50

Car-

ton

10 100

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10 50

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10 50 50

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10 50

10 50

10 50

10 50

10 50

10 50

10 50

5 50 50 .85 1.15

5

1ô

10

10 50

10 50

10 20

List

No.

32 AA-32 AB-32

AC-32 AD-32

AE-32 AF-32 AG-33

AH-32

AK-32

AL-32

AM-32 AN-32

AP-32

AR-32

AS-32

AT-32 AU-32

A V-32 A W-32

A W -32 A X -32 A Y -32 AZ -32†

BA-32

BC-32

BX-32

BW-32

BB-32

BD-32

BE-32 BH-32

BK-32

BL-32 BM-32

BN-32 BP-32

BR-32

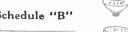
BT-32

BU-32

BV-32

BZ-32

BS-32\* 10 50



W. E. List

'arton

 $\frac{11.78}{12.88}$ 

12.70 12.70 13.25

10.67

10.67

13.62 12.70 12.70 13.62

13.62

13.62

13.62

13.62 12.70 12.70 12.70 14.54

16.19 21.71

10.88

11.00

1.10

18.40

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2 82

33

per

Com

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. 67 . 64  $\hat{1}\hat{2}.33$ 

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7313.43

.64 11 12

67

. 63  $\frac{11.59}{13.25}$ 

.72

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 $\frac{.72}{.58}$ 

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1.00 50





\*Body,





















					,	,		7
Standard finish is brush Polished brass, when specified see listing elsewhere.	or old brass. l, will be furn	which wi	ll be s hout e	hipped w	hen no	finish or spec	is spec	ified. shes,
For long keys, metal key	s, sockets w	ith thread	led st	ems and	other s	pecial :	sockets	s, see

listing elsewhere.

\*Approved rating, 2 amperes, 125 volts total load,
†This base is suitable for attachment to No. 500 Adaptiboxes.

\*National Electrical Code Standard.

C00000



































4200020 D-1 BASE





























66 360

B D BASE











# Western Electric

# NEW "WRINKLE" SOCKETS



High Capacity Pull Socket, 660 Watts, 250 Volts



Pull Socket with Spartan Outlet Socket Outlet, 250 Watts, 250 Volts Spartan Outlet, 660 Watts, 250 Volts







ARCAP		High Ca	ıpaci	ty Pı	ıll Soci	kets	Wi		l Soc	ket i Outle	et
ACCAP	Description	List No.		Std. Pkg.	List Com-	W. E. List per Carton	List No.			Mfrs. List Com-	
ADCAP	*Body, without eap or base.  *With 1/4 in. cap  *With 1/4 in. cap	35 AA-35 AB-35	25 25 25	250 250 100	\$0.59 .66 .75	\$32.45 36.30 34.50	33 AA-33 AB-33	10 10 10	100 100 50	.85	\$17.16 18.70 17.30
AMCAP	*With 36 in. cap.  *With 12 in. cap.  *With 14 in. male cap.  *With 14 in. male cap.  *With 36 in. male cap.	AC-35 AD-35 AE-35 AF-35 AG-35	25 25 25 25 25 25	100 50 250 100 100	.72 .78 .66 .75	35.88 36.30 34.50	AC-33 AD-33 AE-33 AF-33 AG-33	10 10 10 10 10	50 50 50 50 25	.91 .97 .85 .94	17.85 15.64 17.30
AN (AP	*With ½ in. male cap  *With ½ in. fixture cap  *With ¼ in. fixture cap  *With ½ in. angle cap	AH-35 AK-35 AL-35 AM-35	25 25 25 25	50 100 100 50	.81 .72 .75	37 26 33.12 34.50 32.66	AH-33 AK-33 AL-33 AM-33	10 10 10 10	50 50 50 50	1.00 .91 .94	18.40 16.74 17.30 16.56
AP (AP	*With 1/4 in. angle cap  *With 3/4 in. angle cap  *With 1/4 in. angle fixture cap  *With 1/4 in. angle fixture cap  *With pendent cap	AS-35 AT-35	25 25 25 25 25 25	50 50 50 50 250	.30 .77 .77 .30	35.42 35.42 36.80 36.30	AN-33 AP-33 AR-33 AS-33 AT-33	10 10 10 10 10	50 50 50 50 50 50	.90 .96 .99	18,22 17,66 17,66 18,22 15,64
ATCAP	*With strain relief cap  *With attachment plug  *With cleat base  *With slotted base  *With small concealed base.	AU-35 AV-35 AW-35 AX-35 AY-35	25 10 10 10 10	250 50 100 100 100	.66 .86 .82 .77	15.82	AU-33 AV-33 AW-33 AX-33 AY-33	10 10 10 10 10	50 50 50 50 50	1.05 1.01 .90	
A-U CAP	*With large concealed base.  *With angle concealed base.  *With base for 3% and ½ in.	AZ-35† BA-35	10 10	100 50	.82 .82	18.04 15.09	AZ-331 BA-33	10	50 50	1.01 1.01	18.58 18.58
CC1012	aWith base for ¼ in. condulets	BC-35 BX-35	10	100	.82	18.04 18.04	BC-33 BX-33	10	50	1.01	18.58
A x BASE	*With base for ½ and ¾ in. taplets.	BW-35	10	100	.82		BW-33	10	50	1.01	
	*With wood moulding base.  *With one-way national base  *With two-way national base	BB-35 BD-35 BE-35	10 10 10	100 100 100	.77 .77 .77	16.94 16.94 16.94	BB-33 BD-33 BE-33	10 10 10	50 50 50	.96 .96 .96	17.66 17.66 17.66
A Y BASE	With small covered base With large covered base With 3½ in. box base With 4 in. box base	BH-35 BK-35 BL-35 BM-35	10 10 5 1	100 50 50 50	.87 .96 .96		BH-33 BK-33 BL-33 BM-33	10 10 5 1	50 50 50 50	$\begin{bmatrix} 1.06 \\ 1.15 \\ 1.15 \\ 1.45 \end{bmatrix}$	21.16
A Z BASE	AWith 314 in. pancake base With 4 in. pancake base With concealed rosette base With cleat rosette base	BN-35 BP-35 BR-35 BS-35*	5 1 10 10	50 50 20 20	1.06 1.36 1.08 1.08	11.66 2.99 19.87	BN-33 BP-33 BR-33 BS-33*	5 1 10 10	50 50 50 50	1.25 1.55 1.27 1.27	18.75 3.41 23.37 23.37
COUDIN	With 2 wire moulding rosette base	BT-35	10	20	1.08		BT-33	10	50	1.27	
B-A BASE	With 3 wire moulding rosette base	BU-35	10	20	1.08	19.87	BU-33	10	50	1.27	23.37
(00000)	With eleat base covered	BV-35	10	20	1.08		BV-33	10	50	1.27	
B H BASE	With canopy tap base	BY-35 BZ-35	10	50 20	.95 .81		BY-33 BZ-33	5 10	50 20		12.54 18.40









































B D BASE



B-L BASE

Standard finish is brass or old brass, which will be shipped when no finish is specified. Polished brass, when specified, will be furnished without extra charge. For special finishes, see listing elsewhere.

see listing elsewhere.

Soekets regularly furnished with 8 inches of chain. For extra chain, cord instead of chain, extension chain guides, etc., see listing elsewhere.

\*Approved rating 2 amperes, 125 volts.

†This base is suitable for attachment to No. 500 Adaptiboxes.

\*National Electrical Code Standard.

















## "NEW WRINKLE" SOCKETS



No. 16 250 Watts, 250 Volts



No. 17 Bottom Outlet, 250 Watts, 250 Volts Side Outlet, 660 Watts, 250 Volts

#### Twin Pull Sockets

Schedule "B"

60000		Both (	Outle	ts () <sub>I</sub>	ocket ocrate ancous		Twi Side Ou Botton	tlet	ll Soc on all let o	the T	ime; Off	
AD CAP	Description _	I.ist No.	Car- ton	Std.	List Com-	W. E. List per Carton	List No.		Stal.	Com-	W.E. List per Carton	
A M CAP	Body, without cap or base With 1/8 in. cap	16 AA-16	10 10	20 20	\$1.08 1.15	\$19.87 21.16	17 AA-17	10 10	20	1.15	\$19.87 21.16	
AN (AP	With 14 in. cap	AB-16 AC-16 AD-16 AE-16 AF-16	10 10 10 10 10	20 20 20 20 20 20	$egin{array}{c} 1.24 \\ 1.21 \\ 1.27 \\ 1.15 \\ 1.24 \\ \end{array}$	$22.26 \\ 23.37$	AB-17 AC-17 AD-17 AE-17 AF-17	10 10 10 10 10	20 20 20 20 20 20	1.24 1.21 1.27 1.15 1.24	22.82 22.26 23.37 21.16 22.82	
A P (AP	With 14 in. male cap	AG-16 AH-16 AK-16 AL-16	10 10 10 10	20 20 20 20 20	1.24 1.30 1.21 1.24	22.82 23.92 22.26 22.82	AG-17 AH-17 AK-17 AL-17	10 10 10 10	20 20 20 20	1.24 1.30 1.21 1.24 1.20	22.82 23.92 22.26 22.82 22.08	
A-T (AP	With 1/8 in. angle cap	AM-16 AN-16 AP-16 AR-16 AS-16	10 10 10 10 10	20 20 20 20 20 20	1,20 1,29 1,26 1,26 1,29	$ \begin{array}{c c} 23.74 \\ 23.18 \\ 23.18 \end{array} $	AM-17 AN-17 AP-17 AR-17 AS-17	10 10 10 10 10	20 20 20 20 20	1.29 1.26 1.26 1.29	23.74 23.18 23.18 23.74	
AU CAP	With pendant cap With strain relief cap With attachment plug With cleat base	AT-16 AU-16 AV-16 AW-16	10 10 10 10	20 20 20 20	$\begin{bmatrix} 1.15 \\ 1.15 \\ 1.35 \\ 1.31 \\ 1.26 \end{bmatrix}$	21.16 $24.84$ $24.10$	AT-17 AU-17 AV-17 AW-17 AX-17	10 10 10 10 10	20 20 20 20 20	$egin{array}{c} 1.15 \\ 1.15 \\ 1.35 \\ 1.31 \\ 1.26 \\ \end{array}$	21.16 $24.84$ $21.10$	
A-X BASE	With slotted base With small concealed base With large concealed base With angle concealed base With base for 3% and ½ in.	AX-16 AY-16 AZ-16 BA-16	10 10 10 10	20 20 20 20	1.26 1.31 1.31	$23.18 \\ 24.10$	AY-17 AZ-17 BA-17	10 10 10	20 20 20	1.26 1.31 1.31	23.18 24.10 24.10	6
GILLED.	condulets	BC-16 BX-16	10	20 20	1.31		BC-17 BX-17	10	20	1.31		_
A Y BASE	With wood molding base With one way National base.	BW-16 BB-16 BD-16 BE-16	10 10 10 10	20 20 20 20	1.31 1.26 1.26	$\begin{bmatrix} 23.18 \\ 23.18 \end{bmatrix}$	BW-17 BB-17 BD-17 BE-17	10 10 10 10	20 20 20 20	1.31 1.26 1.26 1.26	$\begin{vmatrix} 23.18 \\ 23.18 \end{vmatrix}$	
A 2 BASE	With two way National base With small covered base With large covered base With 3½ in. box base With 4 in. box base	BH-16 BK-16 BL-16 BM-16	10 10 10 5	20 20 20 20 20	1.30 1.44 1.44 1.74	3 25.02 5 26.68 5 13.34	BH-17 BK-17 BL-17	10 10 5 1	20 20 20 20	1.36 1.45 1.45 1.75	$ \begin{array}{c} 25.02 \\ 26.68 \\ 13.34 \\ 3.85 \end{array} $	(
B'A BASE	With 3¼ in. pancake base With 4 in. pancake base With concealed rosette base. With eleat rosette base	BN-16 BP-16 BR-16 BS-16	10	20 20 10 10	1.5 1.8 1.5 1.5	$\begin{bmatrix} 14.26 \\ 5 & 4.07 \\ 7 & 11.78 \end{bmatrix}$	BN-17 BP-17 BR-17 BS-17	5 1 10 10	20 20 10 10	1.55 1.85 1.57 1.57	$\frac{4.07}{11.78}$	(
(Green)	With 2 wire molding rosette	BT-16	10	10	1.5	7 11.78	BT-17	10	10	1.57	11.78	
B H BASE	With 3 wire molding rosette base	BU-16		10	1.5			10	10	1.57		
	with cleat case covered con- nections	DV	5	50	1.4	1	BY-13	5 10	50	1.44	1 15.84	
B K BASE	·	1		1	1	1	<u> </u>		0 1 1		10.1	

Standard finish is brush or old brass, which will be shipped when no finish is specified. Polished brass, when specified, will be furnished without extra charge. For special finishes, see listing elsewhere.

see using eisewhere.

Sockets are regularly furnished with 8 inches of chain. For extra chain, cord instead of chain, extension chain guides, see listing elsewhere.

\*This base is ritable for attachment to No. 500 Adaptiboxes.
†Approved rating 2 amperes, 125 volts.



B-L BASE











B-E BASE

B-D BASE

B C BASE

B-X BASE

#### "NEW WRINKLE" ROSETTES



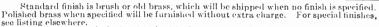
No. 26 3 Amperes, 250 Volts



No. 25 1 Ampere, 250 Volts 3 Ampere, 125 Volts

# Rosette and Pull Switch Rosette

SECUCIO	Rosette	and	Pι	ıll	Sw	itch	Rose	ett	e			
A-O CAP								Sc	hed	lule "	'H''	410
CCD D BO	,		Re	osetti	e		**1'1	ıll Sv	vitch	Roset	te	W00.01
ACCAP	Description	List	Car-	8+4	Mfrs. List	W. E. List	List	Car	Seal	Mirs.	W.E. List	1000
C00000		No.			Com-	per Carton	No.			Com-	per Carton	6000
A-D (AP	ATD 1 111 1 1 1 1		10		<u> </u>		0.7	-	-	<u> </u>		AHCA
	Body, without cap or base. With 1/8 in. cap	AA-26	10 10	20	\$0.13 .20	3.68	25 AA-25	10	50 20	\$0.53 .60	11.04	
Ginning	With 14 in. eap	AB-26 AC-26	10 10	20	.29 .26	5.34 4.78	AB-25 AC-25	10	20	.69		KENDE
AMCAP	With 1/2 in. cap	AD-26	10	20	.32	5.89	AD-25	10	20	.72	13.25	AHC
	‡With 1/8 in. male cap	AE-26	10	20	. 20	3.68	AE-25	10	20	. 60	11.04	Quest (
	With ½ in. male cap	AF-26 AG-26	10 10	20 20	.29	$\frac{5.34}{5.34}$	AF-25 AG-25	10	20 20	.69	$12.70 \\ 12.70$	_
ANGO	With ½ in, male cap	AH-26	10	20	.35	6.44	AH-25	10	20	.75	13.80	0000
	‡With ½ in. fixture cap	AK-26	10	20	. 26	4.78	AK-25	10	20	.66	12.14	A-L CA
	With 14 in. fixture cap	AL-26 AM-26	10	20	.29	5.34	AL-25	10	20	.69		
COUNTRY	With 1/8 in. angle cap	A N-26	10 10	20	.34	4.60 6.26	AM-25 AN-25	10	20	.65	$11.96 \\ 13.62$	
AP (AP	With 3 in. angle cap	AP-26	iŏ	20	. 31	5.70	AP-25	10	20	71	13.06	A-R (
	#With 1/2 in. angle fixture cap	AR-26	10	20	.31	5.70		10	20	.71	13.06	U.L
<u></u>	With 14 in. angle fixture cap	AS-26 AT-26	10 10	20 20	.34	6.26 3.68	AS-25 AT-25	10	20 20	. 74	13.62	
A000000	With pendent cap	AU-26	10	20	120	3.68	AU-25	10	20	.60	$11.04 \\ 11.04$	Cort
ATTLAP	With attachment plug	A V-26	10	20	.40	7.36	AV-25	10	20	.80	14.72	450
	‡With cleat base	AW-26	10	20	.36	5.62	AW-25	10	20	- 76	13.98	
	With slotted base	A X-26 A Y-26	10 10	20 20	.31	a.70 a.70		10	20	.71	$13.98 \\ 13.06$	00000
A-U CAP	With large concealed base.	AZ-26†	10	20	.36	6.62	AZ-25†		20	76		A-V PL
	With angle concealed base.	BA-26	10	20	.36	6.62	BA-25	10	20	. 76		
_	With base for 3% and 1/2 in.	BC-26	10	20	. 36	2 60	DC 0*	10	20		10.00	6
OCCUDED.	twith base for 34 in. con-	110-20	10	20	. 30	6.62	BC-25	10	20	.76	13.98	
A-X BASE	dulet	BX-26	10	20	. 36	6.62	BX-25	10	20	.76	13.98	Cobbe
9 0	‡With base for ½ and ¾ in.	D.11. 00			] [							
-	taplets	BW-26 BB-26	10	20	.36	6.62	BW-25	10	20	.76		AW BA
	With one way National base	BD-26	10	20	.31	$\frac{5.70}{5.70}$	BB-25 BD-25	10 10	$\frac{20}{20}$	71	$\frac{13.98}{13.06}$	
COLLEGE	With two way National base	BE-26	10	20	.31	5.70	BE-25	10	20	71	13.06	MC0000
A Y BASE	‡With small covered base	BH-26	10	20	.41	7.54	BH-25	10	20	.81	13.06	B-C BAS
	With large covered base	BK-26 BL-26	10	20 20	.50	9.20		10	20 20	.90	14.90	(ZIE)
	With 3¼ in. box base	BM-26	5 1	20	.50	$\frac{4.60}{1.76}$		$\begin{vmatrix} 5\\1 \end{vmatrix}$	20	1.20	$\frac{16.56}{8.28}$	-
000000	With 31/4 in. pancake base.	BN-26	5	20	. 60	5.52	BN-25	5	20	1.00	2.64	
0)	‡With 4 in, pancake base	BP-26	1	20	.90	1.98	BP-25	1	20	1.30	9.20	B-X B
A Z BASE	With concealed rosette base 1 With cleat rosette base	BR-26 BS-26*	10	10	.62	9.30	BR-25 BS-25*	10	20 20	$1.02 \\ 1.02$	$\frac{2.86}{19.76}$	· LA
	With 2 wire molding rosette	270, 200	10	117	.02	9.50	110-20	'''	""	1.02	18.76	
000000	base	BT-26	10	10	. 62	9.30	BT-25	10	20	1.02	18.76	(100 00
B'A BASE	With 3 wire molding rosette	D1: 96	10	10	0.0	0.00	7) 11 0 -	10	90	1 00		EW BA
SADA	With combination rosette	BU-26	10	10	. 62	9,30	BU-25	10	20	1.02	18.76	LOG
	base	BV-26	10	10	. 62	9.30	BV-25	10	20	1.02	18.76	-
COLCUD	With cleat base covered	_								1 1		C- CHIEGO
B-H BASE	With canopy tap base	BY-26 BZ-26	10	20	. 49	5.39		5	50 20	- 89	9.79	8 5 8
		1727-00	110	1 40		-6.441	BZ-25	10	الاشا	.75	-13.80	



\*\*Bodies are regularly furnished with short chain and 10 feet of best quality linen cord. Extra cord 2 cents list per foot. For extension chain guides, insulated chain,

etc., see listing elsewhere.

\*Approved rating 2 amperes, 125 volts,

†This base is suitable for attachment to No. 500 Adaptiboxes,

‡National Electrical Code Standard.



B-K BASE

CCCCC B-L BASE













B-D BASE

BE BASE

#### "NEW WRINKLE" SWITCHES



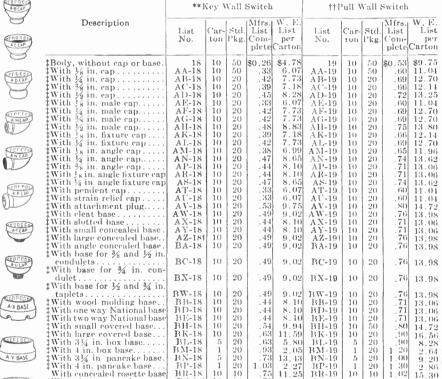
No. 18 3 Amperes, 125 Volts 1 Ampere, 250 Volts



No. 19 3 Amperes, 125 Volts 1 Ampere, 250 Volts

## Key and Pull Wall Switches

Schedule "H"



5 1

10 10

10 10

10 20

BS-18\* 10 10

BT-18

BU-18

B V-18

BY-18 BZ-18

10

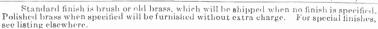
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see listing elsewhere.

\*\*For long keys, metal keys, switches with threaded stems, and other special sockets. see listing elsewhere.

through the strength of the st see listing elsewhere.

\*Approved rating 2 amperes, 125 volts.
†This base is suitable for attachment to No. 500 Adaptiboxes.

National Electrical Code Standard.





































(ADD COC)



With 4 in. pancake base. . . With concealed rosette base

With 2 wire molding rosette

With 3 wire molding rosette

With combination resette 

With canopy tap base....

With cleat rosette base.

hase.

connections.





13,43

 $\frac{2.27}{11.25}$ 

11.25

11.25

6.82

8.83

1.03

.75 11.25

.75 11 - 25

.75

. 62

.48



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20

10 1ö

10 10 1.02 15, 30

10

10 10

10 20

BT-19

BU-19

BV-19

BY-19

BZ-19

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89 9.79

75 13.80

9 90

15,30

15.30

15,30

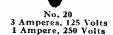
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#### "NEW WRINKLE" SWITCHES







No. 27 3 Amperes, 125 Volts 1 Ampere, 250 Volts

B-D BASE

8-E BASE

#### S. P. Pull and Electrolier Pull Ceiling Switch Schedule "H"

		S. P.	. Pull	Ceil	ing S	witch	Elec			ll Ceil	ing	
	To the						Operat	ing l	wite	n Isandi	no s	
	Description		ī	1	Mfrs.	1 W. E.		1	1		W. E	
		I.ist		Std	List	List	I.ist	Car	- Std	List		
		No.	ton	Pkg.	Com-		No.	ton	Pkg	. Com-	per	
				_	plete	Carton	1			plete	Carto	n
	‡Body, without cap or base.	20	10	50	80.53	\$9.75	27	10	50	90 93	\$15.2	7
	‡With 1/8 in. cap	AA-20	10	50	.60		A A-27	io	50		16.5	
	With 14 in. cap	AB-20	10	20	. 69			10	20	.99		
	With % in. cap	AC-20	10	20	. 66	12.14		10	20	.96		6
	With ½ in. cap With ½ in. male cap	AD-20 AE-20	10	20 20	.72			10	20	1.02		
	With 14 in. male cap	AF-20	10	20	. 60 . 69		AE-27 AF-27	10	20	.90		
	With 3/8 in, male cap	AG-20	iŏ	20	.69			10	20 20	.99		
	‡With ½ in. male cap	AH-20	10	20	.75			iö	20	1.05		
	With 1/8 in. fixture cap	A K-20	10	20	. 66		AK-27	10	20	.96		
	tWith 12 in. fixture cap	AL-20	10	20	. 69			10	20	.99		
	With 1/8 in. angle cap	A M-20 A N-20	10	20 20	.65		A M-27	10	20	.95	17.4	8
	With 38 in angle cap	AP-20	10	20	. 74		AN-27	10	20	1.04	19.1	
	With 18 in. angle fixture cap	AR-20	10	20	.71		AP-27 AR-27	10	20 20	1.01	18.5	
	With 1/4 in. angle fixture cap	AS-20	10	20	.74		AS-27	10	20	$  1.01 \\ 1.04$	18.5	
	TWith pendent cap	AT-20	10	20	.60		AT-27	îŏ	20	.90		
	With strain relief cap	AU-20	10	20	. 60	11.04	A U-27	10	20	.90		
	With attachment plug	AV-20	10	20	.80		AV-27	10	20	1.10	20.2	
	With cleat base	AW-20 AX-20	10 10	20 20	. 76		A W - 27	10	20	1.06	19.50	0
	With small concealed base.	AY-20	10	20	.71 .71		A X-27 A Y-27	$\frac{10}{10}$	20	1.01	18.58	
	1 With large concealed base.	AZ-201	l iŏ l	20	.76	13.98	AZ-271	10	20 20	$\begin{bmatrix} 1.01 \\ 1.06 \end{bmatrix}$		
	With angle concealed base.	BA-20	10	20	.76		BA-27	îŏ	20	1.06		
	I With base for 3/8 and 1/2 in.	20.00								1.00	15.50	U
	condulets	BC-20	10	20	.76	13.98	BC-27	10	20	1.06	19.50	0
	dulet	BX-20	10	20	. 76	12.04	D 37 07	10	200			
	With base for 1/2 and 3/4 in.	D11-20	10	-"	. 70	13,98	BX-27	10	20	1.06	19.50	0
	taplets	BW-20	10	20	.76	13.98	BW-27	10	20	1.06	19.50	n
	With wood molding base	BB-20	10	20	.71	13.06	BB-27	10	20	1.01	18.58	
	Withone-way National base Withtwo-way National base	BD-20	10	20	.71	13.06	BD-27	10	20	1.01	18.58	
	With small covered base	BE-20 BH-20	10	20	.71	13.06	BE-27	10	20	1.01	18.58	
	With large covered base	BK-20	10	20	.81	$14.72 \\ 16.56$	BH-27	10	20	1.11	20.42	
	With 314 in. box base	BL-20	5	20	.90	8.28	BK-27 BL-27	10 5	20 20	1.20		
	With 4 in. box base	BM-20	1	20	1.20	2.65	BM-27	ĭ	20	1.20	$\frac{11.04}{3.30}$	
	With 314 in. pancake base.	BN-20	5	20	1.00	9.20	BN-27	5	20	1.30	11.96	
•	With 4 in. pancake base With concealed rosette base	BP-20	.1	20	1.30	2.86	BP-27	1	20	1.60	3.52	
	With cleat rosette base	BR-20 BS-20*	10	10	1.02	[15, 30]	BR-27	10	10	1.32	19.80	)
	With 2 wire molding rosette	13/7-20"	10	10	1.02	15.30	BS-27*	10	10	1.32	19.80	)
	base	BT-20	10	10	1.02	15,30	BT-27	10	10	1 20	10.00	
	With 3 wire molding rosette		-		,2	2.7. 19(7	171-21	10	10	1.32	19.80	}
	base	BU-20	10	10	1.02	15.30	BU-27	10	10	1.32	19,80	1
	With combination rosette	D2: 00	,,					_			-17.00	
	With cleat base covered	BV-20	10	10	1.02	15,30	BV-27	10	10	1.32	19.80	)
	connections	BY-20	5	50	80	0.70	D3: 07	_	-	. ,,		
	With canopy tap base	BZ-20	10	20	.89	$\frac{9.79}{13.80}$	BY-27 BZ-27	5	50	1.19	13.09	)
							ped when	10 1	201	1.00	19.32	

Polished brass when specified will be furnished without extra charge. For special finishes, see listings elsewhere.

Bodies are regularly furnished with short chain and 10 feet of best quality linen cord. Extra cord 2 cents list per foot. For extension chain guides, insulated chain, etc., see listing elsewhere.

\*Approved rating 2 amperes, 125 volts.

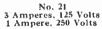
†This base is suitable for attachment to No. 500 Adaptiboxes, †National Electrical Code Standard.

900000 B-L BASE



## "NEW WRINKLE" SWITCHES







No. 28 3 Amperes, 125 Volts 1 Ampere, 250 Volts



# S. P. and Electrolier Pull Fixture Switch Schedule "H"

Time !		S. P. T	ull	Fixtu	re Swi	tch	Elect Operat	181	vitch	Fixtu		
AD (AP	Description			Std.	M frs. List Com- plete	W. E. List per Carton	List No.	Car-	Std.	Mfrs. List Com-		
AMCAP	Body, without cap or base.  With 1/8 in. cap  With 1/4 in cap  With 3/4 in cap	21 AA-21 AB-21 AC-21	10 10 10 10	50 50 20 20	\$0.68 .75 .84 .81	15.46	28 AA-28 AB-28 AC-28	10 10 10 10	50 50 20 20	\$0.98 1.05 1.14 1.11	\$18.03 19.32 20.98 20.42	
AN (AD	With ½ in. cap	A D-21 A E-21 A F-21 A G-21	10 10 10 10	20 20 20 20	.87 .75 .84	16.01 13.80 15.46	AD-28 AE-28 AF-28 AG-28	10 10 10 10	20 20 20 20 20	1.17 $1.05$ $1.14$ $1.14$	$\begin{array}{c} 21.53 \\ 19.32 \\ 20.98 \\ 20.98 \end{array}$	
COUNTY (A)	With ½ in male cap With ½ in fixture cap With ¼ in fixture cap With ¼ in angle cap With ¼ in angle cap	AH-21 AK-21 AL-21 AM-21 AN-21	10 10 10 10	20 20 20 20 20 20	.90 .81 .84 .80 .89	$\begin{bmatrix} 14.90 \\ 15.46 \\ 14.72 \end{bmatrix}$	AH-28 AK-28 AL-28 AM-28 AN-28	10 10 10 10 10 10	20 20 20 20 20 20	$egin{array}{c} 1.20 \\ 1.11 \\ 1.14 \\ 1.10 \\ 1.19 \\ \end{array}$		
A-T (AP	With % in, angle cap With 1/8 in, angle fixture cap With 1/4 in, angle fixture cap With pendent cap	AP-21 AR-21	10 10 10 10 10	20 20 20 20 20 20	.86 .86 .89 .75	15.82 16.38 13.80	AP-28 AR-28 AS-28 AT-28 AU-28	10 10 10 10 10	20 20 20 20 20 20	1.16 1.16 1.19 1.05 1.05	21.34 21.90 19.32	
AUCAP	With strain relief cap. With attachment plug With cleat base. With slotted base. With small concealed base.	AV-21 AW-21 AX-21 AY-21	10 10 10 10	20 20 20 20	.95 .91 .86	17.48 16.74 15.82 15.82	AV-28 AW-28 AX-28 AY-28	10 10 10 10	20 20 20 20 20	1.25 1.21 1.16 1.16	23.00 22.26 21.34 21.34	
A x BASE	With large concealed base. With angle concealed base. With base for 38 and ½ in. condulets With base for 34 in. con-	AZ-21† BA-21 BC-21	10 10	20 20 20	.91 .91 .91	16.74	AZ-28† BA-28 BC-28	10 10 10	20 20 20	1.21 1.21 1.21	22.26 22.26 22.26	,
COTTO	tWith base for ½ and ¾ in.	BX-21	10 10	20	.91	1	BX-28 BW-28	10	20	1.21	22.26 22.26	[
A Y BASE	taplets	BB-21 BD-21	10 10 10	20 20 20	.80	15.82 15.82	BB-28 BD-28 BE-28	10 10 10	20 20 20	1.16 1.16 1.16	21.34 21.34 21.31	C
A 2 BASE	With small covered base. With large covered base. With 3½ in. box base. With 4 in. box base. With 3½ in. pancake base.	BH-21 BK-21 BL-21 BM-21	10 10 5 1 5	20 20 20 20 20 20	1.05 1.05 1.35 1.35	19.32 9.66 2.97	BH-28 BK-28 BL-28 BM-28 BN-28	10 10 5 1 5	20 20 20 20 20 20	$\begin{bmatrix} 1.26 \\ 1.35 \\ 1.35 \\ 1.65 \\ 1.45 \end{bmatrix}$	21.81 21.81 12.42 3.63	
B-A BASE	With 4 in. pancake base With concealed rosette base With cleat rosette base With 2 wire molding rosette	BP-21 BR-21 BS-21*	1 10 10	10 10	1 42 1 17 1 17	5 3.19 7 17.55	BP-28 BR-28 BS-28	* 10 * 10	10 10	1.75 1.47 1.47	$\begin{array}{c c} 3.85 \\ 22.05 \end{array}$	
CCCCOD	base	BT-21 BU-21	10	10	1.1	1	BT-28 BU-28		10	1.47		
B H BASE	With combination rosette base	BV-21	10	-	1.1					1.47		
fi u Base	With canopy tap base Standard finish is bru	. [_BZ-21		20		0 16.56		_			) 22 08	

Standard finish is brush or old brass, which will be shipped when no finish is specified. Polished brass when specified will be furnished without extra charge. For special finishes, see listing elsewhere.

Bodies are regularly furnished with short chain and 10 feet of best quality linen cord. Extra cord 2 cents list per foot. For extra chain, insulated chain, etc., see listing elsewhere.

\*Approved rating 2 amperes, 125 volts.

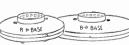
†This base is suitable for attachment to No. 500 Adaptiboxes.

‡National Electrical Code Standard.





B & BASE













B E BASE

BDBASI

B-C BASE

B x BASE

#### Western Electric

#### "NEW WRINKLE" SWITCHES



No. 22 3 Amperes, 125 Volts 1 Ampere, 250 Volts



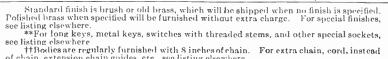
No. 24 3 Amperes, 125 Volts 1 Ampere, 250 Volts



#### Key and Pull Candle Switches

Schedule "H"

								_			
	2 * IV	ley (	'andl	e Swite	ch	††P	ull C	andle	Swite	ħ	
Description		i	1	Mfrs.	W.E.		1	1	Mfrs.	W. E.	A G CAP
r escription	List	Car	Std.	List	List	List	Car-	Std.		List	No.
	No.			Com-	per	No.			Com-	per	
			~	plete	Carton		ł		plete	Carton	(1222000)
				20 20					20 -	30. 55	A-M CAP
Body, without cap or base.	22	10		30.26	54.78	24	10	50	\$0.53	\$9.75	
With 1/8 in. cap	AA-22	10	50	. 33	$\frac{6.07}{7.73}$	AA-24	10 10	50 20	. 60	$\frac{11.04}{12.70}$	
With 14 in. cap	AB-22 AC-22	10	20	.42	7.18	AB-24 AC-24	10	20	. 66	12.14	CORCOL
With % in. cap	A D-22	10	20	.45	8.28	AD-24	10	20	.72	13.25	ANCAP
With 1/8 in. male cap	AE-22	1 10	20	.33	6.07	AE-24	10	20	.60	11.04	
With 1/4 in male can	AF-22	l iŏ	20	.42	7.73	A F-24	10	20	.69	12.70	
With ¼ in. male cap With ¾ in. male cap	AG-22	10	20	.42	7.73	AG-24	10	20	. 69	12.70	
With 14 in, male cap	A II-22	10	20	.48	8.83	A11-24	10	20	.75	13.80	C0000
With 1/8 in. fixture cap	AK-22	10	20	. 39	7.18	AK-24	10	20	. 66	12.14	A-L CAP
With 1/4 in, fixture cap	AL-22	10	20	.42	7.73	A124	10	20	. 69	12.70	$\mathbf{S}$
With 1/8 in, angle cap	AM-22	10	20	.38	6,99	A M-24	10	20	. 65	11.96	
With ¼ in, angle cap	AN-22	10	20	.47	8,65	A N-24	10	20	7.4	13.62	Granda
With 3% in, angle cap	AP-22	10	20	.44	8.10	AP-24	10	20	.71	13.06	A-R CAP
With 1/8 in, angle fixture cap	AR-22	10	20	.44	8.10	AR-24	10	20	.71	13.06	
With ¼ in. angle fixture cap	AS-22 AT-22	10	20 20	.47	8,65	AS-24 AT-24	10	20	.74	$\frac{13.62}{11.04}$	VOL.
With pendent cap With strain relief cap	A 1 - 22 A 1 - 22	10	20	.33	$\begin{bmatrix} -6.07 \\ -6.07 \end{bmatrix}$	A U-24	10	20	.60	11.04	
With attachment plug	A V-22	10	20	.53	9.75	A V-24	10	20	.80	14.72	ASTAR
With cleat base	AW-22	10	20	.49	9.02	AW-24	líö	20	.76		
With slotted base	AX-22	10	20	.44	8.10	AX-24	10	20	.71	13.06	
With small concealed base.	AY-22	10	20	.44	8,10	AY-24	10	20	.71	13.06	000000
With large concealed base	AZ-22†	10	20	. 49	-9.02	AZ-241	10	20	.76	13.98	
With angle concealed base.	BA-22	10	20	.49	9.02	BA-24	10	20	. 76	13.98	A-V PLUG
With base for 3/8 and 1/2 in.		l					l				
condulets	BC-22	10	20	.49	9.02	BC-24	10	20	. 76	13.98	
With base for ¾ in. con-	D37 00	10	00	10	0 000	713" 04	10	00	70	10.00	
With been for 14 and \$6 in	BX-22	10	20	.49	9.02	B X-24	10	20	.76	13.98	SECOND.
With base for ½ and ¾ in. taplets	BW-22	10	20	.49	9.02	BW-24	10	20	. 76	13.98	
With wood molding base	BB-22	io	20	.44	8.10		10	20	71	13.06	AW BASE
With one way National Base	BD-22	10	20	.44	8.10	BD-24	Liö	20	71	13.06	
With two way National base	BE-22	10	20	.44	8, 10	BE-24	10	20	71	14.72	
With small covered base	BH-22	10	20	.54	9.94	BH-24	10	20	81	16.56	Heconor
With large covered base	BK-22	10	20	. 63	11.59	BK-24	10	20	.90	8.28	B C BASE
With 3 1/4 in. box base	BL-22	5	20	. 63	-5.80	BL-24	- 5	20	.90	2.65	(DA)
With 4 in. box base	BM-22	1	20	.93	2,05	BM-24	1	20	1.20	9.20	22.7
With 31/4 in. pancake base.	BN-22	5	20	, . 73		BN-24	5	20	1.00	2.86	
With 4 in. pancake base	BP-22	1	20	1.03		BP-24	1	20	1.30	15.30	B-X BASE
With concealed rosette base With cleat rosette base	BR-22 BS-22*	10	10	.75		BR-24	10	10	1.02	15.30	I LEON
With 2 wire molding rosette	158-22"	10	1 10	. 4.0	11.25	BS-24*	110	10	1.02	15.30	
base	BT-22	10	10	.75	11,25	BT-24	10	10	1.02	15.30	AGEODOLES.
With 3 wire molding rosette		• ''	1 ''		11.20	171-24	1 "	1 "	1.02	10.00	5
base	BU-22	10	10	. 75	11.25	BU-24	10	10	1.02	15.30	TWEET THE
With combination resette				1							LILL
base	BV-22	10	10	.75	11.25	BV-24	10	10	1.02	9.79	
With cleat base covered	73.11.00	_		00					_		Bonne
connections	BY-22	5	50	. 62	6.82	BY-24	5	50	.89	13.80	B B BASE
With canopy tap base	BZ-22	10	20	1	8,83	BZ-24	10	20	. 75		00000



of chain, extension chain guides, etc., see listing elsewhere.

\*Approved rating 2 amperes 125 volts.

†This base is suitable for attachment to No. 500 Adaptiboxes.

‡National Electrical Code Standard.



B-A BAS

BHBASE

CONTRACTOR .

B-K BASE

B-L BASE









BE BASE

B-D BASE

#### "NEW WRINKLE" SOCKETS



No. 23 3 Amperes, 125 Volts 1 Ampere, 250 Volts



10 Amperes, 250 Volts



#### Turn Candle Switch and "Spartan" Plug Receptacle Schedule "H"



		Tui	rn Ca	ndle	Switch	n	"Spart	an''	Plug	Recep	tacle	
	Description	List No.			Mirs. List Com- plete	W. E List per Carton	List No.			List Com-	W. E. List per Carton	
	Body, without cap or base. With ½ in. cap. With ½ in. male cap. With ½ in. male cap. With ½ in. male cap. With ½ in. male cap. With ½ in. fixture cap. With ½ in. fixture cap. With ¼ in. fixture cap. With ¼ in. angle fixture cap. With ¼ in. angle fixture cap. With ¼ in. angle fixture cap. With strain relief cap. With strain relief cap. With cleat base. With small concealed base. With large concealed base. With large concealed base. With large concealed base.	A D-23 A E-23 A F-23 A G-23 A H-23 A K-23 A M-23 A M-23 A M-23 A R-23 A A R-23 A A R-23 A A R-23 A A R-23 A A R-23 A A R-23 A R-	10 10 10 10 10 10 10 10 10 10 10 10 10 1	30 10 10 10 10 10 10 10 10 10 10 10 10 10	\$0.68\\ .75 .84 .81 .87 .75 .84 .90 .81 .80 .89 .80 .89 .80 .89 .80 .80 .80 .80 .80 .80 .80 .80 .80 .80	11, 25 12, 60 12, 15 13, 05 11, 25 12, 66 12, 60 12, 15 12, 20 12, 90 13, 35 12, 90 12, 90 14, 25 11, 25 11, 25 14, 25 16,  A K-29 A L-29 A M-29 A R-29 A R-29 A R-29 A T-29 A V-29 A W-29 A W-29 A X-29 A X-29 A X-29 A X-29	10 10 10 10 10 10 10 10 10 10 10 10 10 1	20 20 20 20 20 20 20 20 20 20 20 20 20 2	\$0.38 .45 .54 .51 .57 .45 .54 .60 .51 .59 .56 .59 .56 .59 .56 .56 .56 .65 .65 .65	7. 65 9. 18 8. 67 9. 69 7. 65 9. 18 9. 18 10. 20 8. 67 9. 18 8. 50 10. 03 7. 65 7. 65 11. 05 10. 37 9. 52		
}	With base for ¾ and ½ in condulets	BC-23 BX-23	10	10 10	.91 ,91	13.65 13.65		10 10	20 20	.61 .61	10.37 10.37	
)	taplets.  With wood molding base.  With one way National base.  With two way National base.  With small covered base.  With 3½ in. box base.  With 3½ in. box base.  With 3½ in. pancake base.  With 4 in. pancake base.  With concealed rosette base.  With concealed rosette base.  With ceat rosette base.  With 2 wire molding rosette	BW-23 BB-23 BE-23 BE-23 BK-23 BK-23 BM-23 BN-23 BP-23 BR-23 BR-23*	10 10 10 10 10 10 10 5 1 5 1 10 10	10 10 10 10 10 10 10 10 10 10	.91 .86 .86 .96 1.05 1.35 1.15 1.45 1.17	14.40 15.75 9.66 2.97	BB-29 BD-29 BE-29 BH-29 BK-29 BL-29 BM-29 BN-29 BP-29 BR-29	10 10 10 10 10 10 5 1 5 1 10	20 20 20 20 20 20 20 20 20 20 10	.61 .56 .56 .56 .75 .75 1.05 .85 1.15 .87	9.52 9.52 11.22 12.75 6.38 2.10 7.23 2.30 12.52	
	with 3 wire molding rosette	BT-23	10	10	1.17			10	10	.87		1
	haca	1 101 -23	1 10	10	1 1 17	17 55	D1"_90	110	10	1 87	10 50	- 1

































B H BASE

R-A RASE

Standard finish is brush or old brass, which will be shipped when no finish is specified. Polished brass when specified will be furnished without extra charge. For special finishes, see listing elsewhere.

1.04

\*Approved rating 2 amperes, 125 volts.

†This base is suitable for attachment to No. 500 Adaptiboxe

BU-23

BV-23

BY-23 BZ-23

10 10

10 10

 $\begin{array}{c|c} 5 & 50 \\ 10 & 20 \end{array}$ 

‡National Electrical Standard Code.







000000



With combination rosette

base..... With cleat base covered





1.17 17.55 BU-29

1.17 17.55 BV-29

.04 11.54 BY-29 .90 16.56 BZ-29



10 10

10

10

10



.87 12.52

 $.74 \begin{vmatrix} 7.40 \\ 10.20 \end{vmatrix}$ 



"WRINKLET" FIXTURE SOCKETS





No. 81 660 W., 250 V.



No. 80 250 W., 250 V.



No. 82 660 W., 250 V.



No. 83 660 W., 250 V



WE



660 W., 250 V.



No. 85 250 W., 250 V.



No. 84 250 W., 250 V.



6 Amp., 125 V. 3 Amp., 250 V.



No. 92 3 Amp., 125 V. 1 Amp., 250 V.

wG















# Bryant Sockets and Switches

S.P. Key Socket Schedule "B"

Q.T. Key Socket Schedule "B"

	1		Mirs.	W. E.		1	Mfrs.	$[W, E_{\tilde{e}}]$	1	1 1	Mfrs.) W. E.
			List	List	1	1	List	List	'		List   List
	List	Std	Com-	per	List	Std.	Com-	per	List	Std.	Com- per
Description	No.			Carton				Carton			plete Carton
Description	140.	I Kg.	picco		4117	116.	picou			I Rg.	piece Car wit
XBody, without cap	81	500	\$0.26	\$14,30	80	500	\$0.26	\$14.30	82	500	\$0.29 \$15.95
8With 1/8 in. cap	WA -81	500			WA -80	500	. 33	18,15	WA -82		.36 19.80
‡With 14 in. cap	WB-81	250	.42	23.10	WB -80	250	.42	23.10	WB -82	250	.45 24.75
With 3% in. cap			.39	21.45	WC -80	250	. 39	21.45	WC -82	250	42 23.10
With 14 in. male cap			.33	18.15	WE -80	500	. 33	18,15	WE -82	500	.36 19.80
With 14 in. male cap			. 42	23.10	WF -80	250			WF -82		15 24.75
‡With 3% in male cap			.42		WG-80				WG- 82		.45 24.75
With 1/8 in. fixture cap	W K -81	250	.39		WK -80				WK-82		42 23.10
With 1/4 in. fixture cap	WL -81	250			WL -80		. 42	23.10	WL -82	250	.45 24.75
‡With 1% in, angle cap	WM-81	100			WM-80				W M-82		.41 18.86
‡With ¼ in. angle cap			. 47		W N -80				WN -82		.50) 23,00
‡With 3% in, angle cap	WP -81	100			WP -80				WP -82		.47 21.62
-‡With ⅓ in. angle fixture cap					WR -80				WR -82		47 21.62
‡With ¼ in. angle fixture cap					WS -80				WS -82		.50 23.00
‡With pendent cap	JWT -81	1.500	. 33	$\{18,15\}$	WT -80	500	1 .33	1.18.15	WT -82	[ 500!	.36' 19.80

Std.	Keyloss	Socket
Sc	hedule	"B"

Short Keyless Socket Schedule "B"

Pull Socket Schedule "B"

‡Body, without cap 83	-500 \$0.23	12.65 95	500 \$0.23			\$29.15
‡With 1/8 in. cap [WA -83]		16.50 WA -95		-16.50 WA - 85		33.00
‡With ¼ in. cap		21.45 WB- 95		21.45 WB -85		31.74
‡With 3/4 in. cap		19.80 WC -95		-19±80∥WC -85		30.36
‡With 1/8 in. male cap   WE -83	500 .30	16.50 WE -95	500 .30	16.50 WE -85	250 .60	33.00
‡With ¼ in. male cap  WF -83		21.45 WF -95		21.45 WF -85	100 .69	31.74
‡With 3% in. male cap   WG -83	250 .39	21.45 WG -95	250 .39	21.45 WG -85	100 , 69	31.74
With 1/4 in. fixture cap WK-83	250 .36	19,80 WK-95	250 .36	19.80 WK-85	100 .66	30.36
‡With 14 in. fixture cap WL -83	250 .39	21,45 WL -95	250 .39	21.45 WL -85	100 .69	31.74
‡With 1/8 in. angle cap WM-83	100 .35	16, 10 WM-95	100 .35	$-16.10 \  W M - 85 \ $	50 .65	29.90
#With 14 in. angle cap WN-83	100 .44	20, 24 WN -95	100 .44	20.24 WN -85	50 .74	34.04
With 34 in, angle cap WP -83	100 .41	18.86 WP -95	100 .41	18.86 WP -85	50 .71	32.66
With 1/8 in. angle fixture WR-83	100 .41	18,86 WR -95	100 .41	18.86 WR -85	50 .71	32.66
‡With ¼ in. angle fixture cap WS -83	100 .44	20,24 WS -95	100 .44	20 24 WS -85		34.04
‡With pendent cap  WT -83	500 .30	16,50 WT-95	500 .30	16.50  WT -85	250 .60	33.00

Turn Socket Schedule "B"

Push Button Candle Sw. Key Candle Sw. Schedule "H" Schedule "H"

‡Body, without cap 84				50 \$0.26	\$4.78   92	50 \$0.26	\$4.78
‡With ½ in. cap		60 27.60		50 ,33	[ 6.07][WA -92]	50 .33	6.07
‡With ¼ in. cap		69[-31.74]		20 .42	7.73 WB -92	20 .42	7.73
‡With 3/8 in. cap WC -84		66 30.36		20 .39		20 .39	7.18
‡With 1/8 in. male cap WE -84		60[-27,60]		20 .33		20 .33	6.07
‡With ¼ in. male cap [WF -84]		69[-31.74]	W F -96	20] .42	7.73  WF-92	20 .42	7.73
‡With 3/8 in. male cap [WG -84]		69[-31.74]	WG -96	[20] .42	7.73 WG -92	20 .42	7.73
With 1/8 in. fixture cap WK -84		66 30.36		20 .39	7.18 WK-92	20 ,39	7.18
‡With ¼ in. fixture cap WL -84		69 31.74		20 .42	7.73 WL-92	20 ,42	7.73
‡With 1/8 in. angle cap WM-84		65 29.90	WM-96	20 .38		-20 $-38$	6.99
‡With ¼ in. angle cap WN-84		74 34.04	WN -96	20 .47	8 . 65 W N -92	20 .47	8.65
‡With 34 in. angle cap WP -84		71   32.56	WP96	20 ,44	8.10WP-92	20 .44	8.10
‡With 1/8 in. angle fixture cap WR -84		71 32.56	W R -96	20 .44	8.10 WR-92	20 .44	8.10
‡With ¼ in, angle fixture cap WS -84	50 .	74 34.04	WS -96	20 .47	8.65 WS -92	20 .47	8.65
With pendent can	100] .	60 27.60	WT -96	50 .33	6,07  WT-92	50 .33	6.07

Note: Carton quantity of 25, except the Nos. 95, 92, 93 and 90 groups which are 10. Standard finish is brush or old brass, which will be shipped when no finish is specified. Pol when specified will be furnished without extra charge. For special finishes, see listing elsewhere. I National Electrical Code Standard. Polished brass

# "WRINKLET" FIXTURE SWITCHES





WB





No. 93 3 Amp., 125 V. 1 Amp., 250 V.







WC







wG





Schedule "H" Pull Candle Switch

Schedule "H" Turn Candle Switch Schedule "H" S.P. Pull Switch

Pull Candle Switch												
Description	List No.	Std.	List ('om-	W. F. List per Carton	List No.	Std. Pkg.	List Com- plete	per Carton	No.	Std. Pkg.	List Com- plete	Carton
Body, without cap.  With 1s in, cap.  With 1s in, cap.  With 1s in cap.  With 1s in male cap.  With 1s in, male cap.  With 1s in, male cap.  With 1s in, male cap.  With 1s in, fixture cap.  With 1s in angle cap.  With 1s in angle cap.  With 1s in angle cap.  With 1s in, angle cap.  With 1s in, angle cap.  With 1s in, angle cap.  With 1s in, angle fixture cap.  With 1s in, angle fixture cap.  With pendent cap.	WA -94   WB -94   WE -94   WF -94   WG -91   WK -94   WN -94   WP -94   WS -94	50 20 20 20 20 20 20 20 20 20 20 20 20 20	. 60° . 69 . 66 . 60 . 69 . 66 . 69 . 65 . 74 . 71 . 71	12.70 12.14 11.04 12.70 12.70 12.14 12.70 11.96 13.62 13.06 13.63	93 WA -93 WB -93 WC -93 WF -93 WK -93 WL -93 WN -93 WN -93 WN -93 WR -93	10 10 10 10 10 10 10 10 10 10 10 10 10	.75 .84 .81 .75 .84 .81 .80 .89 .86 .86	12.60 12.15 11.25 12.60 12.60 12.15 12.00 12.90 12.90 12.90 13.35	90 WA -90 WB -90 WE -90 WF -90 WK -90 WL -90 WN -90 WP -90 WR -90 WS -90	50 20 20 20 20 20 20 20 20 20 20 20 20 20	. 60 . 69 . 66 . 69 . 69 . 66 . 69 . 65 . 74 . 71 . 71	11.04 12.70 12.70 12.14 12.70 11.96 13.62 13.06 13.06

Note: Carton quantity of 10,

# Single Pole Pull Fixture Switches

3 AMPERES, 125 VOLTS—1 AMPERE, 250 VOLTS Schedule "H"

List No.	1)escription	Carton	Std. Pkg.	Mfrs. List Complete	
	413 1 (41 - 14 - 11 - 11	10	50	\$0.68	\$12.51
91	Body, without cap	10	50	.75	13.80
WA -91	‡With 1/8 inch cap	10	20	.84	15.46
WB -91	#With 1/4 inch cap	10	20	.81	14.90
WC -91	‡With 3% inch cap	10	20	.75	13.80
WE -91	With 1/4 inch male cup	16	20	.84	15.46
WF -91	‡With ¼ inch male cap	10	20	.84	15.46
WG-91	#With % inch male cap	10	20	.81	14.90
WK-91	#With 16 inch fixture cap		20	184	15.46
W.L91	With 14 inch fixture cap	10		180	14.72
W M-91	With 16 inch angle cap	10	20		
WN-91	With 14 inch angle cap	10	20	.89	16.38
WP -91	With 3% inch angle cap	10	20	.86	15.82
WR -91	With 14 inch angle fixture cap	10	20	.86	15.82
WS -91	twith 14 inch angle fixture cap	10	20	.89	16.38
WT -01	With pendent cap	10	50	.75	13.80

	"WRINKLEI" FIXTURE CAPS											
List No.	Description	('arton	Std. Pkg.	Mfrs. List Each	W. E. List per Carton							
****		2.5	500	80.07	\$3.85							
WA	18 inch cap	25	100	. 16	7.36							
WB	14 inch cap	25	250	.13	7.15							
WC	3g inch cap	25	50	.07	3.22							
WE	ig inch male cap	25	50	.16	7.36							
WF	14 inch male cap	55	50	.16	7.36							
WG	3% inch male cap	25	50	.13	5.98							
WK	1/8 inch fixture cap	25	50	116	7.36							
WL	14 inch fixture cap	25	100	112	5.52							
M, M	1 s inch angle cap	25	50	21	9.66							
W.Z.	14 inch angle cap	2.5	50	118	8.28							
W.b.	3% inch angle cap	25	50	118	8.28							
WR	1/8 inch angle fixture cap		50	21	9.66							
WS	14 inch angle fixture cap	25		107	3.85							
WT	Pendent cap	25	500	1 .07	1 3.80							



WL



WN







WS



Standard finish is brush or old brass, which will be shipped when no finish is specified. Polished brass when specified will be furnished without extra charge. For special finishes, see listing elsewhere.

Bodies are regularly furnished with short chain and 10 feet of best quality linen cord. Extra cord, 2 cents list per foot. For insulated chain, etc., see listing elsewhere.

‡National Electrical Code Standard.

## Western Electric

# PT BOM CO.























# BRYANT INTERCHANGEABLE PORCELAIN LINE



No 70 S.P. Key Socket 250 Watts, 250 Volts



No. 73 Keyless Socket 660 Watts, 250 Volts



No. 79 Receptacle 10 Amp, 250 Volts



No. 75 Pull Socket 250 Watts 250 Volts

#### Schedule "B"

	S.	ocket		Keyless Socket						
Description	List No.		Std. Pkg.	Mfrs. List Com- plete	per	List No.		Std.	Mfrs. List Com- plete	W.E. List p r Car- ton
Body, without cap or base twith pendent cap.  With \( \frac{1}{8} \) in. cap.  With \( \frac{1}{3} \) in. cap.  With \( \frac{1}{3} \) in. cap.  With \( \frac{1}{3} \) in. cap (aluminum)  *With \( \frac{1}{3} \) in. angle cap.  With \( \frac{1}{3} \) in. angle cap.  (aluminum)  With cleat base.  †With large concealed base.  With \( \frac{1}{3} \) in. box base.  With \( 4 \) in. box base.	70 PT-70 PA-70 PB-70 PC-70 PD-70 PW-70 PW-70 PW-70 RB-70 RM-70	10 10 10 10 10 10 10 10 10 10 10	250 250 100 100 100 100 100 100 100 100 100 1	.37 .45 .40 .60 .55 .80 .35 .35	7.26	PB-73 PC-73 PD-73 PP-73 PW-73 PW-73 PZ-73	10 10 10 10 10 10 10 10 10 10 10	250 250 100 100 100 100 100 100 100 100 100	.34 .42 .37 .57 .52 .77 .32 .32 .32 .47	6 60 7 48 9 24

#### Schedule "H"

#### Schedule "B"

	Spa	eptac	le	Pull Socket						
Description	List No.		Std. Pkg.	List		List No.		Std.	Mfrs. List Com- plete	per
Body, without cap or base With pendent cap.  With $\frac{1}{8}$ in. cap.  With $\frac{1}{2}$ in. cap.  With $\frac{1}{2}$ in. cap.  With $\frac{1}{2}$ in. cap (aluminum).  With $\frac{1}{2}$ in. cap (aluminum).  With $\frac{1}{2}$ in. angle cap.  With $\frac{1}{2}$ in. angle cap.  (aluminum).  With cleat base.  †With large concealed base with wood molding base.  With $\frac{3}{4}$ in. box base.  With 4 in. box base.	79 PT-79 PB-79 PB-79 PC-79 PD 79 PW-79 PW-79 PZ-79 RB-79 RL-79 RM-79	10 10 10 10 10 10 10 10 10 10 10 10	50 50 50 50 50 20 20 20 20 20 20 20 20	.30 .30 .30 .45	4.76 5.44 6.80 5.95 9.35 8.50 12.75 5.10 5.10	75 PT-75 PA-75 PB-75 PC-75 PD-75 PW-75 PW-75 PZ-75 RB-75 RM-75	10 10 10 10 10 10 10 10	100 100 50 50 50 50 50 50 50 50 50 50 50 50	.87 .95 .90 1.10 1.05 1.30 .85 .85 .85	16 50 18 26 16 01 17 48 16 56 20 24 19 32 11 96 15 64 15 64 15 64 18 40 19 32

Standard finish of brass caps is brush or old brass, which will be shipped when no finish is specified. Polished brass when specified will be furnished without extra charge. Special finishes will be supplied at one-half the list prices given elsewhere.

\*This cap can be furnished in aluminum at 30 cents list extra.

†This base is suitable for attachment to No. 500 Adaptiboxes.

National Electrical Code Standard.

# MOGUL PORCELAIN SOCKETS



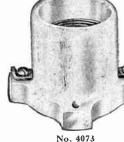




Cast Iron Yoke







No. 4062

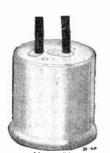
Kevless	Mogul	Porce	lain	Sockets
1500 33/-440				

-	ILCVICOS IVIOZAI I OI CCIAIII	~~~~				
	No. 4069 1500 Watts, 600 Volts-With Alumin	num Ca	ps		Schedul	e "B"
		Cantan	Std.	Pkg.	Mfrs.	W. E.
List		Carton Quantity	Pkg.	Wt.	List	List per
No.		Quantity	I Kg.	Lbs.	Each	Carton
4077	Without cap or yoke	1	50	l	\$0.70	\$1.54
4069	With 38 inch cap		50		1.00	2.20
4070	With 12 inch cap		50		1.00	2.20
4071	With 3/4 inch cap		1 50	١	1.00	2.20
	WITH CAST IRON YOKES				Schedu	le "B"
4078	With 38 inch yoke	1	50		\$0.85	\$1.87
4079	With ½ inch yoke		50		.85	1.87
4080	With 34 inch yoke	1	50		.85	1.87
H	oles for supporting screws of No. 4077 are spaced 11/2 inches	on center	s.			
4062	For fixtures work	j pr	20		.55	\$5.06

for supporting screws are spaced  $1\frac{5}{32}$  inches on centers.

110(03)		RECEPTACLES-1500	Watts,	250 Vo	lts	Schedu	le "B"
4073   Cl	 		10	50	50	80.75	\$13.80

Holes for supporting screws are spaced 27% inches on centers.







No. 4082

No. 4085

#### Weatherproof Keyless Mogul Porcelain Sockets WITHOUT CAP OR YOKE Schedule "B" 50 \$0.70 \*4081 [With 15 inch wires.....

†4088	No wires	1	} 50	1	.66.	1.21			
Holes for supporting screws are spaced $1\frac{1}{3}$ inches on centers.									
WITH ALUMINUM CAPS Schedule									
*4082	With 15 inch wires, $\frac{3}{8}$ inch cap	1	50	1	\$1.00	\$2.20			
*4083	With 15 inch wires, ½ inch cap	1	50		1.00	2.20			
*4084	With 15 inch wires, 34 inch cap	1	50	1	1.00	2.20			
†4089	No wires, $\frac{3}{8}$ inch cap	1	50		.85	1.87			
†4090	No wires, ½ inch cap	1	50		.85	1.87			
†4091	No wires, 34 inch cap	1	50		.85	1.87			
1 ******	WITH CAST IRON YOKES				Schedul				
*4085	With 15 inch wires, 3/8 inch cap	1	50	1	\$0.85	\$1.87			
*4086	With 15 inch wires, ½ inch cap	1	50		.85	1.87			
*4087	With 15 inch wires, 34 inch cap.	1	50	1	.85	1.87			
†4092	No wires, 3/8 inch cap	1	50		.70	1.54			
†4093	No wires, ½ inch cap.	1	50		.70	1.54			
*4094	No wires, 3/4 inch cap	1	50	1	.70	1.54			
de 1									

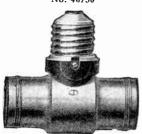
\*Longer wires furnished at 9 cents list per foot per conductor.

†Preferable where wires of various lengths are wanted at short notice. Equipped with loop terminal, into which wires provided by customer may be hooked and soldered.

# BRYANT AND PERKINS SOCKETS



No. 46750



No. 4061



No. 4051



Twin Sockets

Keyless Sockets, 660 Watts, 250 Volts

Pull Sockets, 250 Watts, 250 Volts

Schedule "B"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
46750	Keyless—½ inch cap	25	50	10	\$0.65	\$29.90
46751	IXCVIESS—% Inch Cad	$\frac{-25}{25}$	50	10	.70	32.20
4061▲	Neviess—with Edison Dillg	10	50	30	1.00	18.40
4051	1 un—78 men cap	10	50	20	1.00	18.40
4052	1 un—78 men cap	10	50	20	1.06	19.50
4005▲	1 un—78 men cap	10	50	20	1.00	18.40
4006	I un—ya men cap	10	50	20	1.06	19.50
4053▲	1 UII — 78 III CII CIII)	10	50	20	1.00	18.40
4054▲	1 un— yg men cap	10	50	20	1.06	19.50
4029	I un—with raison only	5	50	30	1.35	14.85
1039▲	Tun—with Edison one.	5	50	30	1.35	14.85
4040	Pull—with Edison plug.	5	50	30	1.35	14.85

## Aluminum Shell Sockets

660 WATTS, 250 VOLTS

Schedule "B"

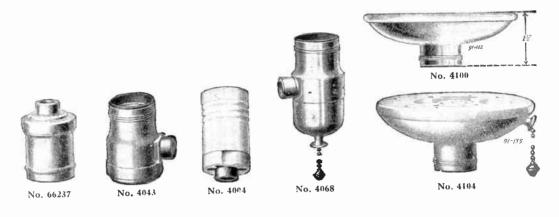
No. 4106

These sockets having aluminum shells are suitable for outdoor work. The shells
are lined with porcelain and the sockets are therefore suitable for show window work
and conform to the specifications of the National Board of Fire Underwriters as to the
conditions under which insulating joints may be omitted.

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
4106 <b>*</b>	Keyless, 3/8 inch cap	10	50	23	\$0.50	\$9.20
4107 <b>*</b>	Keyless. 1/2 inch cap	10	50	22	.50	9.20

<sup>\*</sup>National Electrical Code Standard.

# BRYANT AND PERKINS SOCKETS



# Bryant Electrolier Sockets

660 Watts, 250 Volts

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. per Carton				
BRYANT ELECTROLIER SOCKET Schedule "B"										
66237▲ 50766	Keyless—½ inch cap Keyless—¾ inch cap	50 10	250 100	$\begin{vmatrix} 45 \\ 20 \end{vmatrix}$	\$0.40 ,46	\$36.80 10.12				
BRYANT ANGLE SOCKETS Schedule "B"										
4043 <b>^</b> 4044 <b>^</b>	Keyless— <sup>1</sup> / <sub>8</sub> inch cap Keyless— <sup>3</sup> / <sub>8</sub> inch cap	25 25	100 100	25 28	\$0.35 ,41	\$16.10 18.86				
SOCKET FOR CANDLE FIXTURES  Schedule "B"										
4004	Keyless—! { inch nipple	25	250	15	\$0.30	\$16.50				
SOCKET FOR INDIRECT LIGHTING FIXTURES Schedule "B"										
4068 4116	Pull, with bottom chain guide, and 1% inch nozzle Pull, with bottom chain guide, and 1% inch 3 step nozz	le 10	50 50	22 22	\$0.75	\$13.80 14.72				
	WALL SOCKETS FOR 31/4 INCH		T BOXE	ES	Sched	lule "B"				
4102 4103	Keyless Wall Socket	1 1	100 100		\$0.45	\$0.99 1.10				
	tside diameter of base is $3\frac{11}{16}$ inches. les for supporting screws are spaced $2\frac{3}{4}$ inches on cen									
	WALL SOCKETS FOR 31/4 AND 4 II	NCH OU	TLET B	OXES	Sched	ule "B"				
4100 4101 4104 4105	Keyless Wall Socket. Keyless Wall Socket, with 6 inch wire leads. Pull Wall Socket, with flat back. Pull Wall Socket, with flat back with 6 inch wire lead	1 1 1	100 100 50 50		\$0.60 .65 1.30 1.35	1.43 2.86				
11.	tiside diameter of base is $45\%$ inches, olds for supporting screws are spaced $23\%$ and $31\%$ inches are brush brass, old brass, polished brass, polished brass.	es on cent	ers.							

Standard finishes are brush brass, old brass, polished brass. For other finishes see listing on socket finishes.

\*National Electrical Code Standard.

# BRYANT SOCKETS AND RECEPTACLES

75 Watts, 125 Volts













Miniature and Candelabra Sockets

Schedule "H"

					Seriedu	10 11
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt.	Mfrs. List	W. E. List per
433▲	Miniature Koy I/ inch any			Lbs.	Each	Carton
434▲	Miniature Key, 1/8 inch cap.	25	100	20	\$0.33	\$15.18
320▲	Candelabra Key, 18 inch cap	25	100	23	.33	15.18
3214	Miniature Keyless, 18 inch cap.	50	200	17	.2325	21.39
470	Canuclabra Neviess. % Inch can	50	200	19	235	21.71
	I Milliature Neviess, shan shell 1% mah aan	50	200	15	.2325	21.39
471	I Candelabra Neviess, snan shell 4% inch oon	50	200	17	.235	21.71
385▲	i Miniature Pilli. ¼ inch ean	10	50	10	.60	11.04
386▲	Canuciapra Fun, ½ men con	iö	50	12	.60	
473	Dimenture Turn Socket. 1/2 inch can	1ŏ	50	12		11.04
474	Candelabra Turn Socket, 1/2 inch can	10			.60	11.04
*327▲	Miniature, for candle fixture		50	8	. 60	11.04
*328▲	Candelabra, for eandle fixture.	50	200	9	. 12	11.04
†346▲	Mininture for condle fixture	50	200	10	. 12	11.04
	Miniature, for candle fixture.	50	200	10	. 12	11.04
	Candelabra, for candle fixture	50	200	11	. 12	11.04
*T1.	a graph and in modern death and a second sec					

\*The supporting studs are threaded .312 inch, 27 threads per inch.

†The nipples are 1/8 inch for pipe, .405 inch outside diameter, 27 threads per inch.









No. 367

No. 9445

No. 325

Weatherproof Pendent Sockets

Schedule "H' Pkg. List Mfrs. W. E. Carton Std. Description No. Wt. List List per Pkg. Quantity Lbs. Each Carton 3224 Miniature, Pendent Socket..... 25200 0 \$0.12 \$6.60 323▲ Candelabra, Pendent Socket..... 25 200 10 . 135 7.43 Made in green glazed porcelain.

Each socket fitted with 6 inches of No. 18 B. & S. Stranded Rubber-covered Wire. Sockets with longer wires furnished on special order. Extra charge, \$0.18 per foot, Mfrs. List, \$0.09; \$0.09 each conductor, Mfrs. List \$0.45.

Miniature and Candelabra Receptacles Schedule "H" Screws List Pkg. Mfrs. W.E. Carton Std. Description No. Spaced Wt. List List per Quantity Pkg. on Centers Lbs. Each Carton 3664 Miniature Receptacle.....  $1_{16}^{1}$  ins. 200 30 \$0.075\$4.13 3674 Candelabra Receptacle..... 25  $1_{\frac{1}{16}}$  ins. 20030 Outside diameter of base 1 7 inches. .094.95 9445 Miniature Receptacle.... 15 ins. 500 30 .0653.58 Outside diameter of base  $1\frac{3}{16}$  inches. Candelabra Receptacle.

Outside diameter of base  $1\frac{5}{16}$  inches. 9446  $1_{16}^{-1}$  ins. 25 500 30 .07253.97 Miniature, oblong base..... 324  $1\frac{7}{32}$  ins. 25200 24 .10 325 5.50 Candelabra, oblong base.... 25  $1\frac{1}{32}$  ins. 20026 . 10 5.50 326 Candelabra, oblong base, with spring screwshell 25  $1_{16}$  ins. 200  $\bar{28}$ .15 8.25

Standard finish is brush brass.

For other finishes see listing on socket finishes.

National Electrical Code Standard.

# Western Electric

#### **BRYANT SOCKETS**



No. 9366



No. 399



No. 43310



No. 60#66

#### Weatherproof Sockets

660 Watts, 600 Volts

Schedule "B"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List Per Carton
9366 <sup>A</sup> 399 <sup>A</sup> 43310 <sup>A</sup> 60666 <sup>A</sup> 50788	Porcelain, for W. P. Shade Holder Porcelain W. P. Socket Molded W. P. Socket Composition W. P. Socket Hard Rubber W. P. Socket	10 10 10 10 10	250 250 250 250 250 250	80 75 60 85 60	\$0.20 .125 .22 .24 1.00	\$4.40 2.75 4.84 5.28 22.00

The above sockets are fitted with 6 inches of No. 14 B. & S. Stranded Rubber-covered Wire. Sockets with longer wires furnished on special order. Extra charge, \$0.13 per foot. Mfrs. List \$0.09 (\$0.09 each conductor). Mfrs. List \$0.045.



No. 43311



No. 43314



No. 9448

## Weatherproof Bracket Sockets

660 Watts, 250 Volts

Schedule "B"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List Per Carton
43311 <sup>A</sup> 43312 <sup>A</sup> *43313 <sup>A</sup> *43314 <sup>A</sup> 9448 <sup>A</sup> 9496 <sup>A</sup>	Molded, ½ inch, wires inside of pipe	10 10 10 10 10 10	100 100 100 100 100 100	30 30 30 30 30 40 45	\$0.60 .60 .60 .60 .60	\$13.20 13.20 13.20 13.20 13.20 13.20

The above sockets are fitted with 6 inches of No. 18 B. & S. Solid Rubber-covered Fixture Wire. Sockets with longer wires will be furnished on special order. Extra charge, \$0.18 per foot. Mfrs. List \$0.09 (\$0.09 each conductor). Mfrs. List \$0.045.

- \* These sockets are approved for 660 watts, 600 volts.
- ▲ National Electrical Code Standard.

# BRYANT SOCKETS AND RECEPTACLES

660 Watts, 600 Volts







No. 44912

Bragdon Weatherproof Sockets

Schedule "B"

Extension edge carries the drip away from the lamp and socket. Method of wiring at the top removes the strain from the socket itself and places it on the porceasin. Extra hole in porcelain at top allows for independent suspension, if desired.

List No.	Description	Screws Spaced on Centers	Carton Quantity	Std. Pkg,	Pkg. Wt. Lbs.		W. E. List per Carton
50997▲	Weatherproof Socket		10	250	165	\$0.50	

# Weatherproof Receptacles

Schedule "B"

					-		
9407	With side wires. Outside diameter of base is 234 inches.	0.3 :	10		1		
	Activities to the second of th	$2\frac{3}{16}$ ins.	10	1 100	79	-80.40	\$8.80
	Ourside diameter of base is 2% mehes.		ľ	1	""	4.07.10	ψ0.00
44912	Pony, with side wires. Outside diameter of base 1 22 inches.				i	1	
~ ~ ~ ~ ~ ~	and, with side wifes.	2 ins.	1 10	100	55	9.5	7 70
	Outside diameter of base 12% inches			100	00		1.10
	32 110103.			1			
					l		



No. 9408



No. 9411



No. 30000

# Weatherproof Receptacles

Schedule "B"

List No.	Description	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	List	W. E. List per Carton
9408	With bottom wires	2½ ins.	10	100			
	With bottom wires.  Outside diameter of base is $2\frac{11}{16}$ inches.	274 IIIs.	10	100	80	\$0.40	\$8.80
0311	1 only, with notion wires	$2\frac{3}{8}$ ins.	10	100	57	.35	7.70
	Outside diameter of base is 23% inches						
OOO (A)	Angle, with side wires		10	100	85	. 45	9.90

The above sockets and receptacles are fitted with 6 inches of No. 14 B. & S. Stranded Rubber-covered Wire. Sockets and receptacles with longer wires furnished on special order. Extra charge, \$0.18 per foot. Mfrs. List \$0.09 (\$0.09 each conductor). Mfrs. List \$0.045.

A National Electrical Code Standard.

#### BRYANT SOCKETS





#### Street Hood Sockets

250 Watts, 250 Volts

Schedule "B"

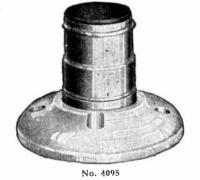
The malleable iron yoke is threaded for 3/8 inch iron pipe.

List No.		Carton Quantity	Std. Pkg.	Lbs.	Mfrs. W. E. List per Each Carton \$0.27 \$5.94	
25706▲	With side lugs	10	100			
660 Watts, 600 Volts Schedule "B"						
25707*	With wire leads	10	100	80	\$0.44 \$9.68	

No. 25707 is fitted with 6 inches of No. 14 B. & S. Stranded Rubber-covered Wire. Longer wire on special order. Extra charge, 18 cents per foot (9 cents each conductor).



4097





No. 4097

# Sockets for Mogul Base Lamps

2.05

660 Watts, 600 Volts			Sc	hedule	"B"			
Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List List Each	st per			
Keyless—3/8 inch cap	10 10	50 50	35 35	\$1.50 <b>\$</b> 2.50				
With 3½ inch Shade Holder Attached Schedule "B"								
Keyless—3% inch cap	1 1	50 50	50 55	\$1.80 1.80	\$3.96 3.96			
MOGUL WALL SOCKETS								
		50 50		\$1.50 1.80	\$2.76 3.96			
s for supporting screws are spaced 23/4 and 31/2 inches on cen	iters.							
BRASS COVERED BASE								
	Neyless—3% inch cap.	Description   Carton   Quantity	Description   Carton Quantity   Pkg.	Description   Carton Quantity   Pkg.   Wt. I.bs.	Description   Carton   Std.   Pkg.   Wt.   List			

4098 Holes for supporting screws are spaced  $2\frac{3}{4}$  and  $3\frac{1}{2}$  inches on centers.

Standard finish is brush brass.

For other finishes see listing on socket finishes.

National Electrical Code Standard.

# BRYANT PORCELAIN RECEPTACLES

660 Watts, 250 Volts



No. 50715



No. 59275



No. 017



No. 9394

#### With Exposed Terminals

Schedule "B"

List No.	Description	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
50715▲	Pony Cleat	1 1 5 ins.	10	250	-79	\$0.15	\$3.30
<b>59275^</b>	Cleat, base 1 inch high	2 ins.	10	250	106	.18	3.90
9171	Cleat Receptacle		10	500	135	.10	2.20
50757	Cleat, with copper fittings and screws		10	250	70	.20	4.40
9394	Cleat, removable ring		10	250	70	.20	4.40

Nos. 9171, 50757, and 9394 supported by one serew in the center.



No. 9402



No. 4013



No. 9403



No. 28795

# With Exposed Terminals

Schedule "B"

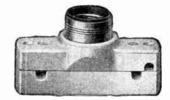
List No.	Description	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
9402	Cleat Receptacle	$2\frac{3}{28}$ ins.	10	250	100	\$0.15	\$3.30
4013▲	Cleat, for W. P. Shade Holder	23% ins.	10	250	110	.20	4.40
9403▲	Cleat, with brass ring for strd. shade holder	$2\frac{3}{8}$ ins.	10	250	100	.25	5.50
28795▲	Cleat Receptacle	1 1/2 ins.	10	250	95	.15	3.30



No. 58301



No. 58300



No. 58949

## With Enclosed Terminals

Schedule "B"

List No.	Description	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.		W. E. List per Carton
58301 <sup>4</sup> 58300 <sup>4</sup> 58949 <sup>4</sup>	Cleat	$\begin{array}{c} 1_{\frac{1}{16}} \text{ ins.} \\ 1_{\frac{1}{16}} \text{ ins.} \\ 1_{\frac{1}{16}} \text{ ins.} \end{array}$	5 5 5	$\begin{array}{r} 250 \\ 250 \\ 250 \\ 250 \end{array}$	165 165 160	\$0.25 .30 .35	3.30

<sup>\*</sup>National Electrical Code Standard.

## Western Electric

#### BRYANT RECEPTACLES

660 Watts, 250 Volts



No. 4014



No. 4023



No. 4063



No. 1700

#### Sign Receptacles

Schedule "B"

List No.	Description	Diam. of Hole Required	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
*4014*	"Ruby" Sign, with binding screws	15/8 ins.		10	250	65	\$0,20	\$4.40
*4023*	Universal Sign Receptacle	$1\frac{1}{2}$ ins.		10	250	85	,20	4.40
*4063*	Sign Receptacle	13 g ins.	1 <del>13</del> ins.	10	250	75	, 14	3.08
†1700 <b>^</b>	Pony Sign Receptacle	$1_{\frac{9}{16}}$ ins.	$1\frac{7}{8}$ ins.	10	250	145	,14	3.08
†50899	Sign Receptacle, short skirt	$1_{16}^{9}$ ins.	$1\frac{7}{8}$ ins.	10	100	30	, 25	5.50
†50782	Sign Receptacle, long skirt	$1_{\frac{9}{16}}$ ins.	$1\frac{7}{8}$ ins.	10	100	50	,25	5.50

See listing on "brass conduit box covers" for receptacles Nos. 4014 and 4023.

\*For metal signs.

tFor wooden signs.



No. 62357



No. 9514



No. 62355



No. 4112



No. 4110

# Receptacles for Conduit Boxes

Schedule "B"

List No.	Description	Screws Spaced on Centers	Car- ton Qnty.	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
62357	For use with 3½ inch boxes	$\frac{234 \text{ ins.}}{2}$	5	100	200	\$0.35	\$3.85
02000	Outside diameter of base 3½ inches.						, , , , ,
4064	For use with 4 inch round box	$3\frac{1}{2}$ ins.	5	100	120	.45	4.95
	Outside diameter of base 4½ inches.						
9514	Flush Receptacle (two piece)	$1\frac{7}{8}$ ins.	10	250	100	. 30	6.60
4033▲	Flush Receptacles (one piece)		10	250	100	. 20	4.40
	The hole required for these receptacles is 1 1 inches						
	in diameter.						
*4110	For use with 3¼ inch boxes, with black japanned cover	$2\frac{3}{4}$ ins.	1	100	70	. 30	. 66
*4111	For use with 31/4 inch boxes, with sherardized cover	$2\frac{3}{4}$ ins.	1	100	70	.31	. 68
*4112	For use with 31/4 inch boxes, with brush brass cover	$2\frac{3}{4}$ ins.	1	100	70	. 40	.88
†4113	For use with 4 inch boxes, with black japanned cover	$3\frac{1}{2}$ ins.	1	100	- 96	. 32	.70
†4114	For use with 4 inch boxes, with sherardized cover	$3\frac{1}{2}$ ins.	1	100	- 96	.335	.74
†4115	For use with 4 inch boxes, with brush brass cover	$13\frac{1}{2}$ ins.	1	100	96	. 44	. 97

<sup>\*</sup>Outside diameter 31/4 inches. †Outside diameter 41/16 inches.

# Receptacles for Condulets and Adaptiboxes Schedule "B"

62355*	Condulet Receptacle		10	250	103	\$0.25	\$5.50
62356*	Condulet Receptacle, for W. P. shade holder.		10	250	110	.30	6.60
4076	Adaptibox Receptacle for shade holder	$2\frac{5}{16}$ ins.	10	250	.,,	.30	6.60

<sup>\*</sup>National Electrical Code Standard.

# BRYANT MISCELLANEOUS RECEPTACLES

660 Watts, 250 Volts



No. 9397



No. 40507



No. 4038

# Receptacles for Conduit Boxes

Schedule "B"

List No.	Description	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
9397 <b>▲</b> 40507 <b>▲</b>	Conduit Box Receptacle	1½ ins. 1¼ ins.	10	250 250	40 40	\$0.20 .17	\$4.40 3.74

# Receptacles for Temporary and Decorative Lighting

Schedule "B"

10284   Tananana I)	
1000"   Temporary Decorative Capat Reconted   115 :-   10   0*0   *0.5   *0.5	
The same of the state of the st	62 OC
4038 <sup>a</sup>   Temporary Decorative Cleat Receptacle   1 <sup>15</sup> / <sub>16</sub> ins.   10   250   103   \$0.18	33.3D
	,

No. 4038 Receptacle is provided with pointed binding screws designed to pierce the insulation, making it unnecessary to strip the wires. Stranded wire is preferable for this use.



No. 4037



No. 4056

# Receptacles for Temporary and Decorative Lighting

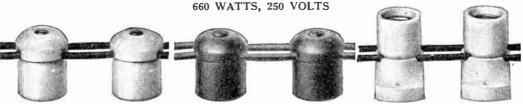
Schedule "B"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
4037 <b>^</b> 4056 <b>^</b>	Porcelain Temporary Decorative Receptacle	10 10	250 250	82 100	\$0.24 .30	\$5.28 6.60

Nos. 4037 and 4056 Receptacles are provided with pointed binding screws designed to pierce the insulation, making it unnecessary to strip the wires. Stranded wire is preferable for this use.

<sup>\*</sup>National Electrical Code Standard.

#### BRYANT RECEPTACLES FOR DECORATIVE LIGHTING



Porcelain Decorative Receptacle

Mica Decorative Receptacle

Decorative Cleat Receptacle

#### Ready-wired Receptacles

These receptacles will be furnished "ready-wired," that is, supplied with approved stranded single braid rubber covered wire, connections soldered, and then filled with insulating compound, making the receptacles absolutely weatherproof.

We carry at all times a large stock of parts and can usually ship orders of reasonable size the same day that they are

received at the factory.

These receptacles are put up in lengths of about 500 feet and will be so shipped, unless otherwise specified.

Additional lengths of wire can be supplied on either end of the streamers. Add \$0.20 list per foot. Mirs List \$0.09. (\$0.09 aach conductor.)

Mirs List \$0.045 for No. 14 wire and \$0.27 list per foot. Mirs List \$0.10 each (\$0.11 each conductor.)

Mirs List \$0.11 each for No. 12 wire.

each conductor.) Mirs List \$0.045 for No. 14 were and \$0.27 list per foot. Mirs List \$0.10 each (\$0.11 each conductor.) Mirs. List \$0.11 each for No. 12 were.

The list price of receptacles spaced more than 30 inches apart is obtained by adding \$1.75 per 100 receptacles per inch. (Mirs List \$0.75) to the list of No. 4041Z and 4042Z for No. 14 were and \$1.87 per 100 receptacles per inch (Mirs List \$0.85.) to the list of No. 124034Z, 124041Z and 124012Z for No. 12 were.

	List Prices and Data					Schedule "B"	
List No.	Description	Carton Quantity	Std. Pkg.	Wt. Lbs.	Mirs. List Each	W. E. List Per Carton	
4034 4041 4042	Porcelain decorative receptacle. Mica decorative receptacle. Decorative cleat receptacle.	10	250 250 250	60 75 100	\$0.20 .25 .285	\$4.40 5.50 6.27	

#### WIRED WITH NO. 14 WIRE Mica Decorative Receptacle Decorative Cleat Receptacle Porcelain Decorative Receptacle Mfrs. List per 100 W. E. List List Price W. E. List Mtrs. List | W. E. List Centers List No. per 100 per 100 List No. per 100 List No. Receptacles Receptacles Receptueles Receptacles Receptacles Receptacles \$57.01 \$26.00 26.75 27.50 28.25 \$47.84 49.22 \$63.48 ‡4042A 4 ins. ±4041A \$34.50 35, 20 36, 00 36, 75 37, 50 38, 25 14041B 58.42 14042B 14042C 64.77 5 ins. †4034B $\frac{31.75}{32.50}$ 6 ins. 50,60 14041C 14041D $59.80 \\ 61.18$ $66.24 \\ 67.62$ 14042C 14042D 14042E 14042F 14042G 51.98 †4034D 33.2529.00 53.36 4041E31.00 $62.56 \\ 63.94$ 69.00 4034E Sins. 70.38 71.76 73.14 74.52 140411 14034F $\frac{29.75}{30.50}$ 54.74 $\frac{34.75}{35.50}$ 9 ins. 56.12 57.484041G 65.3239.00 4034G 10 ins. 14042G 14042 H 14042J 14042K 14042M 14042N 14042P 14042Q 14042Q 31.25 $\frac{66.70}{68.08}$ $\frac{39.75}{40.50}$ 4041H 11 ins. 14034J 14034 K 32.00 33.50 58.88 †4041J 37.00 38.40 12 ins. 70.66 72.20 73.60 74.98 76.36 77.28 78.66 80.04 61.64 ‡4041K 42.00 14 ins. 1034M 1034N $34.25 \\ 35.00$ 63 00 ‡4041M 39.24 $\frac{42.75}{43.50}$ 15 ins. 64,40 14041 N 14041 P 16 ins. 40.00 81.42 82.80 85.56 4034P $35.75 \\ 36.50$ $\frac{40.75}{41.50}$ 44.25 17 ins. 4034Q 4034R 14041Q 14041R 18 ins. 67 16 45.00 69.92 79.12 $\frac{16.50}{47.25}$ 38 00 43 00 20 ins. 43.75 44.50 46.00 $\frac{38.75}{39.50}$ 40428 4042T 21 ins. 71.30 4041S 80.50 86.94 14034S 23 ins. 14034T 14034U $72.68 \\ 75.44$ †4041T $81.88 \\ 84.64$ $\frac{48.00}{49.50}$ 88.3291.0814042 41.00 40411 24 ins. 14034 V 14034 W 14034 X $\frac{41.75}{42.50}$ $\frac{76.82}{78.20}$ 86.02 87.40 14042V 14042W 25 ins. \$4041V 46.75 50.25 92.46 14041W 47.50 51.00 51.75 52.50 26 ins. $93.84 \\ 95.22$ 1041X 48.24 14042 X 14042 Y 43.25 27 ins. 28 ins. 14034 Y 14041Y 14041Z 44.0080.06 49 00 90 16 96 60 50.50 92.9254.0030 ins. 45 - 5083 99 - 36

			WI	RED WITH	NO. 12 W	RE			
	Porcelain	Decorative R	eceptacles	Mica De	corative Re	reptacles	Decorati	ve Cleat Re	ceptacles
Centers	List No.	Mfrs. List per 100 Receptacles	W. E. List per 100 Receptacles	List No.	Mfrs. List per 100 Receptacles	W. E. List per 100 Receptacles	List No.	per 100	W. E. List per 100 Receptacles
4 ins. 5 ins. 6 ins. 7 ins. 8 ins. 9 ins. 11 ins. 12 ins. 14 ins. 15 ins. 16 ins. 17 ins. 20 ins. 22 ins. 22 ins. 24 ins. 25 ins. 26 ins. 27 ins. 28 ins.	1124034A 1124034B 1124034C 1124034B 1124034F 1124034F 1124034J 1124034J 1124034N 1124034N 1124034N 1124034R 1124034R 1124034R 1124034B 1124034B 1124034B 1124034B 1124034B 1124034B 1124034B 1124034B 1124034B 1124034B	\$28, 60 29, 45 30, 50 31, 10 31, 50 32, 75 33, 55 34, 40 35, 20 36, 85 37, 70 38, 50 39, 35 40, 15 41, 80 42, 65 43, 45 46, 75 47, 60 48, 40	\$52.62 54.19 56.12 57.22 57.96 60.26 61.73 63.30 64.77 67.80 69.37 70.84 72.40 73.88 76.91 78.48 79.95 82.98 84.64 86.02 87.58 89.06	#124041A #124041B #124041C #124041E #124041F #124041F #124041H #124041H #124041J #124041J #124041N #124041N #124041N #124041N #124041S #124041S #124041C #124041C #124041C #124041C #124041V #124041V #124041V #124041V #124041V #124041V	\$33.60 34.45 35.50 36.10 36.50 37.75 38.55 39.40 40.20 41.85 42.70 43.50 44.35 45.15 46.80 47.65 48.45 50.10 51.75 52.60 53.40	\$61.82 63.39 65.32 66.42 67.16 69.46 70.93 72.50 73.98 77.00 78.57 80.04 81.60 87.68 89.15 92.18 93.84 95.22 96.78	1124042A 1124042B 1124042C 1124042D 1124042F 1124042F 1124042H 1124042H 1124042M 1124042M 1124042M 1124042C	\$37.16 37.95 39.00 39.60 40.00 41.25 42.90 43.70 45.38 46.24 47.00 47.85 50.30 51.15 51.95 53.60 54.50 55.25 56.10	\$68.37 69.83 71.70 72.86 73.60 75.90 77.37 78.94 80.41 83.50 85.08 86.48 88.04 89.52 92.55 94.12 95.59 98.62 100.28 101.66 103.22 104.70
30 ins.	‡124034Z	50.10	92.18	1124041Z	55.10	101.38	124042Z	58.60	107.82

# BRYANT RECEPTACLES AND SPECIALTIES







No. 390



No. 25705



Schedule "H"

Sig	n	Re	сер	ta	C	l	е	S	
75	Wa	tts,	125	Vo	lt	s			

List No.	Description	Diam. of Hole	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W.E. List per
387 <sup>4</sup> 388 <sup>4</sup> 389 <sup>4</sup> 390 <sup>4</sup> 279 <sup>4</sup> 25¶05 <sup>4</sup>	Miniature Receptacle Candelabra Receptacle Miniature, with removable ring Candelabra, with removable ring Miniature, for wood signs Candelabra, for wood signs	21 in. 3/2 in. 3/4 in. 3/4 in. 3/4 in. 15 in. 15 in.	$\begin{array}{c} \frac{1}{1_{16}} \text{ ins.} \\ 1\frac{3}{16} \text{ ins.} \\ \vdots \\ \frac{1}{3_{2}} \text{ ins.} \\ 1\frac{5}{3_{2}} \text{ ins.} \\ \end{array}$	10 10 25 25 10 10	250 250 250 250 250 100 100	30 32 30 32 12 12	\$0.12 .16 .17 .17 .24 .24	\$2.64 3.52 9.35 9.35 5.28 5.28

# Candelabra Candle Switch

4004	½ Ampere, 125 Volts					
493▲ 420▲	Key Candle Switch.	25	50	7	80.33	\$15.18
420	1 2 un Canule Ownen	4 43	50	7	.60	
†452 <b>^</b>	Turn Candle Switch Switch for Cast Canopy	10	50	7		13.80
	,	10	100	7	.80	17.60



No. 1274



No. 9357



No. 392 Socket Rings



No. 451



	Socket Kings					
1273	Single Petticoat Composition Ring.	1			W	
1974	Double Petticoat Composition Ring	100	100	2	80.01	\$6.00
1495	Potable Tetricoat Composition Ring	100	100	1)		6.00
1499	Single Pettieoat Porcelain Ring	100	100	-	.01	0.00

Socket Adapters	 TOO	°t	.00	7.50
1435   Single Petticoat Composition Ring   Single Petticoat Porcelain Ring	 100		$.04 \\ .05$	6.00

0.00	I vs					
9357*	For T. II. Sockets.	100	500	20	\$0.04	\$7,36
40.4	Socket Reducers				,	
421	Mogulto Medium.	10	100	0.1	00 00 1	
				22	[-\$0, 25]	
391▲	Candalabra to Miniatura	25	100	6	. 10 h	4,60
	Candelabra to Miniature.	100	100	1	ng l	9.00
			100		.00	0,00

## Canopy and Key Arm Switches 3 Amperes, 125 Volts: 1 Ampere, 250 Volts

	5 Amperes, 125 volts; 1 Ampere, 250	Volte				
†451 <b>^</b>	Switch for Spun Canopy	1.00	1			
491	I DWITCH WITH DIF-13H IOF SHIP Canony		100*		\$0.75	\$16.50
492	Switch with pig-tail for Cash Canopy.	10	100	12	.75	
††242 <b>4</b> *	Koy Arm Switch	10	100	11	.80	
541	Key Arm Switch	10	100	20	1.00	*****
011	"Junior" Switch, with leads for spun canopy (1/2 ampere,				1.00	00, دد
F 40	149 VOIIS)	1 10	100	14		10 50
542	Junior Switch, with lead for east canony (1/2 ampers 195)		100	1.4	. 40	16.50
_	volts) (72 different 12.)	10	100			
4/T1	NT 4Fe 1	10	1.100	10	. 80	1.17.60

†The stem on No. 451 is long enough for a canopy not more than  $\frac{1}{16}$  inch thick. No. 452 may be used on canopies up to  $\frac{1}{4}$  inch. The key stems are threaded  $\frac{5}{32}$  inch, 26 threads per inch.

\* List Nos. 451 and 452 may be assorted to make up standard package quantity of 100.

†† The casing of this switch is threaded to receive standard  $\frac{1}{48}$ -inch pipe at each end. Keys are not supplied with switches, as these are usually furnished by the fixture manufacturer in a design to harmonize with the fixture. The stem is threaded  $\frac{5}{32}$  inch, 26 threads per inch.

Anational Electrical Code Standard.

# BRYANT PLUG RECEPTACLES







No. 341

# K .- W. Surface Plug Receptacle

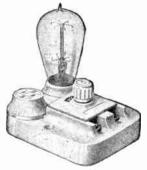
12 Amperes, 125 Volts, 6 Amperes, 250 Volts

Caps are interchangeable and will fit any K.-W. Rosette Base.

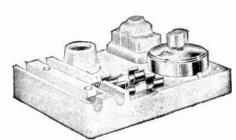
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	List Price per Carton
1681*	Concealed, with plug	1	25	22		\$1.10
	Cleat, with plug	1	25	22	. 50	
1682		1	25	22	. 50	1,10
1683	2-Wire Molding, with plug		25	22	. 50	1.10
1684	Combination Receptacle		25	22	.50	
285	3-Wire Molding, with plug	1 0"		22	25	
1510*	Plug only for above	25	25	0		
*341▲	Recentacle, complete with plug	5	25	30	.60	
	Receptacle only		25	10	. 35	3.22
342▲			25	20	. 25	2.30
343▲	Plug only	10	20	8	.10	1.84
344▲	Porcelain Sub-Base for cleat and molding work	10	20	1 0		2.01

<sup>\*</sup>For concealed work.

Porcelain parts are massive and the current-carrying parts will stand heavy overloads without danger of heating. The contacts are marked in such a way that the plug can be restored to the receptacle without reversing the polarity, but the polarity can be reversed when desired.



No. 466



No. 439

# Surface Heater Control Combination

10 Amperes, 250 Volts

List No.	Description	Carton Quantity	Std. Pkg.	Mfrs. List Each	List Price per Carton
466*	Combination of a 10-Ampere, 250-Volt Indicating Switch, an Edison Receptacle in multiple, to be used for pilot lamp, and a standard Hubbell attachment plug	1	10	\$1.35	<b>\$</b> 2.98
	Switch, 1 No. 342 25-Ampere Plug Receptacle, 1 No. 343 25-Ampere Plug, 1-4000 Receptacle for pilot lamp	1	10	3.50	7,70

<sup>\*</sup>National Electrical Code Standard

# "SPARTAN" INTERCHANGEABLE PLUGS AND RECEPTACLES













No. 100

No. 700

#### "SPARTAN" INTERCHANGEABLE PLUGS AND RECEPTACLES "SPARTAN" PLUG CAPS-10 AMPERES, 250 VOLTS

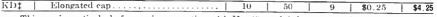
Schedule "H" Any of these caps can be furnished "polarity" (non-reversible) without extra charge. To specify polarity caps, change the first letter to M, as: MA, MB, MC, etc. Any of these caps can be furnished with the blades set tandem (———) instead of parallel (||) without extra charge. To specify caps with tandem blades, change the first letter to L, as LA, LB, LC, etc.

List No.	Description	Carton Qnty.	Std. Pkg.	Pkg. Wt.	Mfrs. List	W. E. List per Carton
KA‡	Standard plug cap	10	50	8	\$0.15	\$2.55
KB‡		10	50	8	.25	4.25

The standard finish on the cap is brush brass or old brass, which will be shipped when no finish is specified. Polished brass, when specified, will be shipped without extra charge. For other finishes add to list \$0.12; Mfrs. List \$0.05.

KCI 1	Brass covered cap with finger grip	10	1 50	10	80.35	CE OF
*** +	man core and a second s	10	1 00	1 10	80.55	\$5.95

This cap is offered in response to the demand from certain engineers and others for a cap that provides some means of detaching the cap from its base other than pulling on the conducting cord, ishes are the same as for KB cap listed above.



This cap is particularly for use in connection with No. 48 conduit box receptacle when the two are installed in a watertight floor box.

KE‡	Pilot cap (125 volts)	 10	30	12	\$0.95	\$16.15
					<del></del>	

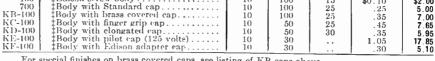
The 2 C.P. 125 volt candelabra base lamp, which forms a part of this device, is connected in multiple with the current consuming device which is connected to the cap. KF‡ | Edison adapter cap (660 watts) . . . . | 10 1 30

		40
This device permits the insertion of a medium base lamp in any "Spartan" base, or as an adapter to connect other makes of Edison attachment plugs into Spartan "bases"	r it may be	11904
as an adapter to connect other makes of Edison attachment plugs into Spartan "bases"	i to may be	uscu

#### "SPARTAN" ATTACHMENT PLUGS-660 WATTS, 250 VOLTS

700	Body with Standard cap. Body with brass covered cap. Body with finger grip cap. Body with elongated cap.	10	100	15	\$0.10	\$2.00
KB-100		10	100	25	.25	5.00
KC-100		10	100	25	.35	7.00
KD-100		10	50	25	.45	7.65
KE-100		10	50	30	.35	5.95
KE-100 KF-100	Body with pilot cap (125 volts) Body with Edison adapter cap	10	30 30		1.05 .30	17.85 5.10

For special finishes on brass covered caps, see listing of KB caps above.



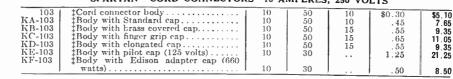
"SPARTAN" MULTIPLE CURRENT TAPS-660 WATTS, 250 VOLTS

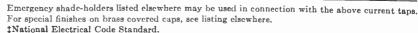
				,		
101	‡Multiple current tap hody	10	50		\$0.35	\$5.95
KA-101	Body with Standard cap	10	50		.50	8.50
KB-101	Body with brass covered cap	10	50		.60	10.20
KC-101	Body with finger grip cap	10	50	1	.70	11.90
KD-101	Body with elongated cap	10	50		. 60	10.20
KE-101 KF-101	Body with pilot cap (125 volts)	10	30		1.30	22.10
KF-101	Body with Edison adapter cap	1 10	30	<u> </u>	. 55	9.35

"SPARTAN" SERIES CURRENT TAPS-660 WATTS, 250 VOLTS

KA-102 KB-102 KC-102 KD-102	Series current tap body.  Body with Standard cap. Body with brass covered cap.  Body with finger grip cap.  Body with clongated cap.	10 10 10	50 50 50 50 50	* * * * * * * * * * * * * * * * * * * *	\$0.35 .50 .60 .70	\$5.95 8.50 10.20 11.90
KD-102 KF-102	Body with clongated cap Body with Edison adapter cap	10 10	50 30	**	.60 .55	10.20

#### "SPARTAN" CORD CONNECTORS-10 AMPERES, 250 VOLTS







Nos. 101 and 102







# "SPARTAN" INTERCHANGEABLE PLUGS AND RECEPTACLES



No. KG-103



"SPARTAN" MOTOR ATTACHMENT PLUG-10 AMPERES, 250 VOLTS

"SPARTAN" MOTOR ATTACHMENT PLUG—10 AMPERES, 250 VOLTS
This device is designed for supplying current to portable current consuming devices such as heaters and vacuum cleaners. The part with the knife blade contacts (measuring 1½ inches in diameter and having holes for supporting screws spaced 1 inch on centers) is permanently attached to the apparatus to which current is to be fed. It is well to so house this part as to protect the contacts from mechanical injury. The body piece is attached to the conductors which supply the current and, as all live parts are completely enclosed, it is impossible for a short circuit or ground to occur should this part, when disconnected from the apparatus, come in contact with some conducting material.

Schedule "H"

List No.	Description	Diam. of Base	Screws Spaced on Centers Inches	Carton	Std. Pkg.		Each	
	Motor Attachment Plug cap Motor attachment plug, complete			10 10	50 50	10 15	\$0.20 .50	\$3.40 8.50



No. 105

"SPARTAN" CLEAT RECEPTA	ACLES-	-10 AMPE	RES, 250	VOLTS					
101 ICleat base body		111 10			5 \$4.20				
KA-104 Body with Standard cap	:::	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			0 6.85				
KC-104 Body with finger grip cap		1 1 10		25 . (	0 10 20				
KD-104 Body with clongated cap.		133 10			8 50				
KE-104 Body with pilot cap (125 volts). KF-104 Body with Edison adapter cap		111 10	30	1.2	20.40				
1' (digo		1 1 1 1 0	30		5 7.65				
"SPARTAN" CONCEALED RECEPTACLES-10 AMPERES, 250 VOLTS									
105th concealed base body	27 1	11. 1 10	1 50 1	90 (\$0.5	251 \$4 25				

105 Concealed base body.

KA-105 Body with Standard cap....

KB-105 Body with brass covered cap....

KC-105 Body with finger grip cap.

KD-105 Body with elongated cap...

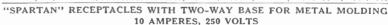
KE-105 Body with pilot cap (125 volts)

KF-105 Body with Edison adapter cap. 6 80 8 50 10 20 25 25 10 50 50 50 .60 10 25 50 8.50 20.40 30 1 20 (660 watts).. 113 10 30 7 65

No. 106

"SPARTAN" RECEPTACLES WITH ONE-WAY BASE FOR METAL MOLDING 10 AMPERES, 250 VOLTS

106[‡One-way body		10	50	20	[\$0.25]	\$4.25
KA-106 Body with Standard cap		10	50	23	.40	6.80
KB-106 Body with brass covered cap	,	10	50	23	.50	8.50
KC-106 Body with finger grip cap	 	10	50	23	.60	10.20
KD-106 Body with elongated cap		10	50	25	.50	8.50
KE-106 Body with pilot cap (125 volts).	 	10	30		1.20	20.40
KF-106 Body, with Edison adapter cap	l		1	ł	[ ]	
(660 watts).,	 	10	30	١	.45	7.65





No. 107

107[‡Two-way body	 l l	10	50	20	[\$0.25]	\$4.25
KA-107 Body with Standard cap	 	10	50	23	.40	6.80
KB-107 Body with brass covered cap	 1 1	10	50	23	.50	8.50
KC-107 Body with finger grip cap	 1 1	10	50	23	.60	10.20
KD-107 Body with elongated cap		10	50	25	.50	8.50
KE-107 Body with pilot cap (125 volts)	 	10	30		1.20	20.40
KF-107 Body with Edison adapter cap			1		1 1	
(660 watts)	 l l	10	30	١	.45	7 65

"SPARTAN" RECEPTACLES FOR 1/2 AND 1/4 INCH PIPE TAPLETS AND WOOD MOI DINC 10 AMPEDES 250 VOLTS

MOLDING-10 A	INIPER	E5, 250	VOLIS			
108[‡Taplet body		2,5	10	50	20	[80.35] \$5.95
KA-108 Body with Standard cap		218 218 218 218 218	10	50	23	.50 8,50
KB-108 Body with brass covered cap		215	10	50	23	.60 10.20
KC-108 Body with finger grip cap		2 5	10	50	23	.70 11.90
KD-105 Body with elongated cap		$\frac{2\frac{8}{16}}{2\frac{5}{16}}$	10	50	25	. 60 10.20
KE-108[‡Body with pilot cap (125 volts).]		2,5	10	30		1.30 22.10
KF-108 Body with Edison adapter cap				[		
(660 watts)		2 1	10	30		.55 9 35



No. 108

"SPARTAN" RECEPTACLES FOR 14 INCH OBROUND CONDULETS

10 AWFERES, 230 VOLTS									
109 Condulet body			10	100		180.40  \$8.0	00		
KA-109 Body with Standard cap			10	50		.55 9 3	35		
KB-109 Body with brass covered cap			10	50		.65 11 (	05		
KC-109 Body with finger grip cap			10	50		.75 12 7	75		
KD-109 Body with elongated cap			10	50	[	. 65 11 (	05		
KE-109 Body with pilot cap (125 volts).			10	30		1.35 22.9	95		
KF-109 Body with Edison adapter cap			ļ						
(660 watts)			10	30	١	. 60 10.2	20		

For special finishes on brass covered caps, see listing elsewhere. No. 109 ‡National Electrical Code Standard.



## "SPARTAN" INTERCHANGEABLE PLUGS AND RECEPTACLES









No. 110



"SPARTAN" RECEPTACLES FOR ¾ INCH OBROUND CONDULETS 10 AMPERES, 250 VOLTS

Schedule "H"





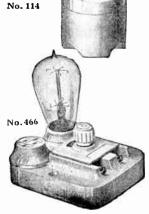






Showing Manner of Installing No. 113





List No.	Description	Diam. of Base Inches	Screws Spaced on Centers Inches	ton	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W.E. List per Carton
*KA-110	Condulet body			10	100	::	\$0.45 .60	
▲KB-110 ▲KC-110	Body with brass covered cap Body with finger grip cap			10 10	50 50		. <b>7</b> 0 .80	11.90 13.60
*KE-110	Body with elongated cap Body with pilot cap (125 volts).			10 10	50 30		.70 1.04	
-KF-110	Body with Edison adaptr cap (660 watts)			10	30		. 65	11.05

#### "SPARTAN" RECEPTACLES WITH BASE FOR ADAPTIBOXES

10 AMPERI	LS, 250	VOLIS	•		
*111 Adaptibox body	27/8	2,5	10	50 r 2.	5 (SO.354 \$5.95
*KA-111 Body with Standard cap	27/8	2 16	10	50 2	
*KB-111 Body with brass covered cap	278	216	10	50 2	
*KC-111 Body with finger grip cap	258	2,5	10	50 2:	3 .70 11.90
*KD-111 Body with elongated cap	274	$2\frac{5}{16}$	10	50 30	60 10.20
*KE-111 Body with pilot cap (125 volts).	2.7 8	25	10	30 .	1.30 22.10
*KF-111 Body with Edison adapter cap					1 1
(660 watts)	21/4	$2\frac{5}{16}$	10	30   .	55 9.35

# "SPARTAN" RECEPTACLES WITH BASE FOR CONDUIT BOXES

TO AMITERES, 250 VOLTS										
▲112 Conduit box body	13/4	5/H	10	50	20	[\$0.25]	\$4.25			
*KA-112 Body with Standard cap	134	5.8	10	50	23	.40	6.80			
*KB-112 Body with brass covered cap	134	5/8	10	50	23	.50	8.50			
*KC-112 Body with finger grip cap	$1\frac{3}{4}$	5/9	10	50	23		10.20			
*KD-112 Body with elongated cap	134	5,4	10	50	25		8.50			
*KE-112 Body with pilot cap (125 volts).	134	58	10	30		1.20	20.40			
*KF-112 Body with Edison adapter cap						1 1				
(660 watts)	134	5/x	10	30		1 .45	7.65			

#### "SPARTAN" RECEPTACLES WITH BASE FOR CONDUIT BOXES 10 AMPERES, 250 VOLTS

This receptacle is specially designed to be installed in a 4 inch octagon box of the standard type. The neck of the receptacle is threaded the same as \(\frac{1}{2}\)2 inch conduit and can, therefore, be inserted in any \(\frac{1}{2}\)4 inch knockout and secured by a \(\frac{1}{2}\)5 inch lock nut. When octagon boxes are used for surface work, this receptacle is extremely useful as the binding posts are so arranged as to be easily accessible after the box has been installed, so that additional taps for drop cords or the like can be taken off at any time with a very stight expenditure of below. slight expenditure of labor.

*113[Conduit box body	 	10	50		[\$0.25]	\$4.25
*KA-113 Body with Standard cap	 	10	50		.40	6.80
*KB-113 Body with brass covered cap	 	10	50		.50	8.50
AKC-113 Body with finger grip cap	 	10	50	.,	.60	10.20
*KD-113 Body with clongated cap	 	10	50			8.50
*KE-113 Body with pilot cap (125 volts).	 	10	30		1.20	20.40
*KF-113 Body with Edison adapter cap					1 1	
(660 watts)	 	10	30		4.45	7.65

# "SPARTAN" RECEPTACLES FOR CONDUIT BOX COVERS 10 AMPERES, 250 VOLTS This receptacle is similar in construction to No. 4072 Sign Receptacle listed elsewhere.

It may be attached to any outlet box cover having a hole  $1_{\rm Td}$  inches in diameter. No notch or lug is necessary, as the receptacle is prevented from turning by three fins in the inner porcelain which bite into the metal of the cover. The outside diameter of the body of the recentacle is 137 inches

tho recopract is 1,4 in ites.						
▲114 Conduit cover body	 1	10	50		[\$0.25]	\$4.25
*KA-114 Body with Standard cap	 	10	50		.40	
*KB-114 Body with brass covered cap	 ,	10	50		.50	
*KC-114 Body with finger grip cap	 ,	10	50			10.20
*KD-114 Body with elongated cap	 	10	50	٠.		
*KE-114 Body with pilot cap (125 volts).	 	10	30		1.20	20.40
*KF-114 Body with Edison adapter cap					ll	
(660 watts)	 	10	30	.,	1 .451	7.65

For special finishes on brass covered caps, see listing elsewhere.

#### "SPARTAN" SURFACE HEATER CONTROL COMBINATION

†This device is listed elsewhere. National Electrical Code Standard.

List price, standard package, etc., of KJ is the same as KA, listed clsewhere.

## "SPARTAN" INTERCHANGEABLE PLUGS AND RECEPTACLES















"SPARTAN" FLUSH RECEPTACLES WITH ROUND PLATE

10 AMPERES, 250 VOLTS

Schedule "H"



No. 115



No. 116

*List No.	Description	Diam. Body Inches	of Plate	Screws Spaced on Centers Inches	Car- ton Qnty.	Std.	Wt.	M frs. List Each	W. E. List per Carton
*KA-115 *KB-115 *KC-115 *KD-115 *KE-115	Receptacle body (receptacle and plate) Body with Standard cap. Body with brass covered cap. Body with finger grip cap. Body with clongated cap. Body with clongated cap. Body with Edison adapter cap (660 watts) Body with duplex adapter.	1 7 6 1 7 6	234 234 234 234 234 234 234 234	17/8 17/8 17/8 17/4 17/4 17/6	1 1 1 1 1 1	50 50 50 50 50 50 30 30		\$0.85 1.00 1.10 1.20 1.10 1.80 1.55	2.00 2.20 2.40 2.20 3.60

#### "SPARTAN" RECEPTACLES FOR 314 INCH OUTLET BOXES 10 AMPERES, 250 VOLTS



No. 117

*116 Receptacle body (receptacle and)		1	1			1	
plate) 1 178	358	234	1	50		80.95	\$1 90
*KA-116 Body with Standard cap $1\frac{7}{16}$	354	234	1	50		1.10	2 20
*KB-116 Body with brass covered cap 1 17	358	234	1	50		1.20	2.40
$^{\bullet}$ KC-116 Body with finger grip cap $1\frac{7}{16}$	35 g	234	1	50	. ,	1.30	2 60
^KD-116 Body with elongated cap 1 17 16	35,	234	1	50		1.20	2 40
<sup>≜</sup> KE-116 Body with pilot cap (125 volts). 1 1 16	398	234	1	30		I.90	3 80
*KF-116 Body with Edison adapter cap				1			
(660 watts) $1\frac{7}{16}$	354	234	1	30		1.15	2 30
▲KH-116 Body with duplex adapter 1 176	35 g	534	- 1	30		1 65	3.10

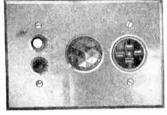
#### "SPARTAN" RECEPTACLE AND TYPE "O" SWITCH COMBINATION 10 AMPERES, 250 VOLTS

This device is a combination of a "Spartan" Flush Receptacle and a Type "O" double pole indicating flush switch, ready wired, and designed to be installed in a standard single switch

box. The line wires may be attached to either end of the device. If attached to the switch end, the switch controls the receptacle as well as the outgoing circuit; but if attached to the receptacle end, current may be taken off through the receptacle irrespective of the position of the switch, which will control only the other outgoing circuit.

For "combination plates" (defined elsewhere) specify "W" sections for this device

| Screws | | |



No. 467



No. 558

	*I.ist No.	Description	Diam. of Plate Inches	Spaced on Centers Inches	ton		Mfrs. List Each	W. E. List Each
ACCUPATION AND ADDRESS OF THE PARTY AND ADDRES	*KA-117 *KB-117 *KC-117 *KD-117 *KE-117	Body with Standard cap	4 ½ x 2 ¾ 4 ½ x 2 ¾	3 1/2	1 1 1 1 1 1 1 1 1	10 10 10 10 10 10 10	\$2.00 2.15 2.25 2.35 2.25 2.95 2.95 2.20 2.70	\$4.00 4.30 4.50 4.70 4.50 5.90
:1		"SPARTAN" FLUSH HEATEI	CONTR	OI CO	MRIN	IATE	ΩN	

467 This device is listed elsewhere.

558 This device is listed elsewhere.

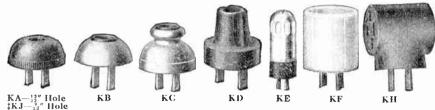
\*Receptucles will regularly be shipped with the porcelain bases, which project through the plate, glazed black. White, when specified, will be shipped without extra charge.

List price, standard package, etc., of KJ is the same as KA, listed elsewhere. \*National Electrical Code Standard.

### "SPARTAN" INTERCHANGEABLE PLUGS AND RECEPTACLES



No. 120 3/8 Actual Size



Schedule "H" "SPARTAN" STANDARD FLUSH RECEPTACLES—10 AMPERES 250 VOLTS For "Combination Plates" specify "F" sections to accommodate these receptacles.

List Description No.	Pack, Wt. Pds.	Car-	Stan. Pack.	Mfrs. List Each	W. E. List per Carton
120 Flush Receptacle Body	28	10	50	\$0.60	\$10.20
KA-120 Body with Standard Cap	28	10	50	.75	12.75
KB-120 Body with Brass Covered Cap	28	10	50	.85	14.45
KC-120 Body with Finger Grip Cap	28	10	50	.95	16.15
KD-120 Body with Elongated Cap	30	10	50	. 85	14.45
KE-120 Body with Pilot Cap (125 volts)		10	30	1.55	26.35
KF-120 Body with Edison Adapter Cap (660 watts)		10	30	.80	13,60
KH-120 Body with Duplex Adapter		10	30	1.30	22.10

Outside supporting screw holes are spaced  $3\frac{9}{32}$  inches on centers. Inside supporting screw holes are spaced  $2\frac{9}{16}$  inches on centers.

### PLATES FOR "SPARTAN" STANDARD FLUSH RECEPTACLES Schedule "H"



Receptacles in gangs are spaced  $1\frac{2}{16}$  inches on centers. See listing elsewhere for special finishes on the above plates.



Nos. 429 and 545

3/8 Actual Size

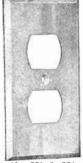
No. 122 3/8 Actual Size

### "SPARTAN" DUPLEX FLUSH RECEPTACLES

Each Outlet 10 Amperes 250 Volts Schedule "H"
For "combination plates" specify "V" sections to accommodate these receptacles.

|Screws1 | |

List No.	1)escription	Spaced on Centers Ins.	Qnty.	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
122	*Duplex Receptacle Body	3 9 3 2	10	50	40	\$0.85	\$14.45
KA-122	Body with two Standard Caps		10	50		1.15	19.55
KB-122	Body with two Brass Covered Caps	$3\frac{9}{32}$	10	50		1.35	22.95
KC-122	Body with two Finger Grip Caps	3.32	10	50		1.55	26.35
KD-122	Body with two Elongated Caps	$3\frac{9}{32}$	10	50		1.35	22.95
KE-122	Body with two Pilot Caps (125 volts)	$3\frac{9}{32}$	1	30		-2.75	5.50
KF-122	Body with two Edison Adapter Caps		ļ				
	(660 watts)	$3\frac{9}{32}$	1	30		1.25	2.50
KH-122	Body with Duplex Adapter	3 9 3 2	1	30		-2.25	4.50



No. 550 & 551 3/8 Actual Size

### PLATES FOR "SPARTAN" DUPLEX RECEPTACLES

					Each
	*Single Plate, stamped, $\frac{1}{16}$ in., $4\frac{1}{2} \times 2\frac{3}{4}$	 25	 15	\$0.40	\$0.88
*551	Single Plate, solid, $4\frac{1}{2} \times 2^{3}4 + \dots$	 25	 	.65	1,43
	↑Two-gang Plate, solid, $4\frac{1}{2} \times 4\frac{9}{16} \dots$	 10	 	1.30	2.86
	<sup>↑</sup> Three-gang Plate, solid, 4½ x 63 g	 - 5	 	1.95	4.29
*554	<b> </b> Four-gang Plate, solid, $4\frac{1}{2} \times 8\frac{3}{16} \dots$	 5	 	2.60	5.60

Receptacles in gangs are spaced  $1_{16}^3$  inches on centers. See listing elsewhere for special finishes on the above plates.

\*A standard package of plates consists of a sufficient number to accommodate 50 single receptacles. \*National Electrical Code Standard.

†A standard package of plates consists of a sufficient number to accommodate 50 Duplex receptacles. ‡List price, standard package, etc., of KJ is the same as KA.

### BRYANT PORCELAIN ROSETTES





No. 873



No. 1179

### Bryant K.-W. Rosettes

Fusible, 2 Amperes, 125 Volts

Caps are interchangeable and will fit any K.-W. Rosette base.

Schedule "H"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.		W. E. List per Carton
950 <sup>4</sup> 870 ‡871 <sup>4</sup>	Cleat Rosette, with stamped lugs Cleat Rosette, with cast lugs Concealed Rosette	10 10 10	$250 \\ 250 \\ 250$	165 170 155	\$0.26 .26 .26	\$5.72 5.72 5.72
926 1426 872	Rosette for two-wire molding. Rosette for three-wire molding. Combination Rosette.	10 10 10	250 250 250	155 205 160	.26 .26 .26	5.72 5.72 5.72

‡Outside diameter of base is 21% inches. Holes for supporting screws are spaced 15% inches on centers.

### Bryant K.-W. Bracket Rosettes

Fusible, 2 Amperes, 125 Volts With Brass Face Plate

Caps are interchangeable and will fit any K.-W. Rosette base.

Schedule "H"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	List	W. E. List per Carton
*873* 1176* 1177 287 1402	Bracket Rosette, concealed Bracket Rosette, cleat Bracket Rosette, 2-wire molding Bracket Rosette, 3-wire molding. Bracket Rosette, combination	10 10 10	100 100 100 100 100	72 75 71 80 72	\$0.36 .36 .36 .36	7.92 7.92 7.92

#### With Brass Thimble

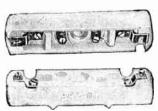
### Schedule "H"

*1073* 1178* 1179 288 1403	Bracket Rosette, concealed Bracket Rosette, cleat Bracket Rosette, 2-wire molding Bracket Rosette, 3-wire molding Bracket Rosette, combination	10 10 10	100 100 100 100 100	72 72 75 80 75	.36 .36 .36	\$7.92 7.92 7.92 7.92 7.92
--	--	----------------	---------------------------------	----------------------------	-------------------	--

<sup>\*</sup> Outside diameter of base is 21/8 inches. Holes for supporting screws are spaced 15/8 inches on centers.

A National Electrical Code Standard.

### BRYANT PORCELAIN ROSETTES









No. 1501





No. 298

### Bryant Cleat Rosette WITH COVERED CONNECTIONS

Schedule "H"

List No.	Description	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	W. E. List per Carton
 565 965▲	Fuseless Rosette 3 amp. 250 volts	1½ ins. 1½ ins.	20 20	$\frac{250}{250}$	125 125	\$8.80 11.44

### Bryant Junior Rosettes

FUSIBLE, 2 AMPERES, 125 VOLTS

Caps are interchangeable and will fit any Bryant "Junior" Rosette Base.

Schedule "H"

List		Screws Spaced	Carton	Std.	Pkg. Wt.	Mfrs. List	W.E. List per
No.	Description	on Centers	Quantity	Pkg.	Lbs.	Each	Carton
1501	"Junior" Rosette, cleat	15/8 ins. 15/8 ins.	10	250 250	115 130	\$0.16 .16	\$3.52 3.52
*1502 <b>*</b>	"Junior" Rosette, concealed" "Junior" Rosette, molding	15% ins.	10	250	125	. 16	3.52

FUSELESS, TWO PIECE, 3 AMPERES, 250 VOLTS

Schedule "H"

297	"Junior" Rosette, cleat	10	250	115	\$0.15   <b>\$</b>	3.30
299▲	"Junior" Rosette, concealed 178 ins. "Junior" Rosette, molding 15% ins.	10	2.00	120	1 . 10	



No. 1999



No. 368



No. 1499

### FUSELESS, ONE PIECE, 3 AMPERES, 250 VOLTS

Schedule "H"

List No.	Description	Screws Spaced on Centers	Carton Quantity		Pkg. Wt. Lbs.	Each	List per Carton
1999* 384*	"Junior" Rosette, cleat and concealed combined. "Junior" Rosette, 2-wire molding	1½ ins. 1¼ ins.	10	250 250	70   145	\$0.08 .08	\$1.76 1.76

# WITH BASE FOR 3½ INCH CONDUIT BOX Schedule "H" †368\* "Junior" Rosette, fusible. 2¾ ins. 1 100 220 \$0.32 \$0.70 ‡369\* "Junior" Rosette, fuseless. 2¾ ins. 1 100 210 30 66

Outside diameter of base is 31/2 inches.

### K.-P. Fuseless Rosettes

3 Amperes, 250 Volts

Schedule "H"

o mission as								
1499 <sup>*</sup>	KP. Rosette, cleat	2½ ins. 2½ ins. 2½ ins.	10 10	$\begin{vmatrix} 250 \\ 250 \end{vmatrix}$	310 290	\$0.16 .16	\$3.52 3.52	

Outside diameter of base is 3½ inches. \*Outside diameter of base is 2½ inches. †Rating: 2 amperes, 125 volts. †Rating: 3 amperes, 250 volts. \*National Electrical Code Standard.

### PERKINS FLUSH SWITCHES











No. 2701



No. 602

### Perkins Push Button Gang Switches

Sch	edule	"Н"

List No.	Description	Amp		Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2201 <sup>A</sup> 2203 <sup>A</sup> 2204 <sup>A</sup> 2625 <sup>A</sup> 2626 <sup>A</sup> 2628 <sup>A</sup> 2630 <sup>A</sup> 2631 <sup>A</sup> 2623 <sup>A</sup> 2202 <sup>A</sup> 2623 <sup>A</sup> 2295 <sup>A</sup> 2296 <sup>A</sup> 2297 <sup>A</sup> 2298 <sup>A</sup> 2624 <sup>A</sup>	Single Pole. Three-Point. Four-Point. Electrolier, 1, 2, 1 and 2, off. Electrolier, 1, 1 and 2, 1 off. Electrolier, 1, 1 and 2, 1 and 2 and 3, off. Electrolier, 1, off, 2, off. Electrolier, 1, off, 1 and 2, off. Electrolier, 1, and 2, off. Electrolier, 1, 2, off or 2 speed Fan Motor Electrolier, 1, 2, 3, off or 3 speed Fan Motor Electrolier, 1, 2, 3, off or 3 speed Fan Motor Double Pole Double Pole Single Pole, lock Three-Point, lock Four-Point, lock Double Pole, lock Double Pole, lock	10 10 10 5 5 5 5 5 5 5 5 10 20 10 10 10 20	5 5 5 2 2 2 2 2 2 2 2 2 2 2 2 2 5 5 5 5	10 10 10 10 10 10 10 10 10 10 10 10 10 1	100* 50* 10 10 10 10 10 10 10 10 10 10 50* 50* 10* 50* 20*	60 30 7   30  60 30 7 30	\$0.45 .70 2.00 1.05 1.05 1.05 1.05 1.05 1.05 1.05 1	†\$9.90 †12.88 †30.00 15.75 15.75 15.75 15.75 15.75 15.75 15.75 12.75 12.88 23.32 23.92 23.92 23.92 27.60

### The "Capax" Push Button Switch

10 Amperes, 125 Volts, 5 Amperes, 250 Volts

$\frac{2701}{2703}$	Single Pole	10 10	5 5	10	100 50	\$0.31	†\$0.74

### Bryant Push Button Switches

#### Schedule "H"

List	Description	Amp		Carton	* Std.	Pkg.	Mfrs. List	W. E.
No.	<u> </u>	125 Volts	250 Volts	Quantity	Pkg.	Lbs.	Each	List per Carton
6014	Single Pole	10	-5	10	50		80.72	†\$13.25
602*	Double Pole	10	10	10	10		.88	†13 20
609*	Double Pole	20	20	10	10		1.40	†21.00
603*	Three-Point	10	5	10	20		.88	†16.19
604*	Four-Point	10	5	10	10		2.00	†30.00
605≜	Single Pole, lock	10	5	10	50		1 17	21.53
606	Double Pole, lock	10	10	10	10		1.33	19.95
610	Double Pole, lock	20	20	10	10		1.85	27.15
607▲	Three-Point, lock	10	5	10	20	• •	1.33	24.47
608	Four-Point, lock	10	5	10	10		2.45	36.75

<sup>\*</sup>National Electrical Code Standard.

Outside supporting screw holes,  $3\frac{9}{32}$  inches on centers. Inside supporting screw holes,  $2\frac{13}{16}$  inches on centers. One No. 2299 Key is furnished with each lock switch. Adjusting frames for aligning Push Button Switches in gangs will be furnished free upon application.

<sup>\*</sup>Button and lock switches of the same description may be assorted to make up standard package quantity. For instance, No. 601 and 605, No. 2203 and 2296, etc. No other assortment permissible, †For switches with both buttons white ivory, regular length, add \$2,20 to list. Mfrs. List \$1,00.

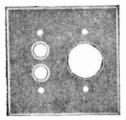
### PERKINS' PUSH SWITCH PLATES







No. 3632



No. 3650

### Standard Solid Push Switch Plates

In One Horizontal Row

Schedule "H"

List No.	Description	Dim Height	nensions Width	Carton Quantity	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List Each
3639	For one switch	4½ x	$2\frac{3}{4}$ ins.	25	30		\$1.10
3640	For two switches	$4\frac{1}{2}$ x	$4\frac{9}{16}$ ins.	10	55	-1.00	
3167▲	For three switches	$4\frac{1}{2}$ x	$6\frac{3}{8}$ ins.	5	100	[-1.50]	3.30
3168*	For four switches	$4\frac{1}{2}x$	$8_{16}^{3}$ ins.	5	120	-2.00	4.40
3169*	For five switches	41/2 x	10 ins.	5	140	[-3.00]	6.60
3170*	For six switches	$4\frac{1}{2}x$	11 13 ins.	1	160	[-3.60]	7.92
3171	For seven switches	$4\frac{1}{2}x$	135% ins.	1	180	-4.20	9,24
31724	For eight switches	4½ x	$15\frac{7}{16}$ ins.	1	220	[-4.80]	10.56
3165*	For one switch (stamped plates)		$2\frac{5}{4}$ ins.	25	30	.35	
3166▲	For two switches (stamped plates)		$4\frac{9}{16}$ ins.	10	55	.70	1.54

Switches in gangs spaced 113 inches on centers.

	In One Vertical Ro			_	chedule "H"
3369 <sup>*</sup>	For two switches. For four switches. For four switches.	8½ x 2¾ ins.	1	8	\$1.20 \$2.64
3370 <sup>*</sup>		11¾ x 2¾ ins.	1	100	1.80 3.96
3371 <sup>*</sup>		15¾ x 2¾ ins.	1	120	2.40 5.28

Switches in "tandem" spaced 35% inches on centers.

### Struck Up Push Switch Plates

	In One Horizontal Row, .(	040 Inch Metal		S	chedule	"H"
3665▲	For one switch, square corners	4½ x 2¾ ins.	25	20	80.14 \$	<b>30.32</b>
3666▲	For two switches, square corners	$4\frac{1}{2} \times 4\frac{9}{16}$ ins.	10	40	.28	. 63
3667▲	For three switches, square corners	$4\frac{1}{2} \times 6\frac{3}{8} \text{ ins.}$	5	55	.42	. 99
3634	For four switches	$4\frac{1}{2} \times 8\frac{3}{16}$ ins.	5	18	.88	1.94
3635	For five switches	$4\frac{1}{2} \times 10$ ins.	5	16	1.10	2.42
3636	For six switches	4½ x 11½ ins.	1	15	1.32	2.90
<b>3</b> 637	For seven switches	4 ½ x 13 % ins.	1	14	1.54	3.39
3638	For eight switches	$4\frac{1}{2} \times 15\frac{7}{16}$ ins.	1	13	1.76	3.87
3650	Two gang combination plate for standard					
	push button switch and No. 120 Spartar					
	receptacle	$ 4\frac{1}{2} \times 9 \text{ ins.} $	10	23	.40	. 88
3631▲	For one switch, round corners	$4\frac{1}{2} \times 2\frac{3}{4} \text{ ins.}$	25	20	. 14	.34
3632▲	For two switches, round corners		10	40	.28	. 67
3633▲	For three switches, round corners	$ 4\frac{1}{2} \times 6\frac{3}{8} \text{ ins.} $	5	55	. 42	1.01

### Push Switch Steel Plates

Brush Brass Finish

Schedule "H"

List No.	Description	Dimensions Height Width	Carton Quantity	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List Each
3621 3622 3623	For one switch. For two switches. For three switches.	$4\frac{1}{2} \times 4\frac{9}{16}$ ins.	10	20 40 55	\$0.12 .24 .36	\$0.26 .53 .79

The only special finish in which steel plates can be furnished is genuine Bauer Barff, for which add

\$0.79 per switch. Mfrs. List \$0.36.

Note: A standard package of plates for Push Button Switches consists of a sufficient number to accommodate 100 switches.

Standard finish, old brass finish.

\*National Electrical Code Standard.

### PERKINS SPECIAL PLATES

### SPECIAL FINISHES ON FLUSH PLATES

Schedule "H"

The standard finish on all Flush Plates, unless otherwise noted, is brush brass, which will be supplied on all orders where no other finish is specified. For all other special finishes, except those requiring gold and silver, add \$0.23 (Mfrs List \$0.10) per switch or receptacle to the price of the plate in standard finish. Prices on plates in gold and silver finishes will be quoted on application. The only special finish that can be applied to Steel Plates is genuine Bauer Barff, for which add \$0.83 list (Mfrs List \$0.36) per switch.

### PLATES WITH ROUND CORNERS AND ROUND EDGES

Plates with round corners and round edges, other than those listed will be furnished at \$0.35 list (Mfrs List \$0.15) extra for single plates and \$0.12 list (Mfrs List \$0.05) extra for each additional switch or receptacle in gang plates.

### PLATES WITH ROUND CORNERS AND BEVELED EDGES

Plates with round corners and beveled edges will be furnished at \$0.35 list (Mfrs List \$0.15) extra per plate.

#### SPECIAL SIZE PLATES

Special size plates for standard devices will be sold at a list price of \$0.14 (Mfrs List \$0.06) per square inch in lots of less than 100, and \$0.09 (Mfrs List \$0.04) per square inch in lots of 100 or more plates (not gangs) of one size and type. When plates are other than rectangular in shape, the area by which the list is determined will be the size of the smallest rectangular piece from which the specified plate can be cut.

Orders for special size plates should always be accompanied by a plainly-marked sketch, giving all dimensions.

#### SPECIAL PLATES

The factory has exceptional facilities for producing promptly anything which may be required in the way of special flush plates. Realizing that special plates are usually more urgently needed than stock material, particular attention is given to all orders covering them and are usually able to make shipment promptly.

Plates which are special in ways not covered above will be quoted upon application. Nothing in the prices listed above shall be understood to mean that special plates of any description

will be furnished at a less price than the corresponding standard plate.

#### FACE PLATE SCREWS

Face plate screws when bought separately will list at \$1.74 (Mfrs List \$0.75) per 100; standard package 100 in Schedule "II."

#### ENGRAVING

Flush plates will be engraved with words or numbers to indicate the circuits controlled at a list price of \$0.14 (Mfrs\_List \$0.06) per letter or numeral.

#### ADJUSTING FRAMES FOR FLUSH SWITCHES

Perkins Adjusting Frames make it a simple matter to line up Flush Switches so that the plate will fit. These frames are made for both Push Button and Rotary Switches, and are supplied gratis to users of Perkins Switches.

### **BLANK PLATES**

#### Schedule "H"

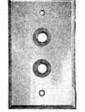


No. 3546

List No. 3546 3551 3556 3628 3624 3624	Single Plate, stamped, 1/16 inch brass. Single Plate, struck-up, .040 inch brass. Single Plate, struck-up, .040 inch steel. Two-gang Plate, stamped, 1/16 inch brass. Two-gang Plate, struck-up, .040 inch brass. Two-gang Plate, struck-up, .040 inch steel.	Std. Pkg.  100 gangs 100 gangs 100 gangs 100 gangs 100 gangs 100 gangs	Mfrs. List Each \$0.35 .22 .12 .70 .44 .24	W. E. List Each \$0.77 .48 .26 1.54 .97
3625 3627	Three-gang Plate, struck-up, .040 inch brass. Three-gang Plate, struck-up, .040 inch steel.	100 gangs 100 gangs 100 gangs	. 24 . 66 . 36	. 53 1 . 45 . 79

#### TELEPHONE PLATES

### With One 3/8 Inch Bushing



No. 3618

3616	Single Plate, stamped, 1/16 inch brass Single Plate, struck-up, .040 inch brass Single Plate, struck-up, .040 inch steel	100 gangs	93	.51

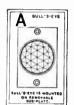
#### With Two 3/8 Inch Bushings

3618         Single Plate, stamped, 1/16 inch brass.         100 gangs         \$0.37         \$0.81           3619         Single Plate, struck-up, .040 inch brass.         100 gangs         .24         .53           3620         Single Plate, struck-up, .040 inch steel.         100 gangs         .14         .31
--

### BRYANT-PERKINS COMBINATION PLATES

Combination plates should be described by using the letters shown below on outline cuts of the respective plates, giving the letters in order from left to right, or from top to bottom, as the devices are to be mounted. The list price will be the sum of the lists as shown. A combination plate cannot be so considered unless it is described by at least two different letters. The standard package quantity is ten plates of one description (not ten gangs).

For combination plates with the different sections arranged tandem or in more than one horizontal row add 20% to the list prices given. Schedule "H"











W. E. List Each \$3.45 Mfrs. List Each \$1.50

W. E. List Each \$2.88 Mfrs. List Each \$1.25

W. E. List Each \$1.61 Mfrs. List Each \$0.70

W. E. List Each \$1.61 Mfrs. List Each \$0.70

W. E. List Each \$1.38 Mfrs. List Each \$0.60











W. E. List Each \$1.15 Mfrs. List Each \$0.50

W. E. List Each \$1.20 Mfrs. List Each \$0.52

W. E. List Each \$1.24 Mfrs. List Each \$0.54

W. E. List Each \$1.15 Mfrs. List Each \$0.50

W. E. List Each \$1.15 Mfrs, List Each \$0.50











W. E. List Each \$1.38 Mfrs. List Each \$0.60

W. E. List Each \$3.45 Mfrs. List Each \$1.50

W. E. List Each \$1.50 Mfrs. List Each \$0.65

W. E. List Each \$1.15 Mfrs. List Each \$0.50

Cat. No. 3639 W. E. List Each \$1.15 Mfrs. List Each \$0.50











W. E. List Each \$1.15 Mfrs. List Each \$0.50

W. E. List Each \$1.38 Mfrs. List Each \$0.60

W. E. List Each \$1.61 Mfrs. List Each \$0.70

W. E. List Each \$6.90 Mfrs. List Each \$3.00

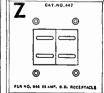
W. E. List Each \$1.38 Mfrs. List Each \$0.60











W. E. List Each \$1.50 Mfrs. List Each \$0.65

W. E. List Each \$1.15 Mfrs. List Each \$0.50

W. E. List Each \$3.68 Mfrs. List Each \$1.60

W. E. List Each \$3.45

W. E. List Each \$4.60 Mfrs. List Each \$1.50 Mfrs. List Each \$2.00

### DOOR SWITCH AND RECEPTACLES

### Perkins Automatic Door Switches

SINGLE POLE

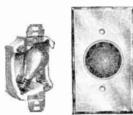
6 Amperes, 125 Volts; 3 Amperes, 250 Volts Schedule "H"



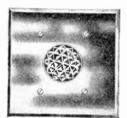
No. 2355

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2355▲ 2356▲	Circuit closed when door is open Circuit closed when door is closed	1 1	25 10	15 6	\$2.25 2.25	

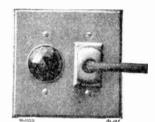
The plate measures 45% x 11/4 inches and the holes for supporting screws are spaced 334 inches on centers. The porcelain body is 338 inches long by 1 inch wide.







No. 436



No. 514

### Bull's Eye Receptacles

For Candelabra Base Lamp

Schedule "H"

The outfit consists of a flush plate of standard dimensions, in the center of which is a ruby glass bull's eye. The lighted lamp beneath serves as an effective cautionary or danger signal. The lamp-holding receptacle may be installed individually or may be mounted up in gangs with switches and receptacles and the entire combination covered by a single plate. The many combinations possible are indicated on page to follow.

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
427▲ 428▲	Receptacle with 2 C.P., 125 Volt Candelabra base Lamp Single plate, $4\frac{1}{2}$ x $2\frac{3}{4}$ inches.	10 5	30 25	 15 		\$18.40 23.00

Outside supporting screw holes,  $3\frac{9}{32}$  inches on centers. Inside supporting screw holes,  $2\frac{13}{13}$  inches on centers.

Plates for mounting these receptacles in gangs will be furnished only on special order. When so mounted the receptacle will be spaced  $1\frac{13}{16}$  inches on centers.

The above receptacle is designed to receive a Form II (General Electric designation) lamp.

#### For 250 Volt Circuits

When Bull's Eye outfits are wanted for circuits of 200 to 250 volts it is necessary to connect two No. 427 receptacles in series and cover them with a No. 436 plate illustrated above.

AGOA	(1) 1 1 4 417 4 6 1 1			1 .		
450=	Single plate 4½ x 4 ½ inches	1 1	10		01 00	00 50
		1	10		D1.G0	83.52
			ı		- 1	

This device requires a two-gang box. There are holes for four supporting screws spaced 3 ½ inches on centers vertically and 113 inches on centers horizontally.

### Ready Wired Bull's Eye Combinations

10 Amperes, 125 Voits		Schedul	le ''H''
514 Combination of: 1 No. 427 lamp holder with lamp, 1 No. 428 flush plate, 1 No. 432 DD plug, 1 No. 400 DD receptacle, 1 No. 520 DD plate	1 10	 \$4.50	\$9.90
flush plate, 1 No. 2520 receptacle cup, 1 No. 2702 receptacle mechanism, 1 No. 2567 receptacle plug, 1 No. 3639 flush plate	1 10	 4.00	8.80

Bull's Eye lights when plug is connected.

\*National Electrical Code Standard.

### BRYANT BULL'S-EYE COMBINATIONS

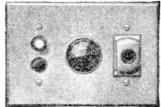


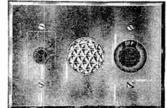


No. 558



No. 465





### Ready-wired Bull's-eye Combinations 10 Amperes, 125 Volts

Schedule "H"

List No.	Description	Carton Quantity	Std. Pkg.	Mfrs. List Each	W. E. List Each
465▲	Combination, complete with 125-Volt Lamp and Plate	1	10	\$3.50	\$7.70
469	Same combination as 465 with Rotary Lock Flush Switch	1	10	4.00	8.80
495	Combination similar to No. 465 but with 3-point Type O Flush Switch instead of double pole switch	,	10	3.50	7.70
	Switch instead of double pole switch	1 1	117	0.00	1.10

No. 465 combination consists of a No. 2494 Type "O" double pole indicating switch mounted in a special porcelain that also provides a receptacle for a candelabra base lamp which is covered by a perforated brass cage so that the lamp cannot be removed without removing the plate. The lamp is in circuit whenever the switch is closed. This outfit may be installed in any standard single switchbox.

Outside supporting screw holes, 332 inches on centers.

Inside supporting screw holes, 213 inches on centers.

Plates for mounting these receptacles in gangs will be furnished only on special order. When so mounted, the receptacles will be spaced 1 13 inches on centers.

### Ready-wired Heater Control Combination 660 Watts, 125 Volts

Schedule "H"

List No.	Description	Carton Quantity		Pkg. Wgt.	Mfrs. List Each	W. E. List Each
437	Combination of: 1 No. 2520 D. P. switch cup, 1 No. 2523 D. P. switch mechanism, 1 No. 3639 flush plate, 1 No. 427 lamp holder with lamp, 1 No. 428 flush plate, 1 No. 1708 plug receptacle, 1 No. 544 flush plate	1	10	30	\$5.50	\$12.10
518	10 Amperes, 125 Volts Combination of: 1 No. 2520 D. P. switch cup, 1 No. 2523 D. P.					
467	switch mechanism, 1 No. 3639 flush plate, 1 No. 427 lamp holder with lamp, 1 No. 428 flush plate, 1 No. 430 D. P. receptacle, 1 No. 520 flush plate, 1 No. 432 D. D. plug	1	10	35	6,00	13.20
	with lamp, 1 No. 428 flush plate, 1 No. 120 spartan receptacle, 1 No. 545 "Spartan" plate	1	10	35	5.75	12.65
558 438	Combination of: 1 No. 2520 D. P. switch cup, 1 No. 2523 D. P. switch mechanism, 1 No. 3639 flush plate, 1 No. 427 kmp holder with lamp, 1 No. 122 spartan receptacle, 1 No. 551 spartan plate	1	10	30	6.25	13.75
400	Combination of: 1 No. 2344 D. P. indicating switch, 1 No. 2345 flush plate, 1 No. 427 lamp holder, with lamp, 1 No. 428 flush					
	plate, 1 No. 1363 Chapman receptacle, 1 No. 543 Chapman plate, 1 No. 397 Chapman plug.	1	10	30	6.00	13.20

The above combinations are designed to be installed in a three gang box. There are holes for supporting screws spaced 3 32 inches on centers vertically and 35% inches on centers horizontally.

### PERKINS SNAP SWITCHES

125-250 Volts



No. 2000



No. 2002



INo. 2001

### SMALL SIZE, SINGLE POLE

5 Amperes, 125 Volts; 3 Amperes, 250 Volts

Schedule "H"

List No.	Description	Diam. of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2047	Slotted. Solid. Slotted, indicating. Solid, indicating.	2 ins. 2 ins. 2 ins. 2 ins.	13/8 ins. 13/8 ins. 13/8 ins. 13/8 ins.	10 10 10 10	250 250 250 250 250	75 75 75 75	\$0.28 .28 .32 .32	\$6.16 6.16 7.04 7.04

### LARGE SIZE, SINGLE POLE

5 Amperes, 125 Volts; 3 Amperes, 250 Volts

Schedule "H"

2002 <b>^</b> 2254 <b>^</b>	Solid Slotted. Solid, indicating. Slotted, indicating.	$2\frac{1}{4}$ ins. $2\frac{1}{4}$ ins.	1½ ins.	10	100	30 30 30 30		\$7.92 7.92 8.80 8.80
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#### SINGLE POLE

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

Schedule "H"

2001	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10 100 10 100 10 100 10 100	45 45	.54	\$10.56 10.56 11.88 11.88
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No. 2455



No. 2175



No. 2176

#### THREE POINT SWITCHES

### Schedule "H"

List No.	Description	Diam. of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
*2455 <b>^</b> *2456 <b>^</b> †2175 <b>^</b>	Solid, 3 amperes	2 ins. 2 ins. 2½ ins.	13/8 ins. 13/8 ins. 11/2 ins.	10 10 10	100 100 100	25 25 25	\$0.48 .48 .56	\$10.56 10.56 12.32
†2027 <b>^</b> ‡2176 <b>^</b> ‡2030 <b>^</b>	Slotted, 5 amperes. Solid, 10 amperes. Slotted, 10 amperes.	$2\frac{1}{4}$ ins. $2\frac{7}{16}$ ins. $2\frac{7}{16}$ ins.	1½ ins. 1 <sup>23</sup> / <sub>32</sub> ins. 1 <sup>23</sup> / <sub>32</sub> ins.	10 10 10	100 50 50	25 25 25	.56 .76 .76	12.32 16.76 16.76

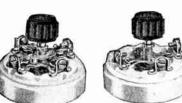
<sup>\*</sup> Rated at this capacity for 125 volts. † Rated at this capacity for 125 volts.

<sup>250-</sup>volt capacity 1 ampere. 250-volt capacity 3 amperes. ‡ Rated at this capacity for 125 volts. 250-volt capacity 5 amperes.

Any of the above switches can be converted into a lock switch by removing the handle and substituting Universal Lock Attachment.

<sup>&#</sup>x27;National Electrical Code Standard.

### PERKINS SNAP SWITCHES











No. 2183

2666

No. 2216

Schedule "H"

1.00

15

FOUR POINT-5 Amperes, 125 Volts; 2 Amperes, 250 Volts Four-point Switches are used in connection with two Three-point Switches where current is to be controlled from any one of more than two points. A Four-point Switch is installed between the Three-point Switches at each additional point.

Four-point Switches can also be used individually as Pole-changing Switches.

		Diam.	Screws	Carton	Std.	Pkg.	Mirs.	W. E.
List	Description	of Base	Spaced	Quantity	Pkg.	Wt.	List	List per
No.	•	Of Dase	on Centers	Quantity	1 kg.	Lbs.	Each	Carton
2183*	Solid	$2\frac{7}{16}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	\$0.86	\$15.82
2033	Slotted	$2\frac{7}{16}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	.86	15.82
2000		JIT ELEC	CTROLIE	R			Schedu	le "H"
2216▲	Solid (1-2-1 and 2-off)	$2\frac{7}{16}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	\$0.76	\$13.98
2215	Slotted (1–2–1 and 2–off)	$2\frac{7}{16}$ ins.	$1\frac{23}{33}$ ins.	10	30	15	.76	13.98
2188	Solid, indicating (1-2-1 and 2-off)	$2\frac{7}{16}$ ins.	$1\frac{23}{3}$ ins.	10	30	15	.86	15.82
2074	Slotted, indicating (1-2-1 and 2-off).	$2\frac{7}{16}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	.86	15.82
2649	Solid (1-1 and 2-1-off)	$2\frac{7}{16}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	.90	16.56
2650	Slotted (1-1 and 2-1-off)	$2\frac{7}{16}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	.90	16.56
2651	Solid indicating (1-1 and 2-1-off).	$2\frac{7}{16}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	1.00	18.40
2652	Slotted, indicating (1-1 and 2-1-off).	$2^{\frac{7}{16}}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	1.00	18.40
2653	Solid (1-off-2-off)	$2_{16}^{7}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	.90	16.56
2654	Slotted (1-off-2-off)	$2_{16}^{7}$ ins.	$1\frac{2}{3}\frac{3}{2}$ ins.	10	30	15	. 90	16.56
2655	Solid indicating (1-off-2-off)	$2\frac{7}{16}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	1.00	18.40
2656	Slotted, indicating (1-off-2-off)	$2_{16}^{7}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	1.00	18.40
2657	Solid (1-off-1 and 2-off)	$2_{16}^{7}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	.90	16.56
2658	Slotted (1-off-1 and 2-off)	$2_{16}^{7}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	.90	16.56
2659	Solid indicating (1-off-1 and 2-off).	$2\frac{7}{16}$ ins.	1 3 3 ins.	10	30	15	[-1.00]	18.40
2660	Stotted, indicating (1-off-1 and 2-off)	$2_{16}^{7}$ ins.	1 3 3 ins.	10	30	15	1.00	18.40
2661	Solid (1-1 and 2-off)	$2\frac{1}{4}$ ins.	$1\frac{23}{32}$ ins.	10	30	15	.90	16.56
2662	Solid indicating (1-1 and 2-off)	$2\frac{1}{4}$ ins.	1 3 ins.	10	30	15	1.00	18.40
2663	Solid, electrolier or 2-speed fan motor	$2\frac{1}{4}$ ins.	1 3 ins.	10	30	15	. 90	16.56
2485	Solid, indicating, electrolier or 2-speed							
	fan motor	$2\frac{1}{4}$ ins.	134 ins.	10	30	15	1.00	18.40

The above switches operate as follows: 1st turn connects Circuit One alone. 2d turn connects Circuit Two alone. 3d turn connects Circuits One and Two. 4th turn off.

3-CIRCUIT ELECTROLIER

Schedule "H" \$0.90 Solid (1-1 and 2-1 and 2 and 3-off).  $2\frac{7}{1.6}$  ins. 10 30 15 \$16.56 2185  $2\frac{7}{16}$  ins.  $2\frac{7}{16}$  ins.  $2\frac{7}{16}$  ins.  $1\frac{32}{32}$  ins.  $1\frac{23}{42}$  ins.  $1\frac{23}{32}$  ins.  $1\frac{23}{32}$  ins. 30 .90 10 2070 Slotted.... 15 16.56 10 30 15 1.00 2187 18.40 10 30 15 1.00 2072 18.40 Slotted, indicating.....

3-CIRCUIT ELECTROLIER OR 3 SPEED FAN MOTOR  $2\frac{7}{16}$  ins.  $\begin{array}{c} 1\frac{23}{32} \text{ ins.} \\ 1\frac{23}{32} \text{ ins.} \\ 1\frac{23}{32} \text{ ins.} \\ 1\frac{23}{32} \text{ ins.} \end{array}$ \$0.90 |\$16.56 10 30 15 2664Solid (1-2-3-off)..... Solited (1-2-3-off) .  $2\frac{1}{16}$  ins. Solid, indicating (1-2-3-off) .  $2\frac{7}{16}$  ins. Slotted, indicating (1-2-3-off) .  $2\frac{7}{16}$  ins. 30 .90 16.56 10 15 2665 1.00 30 18.40 10 15

18.40 30 2667 The above switches operate as follows: 1st turn connects Circuit One. 2d turn connects Circuits One

10

and Two. 3d turn connects Circuits One, Two and Three. 4th turn off. DOUBLE POLE, 250 VOLTS

and In	DOUBLE POLE, 250 VOLTS							
List No.	Description	Diam. of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2391 <sup>A</sup> 2392 <sup>A</sup> 2393 <sup>A</sup> 2394 <sup>A</sup> 2009 <sup>A</sup> 2017 <sup>A</sup> 2038 <sup>A</sup> 2050 <sup>A</sup>	Solid, 5 amperes Slotted, 5 amperes Solid, indicating, 5 amperes Slotted, indicating, 5 amperes Slotted, 10 amperes Slotted, 10 amperes Solid, indicating, 10 amperes Slotted, indicating, 10 amperes	2 ins. 2 ins. 2 ins. 2 ins. 2 ins. 2 ins. 2 ins. 2 <sup>76</sup> ins. 2 <sup>76</sup> ins. 2 <sup>76</sup> ins. 2 <sup>76</sup> ins.	13/8 ins. 13/8 ins. 13/8 ins. 13/8 ins. 13/8 ins. 13/2 ins. 13/3 ins. 13/3 ins. 13/3 ins.	10 10 10 10 10 10 10 10	100 100 100 100 100 100 100 100	30 30 30 30 45 45 45 45	\$0.56 .56 .64 .64 .66 .66 .76	\$12 .32 12 .32 14 .08 14 .08 14 .52 14 .52 16 .72 16 .72

Any switch on this page can be converted into a Lock Switch by removing the handle and substituting \*National Electrical Code Standard. Universal Lock Attachment.

### PERKINS SNAP SWITCHES

125-250 Volts







No. 2611



No. 2025



No 2597

### DOUBLE POLE 20 Amperes, 250 Volts

Schedule "H"

List No.	Description	Diam, of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2011 <sup>*</sup> 2019 <sup>*</sup> 2040 <sup>*</sup> 2052 <sup>*</sup>	Solid Slotted. Solid, indicating. Slotted, indicating.	3 ins. 3 ins. 3 ins. 3 ins.	$\begin{array}{c} 2_{16}^{3} \text{ ins.} \\ 2_{16}^{3} \text{ ins.} \\ 2_{16}^{3} \text{ ins.} \\ 2_{16}^{3} \text{ ins.} \\ 2_{16}^{3} \text{ ins.} \end{array}$	10 10 10 10	30 30 30 30	25 25 25 25 25	\$1.40 1.40 1.50 1.50	\$25.76 25.76 27.60 27.60

#### DOUBLE POLE 30 Amperes, 250 Volts

2042▲	Solid Slotted Solid, indicating Slotted, indicating	$3\frac{19}{16}$ ins. $3\frac{9}{16}$ ins.	$2\frac{10}{16}$ ins. $2\frac{10}{16}$ ins.	1 1	30 30 30 30	30 30 30 30	\$1.70 1.70 1.80 1.80	\$3.74 3.74 3.96 3.96	

### DOUBLE POLE

50 Amperes, 250 Volts

Schedule "H"

List No.	Description	Diam. of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
$\frac{2015}{2023}$	Solid	4½ ins. 4½ ins.	$3\frac{11}{32}$ ins. $3\frac{11}{32}$ ins.		10 10	15 15	\$3.00 3.00	\$6.60
$2044 \\ 2056$	Solid, indicating	$41\frac{7}{2}$ ins.		i 1	10 10	15 15	3.10 3.10	6.82

### DOUBLE POLE, DOUBLE THROW

10 Amperes, 250 Volts					Schedu	ıle "H"		
2611	Solid	$ 2^{\frac{11}{16}}$ ins. $ 2 $	1 ins.	10	10		\$2.40	\$36.00
2612	Slotted	$ 2 _{16}^{11}$ ins. $ 2 $	ins.	10	10			36.00
2613		$2_{16}^{11}$ ins. $2$	is ins.	10	10		2.50	37.50
2614	Slotted, indicating	121% ins. 12	is ins.	10	10		2.50	37.50

#### TRIPLE POLE 10 Amperes, 250 Volts

10 Amperes, 250 Volts				ıle "H"
2025*         Solid           2633         Slotted           2046*         Solid, indicating           2634         Slotted, indicating	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1.90 2.00	28 50 30 00

Any switch on this page can be converted into a lock switch by removing the handle and substituting Universal Lock Attachment.

#### TRIPLE POLE

20 Amperes, 250 Volts	Schedule "H"
**2597   Switch with cast iron cover     1   1   10	\$1.00   1.88.80
	1,40.00

<sup>\*\*</sup>This switch is designed for use in controlling 3 phase alternating current motors up to and including 2 H.P. either 250 or 600 volts.

National Electrical Code Standard.

### PERKINS SWITCH ACCESSORIES





No. 2126

### Miscellaneous Parts

Switch Handles and Lock Attachment

Schedule "H"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
501399 501400	Rotary Switch Handles, composition or porcelain Rotary Switch Handles, metal	100	100 100		\$0.06 .12	\$9.00 18.00
501401 2384	furnished without handles. Switches with metal handles, add. Universal Lock Attachment.	100	100	4	.06	.13 24.00

By substituting this lock attachment for the regular handle on any Perkins Rotary Switch, either surface or flush, lock switches may be obtained. With this lock attachment, special plates are no longer required for Lock Flush Switches.

	Keys for Lock Switcher	В			Schedu	ile "H"
2126 <b>*</b>	Key for Rotary Lock Switches.  Key for Push Button Lock Switch.	100	100	2	\$0.06	\$9.00
2299		100	100	2	.15	22.50



No. 2357



No. 2358

### Porcelain Switch Blocks

For Wall Sockets, Receptacles and 5 Ampere 250 Volt Switches Schedule "H"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2381▲ 2382▲	For surface work For concealed work	10 10	100 100	30 28	\$0.05 .05	\$1.10 1.10
2383	For molding work	10	100	25	.05	1.10
2439	For molding terminal.	10	100	30	. 05	1.10

	For 10 Ampere 250 Volt and 5 Ampere		t Switcl	hes	Schee	dule "H"
2252 <b>-</b> 2222▲	For surface work. For coneealed work. For molding work. For molding terminal.	10	100 100 100 100	45 40 40 45	\$0.06 .06 .06	\$1.32 1.32 1.32 1.32

### For 20 and 30 Ampere 250 Volt and 10 and 20 Ampere 600 Volt Switches

Schedule "H"

2379	For surface work.	5	25	22	180.15	\$1.38
2380~	For concealed work	5	25	$\frac{5}{24}$	.15	1.38
2262▲	For molding work	5	25	$\frac{24}{24}$	15	1.38

### Switch Covers

Schedule "H"

List No.	Description	Std. Pkg.	Mfrs. List Each	W. E. List Each
501417	Cover for 10 ampere, 250 volt Double Pole Switch, and any other cover not larger	50	\$0.08	\$0.18
	Allowance \$0.07 (Mfrs. List \$0.03) when switches are furnished without covers All larger covers.  Allowance \$0.18 (Mfrs. List \$0.08) when switches are furnished without covers.		.20	.44

<sup>^</sup> National Electrical Code Standard.

### PERKINS SWITCHES

125-250 Volts





### "Straight-through" Switches

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

idie II	201100					
W. E. List per Carton	Mfrs. List Each	Pkg. Wt. Lbs.	Std. Pkg.	Carton Quantity	Description	List No.
\$11.04	\$0.60	13	50	10	Single Pole	2592*
lule "H"	Sched			3	10 Amperes, 250 Volta	
\$22.04 23.92	\$2.60 1.30	10 10	25 25	1 1	Double Pole	2451 <sup>4</sup> 2490 <sup>4</sup>
		H s.	WITC 50 volt	TING S	SERIES MULTIPLE HEAT REGULA ating high, medium low, off. 5 amperes, 125 volts; 2 a	Opera
\$19.50	\$1.30	12	10	10	Three Heat Switch, indicating, Single Pole	2678



No. 2572



No. 2370

### Type "T" Pendent Switches

SINGLE POLE

6 Amperes 125 Volta, 3 Ammeres 250 V-14

	o Amperes, 125 voits; 5 Ampere	8, 250 V	olts		Sche	dule "H"
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2572* 2573* 2574* 2370* 2250* 2270*	Pendent Cap, horizontal buttons 1/8 inch cap, horizontal buttons 3/8 inch cap, horizontal buttons. Pendent Cap, vertical buttons. 1/8 inch cap, vertical button 3/8 inch cap, vertical button	10 10 10 10 10 10	100 100 100 100 100 100	30 30 30 30 30 30 30	\$0.50 .50 .60 .50 .50	\$11.00 11.00 13.20 11.00 11.00 13.20
10 Amperes, 125 Volts; 5 Amperes, 250 Volts Schedule "H"						
2359* 2353* 2354*	Pendent Cap, vertical button.  1/8 inch cap, vertical button.  3/8 inch cap, vertical button.	10 10 10	100 100 100	45 45 47	\$0.80 .80 .90	\$17.60 17.60 19.80

Note: The standard finish on the above switches is brush brass, which will be supplied on all orders where no finish is specified. Switches will be finished in polished brass, when specified, at the same price. For switches in any other finish, add \$0.22 to list price. Mfrs. List \$0.10.

\*National Electrical Code Standard.

### PERKINS PULL SWITCHES

### Ceiling Pull Switches

Schedule "H"



		Amı	eres	s Quantity	Std.	Pkg.	Mfrs.	W.E.
List No.	Description	125 Volts	250 Volts		Pkg.	Wt. Lbs.	List Each	List per Carton
2387	Single Pole, solid	10	5	10	30	20		\$18.40
	Single Pole, slotted		5	10	30	20		18.40
	Three-Point, solid		5	10	10	8		17.70
	Three-Point, slotted		5	10	10	8	-1.18	
2389	Four-Point, solid	5	2	1	5	4	1.18	
	Four-Point, slotted	5	2	1	5	4	1.18	
	Electrolier, 2-circuit, solid	10	5	1	5	4	1.18	
	Electrolier, 2-circuit, slotted.	10	5	1	5	4	1.18	
	Electrolier, 3-circuit, solid	10	5	1	5	4	[-1.18]	2.17
	Electrolier, 3-circuit, slotted	10	5	1	5	4	1.18	2.17
	Double Pole, solid		10	10	10	- 8	1.18	17.70
	Double Pole, slotted		10	10	10	8	1.18	17.70

Outside diameter of base is  $2\frac{7}{16}$  inches. Holes for supporting screws are spaced  $1\frac{23}{32}$  inches on centers.





### Wall Pull Switches

Schedule "H"

			4.43	E 6272 E	1243	1.0.1 AVAID 10 10
2546 Single Pole, solid,	10	ð	10	30	20	\$1.00 \$18.40
2547 Single Pole, slotted	10	5	10	30	20	1.00 18.40
2548 Three-Point, solid	10	5	10	10	- 8	1.18 17.70
2549 Three-Point, slotted	10	5	10	10	- 8	1.18 17.70
2550 Four-Point, solid	5	2	1	5	4	1.18 2.17
2560 Four-Point, slotted	5	2	1	5	4	1.18 2.17
*2561 Electrolier, 2-circuit, solid	10	5	1	5	4	1.18 2.17
*2562 Electrolier, 2-circuit, slotted	10	5	1	5	4	1.18 2.17
*2563 Electrolier, 3-circuit, solid	10	5	1	5	4	1.18 2.17
*2564* Electrolier, 3-circuit, slotted	10	5	1	5	4	1.18 2.17
2565* Double Pole, solid	10	10	10	10	8	1.18 17.70
2566 Double Pole, slotted	10	10	10	10	8	1.18 17.70

Outside diameter of base is  $2\frac{7}{16}$  inches. Holes for supporting series are spaced  $1\frac{23}{32}$  inches on centers.



No. 2473

### Type "O" Pull Switches

With 1/8 Inch Cap

Schedule "H" | 30 | 12 | \$1.30|\$23.92 10

With 3	With 3/8 Inch Cap					Schedule "H"		
2473   Single Pole   2474   Three-Point   2475   Four-Point   *2476   2-Circuit Electrolier   *2478   Double Pole   2479   2-Speed Fan Motor   2480   3-Speed Fan Motor   2480   3-Speed Fan Motor   *2480   *3-Speed Fan M	10 10 5 5 5 10 10	5 2 2 2 2 10 5 5	10 10 10 10 10 10 10 10	30 10 10 10 10 10 10 10 10	12 4 4 4 4 4 4 4 4	\$1.30 \\$23.92 1.30 23.92 1.30 19.50 1.30 19.50 1.30 19.50 1.30 19.50 1.30 19.50 1.30 19.50		

CONTAIN
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No. 2507

With	Schedule "H"					
2507* Single Pole	10	5	10	30	14	\$1.30 \$23 92
2508 Three-Point	10	5	10	10	5	1.30 19.50
2509 Four-Point	5	2	10	10	5	1.30 19.50
*2510*2-Circuit Electrolier	5	2	10	10	5	1.30 19.50
*2511 3-Circuit Electrolier	5	$2 \mid$	10	10	5	1.30 19.50
2512 Double Pole	10	10	10	10	5	1.30 <b>  19.50</b>
2513 2-Speed Fan Motor	10	5	10	10	5	1.30 18. <b>50</b>
2514 3-Speed Fan Motor	10	5	10	10	5	1.30 19.50

Note: The above switches are supplied with 10 feet of best quality linen cord. Extra cord, \$0.03 list per foct, Mfrs. List \$0.01.

\*Details of operation of switches given previously.

\*National Electrical Code Standard.

### PERKINS SWITCHES 600 Volts

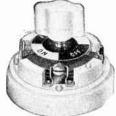


No. 2171

List



No. 2049



No. 2060

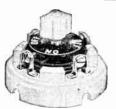
### 3 AMPERES, SINGLE POLE

3 AM	3 AMPERES, SINGLE POLE					Schedule "H"		
	Diam. of Base	on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs <sup>*</sup> List Each	W. E. List per Carton	
· · · · · · · · · · · · · · · · · · ·	2½ ins. 2¼ ins. 2¼ ins.	1½ ins. 1½ ins. 1½ ins.	10 10 10	50 50 50	25 25 25	\$0.54 .54	\$9.94 9.94	

No.  2171 <sup>4</sup> 2003 <sup>4</sup> 2226 <sup>4</sup> 2225 <sup>4</sup>	Solid. Slotted. Solid, indicating.	21/4 ins.	Spaced on Centers  1½ ins. 1½ ins. 1½ ins.	Carton Quantity 10 10 10	50 50 50 50	Wt. Lbs. 25 25 25	List Each \$0.54 .54	Per Carton \$9.94 9.94 11.04
			SINGLE	POLE	50	25	.60	11.04 edule "H"
2211 <sup>A</sup> 2212 <sup>A</sup> 2049 <sup>A</sup> 2103 <sup>A</sup>	Solid. Slotted. Solid, indicating. Slotted, indicating	$2\frac{7}{4}$ ins	1 23 ins. 1 32 ins. 1 232 ins. 1 232 ins. 1 323 ins.	10 10 10 10 10	50 50 50 50	25 25 25 25	\$0.66 .66 .76 .76	\$12.14 12.14 13.98 13.98
10 AMPERES, SINGLE POLE Schedule "H"								
2227 <sup>A</sup> 2228 <sup>A</sup> 2060 <sup>A</sup> 2066 <sup>A</sup>	Solid	3 ins. 3 ins. 3 ins. 3 ins.	$2\frac{3}{16}$ ins. $2\frac{3}{16}$ ins. $2\frac{3}{16}$ ins. $2\frac{3}{16}$ ins. $2\frac{3}{16}$ ins.	10 10 10 10	50 50 50 50	45 45 45 45	\$1.60 1.60 1.70 1.70	\$29.44 29.44 31.28 31.28



No. 2301



No. 2448

### 20 AMPERES, SINGLE POLE

Sche	dule	"H
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List No.	Description	Diam. of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2301 <sup>A</sup> 2302 <sup>A</sup> 2303 <sup>A</sup> 2304 <sup>A</sup>	Solid. Slotted. Solid, indicating. Slotted, indicating.	$3\frac{9}{16}$ ins. $3\frac{9}{16}$ ins. $3\frac{9}{16}$ ins. $3\frac{9}{16}$ ins. $3\frac{9}{16}$ ins.	$\begin{array}{c} 2\frac{9}{16} \text{ ins.} \\ 2\frac{9}{16} \text{ ins.} \\ 2\frac{9}{16} \text{ ins.} \\ 2\frac{9}{16} \text{ ins.} \\ 2\frac{9}{16} \text{ ins.} \end{array}$	1 1 1 1	50 50 50 50	70 70 70 70 70	\$1.90 1.90 2.00 2.00	\$4.18 4.18 4.40 4.40

### 10 AMPERES, DOUBLE POLE

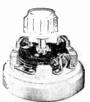
#### Schedule "H"

_							Den	cause 11
List No.	Description	Diam. of Base	Screws Spaced on ('enters	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2447-	Solid. Slotted. Solid, indicating. Slotted, indicating.	3 ins. 3 ins. 3 ins. 3 ins.	$\begin{array}{c} 2\frac{3}{16} \text{ ins.} \\ 2\frac{3}{16} \text{ ins.} \\ 2\frac{3}{16} \text{ ins.} \\ 2\frac{3}{16} \text{ ins.} \\ 2\frac{3}{16} \text{ ins.} \end{array}$	10 10 10 10	50 50 50 50 50	45 45 45 45	\$1.80 1.80 1.90 1.90	\$33.12 33.12 34.96 34.96

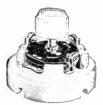
Any Switch on this page can be converted into a lock switch by removing the handle and substituting Universal Lock Attachment.

A National Electrical Code Standard.

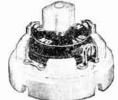
### Western Electric PERKINS SWITCHES 600 Volts







No. 2100



No. 2416

#### 3 AMPERE

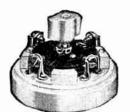
zs,	THREE-POINT			Sche	dule "H"
	61	1	I m. I	316	337 E

List No.	Description	Diam. of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. W.t. Lbs.	Mfrs. List Each	W. E. List per Carton	
2232 <sup>*</sup> 2231 <sup>*</sup>	Solid	$\frac{2\frac{1}{4}}{2\frac{1}{4}}$ ins.	$\frac{112 \text{ ins.}}{112 \text{ ins.}}$	10 10	50 50	25 25	\$0.70 .70	\$12.88 12.88	
5 AMPERES, THREE-POINT Schedule "H"									
2179 <sup>*</sup> 2100 <sup>*</sup> *2413 <sup>*</sup> *2414 <sup>*</sup>	Solid Slotted Indicating, solid Indicating, slotted	$2\frac{7}{16}$ ins. $2\frac{7}{16}$ ins.	1 332 ins. 1 332 ins. 1 332 ins. 1 332 ins. 1 332 ins.	10 10 10 10	50 50 50 50 50	25 25 25 25 25	\$0.90 .90 1.00 1.00	\$16.56 16.56 18.40 18.40	
10 AMPERES, THREE-POINT Schedule "H"									
2397 <sup>*</sup> 2398 <sup>*</sup> *2415 <sup>*</sup> *2416 <sup>*</sup>	Solid   Slotted   Indicating, solid   Indicating, solid   Indicating, slotted   Solid   Soli	3 ins.	$\begin{array}{c} 2\frac{3}{16} \text{ ins.} \\ 2\frac{3}{16} \text{ ins.} \\ 2\frac{3}{16} \text{ ins.} \\ 2\frac{3}{16} \text{ ins.} \\ 2\frac{3}{16} \text{ ins.} \end{array}$	10 10 10 10	50 50 50 50	45 45 45 45	\$1.70 1.70 1.80 1.80	\$31.28 31.28 33.12 33.12	

<sup>\*</sup> These Switches indicate "on" and "off."



No. 2181



No. 2409



No. 2079

Schedule "H"

#### †3 AMPERES, 2-CIRCUIT

List No.	Description	Diam. of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg,	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2181	Solid	$2\frac{7}{16}$ ins.	$1\frac{23}{3}$ ins.	10	50	25	\$0.76	\$13.98
2028	Slotted	$2\frac{7}{16}$ ins.	$1\frac{2}{3}$ ins.	10	50	25	.76	13.98
2062	Indicating, solid	$2\frac{7}{16}$ ins.	$1\frac{23}{37}$ ins.	10	50	25	.86	15.82
2068	Indicating, slotted		$1\frac{23}{37}$ ins.	10	50	25	.86	15.82
†10 AMPERES, 2-CIRCUIT Sc								

	10 AMPERES, 2-CIRCUIT Schedule "H"								
2411	Solid         3           Slotted         3           Indicating, solid         3           Indicating, slotted         3	ins.	$2\frac{3}{16}$ ins.	10 10 10 10	50 50 50 50	45 45 45 45	\$1.70 1.70 1.80 1.80	\$31.12 31.12 33.28 33.28	
†15 AMPERES, HEAT REGULATING Schedule "H"									

2079▲ 2081▲	Solid, indicating, 3-heat	$3\frac{9}{16}$ ins. $3\frac{9}{16}$ ins.	$2\frac{9}{16}$ ins. $2\frac{9}{16}$ ins.	1	10 10	30	\$3.10 3.10	\$6.82 6.82
†The	ese Switches will break the circuit	without	the use of	an add	itional	switch.	and are	especially

adapted for use on street cars as headlight switches and to control the interior lights.

†These Switches are used for the regulation of heat by different combinations of the heaters.

Any Switch on this page can be converted into a lock switch by removing the handle and substituting Universal Lock Attachment.

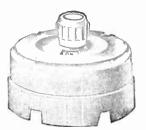
A National Electrical Code Standard.

### Western Electric PERKINS SWITCHES

### 600 Volts



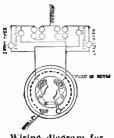




No. 2077



Wiring diagram for Nos. 2077 and 2277



Wiring diagram for Nos. 2078 and 2278

### Porcelain Cap Switches

Schedule "H"

List No.	Description	Diam. of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs List Each	W. E. List per Carton
2265	3 ampere, single pole	2½ ins.	1 23 ins.	10	10	9		\$10.80
2449▲ 2267▲	3 ampere, single pole, indicating 5 ampere, single pole	$2\frac{1}{2}$ ins. $2\frac{1}{2}$ ins.	$1\frac{23}{32}$ ins. $1\frac{23}{32}$ ins.	10 10	10 10	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	.82	12.30 12.30
2450▲ 2268▲	5 ampere, single pole, indicating 3 ampere, three-point	$2\frac{1}{2}$ ins. $2\frac{1}{2}$ ins.	$1\frac{23}{32}$ ins. $1\frac{23}{32}$ ins.	10 10	10 10	9	$.92 \\ .82$	13.80
2451	3 ampere, three-point, indicating	$2\frac{1}{2}$ ins.	1 3 ins.	10	10	9	. 92	13.80
2272▲ 2452▲	5 ampere, three-point	$2\frac{1}{2}$ ins. $2\frac{1}{2}$ ins.	$1\frac{23}{32}$ ins. $1\frac{23}{32}$ ins.	10	10 10	9	$\begin{bmatrix} 1.06 \\ 1.16 \end{bmatrix}$	
2273▲ 2453▲	3 ampere, 2-circuit	$2\frac{1}{2}$ ins. $2\frac{1}{2}$ ins.	1 3 ins. 1 3 ins. 1 3 ins.	10 10	10 10	9	.92	13.80
= 100	Sampere, 2-chedit, mulcating	272 ms.	132 1115.	10	10	"	1.02	15.30

The above switches cannot be supplied on slotted bases.

	ISI	101	
rı	1.31	B	. F.

Schedule "H"

Schedule "H"

2077 2277	3 ampere, S. P., indicating 3 ampere, S. P., indicating, brown	3½ ins.	1 1 5 ins.	1	10	15	\$1,60 \$3.52
2078	porcelain	$3\frac{1}{2}$ ins.		1	10	15 15	1.60 1.60 3.52 3.52
	3 ampere, 2-circuit, brown porcelain	$3\frac{1}{2}$ ins.	1 1 1 6 ins.	î	10	15	1.60 3.52

The above switches cannot be supplied on solid bases.

### Brown Porcelain Cap and Base





No. 2315

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
2315 <sup>*</sup> 2404 <sup>*</sup> 2405 <sup>*</sup>	3 ampere, single pole, indicating 3 ampere, 3-point, indicating . 3 ampere, 2-circuit, indicating	1 1 1	25 25 25	18 18	\$1.50 1.50	\$3.30 3.30

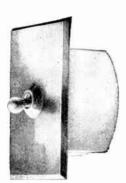
Connections for Enclosed Fuses

	Enclosed l	Fuse		s	chedu	le "E"
2316▲	3 ampere enclosed fuse $3\frac{3}{16}$ ins. long, $\frac{1}{2}$ inch diameter	25	100	7	\$0.30	\$8.85

The above switch prices do not include fuses. One fuse will be furnished with each switch, however, unless otherwise specified, and charge made for it at the regular price.

National Electrical Code Standard.

# Western Electric SWITCHES



Western Electric Switch



Showing the size of the small plate which can be used with this switch as compared with the standard push button switch plate.



View Showing Mechanism

The Western Electric switch is the latest and most revolutionary improvement in switch design. It combines convenience and neatness with a positive long-wearing mechanism.

The small neat lever, unobtrusively presenting itself through the flush switch plate, is the logical means of turning lights on or off. A flip up of the lever, lights, a flip down, extinguishes, both actions the most natural and logical and both the quickest in emergency. The metal lever is thoroughly insulated from current carrying members by fiber discs.

There is no fumbling for the right button or twisting off the switch key, the lever is large enough to be found readily, yet small enough not to protrude unnecessarily. There can be nothing neater than a Western Electric switch. Its construction admits of a small compact mechanism, while the entire absence of screw holes in the plate permits of novel designs or of matching the dominant architectural features of the house. The Western Electric switch does more than lend itself to architectural design; it ornaments. The artistic effects and finishes possible with the Western Electric switch are not feasible with any other type of switch.

The phosphor bronze spring will stand a far greater number of operations than switches of other types — push button, plunger, etc., due to the peculiar mechanism, positive action, clean and rapid make and break. The directing strain of the mechanism cannot be changed, and this adds to the longevity of this type of switch. This mechanism is completely buried in a solid porcelain container with ample room for complete isolation of current carrying parts.

The Western Electric switch is furnished in single double pole, three-way, four-way, emergency, remote control, and two and three circuit electrolier.

The Type A switch is for use with any standard outlet box or wall case. The Type B is for use only with outlet boxes and special Western–Electric cover. The mechanism of both types of switches is exactly the same, the only difference being the length of bridge. The Type B switch has a short bridge, which is necessary because of the use of the smaller plates. The dimensions of porcelain container is 2!4 inches long,  $1\frac{1}{8}$  inches wide, and  $1\frac{1}{8}$  inches deep. The porcelain is stamped "Underwriters laboratory inspection."

List No.	Style	Capacity	Std. Pkg.	W. E. List Price
101	Single pole	{ 10 amp. 125 volts } 5 amp. 250 volts }	50	\$1.10
102	Double pole	10 amp. 125 volts	30	1.70
103	Three-way	$\int 10 \text{ amp. } 125 \text{ volts } $ $\int 5 \text{ amp. } 250 \text{ volts } $	30	1.70
104	Four-way	5 amp. 125 volts 3 amp. 250 volts	10	4.40
105	Emergency		10	4.40
$\frac{106}{107}$	Remote control. Two circuit electrolier.	••••••	10	4.40
108	Three circuit electrolier.		10 10	4.40 4.40

Switches supplied in Type A for standard plate and Type B for small plates. Always specify number and full description when ordering,

### SWITCH PLATES AND COVERS







Type B Cast



Type B Oval



Type B Round-Solid

### Switch Plates

The switch plate for the WESTERN ELECTRIC switch is fastened in by means of a locknut which holds it in place securely, and in order to complete the appearance of the entire device the locknut is covered by a small round escutcheon. There are no unsightly screws or buttons to mar the appearance of the plate. On account of the peculiar manner in which our plates are fastened they can be set straight in the wall even if the boxes are not in straight. This is a decided advantage which the lack of screw holes gives us in aligning the plates when the boxes are not set quite straight in the wall. With the push button type of switch, the direction of the plate is the same as that of the box; that is to say, if the box is crooked the plate must also be crooked.

A feature which appeals to the architect is the possibility of finishing the plate and the lever differently; for instance, a very attractive combination is a polished brass plate and a black lever or vice versa. This feature is capable of endless combinations and lends itself to almost any scheme of decoration.

The standard finish of these plates is brush brass, but they can be furnished in any special finish specified. The standard switch plates adapted for the Western Electric switches are furnished in three sizes, the dimensions are as follows: Type A, 234 x 4½ inches, Type M, 25% x 4 inches, Type B, 2½ x 35% inches. The Type A plate will fit any standard outlet box or wall case in use at the present time. The Type M will fit all but a very few wall cases on the market. When used with standard outlet boxes, the special WESTERN ELECTRIC cover must be specified. The Type B cannot be used with wall cases, but can be used with any standard outlet boxes and special WESTERN ELECTRIC cover. The Type M and B plates are considerably smaller than the ordinary switch plate.

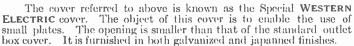
#### **Plates**

List	Letter	Shape	Size	Dimensions	Туре	List Price	per Gang
No. 201	A	Rectangular	Large	$2^{3}4 \times 4^{1}2$ ins.	Stamped or solid	Solid \$1.12	Stamped \$0.56
202 203 204 205	B O R	Rectangular   Rectangular   Oval   Round	Medium Small	$2\frac{5}{6} \times 4$ ins. $2\frac{1}{2} \times 3\frac{5}{8}$ ins.	Stamped or solid Solid or cast Solid or cast Solid	$egin{array}{ccc} 1.12 \\ 1.12 \\ 1.10 \\ 1.50 \\ \end{array}$	, 56

Standard finish is brush brass. Special finishes supplied. Prices on application.

Type A and Type M above three gang must be furnished in solid plates. Accordingly, the price of solid brass plates will apply on these sizes and above three gangs.

#### COVER



In addition to this special cover, the Crouse Hinds Co. have put on the market for use in connection with the WESTERN ELECTRIC Switch a special cover known as the special DS-25 condulet cover. This is furnished in both black and galvanized finishes.



SPECIAL COVER	W. E.
Style Std. Pkg.	List Price
One gang special cover	\$0.40
Two gang special cover	. 60
Three gang special cover	. 90
These covers are furnished either galvanized or ianaaned	1

### Condulet Cover

### Western Electric

### HUBBELL "QUICK CATCH" SOCKETS AND PULL SWITCHES Schedules "B" and "F"

No. 25								Schedule	s "B" and '
No. 61   No. 66   No. 3770   No. 3769   No	Electrical Code Standard Pull and Key Sockets								
No. 60 Pull Socket Carton 25 Carton 25 Carton 25 Carton 25 No. 3619 No. 3619 No. 3620 No. 3775 No. 3775 No. 3776 No. 3777 No. 3757 No. 3757 No. 3769 No. 3757 No. 3769 No. 3769 No. 3661 No. 3664 No. 3664 No. 3770 No. 3665 No. 3666 No. 3666 No. 3667 No. 3677 No. 3771 No. 3665 No. 3668 No. 3669 No. 3781 No. 3789 No. 3881 No. 3789 No. 3881 No. 3789 No. 3881 No. 388	Keyless Sockets 560 Watts, 250 Volts	⅓-inch	⅓-inch	⊮-inch	Pendent	⅓-ınch Male	⅓-inch Male	⅓-inch Male	1/4-inch Angle
Carton 25	J Amperes, IZS Volts 7 Ampere, 250 Volts	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Cartor_25	Carton 25	
Pull Socket   Carton 25	No. 60	No. 3618	No. 3769	No. 3619	No. 3620	No. 3775	No. 3776	No. 3777	No. 3757
No. 61 Rey Socket Carton 25 Carton 25 Carton 25 Carton 25 Carton 25 Carton 25 Carton 25 Carton 25 Carton 25 Carton 25 No. 3661 No. 3667 No. 3771 No. 3668 No. 3669 No. 3781 No. 3779 No. 3683 No. 3759  Carton 25 Carton 25 Carton 25 Carton 25 No. 63 Ceiling Switch Carton 10 Cart	Pull Socket								
Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25		
Carton 25  No. 5702  No. 5702  No. 5702  No. 5703  No. 5704  No. 5891  No. 5892  No. 5893  No. 5893  No. 6300  No. 6300  No. 6301  No. 6302  No. 6361  No. 6362  No. 6362  No. 6363  No. 6364  No. 6365  No. 6366  No. 6367  No. 6377  No. 6378  No. 6379  No. 6380  No. 6381  No. 6382  No. 6383		No. 3664	No. 3770	No. 3665	No. 3666	No. 3682	No. 3778	No. 3780	No. 3758
No. 62   No. 3667   No. 3771   No. 3668   No. 3669   No. 3781   No. 3779   No. 3683   No. 3759	Key Socket								
Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25			
Carton 25		No. 3667	No. 3771	No. 3668	No. 3669	No. 3781	No. 3779	No. 3683	No. 3759
No. 63	Keyless Socket					Ê			
Carton 10	Carton 25	Carton @5	Carton 25	Carton 25		Carton 25			
Carton 10		No. 5702	No. 5724	No. 5703	No. 5704	No. 5891	No. 5892	No. 5893	No. 6340
No. 64 Fixture Switch  Carton 10  No. 637  No. 6378  No. 6379  No. 6380  No. 6381  No. 6382  No. 6383			Carra 10	Garan 10	Carton 10		Gardon 10	Carton 10	Carton 10
Carton 10   Cart								No. 6305	No. 6403
No. 65 Rosette Switch  Carton 10  No. 6361  No. 6362  No. 6363  No. 6364  No. 6365  No. 6366  No. 6366  No. 6367  No. 6368  No. 6367  No. 6368	Fixture Switch								
Carton 10   Cart	No. 65			No. 6363	No. 6364	No. 6365	No. 6366	No. 6367	No. 6368
No. 66 No. 6376 No. 6377 No. 6378 No. 6379 No. 6380 No. 6381 No. 6382 No. 6383 No. 6381 No. 6382 No. 6383	Rosette Switch				0		0		
Wall Switch Ch. Ch. Ch. Ch. Ch. Ch. Ch. Ch. Ch. Ch			1	<del></del>					
	Wall Switch		(A)						
Carton 10 Carton 10 Carton 10 Carton 10 Carton 10 Carton 10 Carton 10 Carton 10 Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10

		_					$\overline{}$							_					
			Mfrs.	W.E.	11	1 1		Mīrs.	W. E. 1	1	0 1	- 1	Mirs.	W. E.		1 1		Mfrs.	W.E.
List	Car-	Std.	List	List Per	List	Car-	Std.	List	List Per	List	Car-	Std.	List	List Per-	List	Car-	Std.	List	List Per
No.	ton	Pler.	Each	Carton	No.	ton	Pkg.	Each	Carton	No.	ton	Pkg.	Each	Carton	No.	ton	Pkg.	Each	Carton
	_	200		\$29.25	3758	25	100	\$0.38	\$17.50	5,03	10	20	\$0.66	\$12.10	63.4	10	20	\$0.60	\$11.00
60	25		.26	14.25	3759	25	100	435	16.00	5704	10	20	.60	11.00	6365	10	20	.60	11.00
61	25	500			3769	25	100	69	31.75	5721	10	20	. 69	12.70	6366	10	20	.69	12.70
62	25	500	.23	12.75	3770	25	250	.42	23.00	5891	10	20	.60	11.00	6367	10	20	. 69	12.70
63	10	50	.53	9.80	3771	25	250	.39	21.50	5892	10	20	69	12.70	6368	10	20	.65	12.00
64	10	50	.68	10.80	3775				33.00	5893	10	20	69	12.70	6376	10	50	.60	11.00
65	10	50	.53	9.80		25	250	.60	31.75	6300	10	50		13.80	6377	10	20	.69	12.70
66	10	50	.53	9.80	3776	25	100	.69			10	20	.75	15.50	6378	10	20	.66	12.10
3618	25	250	.60	33.00	3777	25	100	.69	31 75	6301					6379	10	20	.60	11.00
3619	25	100	.66	30 25	3778	25	250	.42	23.00	6302	10	20	.81	14.90				.60	
3620	25	250	.60	33.00	3779	25	250	.39	21.50	6303	10	20	.75	13.80	6380	10	20		11.00
3664	25	500	.33	18.25	3780	25	250	.42	23.00	6304	10	20	.84	15.50	6381	10	20	.69	12.70
3665	25	250	.39	21.50	3781	25	500	.30	16.50	6305	10	20	.84	15.50	6382	10	20	.69	12.70
3666	25	500	.33	18.25	5702	10	50	, 60	11.00	6340	10	20	.65	12.00	6383	10	20	.65	12.00
3667	25	500	.30	16.50	1/2 in.	25	500	.07	3.75	6361	10	20	.60	11.00	6403	10	20	.80	14.70
3668	25	250	.36	19.75	! <pre>!</pre> in.	25	350	.16	8.75	6362	10	20	. 69	12.70	6427	10	20	.75	13.80
3669	25	500	.30	16.50	3% in.	25	250	.13	7.25	6363	10	20	.66	12.10	11	1	1		1
3682	25	500	.33	18.25	l'en-					11		1	1		11	1	1		
3683	25	250	.39	21.50	dent	25	500	.07	3.75	11	1	1	1		11	1	1		
3757	25	50	.65	30.00	JI.		ì			li .	1 3	1		I	H		1		

Standard finishes are brush brass and polished brass. Brush brass shipped unless otherwise specified. "Quick Catch" devices supplied with threaded shells. For special finishes see listing elsewhere. For prices of socket parts see listing elsewhere. Sockets furnished with chains over 8 inches length, except ceiling and rosette, add to list, \$0.22 per foot; Mfrs. List, \$0.10. For listing of separate caps and bases, see listing elsewhere.

### HUBBELL "QUICK CATCH" SOCKETS AND PULL SWITCHES

Schedule "B" and "F"

							chedule D
	<b>E</b>	3	3				
⅓-inch Angle	⅓-inch Angle	14-inch Fixture	X-Inch Fixture	14-inch Angle Faxture	⅓-inch Angle Fixture	Small Concealed Base	Small Concealed Covered Base
Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 10	Carton 10
No. 3760	No. 3763	No 3345	No. 3346	No. 3351	No. 3352	No. 3731	No. 3734
	B						
Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 10	Carton 10F
No. 3761	No. 3764	No. 3347	No. 3348	No. 3353	No. 3354	No. 3732	No. 3735
	1						E I
Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 10	Carton 10
No. 3762	No. 3765	No. 3349	No 3350	No. 3355	No 3356	No. 3733	No. 3736
Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 10	Cartor 10
No. 6341	No. 6342	No. 6343	No. 6344	No. 6345	No. 6346	No. 5795	No. 5796
	Ü	0	Û	Û	Û	<b>J</b>	Ü
No. 6404	Carton 10	Carton 10	Carton 10 No. 6414	Carton 10	Carton 10	No. 6417	Carton 10
Carton 10	No. 6405	No. 6113	Carton 10	No. 6415	No. 6416	Carton 10	No. 6418
No. 6369	No. 6370	No. 6371	No. 6372	No. 6373	No. 6374	No. 5900	No 5901
0	<b>D</b>			<b>D</b>	<b>U</b>	Ü	
Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10
No. 6384	No. 6385	No. 6386	No. 6387	No. 6388	No. 6389	No. 6096	No. 6097
a.	T.						
Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Çarton 10

		Patent	t Allowed																
			Mfrs.	List				Mfrs.	W. E. List				Mfrs.	W. E.   List				Mfrs,	W.E. List
List	Car-	Std.	List	Per	List	Car-	Std.	List	Per	List	Car-	Std.	List	Per	List	Car-		List	Per
No.	ton	Pkg.	Kach	Carton	No.	ton	Pkg.	Each	Carton	No.	ton	Pkg.	Each	Carton	No.	ton	Pkg.	Each_	Carton
3345	25	100	\$0.66	\$30 25	3+33	10	250	\$0.41	\$9.90	6096	10	20	\$0.71	\$13 10	6385	10	20	\$0.71	\$13.10
3346	25	100	.69	31.75	3734	10	100	.81	17,80	6097	10	20	. 81	14.90	6386	10	20	.66	12.10
3347	25	250	.39	21.50	3735	10	250	.54	11 90	6341	10	20	.74	13.60	6387	10	20	.69	12.70
3348	25	250	.42	23.00	3736	10	250	.51	11 20	6312	10	20	.71	13.10	6388	10	20	.71	13.10
3349	25	250	.36	19 75	3760	25	50	74	34 00	6343	10	20	.66	12.10	6389	10	20	.74	13.60
3350	25	250	.39	21 50	3761	25	100	.47	21 50	6344	10	20	. 69	12 70	6404	10	20	.89	16.40
3351	25	50	.71	32.75	3762	25	100	.44	20 25	6345	10	20	.71	13.10	6405	10	20	,86	15.80
3352	25	50	.74	39.00	37.63	25	50	.71	32 75	6346	10	20	.74	13.60	6413	10	20	.81	14.90
3353	25	100	.44	20 25	3764	25	100	.44	20 25	6369	10	20	.74	13 60	6414	10	20	,84	15.50
3354	25	100	.47	21.50	3765	25	100	.41	18 75	6370	10	20	.71		6415	10	20	.86	15.80
3355	25	100	.41	18 75	5795	10	20	.71	13.10	6371	10	20	,66	12 10	6416	10	20	.89	16.40
3356	25	100	.44	20 25	5796	10	20	.81	14 90	6372	10	20	.69	12 70	6417	10	20	.86	15.80
3731	10	100	.71	15.60	5900	10	20	.71	13 10	6374	10	20	.74	13 60	6418	10	20	.96	17.70
3732	10	250	44	9 20	5901	110	20	.81	14 90	6384	1 10	20	,74	13 60	11	I	l	I	l

Ceiling and Rosette Sockets with chains over 18 inches in length add to list price per foot \$0.22. Mfrs. List \$0.10.

All pull switches are equipped with short chain, 6 feet linen cord and No. 5919 adjustable acorn extra cord \$0.02 per foot list. Mfrs. List \$0.01. The steps on the fixture cans and fixture sockets listed above are designed to accommodate % inch, % inch and % inch fixture struts.

World Radio History

### HUBBELL "QUICK CATCH" SOCKETS AND PULL SWITCHES

								Schedules	"B" and "
National Electrical Code Standard Pull and Key Sockets 250 Warts. 250 Volts Keyless Sockets 660 Warts. 250 Volts All Pull Switches		Surface Wiring Base	Wood Moulding Base	Condulet Base	Angle Concealed Base	One-Way National Base	Two-Way National Base	Concealed Rosette Base®	Cleat Rosette Base®
1 Amperes, 125 Volta 1 Ampere, 250 Volta		Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10
No. 60 Pull Socket		No 3885	No. 3888	No. 3891	No. 3746	No. 3855	No. 3858	No. 3737*	No. 3740*
Carton 25		Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10
No. 61 Key Socket		No. 3886	No. 3889	No. 3892	No 3747	No. 3856	No. 3859	No. 3738*	No. 3741
Carton 25		Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10
No 62 Keyless Socket	*	No. 3887	No. 3890	No. 3893	No. 3748	No. 3857	No. 3860	No 3739*	No. 3742*
Carton 25		Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10
No. 63	f	No. 6347	No. 6348	No. 6349	No. 6350	No. 6351	No. 6352	No 5353*	No. 6354*
Ceiling Switch		Carton \$ 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 9 10
No. 64 Fixture Switch		No 6419	No. 6420	No. 6421	No. 6422	No. 6423	No. 6424	No 5428	No. 6429
Cartor 10		Carton 10	Carton 10	Carton 10	Carton 10	Carton 9 10	Carton 10	Carton 10	Carton 10
No. 65 Rosette Switch		No. 6029	No. 6030	No. 6031	No. 6375	No. 5942	No 5943	No 5902*	No. 5903*
Carton 10		Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Cirton 10	Carton 10
No. 66 Wall Switch		No. 6390	No. 6391	No. 6392	No. 6393	No. 6394	No 6395	No 6396*	No. 6397* Eli I Mili II  Carton 10
	i i			-					

			Mfrs.	1 W. E. I	11	1 0		Mfrs,	W. E. 1	1			Mfrs.	W. E.	fi .	. 0		Mfrs, I	W.E.
List	Car-	Std.	List	List per	List	Car-	Std.	List		List	Car-	Std.	List	List per	List	Car-	Std.	List	List per
No.		Pkg.	Each	Carton	No.		Pkg.	Each	Carton	No.	ton	Pkg.	Each	Carton	No.	ton	Pkg.	Fach	Carton
				\$20,20	3885	10	100	\$0.76	\$16.70	6029	10	20	80.76	\$15.20	63.12	10	20	\$0.41	8,4.20
3737	10	20	\$1.10						10.80	6030	10	20	.71	14.20	6393	10	20	.76	15.20
3738	10	100	.75	16 50	3886	10	250	.49						14.20	6394	10	20	.71	14.20
3739	10	50	.72	13 20	3887	10	250	.46	10 10	6031	10	20	- 41						
3740	10	20	1.10	20 20	3888	10	100	.71	15-60	6347	10	20	.76	15 20	6395	10	20	.71	14.20
3741	10	100	.75	16.50	11 3889	10	250	.41	9 70	6348	10	20	.71	14 20	6396	10	10	1.02	16/32
3742	l io	50	72	13 20	3890	10	250	.41	9.00	€349	10	20	.71	14 20	6397	10	10	1.02	16/32
3746	10	50	.76	14 00	3891	10	100	.71	15 60	6350	10	20	76	15 20	[  6419	10	20	.91	-18/20
3747	10	100	.49	10 10	3892	10	250	.41	9.70	6351	10	20	.71	14 20	6129	10	20	.86	17.20
3718	10	100	.46	10 80	3893	10	250	41	9 00	6352	10	20	7.1	14.20	6421	10	20	.86	17 20
	1 1 1			15 60	59 12	10	20	1.02	20 40	6353	Lin 1	10	1 02	16 32	6422	10	20	.91	18 20
3855	10	100	.71								in	10	1.02	16 32	6423	10	20	.86	17 20
3856	1 10	250	.44	9.70	59 13	10	20	1.02	20 40	6354	1								
3857	10	250	.41	9 00	5942	10	20	.71	14 20	6375	10	20	.76	15 20	6424	10	20	86	17 20
3858	10	100	.71	15 60	5943	10	20	.71	14.20	6390	10	20	.76	15.20	6426	19	10	1.02	16 32
3859	10	250	.44	9.70	H			ļ		6391	10	20	.71	14.20	6428	10	10	1.17	18 72
3860	10	230	.41	9 00						I)					H 6429	10	10	1.17	18.72
	1 000		,			_					-			10 1 14	0 1 0	. 1 0	, , .		2 1 241

Standar I finishes are brush bross and polished brass. Brush brass shipped unless otherwise specified. "Quick Catch" devices supplied with threaded shells. For special finishes see listing elsewhere. For prices of socket parts are listing elsewhere. Sockets furnished with chains over 8 inches in length except ceiling and rosette, add to list per foot \$0.22. Mirs. List \$0.10.

# Mail Orders Filled at Prevailing Prices HUBBELL "QUICK CATCH" SOCKETS AND PULL SWITCHES Schedules "B" and "F"

National Electrical Code Standard Pull and Kev Sockets SO wats. 250 Volta		a a a				3
Keyless Sockets 660 Watts, 250 Volts	Two Wire Moulding Base®	Three Wire Moulding Base®	Small Covered Ceiling Base	Insulated Ceiling Base 3%" Outlet Box	Large Covered Ceiling Base	Insulated Ceiling Base 4" Outlet Box
All Pull Switches J Amperes, 125 Volts : Ampere, 250 Volts	Carton 10	Carton 10	Carton 10	Carton 10	Carton 5	Carton 5
No. 60 Puli Socket	No. 3743*	No. 3547*	No. 3749	No. 3750	No. 3877	No. 3880
	TH.		T	T	T	T
Carton 25	Carten 10	Carton 10	Carton 2	Carton 2	Carton 1	Carton 1
No. 61 Key Socket	No. 3744*	No. 3548*	No. 3751	No. 3752	No. 3878	No. 3881
			The state of the s	T	H.	
Carton 25	Carton 10	Carton 10	Carton 2	Cartom 2	Carton 1	Carton 1
No 62 Keyless Socket	No. 3745°	No. 3549*	No. 3753	No. 3754	No. 3879	No. 3882
			T		T	T
Carton 25	Carton 10	Carton 10	Carton 2	Carton 2	Carton 1	Carton 1
No. 63 Ceiling Switch	No. 6355*  Carton 10	No_6356*	No. 6357	No. 6358	No. 6359	No. 6360
No. 64 Fixture Switch	No. 6430	No. 6431	No. 6432	No. 6433	No. 6434	No. 6436
	Carton de 10	Carton 10	Carton 2	Carton 2	Carton 1	Carton
No. 65	No. 5904*	No. 6026*	No. 5905	No. 5906	No. 5949	No. 5950
Rosette Switch	<b>D</b>	T	T	T	T	T
No. 66	Carton 10 No. 6398*	Carton 10	Carton 2 No. <b>6</b> 399	Carton 2	Carten 1	Carton 1
Wall Switch	140. 6398	No. 6426*	140. 6539	No. 6400	No. 6401	No. 6402
Carton 10	Carton 10	Carton 10	Carton 2	Carton 2	Carton 1	Cartin 1

				1 1.1 73 1										
	l		Mirs.	W. E.	l	1		Mirs.	W. E. (			1	Mirs.	W.E.
List	Car-		List	List per	List	Car-	Std.	List	Listper	List	Car-	Std.	List	List per
No.	ton	Pkg.	Each	Carton	No.	ton.	Pkg.	Each	Carton	No.	ton	Pkg.	Each	Carton
3547	10	20	\$1.10	\$20.20	3882	1	100	\$0.90	\$1.98	6360	1	20	\$1.20	\$2.76
3548	10	100	.75	16.59	5904	10	20	1.02	20.40	6398	10	10	1.02	16.32
3549	10	50	.72	13.20	5905	2	20	.90	4.14	6399	2	20	.90	4.14
3743	10	20	1.10	20.20	5906	2	20	,90	4.14	6400	2	20	.90	4.14
3744	10	100	.75	16.59	Base					6401	1	20	1.20	2.76
3745	10	50	.72	13.20	Two-wire	10	50	.49	9.00	6402	li	10	1.20	2.76
3749	2	50	1.00	4.40	Three-wire	10	50	.49	9.00	6430	10	10	1.17	18.72
3750	2	50	1.00	4.40	Small covd.	10	100	. 37	8.10	6431	10	10	1.17	18.72
3751	2	100	. 63	2.78	5949	1	20	1,20	2.76	6432	2	20	1.05	4.83
3752	2	100	. 63	2.78	5950	1	20	1.20	2.76	6433	2	20	1.05	4.83
3753	2	100	.60	2.64	6026	10	20	1.02	29.40	6434	1	20	1.35	3.10
3754	2	100	. 60	2.64	6355	10	10	1.02	16.32	6436	1	20	1.35	3.10
3877	j 1	50	1.30	2.86	6356	10	10	1.02	16.32	Base				
3878	1	100	. 93	2.05	6357	2	20	. 90	1.14	Insulated	10	100	.37	8.10
3879	1	100	.90	1.88	6358	2	20	.90	4.14	Covd. ceil.	5	100	. 67	7.35
3880	1	50	1.30	2.86	6359	1	20	1.20	2.76	Ins. ceiling.	5	100	,67	7.35
3881	1	100	.93	2.05	l e					]	,			

Ceiling and Rosette sockets with chains over 18 in. in length, add to list per ft. \$0.23. Mfrs, List \$0.10. All pull-switches are equipped with short chain 6 ft. linen cord and No. 5919 Adjustable Acorn, extra cord \$0.02 per ft. list. Mfrs. List \$0.01. For listing of separate caps and bases see elsewhere.

### HUBBELL "QUICK CATCH" ELECTROLIER SOCKETS

Schedule "B"

								Schedule
National Electrical Code Standard								
Pull Sockets 250 Watts, 250 Volts Key Sockets 250 Watts, 250 Volts				4				2
Keyless Sockets 660 Watts 250 Volts All Pull Switches	54-inch	12-inch	36-inch	Pendent	%-inch Male	K-inch Male	%-inch Male	%-inch Angle
3 Amperes, 125 Volts 1 Ampere, 250 Volts	Carton 25	Carton 25	Carton 25	Carton 25	Çarton 25	Carton 25	Carton 25	Carton 25
No. 70	No. 3821	No. 3823	No. 3826	No. 3210	No. 3851	No. 3211	No. 3212	No. 3842
Pull Socket			Ē,		H			
Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25
No. 71	No. 3822	No. 3824	No. 3827	No. 3213	No. 3852	No. 3214	No. 3215	No. 3843
Key Socket	1			P	Û.		P	H-
Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25
No. 72	No. 3756	No. 3825	No. 3828	No. 3216	No. 3853	No. 3217	No. 3218	No: 3844
Keyless				A		Î		B
Carton 25	Carton 25	Carton 25	-Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25
No. 73	No. 3899	No. 3900	No. 3901	No. 3902	No. 3903	No. 3904	No. 3905	No. 3906
Keyless Short	Ĥ			1	Î			
Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25	Carton 25

	1.		Mirs.	1 W. E. J		i .		Mirs.	W. E.	1		I	Mfrs.	W. E.
List	Car-	Std.	List	List Per	List	Car-		List	List Per	List	Car	Std.	List	List Per
No	ton	Pkg.	_Each_	_Carton	No.	ton	Pkg.	Each	Carton	No.	ton	Pkg.	Each	Carton
70	25	250	\$0.53	\$29.25	3218	25	250	\$0.39	\$21.50	3851	25	250	\$0.60	\$33.00
71	25	500	.26	12.75	3756	25	500	.30	16.50	3852	25	500	, 33	18,25
72	25	500	. 23	12.75	3821	25	250	. 60	33.00	3853	25	500	.30	16.50
73	25	500	.23	12.75	3822	25	500	. 33	18.25	3899	25	500	.30	16.50
3210	25	250	.60	33.00	3823	25	100	, 6,9	31.75	3900	25	250	, 39	21.50
3211	25	100	, 69	38.(H)	3824	25	250	.42	23.00	3901	25	250	, 36	19.75
3212	25	100	, 69	38.00	3825	25	250	.39	21.50	3902	25	500	, 30	16.50
3213	25	500	.33	18.25	3826	25	100	. 66	30.25	3903	25	500	, 30	16,50
3211	25	250	.42	23.00	3827	25	250	. 39	21.50	3904	25	250	, 39	21.50
3215	25	250	.42	23 00	3828	25	250	.36	19.75	3905	25	250	.39	21.50
3216	25	500	.30	16.50	3842	25	50	.65	30,00	3906	25	100	. 35	16.00
3217	25	250	.39	21.50	3843	25	100	.38	17.50	1% in. male	25	50	. 07	3.25
🤘 in. cap	25	500	.07	3.75	3844	25	100	. 35	16.00	🍕 in. male		50	. 16	7.25
14 in. cap	25	100	.16	7.25	³≼ in. cap	25	250	. 13	7.25	] <sup>3</sup>		50	, 16	7.25
	<u> </u>		1	I	<u> </u>	1			ł	🛮 🧏 in. angle	1 25	l 100	. 12	5.50

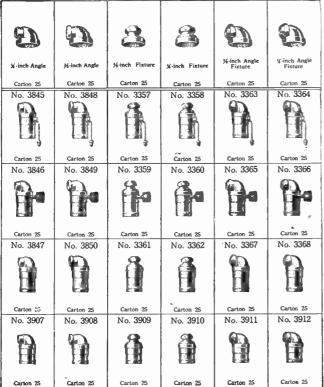
For special finishes see listing elsewhere. All separate pull socket bodies equipped with 8 inch chains. For listing of separate electrolier caps and bases see elsewhere. "Quick Catch" devices supplied with threaded shells,

SEPARATE CAPS, BASES AND BODIES FOR STANDARD "QUICK CATCH" DEVICES

	1	1	}	Mfrs.	[ W. E, ]			<u>т Т</u>		Mfrs.	W. E.
List	İ	Car-	Std.	List	List Per	List		Car-	Std.	List	List Per
No.	Description	ton	Pkg.	Each	Carton	No.	Description	ton	Pkg.	Each	Carton
60	Pull socket body, 8 in.					24	la in, angle fixture cap.	25	50	80.21	\$9.75
	chain	25	250	\$0.53	\$29.25	25	Small concealed base	10	250	.18	4,00
79	Pull socket body, 18					26	Small covered con	1 ***	-00	1	1.00
	in. chain	25	250	.61	33.50		cealed base	1 10 1	250	.28	6.20
61	Key socket body	25	500	. 26	14.25	27	Surface wiring base	l io l	250	.23	5.10
62	Keyless socket body	25	500	. 23	12.75	28	Wood moulding base.	10	100	. 18	4.00
63	Pendent pull switch			1	1	29	1/2 in. condulet base	io	250	. 18	4.00
	body	25	50	,53	24,50	30	Angle concealed base	10	100	,23	5.10
64	Fixture pull switch			]		31	One-way National base	10	250	. 18	4,00
	body	25	50	.68	31,25	32	Two-way National				
65	Rosette pull switch	1		1	!		base	10	250	.18	4,00
	body	25	50	.53	24.50	33	Concealed rosette base.	10	50	.49	9,00
66	Wall pull switch body.	25	50	. 53	24.50	34	Cleat rosette base	10	50	.49	9.00
11	1/8 in. cap	25	500	.07	3.75	35	Two-wire moulding				
12	14 in. cap	25	250	. 16	8.75		base	10	50	.49	9,00
13	3% in. cap	25	250	. 13	7.25	36	Three-wire moulding				
14	Pendent cap	25	500	.07	3.75	1	base	10	50	. 49	9.00
15	1/8 in. male thread cap.	25	100	.07	3.75	37	Small covered ceiling				
16	14 in. male thread cap.	25	50	. 16	7.25	l	base	10	100	. 37	8.10
17	3/8 in. male thread cap.	25	250	. 16	8.75	38	Insulated ceiling base			1	
18	1/8 in. angle cap	25	100	.12	5.50	1	for 314 in outlet	1 1			
19	1/4 in. angle cap	25	100	!!	9.75	l	_ boxes	10	10C	. 37	8.10
20	3/8 in. angle cap	25	100	.18	8.25	39	Large covered ceiling				
21	1/8 in. fixture cap	25	100	. 13	6.00		_ base	5	100	. 37	7.35
22	1/4 in. fixture cap	25	100	. 16	7.25	40	Insulated ceiling base				1100
23	1/8 in. angle fixture cap.	1 25 1	50	l .18	8,25	I	for 4 in, outlet boxes.	5 1	100	.67	7.35

### HUBBELL "QUICK CATCH" ELECTROLIER

Schedule "B" and "F"



"QUICK CATCH" AND PRESTURN SOCKETS AND PULL SWITCHES WITH PORCELAIN STRAIN RELIEF BUSHING



No. 3404

			So	hedul	• "B"
"Quick Catch" List No.	Pres- turn List No.	Description	Std. Pkg.	Mfrs. List Price	W.E. per Carton
55	148	*Pendent cap	500	\$0.07	\$3.75
3404	3401	*Pull socket	250	.60	33.00
3405	3402	*Key socket	500	.33	17.50
3406	3463	*Keyless socket.	500	.30	14.00

*Cart	on, 25.		So	hedul	e ''F''
6576		*Ceiling pull	20	\$9.60	\$12.00
6577	6581	*Fixture pull	20	.75	15.00
6578	6582	*Rosette pull	20	,60	12.00
6579	6583	*Wall pull switch	20	. 60	12.00

<sup>\*</sup>Carton, 10.

These socket caps interchange with all standard "Quick Catch" and Presturn devices.

### Electrolier Sockets

Schedule "B"

	1	1		Mfrs.	W. E. i	1	1	l	1	Alirs.	\ VV.E.
List		1	Std.	List	Listper	List			Std.	1.ist	List per
No.	Schedule	Carton	Pkg.	Each	Carton	No.	Schedule	Carton	Pkg.	Each	Carton
	Th			\$0.66	\$30.25	3848	- R	25	50	80.71	≥32.75
3357	1 13	25	100				D	25	100	.44	20.25
3358	B	25	100	. 69	31.75	3849	D :				18.75
3359	l B	25	250	. 39	21.50	3850	B	25	100	.41	
3360	B	25	250	.42	23.00	3907	B	25	100	. 44	20.25
3361	l ä	25	250	.36	19.75	3908	В	25	100	.41	18.75
3362	l Ř	25	250	. 39	21.50	3909	В	25	250	. 36	16.50
3363	Ř	25	50	.71	32 75	3910	В	25	250	. 39	18.50
3364	Ř	25	50	.71	34.00	3911	В	25	100	.41	18.75
3365	i ii	25	100	. 44	20.25	3912	В	25	100	. 44	20.25
3366	Ŕ	25	100	.47	21.50	14 in, angle	В	25	50	. 21	22.25
3367	l ä	25	100	.41	18.75	3% in. angle	B	25	50	. 18	8.25
3368	l ä	25	100	.44	20.25	1/8 in, fixture	В	25	50	. 13	6.00
3845	ΙŔ	25	50	.74	34.00	14 in. fixture	В	25	50	. 16	7.25
3846	l ñ	25	100	.47	21.50	1/2 in. angle	B	25	50	. 18	8.25
3847	l É	25	100	[44	20 25	14 in. angle	13	25	50	.21	9 75

The steps on the fixture caps listed above are designed to accommodate %, % and ½ inch fixture stems. Pull sockets with chains over 8 inches in length, add to list per foot \$0.10, W. E. List, \$0.22.

### SEPARATE CAPS AND BODIES FOR ELECTROLIER "QUICK CATCH" DEVICES

#### Schedule "B" W.E. Mfrs. Listper List List Pkg. Carton Description Each No. \$29 25 14 25 12 75 70 \*Pull socket body..... \*Key less socket body. \*Keyless socket body. \*Keyless socket body, short shell. 71 72 73 .26 500 500 500 12.75 3.75 7.25 7.25 3.75 41 42 43 \*16 in. cap. \*14 in. cap. \*36 in. cap. .07 500 100 250 .13 \*% in. cap. \*Pendent cap. \*½ in. male thread cap. \*½ in. male thread cap. \*½ in. male thread cap. \*½ in. nargle cap. 44 45 500 3.25 7.25 7.25 46 47 48 49 50 50 .16 .16 .12 5.50 9.75 8.25 100 \*14 in. angle cap. \*14 in. angle cap. \*15 in. angle cap. \*15 in. fixture cap. \*14 in. fixture cap. \*16 in. angle fixture cap. 50 50 .13 6.00 \* 0 100 . 16 \*14 in. angle fixture cap...... 9 75

#### PARTS OF SOCKETS

		Schedul	e ''B''
Description	Std. Pkg.	Mfrs. List Each	W. E List per Carton
Shells, key, without linings. Shells, keyless, without linings. Shells, pull, without linings. Caps, ½ in., without linings. Caps, ½ in., without linings. Caps, pendent, without linings. Linings, shell, all kinds. Linings, cap, all sizes. Linings, pull, without chain or eyelet	250 250 250 250 250 250 250 250 250 250	\$0.07\frac{1}{2} .07\frac{1}{2} .07\frac{1}{2} .06\frac{1}{2} .15\frac{1}{2} .12\frac{1}{2} .02\frac{1}{2} .00\frac{1}{2} .30	.15 .33 .27
Interiors, pull, with chain, acorn and eyelet	250 250 250 250 250	.43 .16 .19 .13	.95 .35 1.01 .68

### HUBBELL "LOCK SHELL" SOCKETS













No. 3300

Two Screw Fastenings PULL SOCKETS

Schedule "B"

List No.	Description	Carton	Pkg. Wt. Lbs.	Std. Pkg.	Mfrs. List Each	W. E. per Carton
35000	Pull 1/8 in. cap	25	65	250	\$0.60	\$33.00
3766	Pull, ¼ in. cap	25	27	100	.69	31.75
35001	Pull, 3% in, cap	25	30	100	.66	30.25
35040	Pull, pendent cap	25	68	250	.60	33.00
	PULL SOCKETS WITH MALE	THREA	D CAPS	5		
3789	Pull. 1/8 in. male thread cap	25	70	250	\$0.60	\$33.00
3790	Pull, ¼ in. male thread cap	25	30	100	.69	31.75
3791	Pull, 3/8 in. male thread cap	25	30	100	.69	31.75
	KEYLESS SOCKE	TS				
35053	Keyless, ½ in. cap	25	127	500	\$0.30	\$16.50
3768	Keyless, ¼ in. cap.	25	65	250	.39	21.55
35054	Keyless, % in. cap.	25	65	250	.36	19.75
		25	135	500	.30	16.50
35055	Keyless, pendent cap	1 20	100	- 500	1 .00	207.000

660 Watt Key Sockets
"QUICK CATCH" AND PRESTURN SHELLS
660 WATTS—250 VOLTS

Schedule "B"

		***					
'Quick	Presturn	D!!	Carton	Pkg. Wt.	Std.	Mfrs. List	W.E.
Catch"	List	Description	Carton		Pkg.		
List No.	No.			Lbs.		Each	Carton
-75	89	Socket body	25	100	500	\$0.29	\$16.00
3300	3140	Socket, 1/8 in. cap	25	135	500	. 36	19.75
3301	3141	Socket, 1/4 in cap	25	70	250	,45 $ $	24.75
3302	3142	Socket, % in. cap	25	70	250	.42	23.00
3303	3143	Socket, pendent cap	25	138	500	.36	19.75
3304	3144	Socket, 1/8 in. angle cap	25	30	100	.41	18.75
3305	3145	Socket, 1/4 in. angle cap	25	30	100	. 50	23.00
3306	3146	Socket, 3% in. angle cap	25	30	100	.47	21.50
3307	3147	Wall socket, small concealed base	10	100	250	.47	10.30
3308	3148	Wall socket, small covered concealed base.	10	115	250	. 57	17.50
3309	3149	Wall socket, surface wiring base	10	145	250	. 52	11.40
3310	3150	Wall socket, wood moulding base	10	120	250	.47	10.30
3311	3151	Wall socket, 1/2 in. condulet base	10	120	250	.52	11,40
3312	3152	Wall socket, one-way National base	10	125	250	. 47	10.30
3313	3153	Wall socket, two-way National base	10	125	250	.47	10.30
3314	3154	Wall socket, angle concealed base	10	50	100	. 52	9.60
3315	3155	Ceiling socket, small covered ceiling base.	2	75	100	.66	[-2.90]
3316	3156	Ceiling socket, insulated ceiling base, 31/4	1		l l		
3310	0130	in outlet boxes	2	75	100	.66	2.90
3317	3157	Ceiling socket, large covered ceiling base.	$\begin{vmatrix} 2\\1 \end{vmatrix}$	180	100	.96	2.11
3318	3158	Ceiling socket, insulated ceiling base, 4 in.				,	1
9919	8100	outlet boxes	1	180	100	.96	2.11

Standard finishes are polished brass and brush brass. Brush brass shipped unless otherwise specified. For special finishes, see listing elsewhere.

No. 6100 connecting block listed clsewhere. Supplied with No. 3343 and No. 3153 without extra charge.

### Western Electric

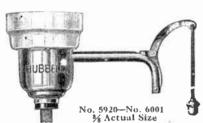
# HUBBELL PULL SOCKETS Equipped with "Economy" Extender "QUICK CATCH" AND PRESTURN SHELLS





Schedule "B"

"Quick	Presturn				Pkg.	Mfrs.	W.E.
('atch''	List	Description	Carton	Std.	Wgt.	List	per
ListNo.	No.	-		Pkg.	Lbs.	Each	Carton
67	86	Pull socket body with "Economy" extender	10	100	25	\$0.73	\$16.10
3836	3078	With 1/8 inch cap	10	100	35	.80	17.60
3837	3079	With 3g inch cap	10	100	35	.86	18.90
3838	3080	With small concealed base	10	30	27	.91	16.70
3839	3081	With small covered, concealed base	10	30	27	1.01	18.60
3868	3084	With concealed rosette base	10	20	20	1.22	22.40
3869	3085	With cleat rosette base	10	20	20	-1.22	22.40
3870	3086	With two-wire molding base	10	20	20	1.22	22.40
3872	3127	With three-wire molding base	10	20	20	1.22	22.40
3894	3128	With surface wiring base	10	30	27	.96	17.70
3895	3129	With wood molding base	10	30	27	.91	16.70
3896	3130	With ½ inch condulet base	10	30	27	.96	17.70
3875	3087	With one-way National base	10	30	25	.91	16.70
3876	3088	With two-way National base	10	30	25	.91	16.70
3840	3082	With small covered ceiling base	2	30	31	1.10	4.86
3841	3083	With inside ceiling base for 3 14 inch outlet box	2	30	31	1.10	4.86
3873	3131	With large covered ceiling base	1	30	35	-1.40	3.08
3874	3132	With inside ceiling base for 4 inch outlet box	1	30	35	1.40	3.08



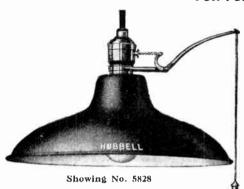


		SINGLE POLE, 3 AMPERES-125 VOLTS, 1	AMPER	E-250 V	VOLTS	Schedu	ıle "F"
69	88	Rosette pull switch body with "Economy" ext.	10	30	15	80.73	\$14,60
5920	6001	With small concealed base	10	20	25	.91	18.20
5921	6002	With small covered, concealed base	10	20	25	1.01	20.20
5922	6003	With concealed rosette base	10	20	33	1.22	24.40
5923	6004	With cleat rosette base	10	20	33	1.22	24.40
5924	6005	With two-wire molding base	10	20	33	1.22	24,40
6028	6009	With three-wire molding base	10	20	33	[-1.22]	24.40
6032	6010	With surface wiring base	10	20	33	.96	19.20
6033	6011	With wood molding	10	20	33	.91	18.20
6034	6036	With ½ inch condulct base	10	20	33	, 96	19.20
5944	6020	With one-way National base	10	20	33	.91	18.20
5945	6021	With two-way National base	10	20	33	.91	18.20
5925	6006	With small covered ceiling base	2	20	30	1.10	5.06
5926	6007	With inside ceiling base for 31/4 inch outlet box	2	20	30	1.10	5,06
5951	6022	With large covered ceiling base	1	20	35	1.40	3.22
5952	6023	With inside ceiling base for 4 inch outlet box.	1	20	35	1.40	3.22

All of the above sockets and switches are equipped with 6 feet of extra quality linen cord and No. 5919 adjustable acorn. Additional cord, W. E. list \$0.02 and Mfrs. List \$0.01. Special acorn, W. E. List \$0.14 and Mfrs. List \$0.06. "Quick Catch" sockets equipped with threaded shells only. Presturn sockets equipped with beaded shells only. Standard finishes are brush brass and polished brass. Brush brass furnished where no finish is specified. For suitable outlet boxes, see corresponding type of sockets on charts. Switches in special finish subject to same corresponding addition of list price as standard pull sockets and W. E. List \$0.12 and Mfrs. List \$0.05 additional for switches with "Economy" extender attached. The "Economy" extender takes the place of the regular chain eyelet, being attached direct to eyelet bracket.

### HUBBELL ATTACHMENTS

FOR PULL SOCKETS





### Attachment for Pull Sockets

This attachment is made of sheet brass of ample stiffness to resist strain of continuous use. Attaches direct to the socket, not to the shade holder. The spring hand at the end of the horizontal arm snaps around the socket. A slot hooks over a screw by which the band is secured.

					Sched	uic i
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
5828▲	For 8, 10 and 12 in. reflectors	25	250	21	\$0.25	\$13.75
5829▲	For 14 in, reflectors	25	250	22	.25	13.75
5953▲	For 16 in. reflectors	25	100	24	.30	13.75
5954▲	For 18 and 20 in. reflectors	25	100	24	.30	13.75
6317	For 22 in. reflectors	25	100	25	. 40	18.75

### Attachments for Porcelain Pull Sockets

5957	For 8, 10 and 12 in. reflectors	25	250	21	\$0.25	\$13.75
5958	For 14 in. reflectors	25	250	22	.25	13.75
5959	For 16 in, reflectors	25	100	24	.30	13,75
5960	For 18 and 20 in, reflectors	$^{25}$	100	24	.30	13.75
5961	For 22 in. reflectors	$^{25}$	100	25	.40	18.75

	"ECONOMY" EXTENDER					ule "F"
5880▲	Extender only for Standard sockets Extender only for electrolier sockets	25	250	18	\$0.30	\$16.50
6306		25	250	18	.30	16.50

Attachments sold separately do not come under Schedule "B" but are subject to Schedule "F" discounts. The above price covers attachments in polished brass and old brass finishes. For special finish add 30.11 to W. E. list, to Mfrs. list \$0.05.

National Electrical Code Standard.



Showing No. 5403 Attached to Lamp

### Incandescent Light Attachment

FOR OIL LAMPS

250 WATTS-250 VOLTS

Schedule "F"	Scl	ned	ul	e ''	F"
--------------	-----	-----	----	------	----

List No.	Description	Carton Quantity	Pkg. Wt. Lbs.	Std. Pkg.	Mfrs. List Each	W. E. List per Carton
5403	With plug and 7 ft. of silk cord	1	15	20	\$2.00	\$4.40
5529	Without cord or plug	i	10	20	1.50	3.30

This is a handsome and inexpensive device for attaching to an oil lamp, to give it the practical advantage of an electric lamp.

The base of the socket is easily and quickly fitted to any lamp with a common burner, either flat wick or central draft.

It does not injure the lamp in any way and requires no tools to attach. When sold complete it is fitted with 7 feet of silk parallel lamp cord and Hubbell Plug No. 5406.

Socket fitted 12 inch chain.

Standard finishes are polished brass, old brass and brush brass. Brush brass shipped unless otherwise specified.

For special finishes see listing elsewhere.

World Radio History

### Western Electric

### HUBBELL PORCELAIN SOCKETS AND RECEPTACELS

National Electrical Code Standard Pull Sockets 250 Watts, 250 Volts Key Sockets 250 Watts, 250 Volts Keyless Sockets 660 Watts, 250 Volts	Pendent	1/8-inch	1/4-inch	1/g-inch	J/g-inch Aluminum	1/2-inch Aluminum	Concealed Base	Cleat Base
	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10
No. 160	No 3380	No. 3330	No 3432	No. 3331	No 3387	No. 3336	No. 3420	No. 3423
Pull Socket								
Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10
No. 161	No. 3381	No. 3332	No. 3433	No. 3333	No. 3388	No 3337	No. 3421	No. 3424
Key Socket						2		Tata
Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10
No. 162	No. 3382	No. 3334	No. 3434	No. 3335	No. 3389	No. 3338	No. 3422	No. 3425
Keyless Socket								
Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	Carton 10	"Carton 10"

Carton 10	Carton 10	Carton 10	Carton 10	1
National Electrical Code Standard Pull Sockets 250 Watts, 250 Volts Key Sockets 250 Watts, 250 Volts Kevicss Sockets 660 Watts, 250 Volts	Small Cerling Base 3),4 "Outlet Box Carton 10	4*0	Ceiling Save utlet Box	-
No. 160 Pull Socket	No. 3426	No.	3429	
		1		
No. 161	Carton 2		rton 1	
No. 161 Key Socket	No. 3427	No.	3430	. i
Carton 10	Carten 2	Car	ton I	•
No. 162 Keyless Socket	No. 3428	No.	3431	]
		Ì		
Carton 10	Curton 2	Car	tota 1	

						Schedu	le "B"
List No.	Std. Pkg.	Mfrs. List Each	W.E. per Carton	List No.	Std. Pkg.	Mfrs. List Each	W. E. per Carton
160 161 162 3330 3331 3332 3333 3334 3335 3336 3337 3338 3381 3382 3387 3388	100 250 250 50 50 100 100 100 50 100 100 250 250 50	\$0.75 .25 .22 .87 .90 .37 .40 .34 .37 .10 .57 .83 .33 .30 .1.05	\$16.50 5.50 4.80 16.00 16.60 8.10 8.80 7.50 8.10 20.20 12.50 18.30 7.30 6.60 19.30	3420 3421 3422 3423 3424 3425 3432 3432 3433 3434 Pendent ½ in, cap ¼ in, cap ¾ in, cap ½ in, Alum cap ½ in, Alum cap ½ in, Cop	50 100 100 50 100 100 100 2 0 100 50 100 50	\$0.85 .35 .32 .85 .35 .32 .95 .45 .42 .08 .12 .20 .15 .30	\$15.60 7.70 15.60 7.70 7.00 17.50 9.90 9.20 1.70 2.60 3.70 3.30 6.40 6.60 7.70
3389	100	. 55	12 10 11 40	hase Cleat base	100	.10	2.20 2.20

Carton quantity 10.
Sockets furnished with chains over 8 inches in length, add to list per foot, 80.53, Mfrs. List \$0.24. Special finishes take one-half the list price charged for brass shell sockets. Standard finish for brass cap on porcelain sockets is brush brass.

	SEF	PARA	TE (	CAPS,	BASES	AND B	ODI	ES	Schedu	le "B"
	List No.	Car- ton	Std. Pkg.	Mfrs. Each	W E. per Carton	List No.	Car- ton	Std. Pkg.	Mfrs. List Each	W. E. per Carton
1	3426 3427	$\frac{2}{2}$	50 100	\$1.00	\$4.40	3431 3/ in.	1	100	\$0.52	\$1.14
	3428 3429	2	100	1.05	2.06	outlet	10	100	. 25	5.50
	3430	i	100	. 55	1.21	outlet	- 5	100	.30	3.30

List	FOR PORCELAIN SOCKETS AND RECEPTACLES Schedule "B"	Carton	Pkg. Wt.	Std.	Mfrs.	W.E.
No.	Description		Lbs.	Pkg.	Each	Carton
160	Porcelain pull socket body	10	30	100	\$0.75	\$16.50
161	Porcelain key socket body	10	60	250	. 25	5.50
162	Porcelain keyless socket body	10	15	250	. 22	2.80
150	Pendent cap for porcelain sockets	10	35	250	.08	1.70
151	1/8 inch brass cap for porcelain sockets	10	15	100	.12	2 60
152	1/4 inch brass cap for porcelain sockets	10	15	50	.20	3.70
153	36 inch brass cap for porcelain sockets	10	15	100	. 15	3.30
154	3% inch aluminum cap for porcelain sockets	10	15	100	. 30	6.60
155	1/2 inch aluminum cap for porcelain sockets.	10	15	50	.35	6.40
156	Concealed base for porcelain sockets	10	40	100	. 10	2.20
157	Clear base for porcelain sockets	10	45	100	. 10	2.20
158	Small ceiling base for porcelain sockets	10	25	100	.25	5.50
159	Large ceiling base for porcelain sockets	5	35	100	. 30	3 30

# HUBBELL SOCKETS WITH SHADE HOLDERS ATTACHED "Quick Catch" and Presturn Shells







No. 3039—No. 3673 ∮8 Actual Size

### PULL SOCKETS WITH 214 INCH SHADE HOLDER ATTACHED

Schedule "B"

"Quick				- CI. 1	711		
Catch"	Presturn		Carton	Std.	Pkg.	Mfrs.	W. E.
List	List	Description	Quantity	Pkg.	Wgt.	List	per
No.	No.	·			Lbs.	Each	Carton
76	167	Pull socket body only	10	-250	$\overline{70}$	\$0.59	\$13.00
3621	3030	Pull socket 1/8 in. cap	10	250	75	. 66	14.50
3622	3031	Pull socket 3/8 in. cap	10	100	35	.72	15.80
3623	3032	Pull socket pendent cap	10	250	75	.66	14.50

#### PULL SOCKETS WITH 214 INCH SHADE HOLDER ATTACHED

Schedule "B"

			1.0	-	4 ()()		1	211 =0
164	170	Pull socket body only	10	-1	100	45	\$0.67	\$14.70
3624	3033	Pull socket 1/8 in. cap	10		100	50	.74	16.30
3625	3034	Pull socket 3 g in. cap	10		100	55	.80	17.60
3626		Pull socket pendent cap			100	50	.74	17.30

### KEY AND KEYLESS SOCKETS WITH 21, INCH SHADE HOLDER ATTACHED

Schedule "B"

77 '	168	Key socket body only	10	500	140	\$0.32	\$7.00
3670 i	3036	Kev socket ½8 in. cap	10	500	150	.39	8.60
3671	3037	Key socket 3 g in, cap	10	250	75	.45	9,90
3672	3038	Key socket pendent cap	10	500	150	.39	8.60
78	169	Keyless socket body only	10	500	140	.29	6.40
3673	3039	Keyless socket 1/8 in. cap	10	500	140	.36	7.90
3674	3040	Keyless socket 3 in. cap	10	250	70	.42	9.20
3675	3041	Keyless socket pendent cap	10	500	140	.36	7.90

### KEY AND KEYLESS SOCKETS WITH 3/4 INCH SHADE HOLDER ATTACHED

Schedule "B"

10#	171	True medent bunder order	10	100		80.40 1	20 OA
165	171	Key socket body only			4.5		\$8.80
3676	3042	Key socket 1/8 in. cap	10	100	45	. 47	10.30
3677	3043	Key socket 3/8 in. cap	10	100	50	. 53	11.70
3678	3044	Key socket pendent cap	10	100	45	.47	10.30
166	172	Keyless socket body only	10	100	45	.37	8.10
3679	3045	Keyless socket 1/8 in. cap	10	100	45	.44	9.70
3680	3046	Keyless socket 3/8 in. cap	10	100	50	.50	11.00
3681	3047	Keyless socket pendent cap	10	100	45	.44	9.70

Sockets furnished with chains over 8 inches in length, add to W. E. List, per foot, \$0.22, and to Mfrs. List, per foot, \$0.10.

Pull sockets may be equipped with 3 feet of linen cord in place of chain without additional cost.

For separate chains not attached to socket, see listings elsewhere.

For special finishes, see listings elsewhere.

6.00

Schedule "F"

. 15

7.50

### HUBBELL SOCKETS AND RECEPTACLES

### Candelabra Pull Sockets

75 Watts—125 Volts





No. 5792

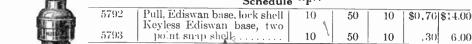


No. 5742

T WO DCI	ew LOCK STILLE	MOILI	1140	30	neaule	r.			
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W.E. per Carton			
5455 <b>≜</b> 5836	Pull, Ed. Candelabra base Pull. Miniature base	10, 10	50 50	10 10	<b>\$</b> 0.60	\$12.00 12.00			
	QUICK CATCH FASTENING Schedule "F"								
5742	Pull, Ed. Candelabra base .	10	50	10	\$0.608	\$12.00			

Candelabra Sockets with Ediswan Base Lock Shell and Two Point Snap Shell Fastening, 75 Watts—125 Volts Schedule "F"

5837 | Pull. Miniature base..... | 10 | 50 | 10 | .60 | 12.00



Standard length of chain in pull socket, 4 inches. For chains over 3 inches in length add to list, per foot, \$0.23 Mfrs. List \$0.10.

Standard finishes are brush brass, old brass, and polished brass.

For Candelabra and Miniature Pull Sockets, equipped with extension eyelets, add to W. E. List \$0.02 ½ inch extension eyelets, are standard. Separate extension eyelets \$0.28 each W. E. List.

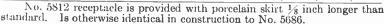


No. 5753

Candelabra Keyless Sockets Lock Shell Fastening, 75 Watts-125 Volts Schedule "F"

5753 [Keyless socket, Candelabra base] |\$0.235|\$13.50 5838 Keyless socket, Miniature base 25 200 20 .235|13.50Candelabra Candle Receptacles

75 Watts-125 Volts Schedule "F" 5686A Receptacle with 56 inch male thread bushing.....Receptacle with 6 inch male 25 200 \$0.12 \$6.90 12 5812 thread bushing, with extra long porcelain skirt... 25 200 12 , 12 6.90 5808 Receptacle with 5/16 inch female thread bushing.... 25 200 .12 6.905819 Receptacle with 1/8 inch pipe tap female thread bushing 25 200 .12 6,90 6164 Receptacle with 1/8 ins. pipe tap, male thread bushing 200 12 .126.90





No. 5686



No. 5819



No. 5481

No. 5483

No. 6145



No. 5482

Pkg. Carton Mfrs. W.E. List List Std. Description Quan-Wt. List No. per Pkg. J hs. tity Each Carton 5481Extension, candelabra base,  $4\frac{3}{8}$  ins. long.... 50 50 1 \$0.35 \$28.00 Extension, miniature base, 43% ins. long.... 5879 miniature 50 50 1 .3528.006145 Candle extension, medium serew base..... 25 50 5 .5025.005482 Collar, for candelabra socket. 50 50 1 .054.00Candle, 4 ins. long, for

EXTENSIONS, COLLAR AND CANDLE

candelabra socket..... 25 Extensions over 43% inches in length, add to list \$0.23 per inch or fraction thereof. Mfrs. List \$0.10.

50

9

Candles over 4 inches in length, add to list \$0.09 per inch or fraction thereof. Mfrs. List \$0.04.

Extensions less than 43% inches in length and candles less than 4 inches, take same list price as standard.

Extensions, although 43/8 inches in length, are designed to take a 4 inch candle. For special finished collar, add to list \$0.05. Mfrs. List \$0.02.

Brush brass furnished unless otherwise specified. **World Radio History** 

### HUBBELL PORCELAIN MOGUL SOCKETS

1500 WATTS, 600 VOLTS

Schedule "B"

595











17	v.	3.	ŧu	

3390

3289

140.	3100 110. 3370	140, 3207	190, 5	100		140. 9	42 (3·6
No. 3465 3390	Keyless, without cap or yoke. Keyless, 35 in. aluminum cap.		Carton Quantity 2	Std. Pkg. 50 50	Pkg. Wt. Lbs. 70	Mfrs, List Each \$0.70 1.00	W. E. per Carton \$2.80
3391 3392 3289 3290 3291	Keyless, 34 in. aluminum cap. Keyless, 34 in. aluminum cap. Keyless, 38 in. cast iron yoke. Keyless, 42 in. cast iron yoke. Keyless, 34 in. cast iron yoke.		2 2 2 2 2	50 50 50 50 50	75 75 85 85 85	1.00 1.00 .85 .85	4.00 4.00 3.40 3.40 3.40
		One Piece Porcelain					
3468 3469 3471 3472	Keyless, 3% in. aluminum cap. Keyless, ½ in. aluminum cap. Keyless, 3% in. cast iron yoke. Keyless, ½ in. cast iron yoke.		$\frac{2}{2}$	-50 -50 -50 -50	60 60 60 60	.85 .85 .70 .70	3.40 3.40 2.80 2.80
3473 3474 3464	Keyless, ¾ in. east iron yoke. Keyless, without cap or yoke. Keyless, Mogul receptacle.	· · · · · · · · · · · · · · · · · · ·	2 2 2	50 50 50 50	60 55 50	.70 .55 .75	2.80 2.20 3.00

Supporting screw holes spaced 2\% inches on centers.

Screw holes in all Mogul sockets sealed with heat-proof compound.

#### 1500 WATTS, 600 VOLTS











No. 3383

No. 3460

No. 3463

### HUBBELL BRASS SHELL MOGUL SOCKETS

		1. 1		Pkg.	Mfrs.	W. E.
List		Carton	Std.	Wt.	List	per
No.		Quantity	Pkg.	Lbs.	Each	Carton
3383	Keyless, 3/8 in. cap	10	50	35	\$1.50	\$25.50
3384	Keyless, ½ in. cap	10	50	38	1.50	25.50
3385	Keyless, 38 in. cap with 31/4 in. shade holder	1	50	50	1.80	3.60
3386	Keyless, $\frac{1}{2}$ in. cap with $3\frac{1}{4}$ in. shade holder	1	50	55	1.80	3.60

These Mogul base sockets are fitted with special, high heat-resisting linings capable of withstanding the intense heat generated by Type C gas-filled lamps.

Shell and cap are fastened together by means of a screw thread and held in place by a steel set screw.

3460 3461	Keyless ceiling socket, porcelain base, for 3¼ or 4 in. outlet boxes	1 1	50 50	95 100	\$1.50 1.80	\$3.00 3.60
3462	Keyless ceiling socket, insulated base, for 31/4 or 4 in, out-	_		100	1.00	0.00
	let boxes	1	50	100	1.75	3.50
3463	Same with 31/4 in. shade holder attached	_ 1	50	105	2.05	4.10

Diameter of base, 45% inches.

Supporting screw holes, 2% inches and 3½ inches on centers. For 4 inch shade holders for brass shell Mogul sockets, see listing elsewhere.

For special finish on Mogul base sockets without the shade holder, add to list price twice the addition made for special finishes on standard sockets.

For special finish on Mogul base sockets with shade holder, add to list price twice the regular addition for standard socket and the regular addition for the standard 31/4 inch shade holder.

Standard finish, brush brass.

### HUBBELL PORCELAIN RECEPTACLES











No. 9402

No. 4013

No. 28795

No. 9171

No. 59275

### Porcelain Cleat Receptacles

660 Watts-250 Volts

Schedule "B"

			Pkg.		Mfrs.	W. E.
List		Carton	Wt.	Std.	List	List per
No.	Description	Quantity	Lbs.	Pkg.	Each	Carton
9402	Cleat receptacle	10	115	250	\$0.15	\$3.30
4013	Cleat receptacle, for shade holder	10	110	250	.20	4.40

Holes for supporting screws are spaced 23% inches on centers. Outside dimensions of base  $2\frac{15}{16}$  by  $2\frac{23}{32}$  inches.

28795 | Cleat receptacle, round base..... 10 90 250 \$0.15 \$3.30 Holes for supporting screws are spaced 1 1/8 inches on centers.

Outside diameter of base  $2\frac{5}{16}$  inches.

9171Cleat receptacle..... 10 90 500 \$0.10 | \$2,20

Supported by one screw in center. Outside diameter of base  $1\frac{15}{16}$  inches.

59275 | Cleat receptacle—wires raised 1 in. from surface..... 10 250  $105 \pm$ \$0.18 \$4.00

Holes for supporting screws are spaced 2 inches on centers. Outside dimensions of base  $2\frac{7}{16}$  inches and  $2\frac{3}{32}$  inches. Arranged with square recess for stove bolts.



No. 50715



No. 25706



No. 61988



No. 4099

### Porcelain Cleat Receptacles

660 Watts—250 Volts						Sche	dul	e "B"
50715   Pony cleat receptacle	10	1	85	1	$250 \pm$	\$0.15	-	\$3.30
Holes for supporting screws are spaced $1\frac{15}{16}$ inches on centers. Dimensions of base $2\frac{7}{16}$ x $2\frac{7}{16}$ inches.								
25706   Street hood socket with side lugs	10	1	75	1	100	\$0.27	1	\$5.90

The malleable iron yoke is threaded for 3% inch iron pipe.

### Porcelain Receptacles FOR CONDUIT BOXES AND METAL SIGNS

660 Watts—250 Volts		Sched	ule "B"	
61988   Receptacle with screw ring	10 10	85   100	\$0.20 .25	$\begin{array}{r} \$4.40 \\ 5.50 \end{array}$

A hole 1½ inches in diameter is required for these receptacles.

\*This receptacle is fitted with a separate porcelain base for use with outlet boxes.

These receptacles are constructed with five notches in the base designed to prevent the receptacle turning, once it is installed. One projection in the metal plate bent down into any one of the notches will insure the permanent location of the receptacle in its original position.

Rubber gaskets are regularly supplied, but leather gaskets may be had when so ordered without extra charge.

The design of these receptacles makes possible the removal of the screw shell without disturbing the wiring.

Porcelain rings only, Mfrs. list price \$0.06, W.E. List \$0.13—standard package 250.

### HUBBELL MISCELLANEOUS SOCKETS



No. 35024 36 actual size



Wall Switch Porcelain Base



Wall Switch Metal Covered Base



No. 5610—Fixture Switch Side Outlet

### PULL SOCKET WITH LAMP BASE ATTACHMENT "Lock Shell" Fastening

250 Watts—250 Volts

Schedule "B"

List No.	Description	Carton	Pkg. Wt. Lbs.	Std. Pkg.	Mfrs. List Each	W. E. per Carton
35024	Pull socket, with lamp base attachment	10	17	50	\$0.70	\$12.80

Pull socket with lamp base attachment can be attached to an ordinary key socket or receptacle.

## "Lock Shell" Pull Switches TWO SCREW FASTENING—SINGLE POLE 3 Amperes—125 Volts, 1 Ampere—250 Volts

Schedule "F" \$0.71 Wall pull switch, small concealed base....... 5027▲ 20 \$14.20  $\overline{20}$ 56894 Wall pull switch, small covered concealed base..... 10 18 .81 16.20 Wall pull switch, 1/8 in. cap.
Wall pull switch, 3/8 in. cap.  $5610^{\blacktriangle}$ 50 10 14 .60 12.005631▲ 10 20 .69 13.80



No. 3287



No. 3444



No. 3275

### Porcelain Sockets WITH "KNOSTRAIN" BUSHING FOR ARMORED CORD Schedule "B"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. per Carton
163 3286 3287	Cap only with "Knostrain" bushing. Pull socket with "Knostrain" bushing. Key socket with "Knostrain" bushing.	10 10 10	50 50 100	15 35 50	\$0.55 1.30 .80	$23,90 \\ 17.60$
3288	Keyless socket with "Knostrain" bushing	10   10	100	45   T	.77	16.90

#### TAPPED FOR ½ INCH PIPE AND 173 ½ in. aluminum cap only..... 10 50 \$0.40 \$7.40 Pull socket, ½ inch aluminum cap. ... Key socket, ½ in. aluminum cap. ... 10 50 3442 1.15 21.2035 3443 10 100 50 12.10 . 战5 Keyless socket, ½ in. aluminum cap. 3444 10 100 45 .6213.60

### Porcelain Husk Socket

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. per Carton
3375	Keyless, ½ in. brass covered cap	10	100	45	\$0.34	\$7.50
3377	Keyless, 3/8 in. brass covered cap	10	100	45	.37	8.10

Length of socket overall,  $2\frac{31}{32}$  inches. Diameter  $1\frac{1}{2}$  inches. Special wrench for inserting socket cap in husk, supplied without charge.

### HUBBELL ATTACHMENT PLUGS AND CURRENT TAPS

	No. 6918 Composition Cap Polarized	No. 6919 Brass Covered Composition	No. 6921 Composition "Knostrain"	No. 6565 Br. Cov. Compo., "Knostrain"	No. 5419 Porcelain Cap	No. 5420 Composition Cap	No. 5421 Brass Covered Porcelain Cap
All Screw Base Plugs 660 Watts, 250 Volts All other Plugs, Connectors and Receptacles 6 Amperes, 250 Volts	Total Dec	Polarized	Polar ized	Polar ized		delingti	
No. 6817 Porcelain Base	No. 6815	No. 6816	Cap_No. 6921 Base 6817	Cap No. 6565 Base 6817	¢	於	☆
No. 6917 Composition Base	No. 6915	No. 6916	Cap No. 6921 Base 16917	Cap No. 6565 Base 6917	☆	ά	:Ar
No. 5607 Porcelain Base	Cap No. 6918 Base No. 5607	Cap No. 6919 Base No. 5607	Cap No. 6921 Base 5607	Cap No. 6565 Base 5607	No. 5406	No. 5408	No. 5410
No. 5612 Composition Base	Cap No. 6918 Base No. 5612	Cap No. 6919 Base No. 5612	Cap No. 6921 Base 5612	Cap No. 6565 Base 5612	Cap No. 5419 Base No. 5612	No. 5467	Cap No 542 Base No 561
No. 5756 Porcelain Base Cartridge Fuse	Cap Na. 6918 Base No. 5756	Cap No 6919 Base No. 5756	Cap No. 6921 Base 5756	Cap No. 6565 Base 5756	No. 5729	Cap No. 5420 Base No. 5756	Cap No. 542 Base No. 575
No. 5826 Composition Base Cartridge Fuse	Cap No. 6918 Base No. 5826	Cap No. 6919 Base No. 5826	Cap No. 6921 Base 5826	Cap No. 6565 Base 5826	Cap No. 5419 Base No. 5826	Cap No. 5420 Base No. 5826	Cap No. 542 Base No. 582
No. 6295 †Current Tap	Cap No. 6918 Base No. 6295	Cap 'No 6919 Base No. 6295	Cap No. 6921 Base No. 6295	Cap No. 6565 Base No. 6295	No. 5638	Cap No. 5420 Base No. 6295	Cap No. 542 Base No. 629

### List Price and Data

Schedule "H"

CAPS					BASES				BASES					
List No.	Carton	Std. Pkg.	Mfrs. List Each	W.E. per Carton	List No.	Carton	Std. Pkg.	Mfrs. List Each	W.E. per Carton	List No.	Carton	Std. Pkg.	Mfrs. List Each	W.E. per Carton
5419 5420 5421 6565 6918 6919	10 10 10 10 10	50 50 50 50 50 50 50	\$0.15 .20 .25 .55 .15 .25	\$2,70 3,60 4,50 9,90 2,70 4,50	5406 5408 5410 5467 5607 5612	10 10 10 10 10	250 250 250 250 250 250 250	\$0,30 ,35 ,40 ,40 ,15 ,20	8.80 8.80 3.30 4.40	5826 6995 6815 6816 6817	10 10 10 25 25 10	100 100 50 100 100 100	\$0.60 .75 .35 .25 .35 .15	\$13.20 16.50 6.30 11.25 15.75 3.30
6921	10	50	.25	4,50	5638 5729	10	50 100	.50 .75	9.00 16.50		25 25 10	100 100 100	.25 .35 .15	11.25 15.75 3.30

Standard finishes for caps, polished brass and brush brass. Brush brass shipped unless otherwise specified. For special finished brass covered caps, add to Mfrs. list 5 cents. To W. E. List 11 cents. When two catalog numbers appear with illustrations, the base and cap are packed and sold as separate units, the price of the whole being the aggregate of the units. Where only one catalog appears the device is packed complete.

\*Not a practical combination.

## HUBBELL ATTACHMENT PLUGS AND CURRENT TAPS

					20 111 11	o con	ICLITA	IMI
No. 5523 Brass Covered Composition	No. 6336 Elongated Composition	No. 5657 Br Cov Compo "Knostrain"	No. 57(8) Br Cov Compo "Knostrain"	No.6328 Compo Swivel "Knostrain" Bushing	No. 5625 Porc. Multi- Current Tap	No. 6335 Compo Mult Current Tap	No. 5424 Porcelam Lamp Receptacle	No. 5897 Composition Lamp Recentacle
¢	ΣÌ	츳	^-	ź	£	€:	ş.b	幹
ŵ	ů	ti .	ý.	57	).	Sil Sil	\$2	4
Cap No 5523 Base No 5607	Cap No. 6336 Base 5607	Cap No 5657 Bass 7 5607	Cap No. 5700 Base 5607	Cap No 6328 Base No 5607	Tap No 5625 B 5 5 a 6 0 d 7	B 6		\$7
No. 5468	Cap No. 6336 Base 5612	No 5493	No. 5701	Cap No 6328 Base No.5612	Tap No. 5625 B 5 6 6 1 2	Tay No 6355 B 56 1 2	धि	17
Base No. 5756	Basc 5756	Cap No 5657 Base 5756	Base 5756	Base No 5756	Tap No. 5625 B F 5 7 5 6	Tap No 6335 B 5 7 8 6 6	Rec. No 5424 Base No 5756	Rec. No. 5897 B a s c
Cap No. 5523 Base No. 5826	Cap No 6336 Base 5826	Cap No 5657 Base 15826	Cap No. 5700 Base 5826	Cap No. 6328 Base 5826	Tap No. 5625 B a 5 8 2 6	Tap No 6335 B 5 8 5 2 6	Rec. No. 5424 B 5 8 2 6	Rec No. 5897 B a 5 8 8 8 8 9 6 6
Cap No. 5523 Base No. 6295	Cap No.6336 Base No.6295	Cap No.5657 Base No.6295		Cap No. 6328 Base No. 6295	☆	☆		Rec. No. 5897 Base No. 6295

## List Prices and Data

Schedule "H"

	CAPS						BASES					
List No.	Schedule	Carton	Std. Pkg.	Mfrs. List Each	W. E. p·r Carton	List No.	Schedule	Carton	Std. Pkg.	Mfrs. List Each	W. E.	
5424 5523 5625 5657 5700 5897 6328 6335 6336	H H H H H H H	10 10 10 10 10 10 10 10	50 50 50 50 50 50 50 50 50	\$0.25 .30 .35 .45 .55 .30 .35 .25	\$4,50 5,40 6,30 8,10 9,90 5,40 6,30 4,50 10,80	5468 5493 5607 5612 5701 5756 5826 6295	H H H H H H	10 10 10 10 10 10 10 10	250 100 250 250 250 100 100 100 50	\$0.50 .65 .15 .20 .75 .60 .75	\$11.00 14.30 3.30 4.40 16.50 13.20 16.50 6.30	

The above cartridge fuse plugs are furnished complete with 6 ampere Type C haby fuses.

Length overall, 1½ inches: diameter ½ inch.

These fuses approved by the National Board of Underwriters for use with Hubbell cartridge fuse attachment plugs.

Designed particularly for use with electrically operated portable machines, such as drills, grinders, etc.

When furnished without the fuse, deduct \$0.55 from list. Mfrs. List \$0.25.

## HUBBELL CURRENT TAPS—FIXTURE RECEPTACLES—CORD CONNECTORS

	_						
National Electrical Code Standard All Screw Base Plugs 660 Watts, 250 Volts	No. 6918 Composition Cap Polarized	No. 6919 Brass Covered Composition Polarized	No. 6921 Composition "Knostrain" Polar	No. 6565 Br.Cov.Compo. "Knostrain" Polar	No. 5419 Porcelain Cap	No. 5420 Composition Cap	No. 5421 Brass Covered Porcelain Cap
All other Plugs, Con- nectors and Recep- tacles 6 Amperes, 250 Volts					3 2	8 8	8 8
*No. 6297 Current Tap	Cap No. 6918 Base No. 6297	Cap No. 6919 Base No. 6297	Cap No. 6921 Base No. 6297	Cap No. 6565 Base No. 6297	No. 5735	Cap No. 5420 Base No. 6297	Cap No. 542 Base No. 629
Multippe						8	0
*No. 6339 Current Tap	Cap No. 6918 Base No. 6339	Cap No. 6919 Base No. 6339	Cap No. 6921 Base No. 6339	Cap No. 6565 Base No. 6339	Cap No. 5419 Base No 6339	No. 6338	Cap No. 542 Base No. 633
M I I I I I I I I I I I I I I I I I I I							
No. 6250 Fixture Receptacle	Cap No. 6918 Base No. 6250	Cap No. 6919 Base No. 6250	Cap No. 6921 Base No. 6250	Cap No. 6565 Base No. 6250	Cap No. 5419 Base No. 6250	Cap No. 5420 Base No. 6250	Cap No. 542 Base No. 625
with Brass Casing							
No. 6251 Fixture Receptable without Casing	Cap No. 6918 Base No. 6251	Cap No. 6919 Base No. 6251	Cap No. 6921 Baserra 6251	Cap No. 6565 Base 6251	Cap No. 5419 Base No. 6251	Cap No. 5420 Base No 6251	Cap No. 542 Base No. 625
No. 6252 Fixture Receptacle with 18-inch Bushing	Cap No. 6918 Base No. 6252	Cap No. 6919 Base No. 6252	Cap No. 6921 Base No. 6252	Cap No. 6565 Base No. 6252	Cap No. 5419 Base No. 6252	Cap No. 5420 Base No 6252	Cap No 542 Base No. 625
No. 6253 Fixture Receptacle	Cap No. 6918 Base No. 6253	Cap No. 6919 Base No. 6253	Cap No. 6921 Base No. 6253	Cap No. 6565 Base No. 6253	Cap No. 5419 Base No. 6253	Cap No. 5420 Base No. 6253	Cap No. 542 Base No. 625
with 30-inch Bushing			Ō				
No. 6087 Porcelain Cord Con- nector Body	Cap No. 6918 Base No. 6087		Cap No. 6921 Base No. 6087	Cap No. 6565 Base 6087	Cap No. 5419 Base No. 6087	Cap No. 5420 Base No. 6087	Cap No. 542 Base No. 608

Schedule "H"

CAPS					BASES				BASES					
List No.	Carton	Std. Pkg.	Mfrs. List Each	W. E. per Cart.	List No.	Carton	Std. Pkg.	Mfrs. List Each	W.E. per Cart.	List No.	Carton	Std. Pkg.	Mfrs. List Each	W.E. Par Cart.
5419 5420 5421 6565 6918 6919 6921	10 10 10 10 10 10 10	50 50 50 50 50 50 50	\$0.15 .20 .25 .55 .15 .25	\$2.70 3.60 4.56 9.90 2.70 4.50 4.50	5735 6087 6250 6251 6252	10 10 10 10 10	50 50 20 20 20 20	\$0.50 .25 .45 .30 .45	4.50	6253 6297 6338 6339	10 10 10 10	20 50 50 50 50	\$0.50 .35 .65 .45	\$9.00 6.30 11.70 8.10

Standard finishes, brush brass and polished brass. For other finishes on fixture receptacles, add to list \$0.22. Mfrs. List \$0.10. For special finished rims on No. 6251 receptacle, add to list >0.11. Mfrs. List \$0.05. Brush brass shipped unless otherwise specified. When two List numbers appear with illustration, the base and cap are packed and sold as separate units, the price of the whole being the aggregate of the units. Where only one List number appears, the device is packed complete.

# HUBBELL CURRENT TAPS-FIXTURE RECEPTACLES-CORD CONNECTORS

No. 5523 Brass Covered Composition	No. 6336 Elongated Composition	No. 5657 Br Cov Compo "Knostrain"	No. 5700 Br.Cov.Compo. "Knostrain"	No. 6328 Compo. Swivel "Knostrain" Bushing	No. 5625 Fore, Mult. Current Tap	No. 6335 Compo.Mult. Current Tap	No. 5424 Porcelain Lamp Receptacle	No. 5897 Composition Lamp Receptacle
Cap No. 5523 Base No. 6297	Cap No. 6336 Base No. 6297	Cap No. 5657 Base No. 6297	Cap No. 5700 Base No. 6297	Cap No. 6328 Base No. 6297	\$\$	ž:	Rec. No.5124 Base No. 6297	Rec. No 5897 Base No 6297
Cap No. 5523 Base No. 6339	Cap No. 6336 Base No. 6339		Cap No. 5700 Base No. 6339	Cap No. 6328 Base No. 6339	(A)	<u>.</u> \$	Rec. No.5424 Base No 6339	Rec No. 5897 Base No 6339
Cap No. 5523 Base No. 6250	Cap No. 6336 Base No. 6250	Cap No. 5657 Base No 6250	Cap No 5700 Base No 6250	Cap No. 6328 Base No. 6250	Tay No. 5625 Base No. 6250	Tap No. 6335 Base No. 6250	Rec. No. 5424 Base No 6250	Rec. No 5897 Base No 6250
Cap No. 5523 Base No. 6251		Cap No 5657 Bas 0 6251	Сар No 5700 Важ 6251	Cup No. 6328 Base No. 6251	Tap. No. 5625 B a b c c c c c c c c c c c c c c c c c c	Tap No. 6335 B 6 a 2 s 5 e 1	Rec. No. 5424 B 6 2 5 e 1	Rec. No.5897 B 6 2 s 1
Cap No. 5523 Base No. 6252	Cap No. 6336 Base No. 6252	Cap No. 5657 Base 6252	Cap No. 5700 Base No. 6252	Cap No. 6328 Base No. 6252	Tap No. 5625 B 66 a 25 e 52	Tap No. 6335 B 6 2 s 5 2	Rec. No. 5424 Base No. 6252	Rec. No. 5897 Base No. 6252
Cap No. 5523 Base No. 6253		Cap No. 5657 Base 6253		Cap No. 6328 Base No. 6253	Tap No. 5625 B 6 2 s 5 3	Tap No. 6335 B 6 a 2 s 5 e		Rec. No. 5897 Base No. 6253
Cap No. 5523 Base No. 6087			Cap No. 5700 Base 6087	Cap No. 6328 Base No. 6087	Tap No. 5625 B 6 a 8 e 7	Tap No 6335 B 6 a 6 s 7	Rec. No 5424 Base No. 6087	Rec. No. 5897 B 6 0 s e 87

## List Prices and Data

### Schedule "H"

		CAPS	5		BASES					
List No.	Carton	Std. Pkg.	Mirs. List Each	W.E.per Carton	List No.	Carton	Std. Pkg.	Mfrs. List Each	W. E. per Carton	
5424	10	50	\$0.25	\$1,50	6087	10	50	\$0.25	\$1.50	
5523	10	50	.30	5,40	6297	10	50	.35	6.30	
5625	10	50	.35	6.30	6339	10	50	.45	8.10	
5657	10	50	.45	8.10	6250	10	20	.45	8.10	
5700	10	50	,55	9,90	6251	10	20	.45	5.40	
5897	10	50	.30	5,40	6252	10	20	.45	8.10	
6328	10	50	.35	6.30	.6253	10	20	,50	9.00	
6335	10	50	,40	7.29						
6336	10	50	.25	4.50					1	

In cases where base an leap are separately packed but ordered at the same time, the standard package quantity of both will be that applying to the base. All devices listed above packed 10 to a carton. For special finished, brass covered caps, add to W. E. List, \$0.11, to Manufacturers List \$0.05. \*Not a practical combination.

## HUBBELL CORD CONNECTORS AND WALL RECEPTACLES

National Electrical Code Standard All Screw Base Plugs 660 Warts 250 Volts	No. 6918 Composition Cap Polarized	Brass Coverts Composition Polarized	Not 6921 Composition "Knostrain" Polar	No 6565 Bli Covi Composi "Knostrain" Polar ized	No. 5419 Porcelain Cap	No. 5420 Composition Cap	No. 5421 Brass Covered Porcelain Cap
All other Plugs, Connectors and Receptacles 6 Amperes, 20 Volts	Ţ		<i>.</i> #			8 3	
No 5574 Connector Body	Cap No. 6918 Base No. 5574	Cap No. 6919 Base No. 5574	Cap_No. 6921 Base 5574	Cap No. 6565 Base 5574	Cap No. 5419 Base No. 5574	No. 5518	Cap No. 5421 Base No. 5574
No. 6095 Connector Body "Knostrain" Bushing	Cap No. 6918 Base No. 6095	Cap No. 6919 Base No. 6095	Cap No 6921 Base No. 6095	Cap No. 6565 Base 6095	Cap No. 5419 Base No. 6095	Cap No. 5420 Base No. 6095	Cap No. 5421 Base No. 6095
No. 5617 Concealed Recept. Screws 14" Centers	Cap. No. 6918 Base No. 5617	Cap. No. 6919 Base No. 5617	Cap No 6921 Base No. 5617	Cap No. 6565 Base No. 5617	Cap No. 5419 Base No. 5617	Cap No. 5420 Base No. 5617	Cap No. 5421 Base No. 5617
				n vi			
No. 5618 Cleat Recept. Screws 114 Centers	Cap No. 6918 Base No. 5618		Cap. No. 6921 Base No. 5618		Cap No. 5419 Base No. 5618	Cap No. 5420 Base No. 5618	Cap No. 5421 Base No. 5618
				110			unital B
No 5619 Moulding Recept Screws 118" Centers	Cap No 6918 Base No. 5619	Cap No 6919 Base No. 5619	Cap No. 6921 Base No. 5619	Cap No. 6565 Base No. 5619	Cap No. 5419 Base No. 5619	Cap No. 5420 Base No. 5619	Cap No. 5421 Base No. 5619
							AU R.A.
No 5939 One-Way Recept National Moulding	Cap No 6918 Base No 5939		Cap No 6921 Base No 5939	Cap No. 6565 Base No. 5939	Cap No. 5419 Base No. 5939	Cap No. 5420 Base No. 5939	Cap No. 5421 Base No. 5939
No 6068 Two-Way Recept National Moulding	Cap No 6918 Base No 6068		Cap. No. 6921 Base No. 6068		Cap No. 5419 Base No. 6068	Cap No. 5420 Base No. 6068	Cap No. 5421 Base No. 6068
National Woulding							

		Caps	List	Frices	anu	Data	Bases	Sche	dule "H"
List		Std.	Mfrs. List	W. E. List	List		Std.		
No.	Carton	Pkg.	Each p	er Carton	No.	Carton	Pkg.	Each	per Carton
5419	10	50°	\$0.15	\$2.70	5518	10	50	\$1,50	\$27.00
5420	10	50	.20	3.60	5574	10	50	.30	5.40
5421	10	50	.25	4,50	5617	10	50	.30	5.40
6565	10	50	. 55	9.90	5618	10	50	.30	5.40
6918	10	50	. 15	2.70	5619	10	50	.30	5.40
6919	10	50	.25	4.50	5939	10	50	.30	5.40
6921	10	50	.25	4.50	6068	10	50	.30	5.40
00=1					6095	10	50	.80	14.40

All devices listed above packed 10 to a carton. Standard finishes for caps, brush brass, polished brass. Brush brass shipped unless otherwise specified. For special finished brass-covered caps, add to list \$0.11. Mfrs. List \$0.05. When two catalog numbers appear with illustration the base and cap are packed and sold as separate units, the price of the whole being the aggregate of the units. When only one catalog number appears the device is packed complete.

# HUBBELL CORD CONNECTORS AND WALL RECEPTACLES

No. 5523 Brass Covered Composition	No. 6336 Elongated Composition	Br Cov Compo. "Knostran"	"Knostraia"	No 6328 Compo Swivel "Knostrain" Bushing	No. 5625 Porc. Mult. Current Tap	No. 6335 Compo. Mult. Current Tup	No 5424 Porcelan Lamp Receptacte	No. 5897 Composition Lamp Receptacle
Cap No. 5523 Base No. 5574	Cap_No. (336) Base 5574	Cap 5657 Basi 75574		Cap No 6328 Base No 5574	Tap No 5625 B 5 5 5 7 c 4	Tap No 6335 B 5 5 7 c 7	Rec No. 5424 B 5 5 7 4	Rec. No 5897 B 5 5 7 c 4
Cap No. 5523 Base No. 6095	Cap No. 6336 Base 6095	Cap No 5657 Base 6095	No. 5699	Cap No. 6328 Base No 6095	Tap No. 5625 B 6 6 a 9 9 e 5	Tap No.6335 B 6 6 4 5 5	Rec No. 5424 Base No. 6005	Rec No 5897 Base No 6095
Cap No. 5523 Base No. 5617	Cap No 6336 Base No. 5617	Cap No 5657 Base 5617	Cap No 5700 Base No 5617	Cap No. 6328 Base No 5617	Tap No 5625 Base No 5617	Tap No 6335 Base No 5617	Rec No 5424 Base No 5617	Rec No 5897 Base No 5617
Cap No. 5523 Base No. 5618	Cap No. CCO Base No. 5618	Cap No 5657 Base 5618	Cap No 5700 Base No 5618	Cap No 6328 Base No. 5618	Tap No 5625 Base No 5618	Tap No 6335 Base No 5618	Rec No 5424 Base No 5618	Rec No 5897 Base No 5618
Cap No. 5523 Base No. 5619		Cap No. 5657 Base No. 5619	Cap No 5700 Fase No 5619		Tip No 5/25 Base No 5619	Tap No 6335 Base No 5619		Rec No 5897 Usse No 5619
Cap No. 5523 Base No. 5939	Base No. 5939	Cap No 5057 Base 5939	Base No. 5939	Base No 5939	Tap No 5625 Base No 5939	Tap No (335) Base No 5939		Rec. No 5897 Base No 5939
Cap No. 5523 Base No. 6068	Cap No 6336 Base No. 6068	Cap. No. 5657 Base 6068	Cap No 5700 Base No 6068	Crp No 6328 Base No 6008	Tat. No 5625 b 6 a 6 e 8	Tap No 6335 B 6 0 s 6 6 8	Rec. No 5424 Base No 6068	Rec. No 5897 Base No 6068

## List Prices and Data

### Schedule "H"

List No.	Carton	Std. Pkg.	Mfrs. List Each	W. E. List per Carton	List No.	Carton	Std. Pkg.	Mfrs. List Each	W. E. List per Carton
5424	10	50	\$0.25	\$4.50	6336	16	50	\$0.25	\$4.50
5523	10	50	.30	5.40	5574	10	50	.30	5.40
5625	10	50	.35	6,30	5617	10	50	.30	5.40
5657	10	50	.45	8.10	5618	10	50	.30	5.40
5699	10	50	1.35	24,30	5619	10	50	.30	5.40
5700	10	50	,55	9,90	5939	10	50	.30	5.40
5897	10	50	.30	5,40	6068	10	50	.30	5.40
6328	10	50	.35	6,30	6095	10	50	.80	14.40
6335	10	50	. 40	7.20					

## Western Electric

## HUBBELL

## CONDUIT BOX, WEATHERPROOF AND FLUSH RECEPTACLES

National Electrical Code Standard All Screw Base Plugs 660 Watts, 250 Volts All other Plugs, Connectors and Receptacles 6 Amperes, 250 Volts	No. 6918 Composition Cap Folarized	No 6919 Brass Covered Composition Polarized	No. 6921 Composition "Knostrain" Polar	No. 6565 Br Cav Compo. Knostrain Polar	No. 5419 Porcelain Cap	No. 5420 Composition Cap	No. 5421 Brass Covered Porcelain Cap
No. 5620 Fielding Receptacle. Screws 25th Centers	Cap No. 6918 Base No. 5620	Cap No. 6919 Base No. 5620	Cap No. 6921 Base 5620	Cap No. 6565 Base 5620	Cap No. 5419 Base No. 5620	Cap No. 5420 Base No. 5620	Cap No 5421 Base No 5620
No. 5624 Conduit Box Recep. Screws % "Centers	Cap No. 6918 Base No. 5624	Cap No. 6919 Base No. 5624	Cap No. 6921 Base 5624	Cap No. 6565 Base 5624	Cap No. 5419 Base No. 5624	Cap No. 5420 Base No. 5624	Cap No. 5421 Base No. 5624
No. 6103 Conduit Box Recep. Cover Suspension	Cap No. 6918 Base No. 6103	Cap No. 6919 Base No. 6103	Cap No. 6921 Base No. 6103	Cap No. 6565 Base No. 6103	Cap No. 5419 Base No. 6103	Cap No. 5420 Base No. 6103	Cap No. 5421 Base No. 6103
No. 6294 Porcelain Weather proof Receptacle	Cap No. 6918 Base No. 6294	Cap No. 6919 Base No. 6294	Cap No. 6921 Base No. 6294	Base No 6294	Cap No. 5419 Base No. 6294	Cap No. 5420 Base No 6294	Cap No. 5421 Base No. 6294
No. 6293 Comp. Weather- proof Receptacle	Cap No. 6918 Base No. 6293	Cap No. 6919 Base No. 6293	Cap · No. 6921 Base No. 6293	Cap 'No. 6565 Base 6293	Cap No. 5419 Base No. 6293	Cap No. 5420 Base No. 6293	Cap No. 5421 Base No. 6293
No. 6282 Flush Receptacle 24" Plate Assembled	Cap No. 6918 Base No. 6282	Cap No. 6919 Base No. 6282	Cap No. 6921 Base No. 6282	Cap No. 6565 Base No. 6282	Cap No. 5419 Base No. 6282	Cap No. 5420 Base No. 6282	Cap No. 5421 Base No. 6282
No. 6283 Flush Receptacle 3¼"Plate Assembled	Cap No. 6918 Base No. 6283	Cap No. 6919 Base No. 6283	Cap No. 6921 Base No. 6283	Cap No. 6565 Base No. 6283	Cap No. 5419 Base No. 6283	Cap No. 5420 Base No. 6283	Cap No. 5421 Base No. 6283

List Prices						
		Bases				
List No. 5419 5420 5421 6535 6918 6919	\$0.35 .30 .35 .85 .95 .65	Std. Pkg. 50 50 50 50 50	W. E. per Carton \$6.30 5.40 6.30 1.87 2.09 11.70 9.00			
6918	,95	50				

Polished brass, brush brass, polished bronze, oxidized copper, standard finishes for brass plates. All other finishes, excepting gold and silver, add to list \$0.22. M/rs. List \$0.10. Brush brass slipped unless otherwise specified. 234 inches round plate, supporting screw holes, 1% inch or centers. Plate only, with strars, I ist No. 5616. Std. pkg. 50. Mfrs. List Price \$0.50. W. E. List \$1.10. 344 inch round plate, supporting screw holes, 234 inches on centers. Plate only, with straps, List No. 5616. Std. pkg. 50. List Price \$1.32 Mfrs. List \$0.60. Porcelain receptacle only for No. 6282 or No. 6283, List No. 5616. Std. pkg. 50. Mfrs. List \$0.50, W. E. List \$1.10. For special finished brass covered caps add to list each \$0.95. W. E. List \$0.11.

# HUBBELL

## CONDUIT BOX, WEATHERPROOF AND FLUSH RECEPTACLES

No. 5523 Brass Covered Composition	No. 6336 Elongated Composition		No. 5700 Br. Cov Compo "Know rulp"	No 6328 Compo Skaved "Knostrain" Bushing	No. 5625 Porc. Mult Current Tap	No. 6335 Compo Mult Current Tap	No. 5424 Poreclain Lamp Receptacle	No. 5897 Composition Lamp Recontacle
Cap No, 5523 Base No, 5620	Cap No 6336 Base 5620	Cap 5657 Base 5620	Cap No 5700 Ba 5620	Cap No. 6328 Base No. 5620	Tap No 5625 B 5 6 s e 0 2 0	Tap. N <sub>2</sub> 6335 B 5 6 2 e 0	Rec No 5424 Base No 5620	Rec No 5897 B 56 2 2 0
Cap No 5523 Base No 5624	Cap Nn 6336 Base 5621	Cap No 5657 Base 5624	Cap No 5700 Base 5624	Cap No 6328 Base No 5624	Tap No 5625 B 5 6 s 24	Tap No. 6335 B 5 5 a 2 2 e 4	Rec. No 5424 B 56 5 62 4	Rec No 5897 B 5 6 8 6 2 2 e 7 7 7
Cap No. 5523 Base No. 6103	Cap No 6336 Base No 6103	Cap. No 5657 Base 6103	Cap No 5700 Base No 6103	Cap No 6323 Base No 6103	Tap No 5625 B 0 1 s e 0 3	Tap Ne 6335 B 6 1 8 0 3 e 3 3	Rec No 5421 Tase No 6103	Rec. No 5897 Base No 6103
Cap No. 5523 Base No. 6294	Cap No 6336 Base 6294	Cp No 5657 B 6 a 2 s 9 4	Cap No 5700 Base 6294	ά	Tap No 5625 B 6 6 4 384 34 2 222 9	Tap No 6335 B 6 2 9 4	Rec. No. 5424 Base 6294	Rec. No 5897 629 I
Cap No 5523 Base No 6293	Cap No 6336 Base 6293	Cap No 5657 Base 60293		ŵ	Tap No 5025 Lask 6243	Tap No 6335 Base (10293)	Rec No 5424 Base 6293	
Cap No 5523 Base No. 6282	Cap No 6336 Base No 6282	Cap No 5657 Base 6282	Cap No. 5700 Base No. 6282	Cap No. 6328 Base No 6282	Tap No 5625 Base No 6282	Tap Nn E335 Base No 6282	Rec No 5424 Base No 6282	Rec. No 5897 Base No 5282
Cap No. 5523 Ruse No. 6283	Cap No 6336 Base No 6283	Cap No 5657 Base No 6283	Cap No 5700 Base No. 6283	Cap No 6328 Base No. 6283	Tap No 5625 Base No 6283		Rec No 5424 Base No. 6283	Rec. No. 5897 Base No. 6283
U	1				TUF			

## List Prices and Data

### Schedule "H"

List No. 5424 5523 5625 5657 5700 5897	Carton 10 10 10 10 10 10	Caps Std. Pkg. 50 50 50 50 50 50 50	Mfrs. List Each \$0,25 .30 .35 .45 .55	W. E. per Carton \$4.50 5.40 6.30 8.10 9.90 5.40	List No. 5620 5624 6103 6282 6283 6293	Carton 10 10 10 10 10 11 11	Bases Std. Pkg. 50 50 50 50 50 20	Mfrs. List Each \$0,35 .35 .85 .95	W. E. per Carton \$6.30 5.40 6.30 1.87 2.09 11.70
						1 10 10			

Weatherproof plugs are designed for use out of doors, being particularly desirable for railroad roundhouses, ship-building plants—in fact any place where a plug would be subjected to all weather conditions.

All devices listed above, except Nos. 6282 and 6283, packed 10 to a carton. Nos. 6282 and 6283 packed 1 to a carton. When two catalog numbers appear with illustration the base and cap are packed and sold as separate units, the price of the whole being the aggregate of the units. \*Not a practical combination.

### **HUBBELL FLUSH RECEPTACLES**

National Electrical Code Standard	No. 6918 Composition Cap Polarized	No. 6919 Briss Covered Composition Polarized	No. 6921 Composition "Knostrain" Polarized	No. 6565 Br Cov Compo "Knostrain" Polarized	No. 5119 Porcelain Cap	No. 5420 Composition Cap	No. 5421 Brass Covered Porcelain Cap
All Screw Base Plugs 560 Watta, 250 Volts All other Plugs, Connectors and Receptacles 6 Amperes, 250 Volts	•						
No. 5547 Flush Receptacle	Cap No. 6918 Rec. No. 5547	Cap No. 6919 Rec. No. 5547	Cap No. 6921 Rec. No 5547	Cap No. 6565 Rec. No. 5347	Cap No. 5419 Rec. No. 5547	Cap No 5420 Rec. No. 5547	Cap No. 5421 Rec. No. 5547
	• 🕝	Ó					•
No. 5579 Flush Receptacle With Lift Cover	Cap No. 6918 Rec. No. 5579	Cap No. 6919 Rec. No. 5579	Cap No. 6921 Rec. No 5579	Cap No. 6565 Rec. No. 5579		Cap No. 5420 Rec. No 5579	Cap No. 5421 Rec. No. 5579
No. 6257 Duplex Flush Receptacle	Cap No. 6918 Rec. No. 6257	Cap No. 6919 Rec. No. 6257	Cap No. 6921 Rec. No. 6257	Cap No. 6565 Rec. No. 6257	Cap No. 5419 Rec. No. 6257	Cap No 5420 Rec. No 6257	Cap No 5421 Rec. No.6257
	00						0

## List Prices and Data

### Schedule "H"

		1	316	( 337 12 1	1	,	1	Mfrs.	W. E.
		0.1	Mfrs.	W. E.	y		.32.1	List	1
List		Std.	List	per	List		Std.		per
No.	Carton	Pkg.	Each	Corton	No.	_ Carton	Pkg.	Each	Carton
5419	, 10	50	\$0.15	\$2.70	5547	, 10	50	\$0.60	\$10.80
5420	, 10	50	.20	3,60	5579	.10	50	.60	10.80
5421	.10	50	.25	[-4.50]	6257	. 10	50	.85	15.30
6565	, 10	50	. 55	9,90				i	1
6918	. 10	50	,15	2.70	1	}			
6919	, 10	50	.25	4.50					
6921	. 10	50	.25	4.50					<u> </u>





No.	5518
140.	2,1,411
No.	6585

	210122					
List No.	Description	Car- ton	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. per Carton
5548 6585	Single (stamped .060 metal) 4 ½ x 2 ¾ ins	10 10	50 50	16 18	\$0.35 .65	\$7.00 11.76
5549 6586 5550 5599	2 gang (stamped ,060 metal) 4½ x 4 % ins 2 gang (solid) 4½ x 4 % ins 3 gang (solid) 4½ x 63 x ins 4 gang (solid) 4½ x 8 % ins	1 1 1	25 25 20 10	13 15 18 20	†1.00 †1.30 †1.95 †2.60	2.30 2.80 4.29 5.72

STEEL PLATE (GENUINE BAUER-BARFF FINISH)





No.6584

†For plates arranged in tandem, add 20% to the list price.

Polished brass, brush brass, polished bronze and oxidized copper are standard finishes for brass flush plates. All other finishes on standard plates excepting gold and silver, add to list, per unit, \$0.10. W. E. List \$0.22.; for plate without list cover and \$0.20 per unit for plate with lift cover, W. E. List \$0.44. Brush brass shipped unless otherwise specified.

## HUBBELL FLUSH RECEPTACLES

No. 5523 Brass Covered Composition	No. 6336 Elongated Composition	No. 5657 R. Cov.Compo. Knos.ram Bushing	No. 5700 Br.Cov.Compo. "Knostrain" Bushing	No. 6328 Compo. Swivel "Knostrain" Bushing	No. 3625 Portelain Multiple Current Tap	No. 6335 Composition Multiple Current Tap	ND. 5424 Porcelain Lamp Receptacle	No. 5897 Composition Lamp Receptacle
Cep No. 5523 Rec. No. 5547	Cap No. 6336 Rec. No. 5547	Cap No. 5657 Rec. No 5347	Cap No. 5700 Rec. No. 5547		Tap No. 5625 Rec. No. 5547	Tap No. 6335 Rec. No. 5547	Rec. No. 5424 Rec. No. 5547	Rec. No. 5897 Rec. No. 5547
(O)				0	.0		0	
Cap No. 5523 Rec. No. 5579	Cap No. 6336 Rec. No. 5579	Cap. No. 5657 Rec. No. 5579	Cap. No. 5700 Rec., No. 5579	Cap No. 6328 Rec. No. 5579		/	Rec. No. 5424 Rec. No. 5579	
					☆	*		*
Cap No. 5523 Rec. No. 6257	Cap No. 6336 Rec. No. 6257	Cap No. 5657 Rec. No. 6257	Cap No. 5700 Rec. No. 6257	Cap No. 6328 Rec. No. 6257	Tap No. 3025 Rec. No. 6257	Tap No. 6335 Rec No. 6257	Rec. No. 5424 Rec. No. 6257	Rec. No. 5897 Rec. No. 6257
	00	9(9)		00	9.0		00	0

Schedule:	"H"
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								Sched	ule "H"
List No.	Carton,	Std. Pkg.	Mfrs. List Each	W. E. per Carton	List No.	Carton	Std Pkg.	Mfrs. List Each	W.E. per Carten
5424 5523 5547 5625 5657 5700	10 10 10 10 10 10	50 50 50 50 50 50	\$0,25 .30 .60 .35 .45	5.40 10.80 6.30	5897 6257 6328 6335 6336	10 10 10 10 10	50 50 50 50 50 50	\$0.30 .85 .35 .40 .25	\$5.40 15.30 6.30 7.20 4.50

# Flush Plates for Hubbell No. 5579 Receptacles Listed Above

DOUBLE HINGE LIFT COVER PLATES



No. 5580

List No.	Description	Carton	Std. Pkg.	Pkg. Wgt. Lbs.	Mfrs. List Each	W. E. per Cart.
5580	Single (solid) 4½ x 2¾ ins	10	50	22	\$1.40	\$25.20
5581	2 gang (solid) 4½ x 4½ ins	1	25	18	† 2.80	6.16
5582	3 gang (solid) 4½ x 6¾ ins	1	20	17	† 4.20	9.24
5600	4 gang (solid) 4½ x 8¾ ins	1	10	20	† 5.60	12.32

## PLATES FOR NO. 6257 DUPLEX RECEPTACLE LISTED ABOVE

6258	Single (stamped .060 metal)					
02.70		2.43			1 .	l
0505	4 ½ x 234 ins.	10	50	1 15	\$0.40	\$8.00
6587	Single (solid) 41/2 x 21/1 ins	10	50	16	.65	30.00
6259	2 gang (stamped .060 metal)		1,,,,	1 10	.00	
	414 m 4 % in-				1	11.70
6588	4½ x 4 % ins	1	25	12	1 1.30	2.99
	2 gang (solid) 4 1 x 4 1 ins	1	25	13	† 1.50	3.30
6960	3 gang (solid) 416 x 638 ins	1	20	17		
6261	1 4 70 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	1	20	17	† 2.25	4.95
0201	4 gang (solid) 416 x 8 16 ins	1	1 10	18	1 † 3.00	1 - 6.60

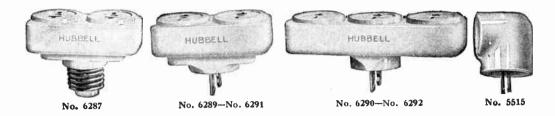


No. 6258 No. 6587

Outside supporting screw holes, 5% inches on centers. Inside supporting screw holes, 24% inches on centers. When an equal number of receptacles, plates and brass covered caps are ordered, caps will be furnished in the finishes standard on plates without extra charge. When two Nos. appear with illustration, the receptacle and cap are packed and sold as separate units, the price of the whole, including separately listed plates, being the aggregate of the units.

Not a practical combination. †For plates arranged in tandem add 20% to the list price.

## HUBBELL ATTACHMENT PLUGS AND RECEPTACLES



## Multiple Attachment Plugs

### WITH MEDIUM SCREW BASE

	660 Watts-250 Volts					
List;	Description	Carton	Pkg. Wt. Lbs.	Std. Pkg.	Mfrs. List Each	W. E. per Carton
6287 6288	Multiple plug, screw base, two outlets, less caps Multiple plug, screw base, three outlets, less caps	5 5	10 15	10 10	\$0.70 1.05	\$6.30 9.45

### WITH KNIFE-BLADE CONTACTS

6 Amperes-250 Volts

### FOR USE WITH ALL HUBBELL RECEPTACLES, EXCEPTING FLUSH RECEPTACLES HAVING LIFT COVER

12A9   William Republic Control of the Control of t	6289	Multiple plug, knife-blade base, two outlets, less caps	5	1 15	10   \$0.	70   \$6.30
--	------	---	---	------	-----------	-------------

### FOR USE ONLY WITH FLUSH RECEPTACLES HAVING LIFT COVER No. 5579 Type

6291	Multiple plug, knife-blade base, two outlets, less caps	5	10	1 10	1 \$0.70	\$6.30

## FOR USE WITH ALL HUBBELL RECEPTACLES, EXCEPTING FLUSH RECEPTACLES HAVING LIFT COVER

6290   Multiple plug, knife-blade base, three outlets, less	s caps.	5	1	15	1	10	1 \$1	.05	<b>\$9.45</b>

## FOR USE ONLY WITH FLUSH RECEPTACLES HAVING LIFT COVER, No. 5579 TYPE

6292	Multiple plug, knife-blade base	, three outlets, less caps.	5	1 15	10	\$1.05	\$9.45

Interchangeable caps for multiple attachment plugs are listed elsewhere.

## Angle Lamp Receptacle

660 Watts-250 Volts

### Schedule "H"

List No.	Description	Carton	Pkg. Wt. Lbs.	Std. Pkg.	Mfrs. List Each	W. E. per Carton
5515	Porcelain angle receptacle	10	12	50	\$0.40	\$7.20

Designed for show case and window lighting.

Made to fit any Hubbell Standard plug base, wall or flush receptacle.

The easy manner in which a lamp can be inserted and the cap connected or disconnected, is a feature of merit and economy.

## HUBBELL SIGNALITES AND CURRENT TAPS







No. 6917 Base





Polarized "Signalite"

### Signalites FOR HUBBELL PLUGS AND RECEPTACLES 6 Amperes, 125 Volts

With Standard Knife-Plade Contacts

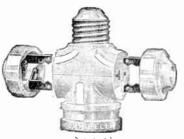
Schedule "H"

List No.	Description	Cartor Ontv.	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. per Carton
6108	"Signalite" without lamp	10	30	12	\$0.55	\$3.90
$6109 \\ 6311$	"Signalite" complete with lamp. "Signalite" without lamp, but with No. 5607 porcelain base.	19	30	12	.95	17.10
6312	"Signalite" complete with lamp and No. 5607 porcelain base	10 10	30 30	$\frac{15}{20}$	1.10	$\begin{vmatrix} 12.60 \\ 19.80 \end{vmatrix}$
$6313 \\ 6314$	"Signalite" without lamp, but with No. 5612 composition base	10	30	15	.75	13.50
0014	"Signalite" complete with lamp and No. 5612 composition base	10	30	20	1.15	20.70

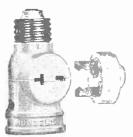
	WITH SMALL POLARIZED KNIFE-BLADE	CON	TACTS	5	•	
6110	"Signalite" without lamp.	10	i 30 I	12	1 \$0 55	\$9.90
0111	I "Signalite" complete with lamp	1.0	1 20 1	19	0.5	17 10
0010	1 "Signature" without lamp, but with No. 6917 composition base 1	10	1 30 1	1.5	1 70	19 60
6316	"Signalite" complete with lamp and No. 6917 composition base	10	30	15	1 10	19.80
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 .20	117	1	1 10 100

"Signalites" are suitable for use with all electrically heated devices of 6 amperes, 125 volts or less. Each plug is supplied with an electro-welded lamp guard to protect the lamp from breakage. "Signalites" are supplied with red lamps.

All brass parts are nickel-plated. Equipped with either standard Hubbell knife-blade contacts, or small polarized type, and are interchangeable with the entire line of Hubbell Attachment Plugs.







No. 5736



No. 5626

## Double Outlet Current Tap

MULTIPLE-PORCELAIN

660 Watts, 250 Volts

Schedule	"H"

List No.	Descripțion	Carton	Std. Pkg.	Wt.	Mfrs. List	W.E.
		Qnty.		Libs.		Carton
	Current tap with two No. 5419 porcelain caps.  Current tap, body only to the control of the cont	10	50	30		\$14.40
200 1	SERIES CURRENT TAFS	10	50	20	.50	9.00

	DERGES CORRERT TATS					
<b>56</b> 53	With about shade holder groove.	F 10	50	1 25	80.50	8 + 00
0100	with shade holder groove	1 10	[ 593	1 125	5.0.1	0.00
<b>56</b> 26	Lauro receptacle current tapy-side wire outlet.	10	5)	15	35	6.30
				1		0.00

## HUBBELL SPECIALTIES







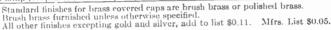




No. 6156

Separate Caps and Lamp Receptacles

	FOR LARGE TYPE POLARIZED PLUG RECE	s _			ıle "H"			
List No.	Description	Carton Quantity	Std.	Pkg. Wt. Lbs.	Mfrs List Each	W. E. per Carton		
5567 5553 6156	6 ampere polarized cap, porcelain, brass covered. 20 ampere polarized cap, porcelain, brass covered. 20 ampere polarized cap, composition, brass covered.	10	30 30 30	12 15 15	\$0.50 .50 .55	\$9.00 9.00 9.90		
01170	20 Ampere Polarized Cap, with "Knostrain"	Bushing				40 11 000		
5665 6589	Brass covered porcelain cap, for No. 10 Jumper cable	10	30	12	\$1.00 1.05	\$18.00 18.90		
-	Lamp Recentacles for Hubbell Polarized Plug Receptacles							
5737 5898	Porcelain lamp receptacle for 6 ampere plugs.  Porcelain lamp receptacle for 20 ampere plugs.	10	30	7	\$0.30	\$5.40 6.30		









No. 5743



No. 6821



No. 5524



No. 5525



No. 5526

Composition Cord Connector WITH METAL COVERED "KNOSTRAIN" BUSHINGS 6 Amperes—250 Volts

Schedule "H" Pkg. Wt. W.E. Mfrs. List per Carton Carton List Quantity Pkg. Lbs. Each 1)escription No. 81.35 25 \$24.30 

POLARIZED COMPOSITION CORD CONNECTOR 6 Amperes—250 Volts								
5743   Polarized connector, with brass covered cap	10 10 10	30 30 30	16 12 12	\$1.00 .50 .50	\$18.00 9.00 9.00			
5567 Cap only  Brush brass standard finish for caps.								

For special finished brass covered caps, see listing elsewhere.

SMALL	POLARIZED 6 Amperes	CORD	CONNECTOR	
	o Amperes	200 10	100	_

6821 6822 6918	Composition cord connector   10   Composition body only   10   Composition cap only   10   10   10   10   10   10   10   1	50 15 50 10 50 8	\$0.50 .35 .15	6.30
0310	FUSIBLE PLUG CAPS			

Equipped with Extra Set of Binding Screws for Fuse Wire 6 Amperes 250 Volts

5524	Porcelain cap	10	30	ĕ	. 25	4.50
5525	Composition cap Equipped with "Knostrain" Bushing for Reinfo	rced C	ord			
5526	Brass covered cap, porcelain	10	30	8	\$0.40	\$7.20
0020	mass covered cap, post-	10	30	1 8	1 .40	[ 0.10

brass covered cap, porceau.

5527 | Brass covered cap, composition. | 10 | 30 | 8 |

The above caps are a trifle deeper than the regular Hubbell caps.

They are made in the fusible type and designed to convert Hubbell fuseless plugs into fusible.

Standard finish for Nos. 5526 and 5527, brush brass, and polished brass.

All other finishes, except gold and silver, add to list \$0.11 when furnished separately. Mfrs. List \$0.05.

When furnished with flush receptacles, no extra charge is made for corresponding standard finish of plates.

# HUBBELL ATTACHMENT PLUGS AND RECEPTACLES For Three-wire Work-Polarized













No. 6055

Separable Attachment Plugs

660 Watts-250 Volts

Schedule "H"

List No.	Description	Carton Quantity	Pkg. Wt. Lbs.	Std. Pkg.	Mfrs. List Each	W. E. per Carton
6940	With porcelain cap	10	40	100	\$0.50	\$11.00
6041	With Drass covered porcelain cap	10	40	100	.60	13.20
6146 6308	With composition cap. With brass covered composition cap.	10	40	100	.55	12.10
6042	Porcelain base only	$\begin{bmatrix} 10 \\ 10 \end{bmatrix}$	40 30	100 100	.65	14.30
6043	Porcelain cap only	10	12	50	.30	6.60 4.50
6044	Drass covered porcelain cap	10	12	50	35	6.30
6149 6150	Composition cap only	10	15	50	.30	5.46
0100	Brass covered composition cap only	10	15	50	40	7.20

## Composition Cord Connector

	6 Amperes—250	Volts			Sched	lule "H"
6408   Co	ord connector composition body only	10	20	50	\$0.80	\$14,40
6409   Co		10	15	50	.50	9,00

## Wall Receptacle

	6 Amperes—250 Y				Sche	dule "H" -
6147 6309	With porcelain cap   With brass covered porcelain cap   With composition cap   With brass covered composition cap   Concealed base only	10 10 10	30 30 30 30 30 25	50 50 50 50 50	\$0.75 .85 .80 .90 .55	\$13.50 15.30 14.40 16.20 9.90

The neutral contact blade of the three-wire cap is made slightly longer than the others and makes contact first when the plug is inserted, and holds contact until after the others are disconnected. The polarity arrangement insures proper connection at all times.

Supporting screw holes 1¾ inches on centers.

Brush brass and polished brass are standard finishes for brass covered caps. Brush brass shipped unless otherwise specified.

For special finished brass covered caps, add \$0.11 to list. Mfrs. List \$0.05.

## 20 Ampere Wall Receptacle

	20 Amperes—250				Schee	dule "H"
6055	Receptacle, with concealed base and polarized cap	1 10	30	1 30	\$1.25	\$22.50
6058	Polarized cap only	iň	15	30	.60	10.80
6059	Concealed base only	10	95	30	.00	10.80
		1 10	1	1 +3()	(0)	

Brush brass and polished brass are standard finishes for caps; all other finishes, excepting gold and silver, add to list \$0.11. Mfrs. List \$0.05.

Supporting screw holes, 134 inches on centers.

## HUBBELL PLUGS AND RECEPTACLES







No. 5747



No. 5894









No. 6143

### MOTOR ATTACHMENT PLUGS Reverse Type

Schedule "H" | Pkg | Mfrs | W E

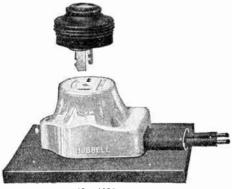
List No.	Description 6 Amperes—250 Volts	Carton Quantity	Std. Pkg.	Wt. Lbs.	List Each	per Carton
5746	Comp. body, porcelain cap	10	50	15	80.45	\$8.10
<b>5747</b> ▲	Comp. body, with knostrain bushing, porcelain cap	10	50	15	. 95	17.10
5744	Porcelain cap only with knife-blade contacts	10	50	10	. 15	2.70
5894▲	Comp. boby, composition cap	10	50	15	. 50	9,00
5895▲	Comp. body, with knostrain bushing, comp. cap	10	50	20	1.00	18.00
5896▲	Composition cap only with knife-blade contacts	10	50	10	.20	3.60
6069	Porcelain body, porcelain cap	10	50	1.5	.40	7.20
6087	Porcelain body only	10	50	10	.25	4.50
5574	Composition body only	10	50	10	.30	5 40
6095	Composition body only with knostrain bushing	10	50	15	.80	14 40
	POLARIZED MOTOR PLUC	3				
6277	Composition polarized motor plug, 6 amperes, 250 volts	10	30	15		\$14.40
6278	Composition body only	10	30	12	.50	9.00
6279	Composition cap, with knife blade contacts	10	30	10	.30	5.40
	REVERSE ATTACHMENT PLUGS Schedule "H"					
5652	Composition attachment plug, 10 amp.—250 v	10	50	20		\$13.50
6098	Composition base only with enclosed terminals	10	50	15	. 45	
6099	Composition cap with knife blade contacts	10	50	10	.30	$\frac{5.40}{}$

REVERSE MOTOR PLUG-With Knostrai	in Bushi	ing	:	Schedule "H"
6143   Reverse motor plug, all composition, 6 amp.—250 vo ts.				\$0.60 \$10.80
Screw holes for attaching the base to apparatus are spaced $1\frac{29}{32}$ in The diameter of base is $2\frac{1}{4}$ inches. Height over all, $2\frac{3}{4}$ inches.	ches on o	centers.		

## 20 AMPERE WALL RECEPTACLES FOR NATIONAL METAL MOULDING 20 Amperes—250 Volts

### WITH ONE-WAY BASE

# Schedule "H"



No. 6090

List No.	Description	Car- ton	Std. Pkg.	Pkg. Wt. Lbs.	Mirs. List Each	W.E. per Carton
6090	With brass covered eap, polarized	10	30	20	\$1.00	\$18.00
6091 5553	Base only Brass covered cap	10	30	15	.50	9.00
	only, polarized	10	30	10	.50	1

### WITH TWO-WAY BASE

6092	With brass covered	'	,	1		
	cap, polarized	10	30	20	\$1.00	<b>\$18.00</b>
6093	Base only	10	30	15	.50	9,00
5553	Brass covered cap		ł	1		1
000.	only, polarized.	10	30	10	.50	9.00

## HUBBELL WALL RECEPTACLES Porcelain Wall Receptacles







No. 5557 Polarity Wall Receptacle



No. 5605 Polarity Condulet Receptacle



No. 5726 Polarity Wall Receptacle

Schedule "H"

### POLARITY WALL RECEPTACLES 6 Amperes-250 Volts

W.E. Mfrs. Pkg. Std. Carton List Wt. List Per Description Quantity Pkg. No. Each Carton Lbs. \$0.75 \$13.50 Receptacle with concealed base and polarized cap...... 30 16 5882 .75 13.50 10 30 17 Receptacle with cleat base and polarized cap..... 5883  $.75 \mid 13.50$ Receptacle with molding base and polarized cap..... 10 30 17 5884 .50 10 30 12 9.005567 10 30 9 .30 5.405885 .30 30 10 5.40 Base only, cleat type..... 10 5886 30 10 .30 5.40 Base only, molding type..... 5887

Supporting screw holes: No. 5882, concealed base, 1½ inches on centers; No. 5883, cleat base, 1½ inches on centers; No. 5884 molding base, 11/8 inches on centers.

20 Amperes—250 Volts					hedule "H"
5557	Receptacle with concealed base and polarized cap	10	30		\$1.00 \$18.00
5558▲	Receptacle with cleat base and polarized cap	10	30		1.00 18.00
5559▲	Receptacle with molding base and polarized cap	10	30	25	1.00 18.00
5553▲	Polarized cap only	10	25	10	.50 9.00
5621▲	Base only, concealed type	10	30	18	.50  9.00
5622▲	Base only, cleat type	10	30	18	.50  9.00
5623▲	Base only, molding type	10	30	18	.50  9.00

Brush brass and polished brass, standard finishes for caps. All other finishes, excepting gold and silver, add to Mfrs. List \$0.05. W. E. L'st \$0.11. Supporting screw holes: No. 5557, concealed base,  $1_{.16}^{+}$  inches on centers; No. 5558, cleat base,  $1\frac{25}{32}$  inches on centers; No. 5559, molding base,  $1\frac{1}{2}$  inches on centers.

### POLARITY CONDUIT BOX RECEPTACLES

	20 Amperes—250 Volts			Schedule "H"
5605 5757 5553▲	Polarity receptacle, brass covered cap	10 10 10	25	20   \$1.00 \$18.00 15   .50  9.00 10   .50  9.00

Supporting screw holes 5% inch on centers.

Brush brass standard finish for cap. All other finishes excepting gold and silver add to W. E. List \$0.11, to Mfrs. List \$0.05.

### POLARITY WALL RECEPTACLES

With Knostrain Bushing for No. 10 Jumper Cable

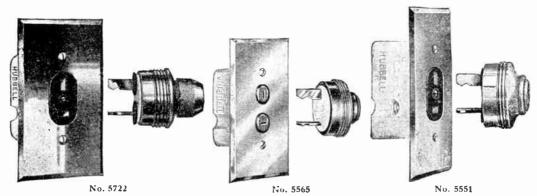
20 Amperes—250 Volts				S	chedule "H"
5726▲	Concealed base, screw holes 17/6 inches on centers	10	30		\$1.50 \$27.00
5727▲	Cleat base, screw holes 1 1 inches on centers	10	30		1.50 27.00
5728	Molding base, screw holes 1½ inches on centers	10	30	32	
5665	Cap only, polished brass	10	25	12	1.00 18.00
5621▲	Base only, concealed	10	30	18	.50  9.00
5622▲	Base only, cleat		30	18	.50 9.00
5623▲	Base only, molding		30	18	.50  9.00

Standard finish for caps polished and brush brass. All other finishes excepting gold and silver add to list \$0.11. Mfrs. List \$0.05. For separate caps see listing elsewhere. Supporting screw holes: No. 5726, concealed base,  $1\frac{7}{16}$  inches on centers, No. 5727, cleat base,  $1\frac{26}{32}$  inches on centers; No. 5728, molding base, 1½ inches on centers.

National Electrical Code Standard.

Schedule "H"

### HUBBELL FLUSH RECEPTACLES



## Polarity Flush Receptacles

20 Amperes-250 Volts

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. F. p r Car- ton
*5722▲	Complete with Knostrain cap for No. 10 cable and 412 x 234 inch plate		30	32	82.50	\$5.50
<b>*5</b> 551 <b>^</b>	Complete with cap and 41/2 x 23/4 inch plate		30	32	2,00	1,40
5552▲	Receptaele only	10	30	17	.75	13.50
5553▲	Cap only	10	30	10	.50	9.00
5554▲	Single gang plate, 4½ x 2¾ inches	10	30	10	.75	13.50
<b>5</b> 555 <b>↑</b>	Two gang plate, 4½ x 4 % inches	1	15	10	†1.50	3 30
5556▲	Three gang plate, 43/2 x 63% inches.	1	10	10	12.25	4.95
5586▲	†Four gang plate, 4½ x 8 % inches.	1	10	14	†3,00	6.60

Polarity Flush Receptacles

10 Amperes—250 Volts					Schedul	e ''H''
*5565*	Complete with cap and 41/2 x 23/4 inch plate		50	60	\$1.75	\$3.85
5566*	Receptable only	10	50	30	. 60	10.80
55674	Cap only	10	30	12	. 50	9 00
5568	Single gang plate, 41/2 x 23/4 inches	10	50	22	. 65	11.70
55694	Two gang plate, 4½ x 4 % inches	1 1	25	18	1.30	2.86
5570*	Three gang plate, 412 x 634 inches.	1	15	17	1.95	4.29
5587	Four gang plate, 41 x 8 1 inches	1	10	14	2.60	5.12

Outside supporting screw holes,  $3\frac{\pi}{2}$  inches on centers. Inside supporting screw holes,  $2\frac{11}{12}$  inches on centers. Brush brass polished brass, polished bronze and oxidized copper are standard finishes for brass plates. Brush brass, standard finishes for caps. All other finishes for caps, excepting gold and silver, add to Mfrs. List \$0.05. W. E. List \$0.11. Caps, when furnished as part of the complete flush receptacle, may be had in any of the finishes that are standard on plates, without extra charge. All other finishes for plates, excepting gold and silver, add to list, per gang, \$0.10. W. E. List \$0.22. For separate caps see listing elsewhere. Brush brass plates and caps will be furnished on all orders unless otherwise specified.

\*Porcelain receptacle, plate and cap packed in separate cartons under their respective catalog number.

†For plates arranged in tandem, add 20 per cent to the list price.

## Flush Receptacles

6 Amperes, 250 Volts Polarized. For Three-Wire Work Schedule "H" Receptacle, complete, with plate and porcelain cap.
Receptacle, complete, with plate and brass covered porcelain cap.
Receptacle, complete, with plate and composition \$1.55 \$3.41 6050 50 60 1.653.63 6118plate and composition cap..... Receptacle, complete, with plate and brass covered 60 50 1.60 3.52 6310 compostion cap..... Porcelain receptacle only  $\frac{3.74}{17.10}$ 10 3.5 .95 Force an receptance only.

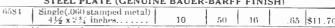
Single (.060 stamped metal)

4\frac{1}{2} \times 2\frac{3}{4} \times inches.

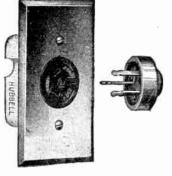
Single (solid) 4\frac{1}{2} \times 2\frac{3}{4} \times

Two-gang (.060 stamped metal) 4\frac{1}{2} \times 4\frac{3}{4} \times

Two gang (solid) 4\frac{1}{2} \times 4\frac{3}{4} \times 5548  $\frac{6.30}{11.70}$ 16 6585 .65 5549 25 13 **†1.00** 2.20 6586 25 inches. 15 †1.30 2.865550 Three gang(solid) 41 6 x 63 6 inches. Four gang (solid) 4½ x 8 ½ 90 †1,95 4.29 5599 **†2.60** inches... 5.72STEEL PLATE (GENUINE BAUER-BARFF FINISH)



Outside supporting screw holes  $3\frac{\pi}{12}$  inches on centers. Inside supporting screw holes  $2\frac{13}{18}$  inches on centers. General brush brass, polished brass, polished bronze and oxidized copper are standard finishes for brass flush plates. All o'her finishes, excepting gold and silver, add to list, per gang, \$0.22. Mfrs. List \$0.10.



No. 6049

# HUBBELL FLUSH RECEPTACLE

With Adjustable Aligning Plate

(National Electrical Code Standard)



No. 6618



No. 6619



Showing Construction of Adjustable Lugs and Slides

## 6 Amperes—250 Volts

	Schedu	ıle "H"
°kg. Wt. Jbs.	Mfrs. List Price	W. E. List per Carton
35	*\$0.60	\$10.80

Std. Carton List Pkg. I Quantity No Description \*6618 Porcelain flush receptacle, complete with adjustable 50 aligning plate . . 50 15 .35 6.30 10 Single, brass flush plate, stamped (.040 metal). 6619 2.206620 Two-gang, brass flush plate, stamped (.040 metal).... 25 1.00

Polished brass, brush brass, polished bronze and oxidized copper are standard finishes for brass flush Brush brass shipped unless otherwise specified.

plates. Brush brass shipped unless otherwise specinea.

\*When the No. 6618 receptacle is sold with the No. 6619 brass face plate the list price of the receptacle.

\*When the No. 6618 receptacle is sold with the No. 6619 brass face plate the list price of \$2.00. When the receptacle is sold will be \$1.32, and of the brass plate, \$0.77, making a total list price of \$2.09. When the receptacle is sold separately, without the brass face plate, the list price of the receptacle with aligning plate only, will be \$1.54.



No. 6179



No. 6179 Exploded View



Composition Attachment Plug FOR SMALL MOTORS 6 Amperes-250 Volts

		1		Pkg.	Mfrs.	W. E.
List		Carton	Std.	Wť.	List	List per
No.	Description	Quantity	Pkg.	Lbs.	Price	Carton
6179	Composition motor plug	10	50	27	\$0.35	\$6.30
6630	Composition motor plug body only		50	20	.20	3.60
6631	Composition motor plug base only		50	15	,15	2.70

The motor plug listed above is designed for use with devices employing small motors such as vacuum cleaners, floor scrubbers and the like. It is constructed of a high-grade, heat-proof composition, measuring, assembled,  $1\frac{5}{8}$  inches in length and  $1\frac{1}{32}$  inches diameter at bottom of base. The portion with contact blade is arranged with holding slots or grooves for fitting into the apparatus and all current carrying parts of the portable body are carefully concealed within patented arcing chambers to prevent accidental contact.

## Heavy Duty Polarized Attachment Plug

660 Watts-250 Volts

5598	Porcelain plug with brass covered cap	10	30	20	\$0.65	\$11.70
	Porcelain body only		30	15		2.70
	Brass covered polarized cap		30	12	, 50	9.00

Brush brass standard finish for cap. All other finishes, add \$0.11 to list.

Polarized cap No. 5567 shown above interchanges with 6 ampere polarized receptacles listed,

### MISCELLANEOUS SOCKET FITTINGS



No. 5583



No. 5767



No. 6580



No. 5748



No. 5589



Showing Casing Attached







Full size

### Rubber Casing and Ring FOR ATTACHMENT PLUGS

Schedule "H" This easing is designed to protect the porcelain cap of No. 5406 separable attachment plug. It is made

of soft rubber and is easily and quickly sprung in place.

The top of the easing grips the cord very tightly, and by adjusting No. 5589 rubber ring as illustrated, an

absolutely weatherproof plug is the result.

List			Std.	l·kg. Wt.	Mfrs. List	W. E. List
No.	Description	Carton	Pkg.	I bs.	Each	Each
5583 5589	Rubber casing for attachment plugs	*	30 30	5 1	\$0.30 .05	<b>\$0</b> .66

"Knostrain" and One-piece Composition Bushings

Schedule "F"

1			1 1	PKg.	IVIII'S.	W . E.
List			Std.	Wt.	List	List
No.	Description	Carton	Pkg.	Lbs.	per 1000	per 1000
5380	1/2 in, socket bushing	*	1000	3	\$5.50	\$8.80
5381	3% in. socket bushing	*	1000	10	14.50	23.20
5748	3/8 in, "Knostrain" split bushing	ole ole	1000	11	39.00	62.40
5767	Rosette bushing		1000	12	26.00	41.60
6555	3% in. Crown Top "Knostrain" split bushing	*	1000	11	39.00	62.40
6566	"Knostrain" split bushing for armored cord.		1000	4	25.00	40.00
<b>65</b> 80	"Knostrain" split bushing for reinforced cord		1000	1 1	25.00	40.00

Bushing No. 5748 is designed especially for use on sockets. For a strain relief bushing on plug caps we recommend the use of No. 6555. The crown design of this bushing readily lends itself for use as a handle for withdrawing the plug cap from the receptacle.

\*In bulk.



No. 1240





No. 3634



No. 3637

### No. 3630 Socket Handles

Schedule "H"

List	Description	Std. Pkg.	List Each	List Each
No.	Description	1 vg.	Laci	racii
1240	With \( \frac{1}{8} \) in, nipple and \( \frac{9}{32} \) in, hole for No. 16 approved lamp cord	100	\$0.15	\$0.33
1388	With $\frac{3}{8}$ in, nipple and $\frac{13}{32}$ in, hole for No. 16 approved lamp cord	100	. 15	1 .33

Socket Bushings

List		Mfrs.	W. E.
No.	Description	List Each	List Each
3630	½ in. genuine hard rubber	\$0.15	\$0.33
3631	1/8 in. composition	. 15	.33
3632	in genuine hard rubber	.15	.33
3634	🔀 in. genuine hard rubber	.15	.33
3637	38 in, genuine hard rubber	. 15	.33
3638	% in. composition	. 15	.33

## P & S SOCKETS AND RECEPTACLES Porcelain-Interchangeable





No. 61317







The body of the "interchangeable" line is held to the base and cap by the one contact screw. The interchangeable line is very convenient for filling rush orders. For example: you have in stock a quantity of P & S 61217 and 435. You receive an order for 60217 and have none in stock; by changing the cap from 61217 to 435 and from 435 to 61217 you will have 60217 keyless socket to fill the order, leaving in stock No. 434 key socket.

000011					Sched	ule "B"
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wgt.	Mfrs. List Each	W. E. List perCarton
61217 <b>^</b> 60217 <b>^</b>	Key, all porcelain, with pendent cap Keyless, all porcelain, with pendent cap	10 10	$250 \\ 250$	101 88	\$0.33 .30	\$7.26 6.60
61317 <b>^</b> 60317 <b>^</b>	Key, all porcelain, with pendent cap.     Keyless, all porcelain, with pendent cap.	10	$\begin{vmatrix} 250 \\ 250 \end{vmatrix}$	100 92	\$0.33	\$7.26 6.60
61227▲ 60227▲	Key, polished brass cap, with ½ in. cap   Keyless, polished brass cap, with ½ in. cap	10 10	100 100	54 38	\$0.37	\$8.14 7.48
488 <sup>4</sup> 448 <sup>4</sup>	Key, porcelain socket, 38 in. aluminum cap Keyless	100	100	43 39	\$0.55 .52	\$12.10 78.00
1218 1219 1220 1221	Key, ¾ in. brass angle cap   Keyless, ¾ in. brass angle cap   Key, ¾ in. aluminum angle cap   Keyless, ¾ in. aluminum angle cap	10 10 10 10	100 100 100 100	37 35 25 23	\$0.55 .52 .70 .67	\$12.10 11.44 15.40 14.74







No. 61327



No. 485



No. 1222

### Schedule "B"

					501104	u D
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wgt.	Mfrs. List Each	W. E. List perCarton
434 <b>▲</b> 435 <b>▲</b>	Key, polished brass cap, with ¼ in. cap Keyless, polished brass cap, with ¼ in. cap	10	100 100	42 38	\$0.45 .42	\$9.90 9.24
61327 <b>^</b> 60327 <b>^</b>	Key, polished brass cap, with $\frac{3}{8}$ in. cap Keyless, polished brass cap, with $\frac{3}{8}$ in. cap	10 10	100 100	42 38	\$0.40	\$8.80 8.14
485 <sup>*</sup> 241 <sup>*</sup>	Key, with ½ in. aluminum cap	10 10	100	42 38	\$0.60 .57	\$13.20 12.54
1222 1223	Key, ½ in. aluminum angle cap.   Keyless, ½ in. aluminum angle cap.	10	100	26 24	\$0.80	\$17.60 16.94

<sup>\*</sup>National Electrical Code Standard.

## MOGUL BASE SOCKETS AND RECEPTACLES



No. 520



No. 597



No. 429 (¼ Full Size) Socket with ¾ Inch Cap and 3¼ Inch Shade Holder Forcelain Weather-proof Socket





No. 521

Mogul or Goliath Lamp Base Devices
1500 Watts, 660 Volts

	1500 Watts, 660 Volts Schedule "L"							
List No.	Description	Schedule	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton	
520	Porcelain, keyless cleat	В	1	50	50	\$0.75	\$1.65	
597	Porcelain, Shurlock, 3, in. brass cap	l L	2	50	65	1.27	5.58	
596	Porcelain, Shurlok, 12 in. brass cap.	l L	2	50	65	1.27	5.58	
541	Dagadain Shuglab 3, in brass our	L	2	50	65	1.27	5.58	
429	Porcelain keyless, <sup>3</sup> <sub>8</sub> in cap, with <sup>3</sup> <sub>4</sub> in shade holder.  Porcelain, keyless, <sup>1</sup> <sub>2</sub> in cap, with <sup>3</sup> <sub>4</sub> in shade holder.	В	1	50	48	1.80	3 96	
411	Porcelain, keyless, to in, cap, with % in, shade holder	В	1	50	40	1.80	3.96	
429	Porcelain, Shurlok, keyless, 3 k in. cap, with 34 in. shade holder	L	1	50	48	2.15	4.73	
441	Porcelain, Shurlok, keyless, 12 in. cap with 34 in. shade holder	L	1	50	50	2.15	4.73	
216	Brass, keyless, 3 g in. cap	В	10	50	34	1.50	27.60	
433	Brass, keyless, 12 in. cap	B	10	50	35	1.50	27.60	
216	Brass, Shurlok, keyless, 3% in. cap	l L	10	50	34	1.85	34.04	
433	Brass, Shurlok, keyless, 14 in. cap	L	10	50	35	1.85	34 04	
455	Porcelain, weatherproof, 3 \( \) in brass cap	B	10	50	65	1.00	18.40	
243	Porcelain, weatherproof, ½ in. brass cap.	B	10	50	65	1.00	18.40	
591	Porcelain, weatherproof, 34 in, brass cap	B	10	50	65	1.00	18.40	
577	Porcelain, weatherproof, 3 in. cast iron yoke	В	10	50	65	.85	15 64	
589	Porcelain, weatherproof, 14 in, east iron voke	В	10	50	65	.85	15.64	
590	Porcelain, weatherproof, 34 in. cast iron yoke	В	10	50	65	.85	15.64	
522	Porcelain, % in. brass cap	В	10	50	60	.85	15.64	
521	Porcelain, 16 in. brass cap	13	10	50	65	.85	15 61	
592	Porcelain, 34 in. brass cap	В	10	50	60	.85	15.64	
593	Porcelain, 3 s in. cast iron yoke	B	10	50	60	. 70	12 88	
594	Porcelain, 16 in. cast iron yoke	B	10	50	60	.70	12 88	
595	Porcelain, 3 in. cast iron yoke	1 B	10	50	60_	.70	12 88	



No. 517



No. 1183





No. 524

Mogul Porcelain Sockets

List No.	Description	Schedule	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
519 518 517 1183	With 3% in. brass cap, long skirt. With 1/2 in. brass cap, long skirt. With 3/4 in. brass cap, long skirt. With 3/4 in. cast iron yoke, long skirt.	B B B B	2 2 2 2 2 2	50 50 50 50 50	70 70 70	\$1.00 1.00 1.00 .85 .85	\$4.40 4.40 4.40 3.74 3.74
1184 1185 523 524	With ½ in. cast iron yoke, long skirt With ¾ in. cast iron yoke, long skirt Without cap, long skirt Without cap, short skirt Without cap, short skirt	13 13 13	2 2 10 10	50 50 50 50	55 50 55	.85 .70 .55 .70	3.74 3.08 10.12 12.88

## Western Electric

## P & S DECORATIVE SOCKETS



P & S 61420

## Ready Wired Porcelain Sockets SOCKETS WIRED WITH NO 14 WIDE

117.48

119.35

121.22

28 in.

 $\overline{29}$  in.

30 in.

**2**79**▲**....

281<sup>\*</sup>....

2804...

			KEIS WIKED	WIIH N	O. 14 W	IRE	Sched	lule "B"
List No.	Centers	W. E. List Price per 100	List No.	Centers	W. E. List Price per 100	List No.	Centers	W. E. List Price per 100
61420 <sup>a</sup>	5 in. 6 in. 7 in.	\$57.20 58.85 60.50 62.15 63.80 65.45 67.10 68.75 70.40	66088 <sup>a</sup> 66089 <sup>a</sup> 66090 <sup>a</sup> 66091 <sup>a</sup> 66092 <sup>a</sup> 66093 <sup>a</sup> 66094 <sup>a</sup> 66096 <sup>a</sup>	14 in. 15 in. 16 in. 17 in. 18 in. 19 in. 20 in.	\$72.05 73.70 75.35 79.00 78.65 80.30 81.95 83.60 85.25	66097 <sup>A</sup> 66098 <sup>A</sup> 66099 <sup>A</sup> 66100 <sup>A</sup> 66101 <sup>A</sup> 66102 <sup>A</sup> 66103 <sup>A</sup> 66105 <sup>A</sup>	22 in. 23 in. 24 in. 25 in. 26 in. 27 in. 28 in. 29 in. 30 in.	\$86.90 88.55 90.20 91.85 93.50 95.15 96.80 98.45 100.10
		SOCI	KETS WIRED		NO. 12 W			ule "B"
66106 <sup>A</sup>	5 in. 6 in. 7 in. 8 in. 9 in. 10 in. 11 in.	\$62.92 64.79 67.10 68.42 69.30 72.05 73.81 75.68 77.44	66115 <sup>A</sup>	14 in. 15 in. 16 in. 17 in. 18 in. 19 in. 20 in.	\$79,42 81,07 82,94 84,60 86,57 88,33 90,20 91,96 93,83	66130 <sup>A</sup>	22 in. 23 in. 24 in. 25 in. 26 in. 27 in. 28 in. 29 in. 30 in.	\$95.59 97.46 99.22 101.20 102.85 104.72 106.48 108.35 110.22



P & S 220

# Ready Wired Mica Sockets

		SOC	KETS WIRED	WITH N	IO. 14 W	IRE	Sched	lule "B"
List No.	Centers	W. E. List Price per 100	List No.	Centers	W. E. List Price per 100	List No.	Centers	W. E. List Price per 100
220 <sup>a</sup>	4 in. 5 in. 6 in. 7 in. 8 in. 9 in. 10 in. 11 in. 12 in.	\$68,20 69,85 71,50 73,15 74,80 76,45 78,10 79,75 81,40	230 <sup>A</sup> 231 <sup>A</sup> 232 <sup>A</sup> 234 <sup>A</sup> 235 <sup>A</sup> 236 <sup>A</sup> 239 <sup>A</sup>	13 in. 14 in. 15 in. 16 in. 17 in. 18 in. 19 in. 20 in.	\$83.05 84.70 86.35 88.00 89.65 91.30 92.95 94.60	245 <sup>4</sup>	23 in. 24 in. 25 in. 26 in. 27 in. 28 in. 29 in.	\$97.90 99.55 101.20 102.85 104.50 106.15 107.80 109.45
229*	12 111.		KETS WIRED V		96.25     O. 12 W			111,10 ule "B"
255 <sup>A</sup>	4 in. 5 in. 6 in. 7 in. 8 in. 9 in.	\$73.92 75.79 78.10 79.42 80.30 83.05 84.81	264 <sup>A</sup>	13 in.   14 in.   15 in.	\$90.42 92.07 93.94 95.70 97.57 99.33 101.20	273 <sup>A</sup>	22 in. 23 in. 24 in. 25 in. 26 in. 27 in.	\$106.59 108.46 110.22 112.20 113.85 115.72

<sup>11</sup> in. 12 in. | 88 44 <sup>▲</sup>National Electrical Code Standard.

10 in.

84-81

83.68

2614.....

2624....

 $263^{\blacktriangle}$ .

2704....

2714....

2724

19 in.

20 in.

21 in.

101,20 102,96 104,83

# P & S SOCKETS AND RECEPTACLES

# Porcelain-Interchangeable







No. 61237



No. 62247



No. 61087

# RECEPTACLE WITH MOLDING BASE For Use with Wood Molding

Schedule "B"

						C C
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wgt.	Mfrs. List Each	W.E List perCarton
100136 <sup>4</sup> 426 <sup>4</sup>	Key, with molding base  Keyless, with molding base  Holes for supporting screws are spaced 1% inches on centers.  Shade holder P & S 119 or 1190 may be used.	10 10	100	50 lbs 48 lbs	\$0.35	\$7.70 7.04
	SOCKETS WITH CONCEALED	WALL E	ASE			
61237 <sup>A</sup> 60237 <sup>A</sup> 61250 <sup>A</sup>	Key, with concealed base	10 10 10	100 100 100	45 lbs 33 lbs 45 lbs		\$7.70 7.04 6.16
	PORCELAIN RECEPT	ACLES				
62247	Key, with concealed wall base	10	100	62 lbs	\$0.35	\$7.70
490 60247 <sup>*</sup>	holder groove.  Keyless, with concealed wall base.  Shade holder P & S 119 or 1190 may be used.	10 10	250 100	157 lbs 59 lbs	.28	6.16
61087 <b>^</b>	Holes for supporting screws are spaced 21/4 inches on centers. Key, with cleat wall base. Keyless, with cleat wall base. Holes for supporting screws are spaced 1 inch on centers.	10 10	100 100	48 lbs 45 lbs		7.70



No. 46



No. 82

# Porcelain Wall Receptacles

Schedule "B"

List No.	Description	Screw Spaced	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Each	W. E. List per Carton
	Key, for 31/4 in. outlet boxes	23/4	1	100	95	\$0.50	\$1.10
46	Key, for 314 in. outlet boxes.	23/4	1 1	100	92	.47	1.03
4.	Keyless, for 31/4 in. outlet boxes	31/3	i	100	152	.55	1.10
82	Key, for 4 in. outlet boxes	11 ( 14	i	100	149	.52	1 14
83	Keyless, for 4 in, outlet boxes	$3\frac{1}{2}$	1	100	110	.02	

National Electrical Code Standard.

# P & S RECEPTACLES For Metal Sign and Outlet Box Receptacles







No. 102704



No. 86



No. 61988



No. 497

### FOR METAL SIGNS AND OUTLET BOXES

Sch	redu	ما	"	~,,

	Description	Carton Quantity	Std. Pkg.	Pkg. Wt.	Mfrs. List Each	W. E. List per Carton
	With ring and gasket complete  Punch required for this receptacle is 1½ inches in diameter.	25	250	77 lbs.	\$0.20	\$11.00
102704	With ring and gasket complete.  The button on the back is readily removed without tools. Replacing the button after	25	250	80 lbs.	.25	13.75
	the contact is made completely encloses the contacts.  Punch required for this receptacle is 1½ inches in diameter.					
	With ring and gasket complete	25	250	92 lbs.	.20	11.00
	flush with the face of the sign, and may be painted to match the sign. The ring is made of non-corrosive gilder's metal, rich in			1		
	Copper. Punch required for this receptacle is 15% inches in diameter.	1			,	
61988	With ring and gasket complete The terminals are recessed in the grove, so	25	250	80 lbs,	.20	11.00
437▲	sealing compound may be poured in. With wide ring and gasket complete. With porcelain ring and rubber gasket com-	25	250	80 lbs.	.20	11.00
	plete	25	250	80 lbs.	.20	11.00



No. 61577



No. 4003



No. 4035

## Schedule "C"

List No.	Description	Carton Quantity	Std. Pg.	Pkg. Wt.	Mfrs. List Each	W. E List per Carton
61577*	With ring and gasket complete Ring glazed porcelain only.	10	250	114 lbs.	\$0.28	\$6.16
61578*	With ring and gasket complete Body glazed porcelain.	10	250	115 lbs.	.36	7.92
4003▲	1/2 inch back with ring and gasket complete.	10	250	100 lbs.	.28	6.16
4035▲	1 inch back with ring and gasket complete.	10	250	95 lbs.	28	6.16
3000	T men back with ring and gasket complete.	10	200	50 108.	20	0.1

These receptacles are fitted with 6 inches stranded No. 14 double braid New Code rubber covered wire. Receptacles with longer wires furnished to order.

# P & S RECEPTACLES

# Sign and Outlet Box Receptacles







No. 61777

No. 61072

### FOR METAL SIGNS AND OUTLET BOXES

Schedule "C"

List	Description	Carton	Std.	Pkg.	Mfrs. List	W. E. List
No.		Quantity	Pkg.	Wt.	Each	per Carton
61977 <b>^</b>	With fastening screws complete	25	250	70 lbs.	\$0.17	\$9.35
61777 <b>^</b>		25	250	75 lbs.	.17	9.35

The punch required for these receptacles is  $1\frac{3}{8}$  inches in diameter. See pages elsewhere for list of outlet box covers which may be used with these receptacles.

### FOR WOOD SIGNS

Schedule "C"

61072▲	With 1 inch skirt, screws are spaced 1 <sup>13</sup> / <sub>16</sub> inches on centers		250	65 lbs.	\$0.14	\$7.70
--------	--	--	-----	---------	--------	--------

The hole required for these receptacles is  $1\frac{1}{2}$  inches in diameter.







No. 77

FOR METAL SIGNS AND OUTLET BOXES

### Schedule "C"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt.	Mfrs. List Each	W. E. List per Carton
54▲	With fastening screws complete  The punch required for this receptacle is	25	250	75 lbs.	\$0.14	\$7.70
900*	13% inches in diameter.  Sign receptacle	25	250	75 lbs.	.20	11.00
878▲	Candelabra base, with ring and rubber gasket	25	250	22 lbs.	. 17	9.35
677▲	23/2 inch in diameter.  Candalabra base, complete, with fastening screws  The punch required for this receptacle is	25	250	30 lbs.	. 16	8.80
778▲	25 inch in diameter. Holes for supporting screws are spaced 1 3 inches on centers. Candelabra base, complete, with fastening screws The punch required for this receptacle is 25 inch in diameter. If oles for supporting screws are spaced 1 3 inches on centers.	25	250	20 lbs.	.16	8.80

<sup>&</sup>lt;sup>♠</sup> National Electrical Code Standard. Illustrations are <sup>3</sup> g of full size.

# P & S PORCELAIN RECEPTACLES Metal Molding and Cleat Receptacles







No. 61770



No. 61971



No. 50715

### FOR USE WITH WOOD MOLDING

### Schedule "B"

List No.	Description	Screws Spaced	Carton Quantity	Std. Pkg.	Pkg. Wet.	Mfrs. List Each	W. E. List per Carton
61670▲	With shade holder groove	$2rac{5}{16}$	10	250	100 lbs.	\$0.30	\$6.80
617704	Shade holder P & S 28 or 29 may be used. Without shade holder groove	$2\frac{5}{16}$	10	250	100 lbs,	.25	5 50

### **CLEAT RECEPTACLES**

619714	With inclosed terminal	10	250	140 lbs.	80.25	\$5.50
50715 <sup>▲</sup>	inches on centers.  Wires are carried 1 inch from surface and 2½ inches apart. Drain holes are provided in the bottom of the receptacle.  Used extensively in amusement parks and all outdoor electrical decorating.  Pony, without shade holder groove.  Holes for supporting screws are spaced 1½ inches on centers.  This receptacle will fit a pony receptacle condulet cover made by Crouse-Hinds, which is used with ½.  ¾ and 1 inch types S, SV, SL, ST and SX condulets.	10	250	82 lbs.	15	3.30



No. 62358



No. 88259

### Schedule "B"

List. No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wgt.		W. E. List per Carton
62358	With 1 inch base	10	250	103 lbs.	\$0.18	\$3.96
	Holes for supporting screws are spaced 115,					
	inches on centers.		0.50	4 4 5 13		
4013▲	With shade holder groove	10	250	115 lbs.	.20	4.40
9402	Without shade holder groove	10	250	115 lbs.	. 15	3.30
0102	Holes for supporting screws are spaced 23/8					
	inches on centers.		ĺ			
88259	With shade holder groove	10	250	107 lbs.	.30	6.80
451	Without shade holder groove	10	250	114 lbs.	.25	5.50

<sup>&</sup>lt;sup>♠</sup>National Electrical Code Standard.

# P & S PORCELAIN RECEPTACLES







No. 599



No. 4000

### FOR CONCEALED OR CLEAT WIRING

Schedule "B"

No.	/ Description	Carton Quantity	Std. Pkg.	Pkg. Wt.	Mfs. Lis <sup>t</sup> Each	W. E. List Per Carton
598	Without shade holder groove	10	250	145 lbs.	\$0.25	\$5.50
599	With shade holder groove	10	250	145 lbs.	.30	€.60
4000	Without shade holder groove	10	250	92 lbs.	.25	5.50
4001	With shade holder groove	10	250	92 lbs.	.30	6.60
1233	Two-piece porcelain socket, without shade					1
	holder groove	10	100	44 lbs.	.35	7.20
1234	Two-piece porcelain socket, with shade					
	holder groove	10	100	44 lbs.	. 40	8.80

### WEATHERPROOF SOCKETS 660 Watts-600 Volts





No. 9366



No. 43310



No. 540



No. 60666

### Schedule "B"

No.	Description	Carton Quantity			W. E. List per Carton
80 <b>▲</b> 9366 <b>▲</b>	Porcelain, weatherproof socket.  Porcelain, weatherproof socket.		$\frac{250}{250}$	83 lbs:	 \$ 6.85

### Schedule "S M"

43310 <sup>*</sup> 60666 <sup>*</sup>	Molded mica, weatherproof socket	10	250 250	28 lbs. 96 lbs.	\$4.84 5.28

### CONDENSITE WEATHERPROOF SOCKET

### Schedule "B"

540   Sharlok, with 6 inch wire	10	100   30	lbs.   \$0.75	1 \$16.50
43310   Shyrlok Molded mica, weatherproof socket	10	100   28	lbs.  \$0.49	9   \$10.78

<sup>&</sup>lt;sup>▲</sup> National Electrical Code Standard.

## P & S PORCELAIN ROSETTES







No. 390



810



No. 1999

ITTLE	<b>GEM</b>	CLEAT	ROSETTES	Schedu	ıle '	"XA"
			4		1	

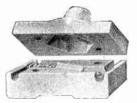
	LITTLE GEM CLEAT RO	OSETTES	5		Schedu	le "XA"
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wgt.	Mfrs. List Each	W. E. List per Carton
400≜ 76≜	Fusible, two-piece. Fuseless, two-piece. Holes for supporting screws are spaced 145 inches on centers.	10 10	250 250	115 lbs. 115 lbs.	\$0.16 .15	\$3.52 3.30
	LITTLE GEM CONCEALED	ROSET	TES			
390 <b>^</b> 79 <b>^</b>	Fusible, two-piece  Fuscless, two-piece  Holes for supporting screws are spaced 1½ inches on centers.  This rosette will fit Crouse-Hinds condulets, types G, GL, GF, GX, H and HA 5 and 10 ampere size.	10 10	250 250	140 lbs. 140 lbs.	\$0.16	\$3.52
	LITTLE GEM MOULDING	ROSET	TE			
810 <sup>A</sup> 176 <sup>A</sup>	Fusible, two-piece.  Fuseless, two-piece.  floles for supporting screws are spaced 1½	10	250 250	117 lbs. 117 lbs.	\$0.16	\$3.52 3.30
1999	inches on centers. Fuseless cleat or concealed resette	10	250	62 lbs.	.08	1.76

See pages elsewhere for list of outlet boxes, which may be used with these rosettes.

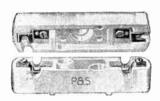




No. 610



No. 607



No. 565

	CONCEALED ROSET	TE			Schedu	le "XA"
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wgt.		W. E. List per Carton
604≜ 605≜	Fuseless, two-piece  Extra cap only  Holes for supporting screws are spaced 131 inches on centers.	10 10	250 250	125 lbs. 115 lbs.	\$0.17	\$3.74 2.42
	ROSETTE FOR WOOD MO	DULDING	3			
610*	Fuseless, two-piece	10	250	55 lbs.	\$0.17	\$3.74
	WITH ENCLOSED TER	MINALS				•
607*	Fuseless cleat, two-piece	25	250	81 lbs.	\$0.17	\$3.74
	FUSELESS CONCEALED TERMINA	L CLEAT	ROS	ETTE		
655	Fuseless, cleat, two-piece	10	250 +	110 lbs.	\$0.26	\$5.72
	CEILING BUTTO	N				
170	Ceiling button, self-tying	50	250	56 lbs.	\$.057	\$5.24

A National Electrical Code Standard.

## Western Electric

### **CUTLER-HAMMER SWITCHES**

### Porcelain Pendent Switches

6 Amperes, 125 Volts; 3 Amperes, 250 Volts



No. 7000

List No. 7000	Description Single pole	Carton Quantity 10		Wt.	W. E. List Each \$1.10				
10 Amperes, 125 Volts; 5 Amperes 250 Volts									
7010	Single pole	10	100	40	81.54				

On the above standard package may be made up of unbroken eartons (f assorted colors.—Standard finish: Gray.—White or brown will be furni-hed when specified.

### With Brass Cap

### 6 Amperes, 125 Volts; 3 Amperes, 250 Volts

7002	Single pole, $\frac{1}{3}$ in, pipe thread. Single pole, $\frac{3}{3}$ in, pipe thread. Single pole for pendent use only.	10	100		
------	---	----	-----	--	--

Standard package discount allowed on assortment (in unbroken carrious) of Nos. 7001, 7002 and 7003. Standard finish: Gray. White or brown can be furnished when specified.





No. 7001

7004	Single pole, 3 point, 1/8 in. pipe thread	10	50	17	81.54
7005	Single pole, 3 point, 3% in. pipe thread	10	50	1×	1.65
7006	Single pole, 3 point, for pendent ase only	10	50	17	1.54

Standard package discount allowed on assortment (in unbroken cartons) of  $50,\,\mathrm{Nos},\,7004,\,7005$  and  $7006,\,$ 

suandara nmsn; Gray. White or brown will be furnished when specified. Caps of Nos. 7003 and 7006 has composition bushing with  $\frac{32}{2}$  in, hole for reinforced cord.



No. 7005

No. 702a

### Two-circuit Pendent Switches

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

List No.	Description	Carton Quantity		Wt.	W. E. List Each
7020	Single pole, porcelain, with porcelain bushing	10	50	34	82 20
Stand Stand	ndard finish; Gray. White or brown will ard package may be made up of unbroken o	be fornish artons of a	ied w issort	hen sp ed colo	ecified- rs.
7021	Single pole, brass shell	10	50	20	\$2.30

Granderd fit ish; Polished brass. Brush brass no additional charge. For other finishes add \$0.22 to list price.

Stan land package discount allowed on assortment of finishes in full cartons of 10 each.



No. 7021



No. 7007

## Brass Shell Pendent Switch

6 Amperes, 125 Volts; 3 Amperes, 250 Volts

7 07 Acorn type..... 100 \$1.15 Standard finish: Polished brass. Brush brass finish no extra cost, For any other finish add 80, 13 cents to list price.

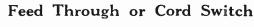
Standard package discount allowed on assortment of finishes in earton lots.



6 Amperes, 125 Volts; 3 Amperes, 250 Volts 7050 Black composition, single pole...... \$0.92

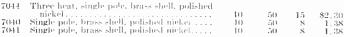


No. 705a



6 Amperes, 125 Volts; 3 Amperes, 250 Volts

These switches are designed for use with flat irons, soldering irons, stoves, toasters, vacuum cleaners.



The No. 7041 switch is the same as No. 7040 in all respects except that knockout bushings are supplied, thus providing a small opening for cords of small diameter and which can be adapted for law  $\alpha$  reinforced cords simply by knocking out or cutting out with a penknife the inner collar of the bushings.

All the above switches are National Electrical Code Standard,



No. 7040



No. 7150

No. 7108

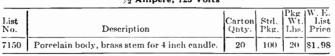
No. 7102

No. 7199

## Western Electric

## CUTLER-HAMMER SWITCHES

**PUSH BUTTON CANDELABRA SWITCH** 1/2 Ampere, 125 Volts



Standard push bars are 1% inches long. Bars 1% or 2 inches long substituted without extra cost, if specified.

Extra stems, 13 cents each; std. pkg., 50. Extra push bars, 22 cents each. Stens for 3 inch or 5 inch candle will be substituted without extra charge, if specified. Price includes stem spider piece for supporting the switch and fibre washer for holding the candle concentric with the stem and socket.

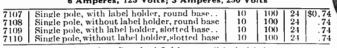


6 Amperes, 125 Volts; 3 Amperes, 250 Volts. Rectangular Base

7102   Single pole, with label b 7103   Single pole, without lab	nolder	100	32	\$0.81
The Tringle paret attitude to		1	1	7.77

Glazed in white only. Standard finish cap polished nickel.
Standard package discounts allowed on assortment (in unbroken cartons)
of 100 Nos. 7102 and 7103.

### **PUSH BUTTON SURFACE SWITCHES** 6 Amperes, 125 Volts; 3 Amperes, 250 Volts



Glazed in white only. Standard finish cap polished nickel. Standard package discounts allowed on assortment (in unbroken cartons) of 100 Nos. 7107 and 7108, or Nos. 7109 and 7110. Standard finish cap polished nickel





No. 7113



TWO WAY BASE

7113 7114	With label holder	10 10	100	30 <b>\$0.92</b> 30 <b>\$0.92</b>	
	·				

Standard package discounts allowed on assortment (in unbroken cartons) of 100 Nos. 7111 and 7112 or Nos. 7113 and



No. 7151

### PUSH AND PULL CANOPY SWITCHES 3 Amperes, 125 Volts; 1 Ampere, 250 Volts



No. 7152

	Stem and Bushing, Inches		Carton Qnty.	Std.	Wt.	W. E. List Price
7151 7152 7154 7155	34	For sheet metal canopy For east metal canopy With 34 inch stem and bushing With knob for fixture knob	20 20 20 20	100 100 100 100	15 15 15 15	\$1.65 1.76 1.85 1.76

Standard finish polished brass. No extra charge for brush brass or polished nickel. Standard package discounts allowed on assortments in (unbroken cartons) of 100 Nos. 7151, 7152 and 7155.

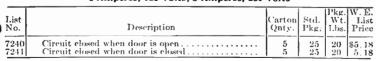
7156 [ Yoke for No. 7155, copper plated steel . . . \$0.11

#### DOOR SWITCHES

### WITH PLATE AND APPROVED BOX FOR ARMORED CABLE

Box is  $1\frac{1}{43}$  inches wide by  $2\frac{3}{4}$  inches long. Plate is  $4\frac{5}{8} \times 1\frac{1}{4}$  inches and will fit no other box.

### 6 Amperes, 125 Volts; 3 Amperes, 250 Volts

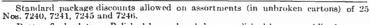


### WITH UNIVERSAL PLATE BUT WITHOUT BOX 6 Amperes, 125 Volts; 3 Amperes, 250 Volts

Universal plate is 53% x 13% inches.

7245	Circuit closed when door is open	5 5	25   20   \$4.66
7246	Circuit closed when door is closed		25   20   4.90

No. 7240



Button flush plates. Polished brass, brush brass, polished bronze, oxidized copper and polished nickel are all standard finishes, no extra charge. Solid brass plates in gangs or tandem can be furnished.



No. 7155

No. 7245

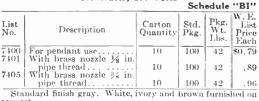
### CUTLER-HAMMER SOCKETS

PUSH-BUTTON PORCELAIN SOCKETS 660 Watts, 250 Volts



No. 7400

No. 7501

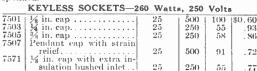


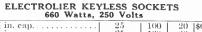
request.

PUSH-BUTTON BRASS SHELL SOCKETS 660 Watts, 250 Volts

	ooo watts, 2	OO A OLER			
7500		25	500	100	1\$0.66
7502	¼ in. cap	25	250	55	1.01
7504	3/8 in. cap	25	250	58	.94
7506	Pendant cap with strain	[			
	relief	25	500	100	.66
7560	1/8 in, cap with extra in-			l	1
	sulation bushed inlet	25	250	55	1 .84

Special 2 inch over-all push-button for standard socket cover or husk will be furnished without extra cost, when specified.









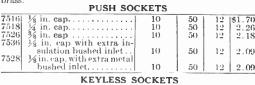
1/8 in. cap. 1/4 in. cap. 3/8 in. cap 250 250 PORCELAIN BASE WALL SOCKETS 660 Watts, 250 Volts, for Concealed Work

10 250 .98 80 756110 950

Standard finishes are polished and special brass.
Special brass furnished unless otherwise specified.
Other finishes can be furnished at special advance.
Special 2 inch over-all push-buttons for standard socket cover or husk will be furnished without cost when specified.



Candle length sockets combine Edison serew shell, socket mechanism, body and binding screws, and switch mechanism in the push type, in a 4 inch white fibre candle locked in a metal cap which may be finished in either white enamel or brass.



	KEYLESS SO	OCKETS			
7517	1/8 in. cap	10	50	12	\$1.40
40191	1/4 m. cap	10	50	12	1.90
7527	3 ś in cap	10	50	12	.82
7537	1/8 in. cap with extra in-				
	sulation bushed inlet	10	50	12	1.73
7529					
- 1	bushed inlet.	10	50	12	1.73

Length of candle, exclusive of cap, 4 inches. Standard finish white candle and brush brass cap. White cap furnished without extra charge.

#### -H CANDLE FIXTURE SOCKET National Electrical Code Standard

C-H 7509 fiber candle socket is arranged to be supported inside the candle on an adjustable stem with fixture wires connecting to a switch mechanism below or directly into fixture arm when no switch is used. This socket can be used in candles measuring 1 \( \frac{1}{16} \) inch or more inside diameter. 75091 Keyless 18 in. nipple.... 25 | 1250 | 15 (\$0.72



No. 7500



No. 7511



No.7550



No. 7510

No. 7516



No. 7509

No. 7650

No. 7612

## SEPARABLE ATTACHMENT PLUGS

C-H ATTACHMENT PLUGS 660 Watts, 250 Volts List

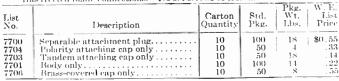


Standard package of Nos. 7600 and 7601 may be made of unbroken cartons,

CORD CONNECTOR

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	W. E. List Each
7650	Black composition cord connector	25	100	23	\$0.99
	MOTOR ATTACHME	NT PLU	3		
7655	10 amperes 250 volts	10	100	23	\$1.10

7700 ATTACHMENT PLUG
Has riveted blade connections. No set screws to loosen.



MESCO SEPARABLE ATTACHMENT PLUGS
3 Amperes, 250 Volts: 6 Amperes, 125 Volts

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	W. E. List Each
16409	Composition plug and cap	10	100	20	\$0.60
16410	Porcelain plug and cap	10	150	63	. 13
16411	Porcelain body, composition cap.	10	150	57	. 51
16404	Brass-covered cap only		50	7	. 43
16405	Porcelain base only		250	17	. 26
16406	Porcelain cap only		50	1 1	. 26
16407	Composition cap only		50	- 4	. 34
16408	Composition base only		100	13	. 34
16433	Composition plug and cap	10	100	13	. 43

Receptacles for Attachment Plug Caps

10 AMPERES, 250 VOLTS

ridsii Keceptaci s with blass i att							
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	W. E. List Each		
7611 7612 7613	Porcelain cap plug Composition cap plug Without plug	10 10 10	50 50 50	40 40 40	\$2,20 2,20 1,87		

ROUND BASE RECEPTACLES FOR CONCEALED 7616 Porcelain cap plug 23 Composition cap plug. Without plug 10

RECTANGULAR BASE RECEPTACLE FOR MOLDING WORK Porcelain cap plug. . . Composition cap plug 10 50  $\frac{25}{25}$  $\frac{7621}{7622}$ 10 50 Without plug

ROUND SLOTTED BASE SURFACE RECEPTACLES 28 28  $\frac{7627}{7628}$ Porcelain cap plug.... 10 50)



### CORD CONNECTOR

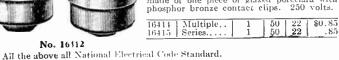
List No.	Description	Carton Qnty.	Std. Pkg.	Pkg. Wt. Lbs.	W. E. List Each
16412	Complet:	. 1	50	13	\$1.19
16403	Receptacle only		50	10	. 77

#### CURRENT TAP

Arranged for shade holder. The body is made of one piece of glazed porcelain with phosphor bronze contact clips. 250 volts.









No. 7602









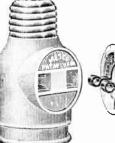


No. 14410





No. 7617



28



No. 17414







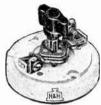
No. 20



No. 220



No. 2684



No. 21

### SINGLE POLE

Small Size. 5 Amperes, 125 Volts; 3 Amperes, 250 Volts

Schedule "S"

List No.			Diameter of Base	Screws Spaced on ('enters	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Price Each	W.E. List per Carton
2148 <sup>4</sup> 2161 <sup>4</sup> 2162 <sup>4</sup> 2163 <sup>4</sup>	Solid Base Slotted Base Solid Base Slotted Base	Plain Plain Indicating Indicating	2 ins. 2 ins. 2 ins. 2 ins. 2 ins.	1 132 ins. 1 132 ins. 1 132 ins. 1 132 ins. 1 132 ins.	10 10 10 10	250 250 250 250 250	71 71 73 73	\$0.28 .28 .32 .32	\$6.16 6.16 7.04 7.04

5 Amperes, 125 Volts; 3 Amperes, 250 Volts

20*	Solid Base	Plain	$12\frac{1}{2}$ ins.	$1_{\frac{7}{16}}$ ins.	10	100	30	1 \$0.36	\$7 09
120*	Slotted Base	Plain	$2\frac{1}{8}$ ins.	$1\frac{7}{16}$ ins.	10	100	30	.36	
2204	Solid Base.	Indicating	21/8 ins.	4 400 1	10				
320▲	Slotted Base			$l_{\frac{1}{16}}$ ins.	10	100	30	.40	
020	plotter base	Indicating	$12\frac{1}{8}$ ins.	$1_{16}$ ms.	10	100	30	.40	8.80

5 Amperes, 125 Volts; 3 Amperes, 250 Volts

2684**	Solid Base	Plain	1.2	ins. I	$1\frac{13}{32}$ ins.	10	I 100 I	28	180.36	87 09
2654**	Solid Base	Indicating	2	ins.	1 13 ins.	10	100	28	.40	8.80

The above switches have a metal covered base.

10 Amperes, 125 Volts; 5 Amperes, 250 Volts

21 <sup>*</sup>	Solid Base	Plain	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10	100	53	\$0.48  \$10.56
121 <sup>*</sup>	Slotted Base	Plain		10	100	53	.48   10.56
221 <sup>*</sup>	Solid Base	Indicating		10	100	53	.54   11.88
321 <sup>*</sup>	Slotted Base	Indicating		10	100	53	.54   11.88
	7 10 10 11 27 1100	Thirt terring	1 2 32 His.   174 His.	1 10	1 100	- 00	86.11   #6. 4

10 Amperes, 250 Volts

2983▲	Solid Base	Plain	$ 2\frac{15}{32}$ ins. $ 1\frac{3}{4}$ ins. $ $	10	100	54	\$0.66 \\$14.52
2984	Slotted Base	Plain	$2\frac{15}{32}$ ins. $1\frac{3}{4}$ ins.	10	100	54	.66 14.52
2985	Solid Base	Indicating	$2\frac{15}{32}$ ins. $1\frac{3}{4}$ ins.	10	100	54	.76 16.72
2986*	Slotted Base	Indicating	$2\frac{15}{32}$ ins. $1\frac{3}{4}$ ins.	10	100	54	.76  $ .16 $ $ .72 $

20 Amperes, 125 Volts

31 131 231 331		Solid Base Slotted Base Solid Base Slotted Base	Plain Plain Indicating Indicating		$2\frac{5}{32}$ ins. $2\frac{5}{32}$ ins.	1 1 1 1 1	10	15 15 15	,90 1.00	2.20
331	<u> </u>	Slotted Base	Indicating	$3\frac{1}{16}$ ins.	$2\frac{5}{32}$ ins.	1	1 10	15	1.00	2.20

30 Amperes, 125 Volts

140 140 240 340	Solid Base Slotted Base Solid Base Slotted Base	Plain Plain Indicating Indicating	$3\frac{1}{2}$ ins.	$2\frac{7}{16}$ ins. $2\frac{7}{16}$ ins.	1 1 1	10 10 10 10	17 17 17 17	1.50	\$3.08 3.08 3.30 3.30
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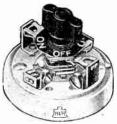


The above switches may be converted into lock switches by the use of the Lock Attachments.

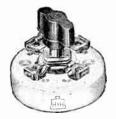
When specified, round handles will be furnished on the above switches in 3, 5 and 10 ampere sizes without extra charge.

\*National Electrical Code Standard.

DOUBLE POLE 5 Amperes, 250 Volts



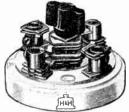




No. 2152



No. 23



No. 43

Schedule "S"

\$3.30

3,30

\$3.96

List No.  2085 <sup>4</sup> 2086 <sup>4</sup> 2087 <sup>4</sup>	Solid Base Slotted Base Solid Base	Plain Plain Indicating	Diameter of Base  21 g ins. 21 g ins.	Screws	Carton Quantity  10 10 10	Std. Pkg.	Pkg. Wt. Lbs. 35 35 35 35	Mfrs. List Price Each \$0.56 .56	W. E. List per Carton \$12.32 12.32 14.08	
2088	Slotted Base	Indicating	$2\frac{1}{8}$ ins.	$1\frac{7}{16}$ ins.	10	100	55	J .04]	14.08	
		10 Am	peres, 250	Volts						
22 <sup>*</sup> 122 <sup>*</sup> 222 <sup>*</sup> 322 <sup>*</sup>	Solid Base	Plain Plain Indicating Indicating	$\begin{array}{c} 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \end{array}$	134 ins. 134 ins. 134 ins. 134 ins.	10 10 10 10	100 100 100 100	54 54 54 54	\$0.66 .66 .76 .76	\$14.52 $14.52$ $16.72$ $16.72$	
		20 Am	peres, 250	Volts						
32* 132* 432* 532*	Solid Base	Plain Plain Indicating Indicating	$\begin{array}{c c} 3\frac{1}{16} \text{ ins.} \\ 3\frac{1}{16} \text{ ins.} \\ 3\frac{1}{16} \text{ ins.} \\ 3\frac{1}{16} \text{ ins.} \\ 3\frac{1}{16} \text{ ins.} \end{array}$	$\begin{array}{c} 2\frac{5}{32} \text{ ins.} \\ 2\frac{5}{32} \text{ ins.} \\ 2\frac{5}{32} \text{ ins.} \\ 2\frac{5}{32} \text{ ins.} \\ 2\frac{5}{32} \text{ ins.} \end{array}$	1 1 1	30 30 30 30	30 30 30 30	\$1.40 1.40 1.50 1.50	\$3.08 3.08 3.30 3.30	
	30 Amperes, 250 Volts									
42 <sup>A</sup>   142 <sup>A</sup>   442 <sup>A</sup>   542 <sup>A</sup>	Solid Base	Plain Plain Indicating Indicating	3½ ins. 3½ ins. 3½ ins. 3½ ins. 3½ ins.	$\begin{array}{c} 2\frac{7}{16} \text{ ins.} \\ 2\frac{7}{16} \text{ ins.} \\ 2\frac{7}{16} \text{ ins.} \\ 2\frac{7}{16} \text{ ins.} \\ 2\frac{7}{16} \text{ ins.} \end{array}$	1 1 1 1	30 30 30 30 30	41 41 44 44	$ \begin{vmatrix} $1.70 \\ 1.70 \\ 1.80 \\ 1.80 \end{vmatrix} $	\$3.74 3.74 3.96 3.96	
			HREE WA		40 M. N.					
01504	3 Aı   Solid Base	Plain	Volts; 1 A $12\frac{1}{8}$ ins.	mpere, $\frac{25}{116}$ ins.	50 Volts	100	1 31	1 Sn . 19 l	<b>\$10,5</b> 6	
21 <b>52</b> <sup>*</sup> 2153 <sup>*</sup>	Slotted Base	Plain	214 ins.	$1\frac{16}{16}$ ins.	10	100	31	.48	10.56	
	5 Ar	nperes, 125 V	olts: 3 A	mperes, 2	50 Volts	3				
2089 <b>*</b> 2090 <b>*</b>	Solid Base	Plain Plain	1 21 g ins.	$\frac{1}{16}$ ins. $\frac{7}{16}$ ins.	10	100	35   35		\$12.32 12.32	
	10 A	mperes, 125	Volts; 5 A	mperes,	250 Volt	s				
23▲ 123▲	Solid Base	Plain Plain	$\begin{array}{ c c c c c } & 2\frac{15}{32} \text{ ins.} \\ & 2\frac{15}{32} \text{ ins.} \\ & \end{array}$	134 ins. 134 ins.	10	50 50	27 27	$\begin{bmatrix} \$0.76 \\ .76 \end{bmatrix}$	\$13.98 13.98	
		20 Am	peres, 12	5 Volts						



33

133

43

143

The above switches may be converted into lock switches by the use of the Lock Attachments. When specified, round handles will be furnished on the above switches in 3, 5 and 10 ampere

 $2\frac{5}{32}$  ins.  $2\frac{5}{32}$  ins.

 $2\frac{7}{16}$  ins.  $2\frac{7}{16}$  ins.

10

10

10

10

1

1

17

17

19

19

81.50

1.50

\$1.80

1.80

size, without extra charge.

A National Electrical Code Standard.

Solid Base.....

Slotted Base.....

Solid Base.....

Slotted Base.....

Plain

Plain

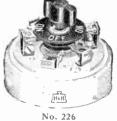
Plain

Plain

 $3\frac{1}{16}$  ins.  $3\frac{1}{16}$  ins.

30 Amperes, 125 Volts  $\frac{312}{314}$  ins.  $\frac{312}{318}$  ins.









No. 24

26 No. 2545

No. 3030

FOUR-WAY 5 Amperes, 125 Volts; 2 Amperes, 250 Volts Schedule "S"								
List No.		Diameter of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs.   W. E List pe Carton	
24▲ 124▲	Solid Base Plain Slotted Base Plain	$\frac{2\frac{15}{32} \text{ ins.}}{2\frac{15}{32} \text{ ins.}}$	134 ins. 134 ins.	10	30	17	\$0.86 \$13.76	
10 Amperes, 125 Volts; 5 Amperes, 250 Volts								
2959 <b>▲</b> 2960 <b>▲</b>	Solid Base   Plain Slotted Base   Plain	$2\frac{11}{16}$ ins. $2\frac{11}{15}$ ins.	$\begin{array}{c c} 2_{16} \text{ ins.} \\ 2_{5} \text{ ins.} \end{array}$	1 1	10 10	12 12	\$1.90   \$4.18 1.90   4.18	
	10	TRIPLE I	POLE				1 1	
20▲	Solid Base   Plain	2   ins.	$2_{16}$ ins.	1	10	11	\$1.90   \$4.18	
126	Slotted Base Plain	$2\frac{11}{16}$ ins.	2 + ins.	l î	10	11	1.90 4.1	
226	Solid Base Indicating	$ 2^{11}_{16}$ ins.	$2_{16}^{1}$ ins.	1	10	îi	2.00 4.40	
326▲	Slotted Base   Indicating	2 ins.	$2 \stackrel{\iota}{\cdot}_{6}$ ins.	1	10	11	2.00 4.40	
		Amperes,	250 Volts					
2655	Solid Base   Plain	4 1/4 ins.	$3_{16}^{3}$ ins.	1	10	10	\$2.90   \$6.3	
2656	Slotted Base Plain	$4\frac{1}{4}$ ins.	$3_{16}^{3}$ ins.	1	10	10	2.90 6.38	
2657 <b>▲</b> 2658 <b>▲</b>	Solid Base Indicating Slotted Base Indicating	$4\frac{1}{4}$ ins.	$3_{16}^{3}$ ins.	1	10	10	3.00 6.60	
2000		$4\frac{1}{4}$ ins.	$3\frac{3}{5}$ ins.	1	10	10	3.09 6.6	
	Taplet and	Wood N	lolding	Switch	ies			
	5 Amperes, 12	SINGLE F	OLE Amperes, 2	50 Volts				
2541	Plain		$2\frac{9}{32}$ ins.	10	100	41	1\$0.361\$7.92	
2542*	Indicating		$2\frac{9}{12}$ ins.	10	100	41	.40 9.00	
	5	DOUBLE 1 Amperes, 2						
2543*	· · · · Plain		$2\frac{9}{32}$ ins.	10	100	43	\$0.65 \$14.86	
2544	Indicating		2 32 ins.	10	100	43	.76 17.10	
	5 Amperes, 12	THREE-V		50 Volte			·	
2545	Plain		$2\frac{9}{32}$ ins.	10 1	100 1	43	\$0.66 (\$14.80	
	Switches for Mou	inting o	on $\frac{1}{2}$ In				1 E.O. 101   \$13.00	
	5 Amperes, 12	SINGLE F	OLE	50 V-la-				
3003*	Plain		1 3 3 ins.	10	100 1	10)	100 0010=0	
30304	To all and to		1 6 4 IIIS.	10	100	42	\$0.36   \$7.9;	

3003		Plain		$1\frac{33}{64}$ ins.	10	100	42	\$0.36   \$7.92	
3030*		Indicating		$1_{64}^{33}$ ins.	10	100	42	.40 9.00	
Thou	vores owit about more	no account ad int	. 11	1 (1	4.1 7	1 .	-	1 1 1 1 1 1 1 1 1	

when specified, round handles will be furnished on the above switches in 3, 5 and 10 ampere size without extra charge.

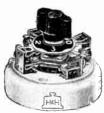
Lock Attachments for Rotary Switches

	Mfr. No.		Std. Pkg.	Pkg. Wt. Lbs.	Mfrs, List Price Each	W. E. List Price Each
- 200	5001	Lock attachment only, for 5 and 10 ampere 250 volt				
通	5010▲	switch and for 3 and 5 ampere 600 volt switch  Lock attachment only, for 20 ampere 250 volt switch and	100	3	\$0.16	\$0.36
	5009*	for 15 and 20 ampere 600 volt switch.  Lock attachment only, for 30 ampere 250 volt switch and	100	3	.16	.36
No. 5001	5002▲	for 10 ampere 600 vo't switch.  Lock key only, to fit all the above lock attachments	100	3	.16	.36

<sup>\*</sup>National Electrical Code Standard.

### Western Electric

## "H & H" SURFACE SWITCHES



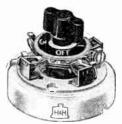




No. 2503



No. 2615



No. 2728

## Electrolier Type

### THREE SECTIONS. CONNECTIONS 1, 1 & 2, 1 & 2 & 3, OFF

These switches operate as follows: First turn connects section One. Second turn connects sections One and Two. Third turn connects sections One, Two and Three. Fourth turn, Off.

### \*5 Amperes, 125 Volts; 2 Amperes, 250 Volts

Schedule "S"

List No.			Diameter of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mirs. List Each	W. E. List per Carton
25 <sup>*</sup>	Solid Base	Plain	$\begin{array}{c} 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \end{array}$	134 ins.	10	30	17	\$0.90	\$16.56
125 <sup>*</sup>	Slotted Base	Plain		134 ins.	10	30	17	.90	16.56
225 <sup>*</sup>	Solid Base	Indicating		134 ins.	10	30	17	1.00	18.40
325 <sup>*</sup>	Slotted Base	Indicating		134 ins.	10	30	17	1.00	18.40

### 10 Amperes, 125 Volts; 5 Amperes, 250 Volts

2501	Solid Base	Plain	$3\frac{1}{16}$ ins.	1 2 5 ins. 1	1	30	30	\$1.40	\$3.08
2502▲	Slotted Base	Plain	$3\frac{1}{16}$ ins.	$2\frac{5}{32}$ ins.	1	30	30	1.40	3.08
2503▲	Solid Base	Indicating	$3\frac{1}{16}$ ins.	$2\frac{5}{32}$ ins.	1	30	31	1.50	3.30
2504▲	Slotted Base	Indicating	3 % ins.	$2\frac{5}{80}$ ins.	1	30	31	1 50	3 30

### THREE SECTIONS. CONNECTIONS 1, 2, 3, OFF

These switches operate as follows: First turn connects section One. Second turn connects section Two. Third turn connects section Three. Fourth turn, Off.

### \*5 Amperes, 125 Volts; 2 Amperes, 250 Volts

2615	Solid Base	Plain	$ 2^{\frac{15}{32}}$ ins.	134 ins.	10	30	17	\$0.90	\$16.56
2616▲	Slotted Base	Plain		134 ins.		30	17	.90	16.56
2617	Solid Base	Indicating	$2\frac{15}{32}$ ins.	$1\sqrt[3]{4}$ ins.	10	30	17	1.00	18.40
2618	Slotted Base	Indicating	$2\frac{15}{32}$ ins.	$1\frac{3}{4}$ ins.	10	30	17	1.00	18.40

### 10 Amperes, 125 Volts; 5 Amperes, 250 Volts

2725 <b>^</b> 2726 <b>^</b>	Solid Base	Plain Plain	$3\frac{1}{16}$ ins. $3\frac{1}{16}$ ins.	$2\frac{5}{32}$ ins. $2\frac{6}{32}$ ins.	1 1	30 30	29 29	\$1.40	\$3.08 3.08
2727▲ 2728▲	Solid Base	Indicating Indicating	$3\frac{1}{16}$ ins. $3\frac{1}{16}$ ins.	$2\frac{5}{32}$ ins. $2\frac{5}{32}$ ins.	1	30 30	29 29	1.50	3.30



The above switches may be converted into lock switches by the use of the Lock Attachments.

\* When specified, round handles will be furnished on the above switches without extra charge.

\* National Electrical Code Standard.







No. 2671



No. 329



No. 2507

## Electrolier Type

### TWO SECTIONS. CONNECTIONS 1, 2, 1 & 2, OFF

These switches operate as follows: First turn connects section One. Second turn connects section Two. Third turn connects sections One and Two. Fourth turn, Off.

### \*5 Amperes, 125 Volts; 2 Amperes, 250 Volts

Schedule "S"

List No.			Diameter of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs, List Price Each	W.E. List per Carton
2661 <sup>*</sup> 2662 <sup>*</sup> 2663 <sup>*</sup> 2661 <sup>*</sup>	Solid Base	Plain Plain Indicating Indicating	$\begin{array}{c} 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \end{array}$	1 <sup>3</sup> / <sub>4</sub> ins. 1 <sup>3</sup> / <sub>4</sub> ins. 1 <sup>3</sup> / <sub>4</sub> ins. 1 <sup>3</sup> / <sub>4</sub> ins.	10 10 10 10	30 30 30 30	17 17 17 17	\$0.76 .76 .86 .86	15.82

### 10 Amperes, 125 Volts; 5 Amperes, 250 Volts

2669	Solid base	Plain		$ 2\frac{5}{32}$ ins.	1			[\$1.40]	
2670*	Slotted Base	Plain	$3\frac{1}{16}$ ins.	$2\frac{5}{32}$ ins.	1	30		1.40	
26714	Solid Base	Indicating	$3\frac{1}{16}$ ins.	$2\frac{5}{32}$ ins.	1	30	30		3.30
26724	Slotted Base	Indicating	3 % ins.	$  2\frac{5}{22} $ ins.	1	30	30	1 1.50	3.30

### TWO SECTIONS. CONNECTIONS 1, 1 & 2, 1, OFF

These switches operate as follows: First turn connects section One. Second turn connects sections One and Two. Third turn connects section One. Fourth turn, Off.

### \*5 Amperes, 125 Volts; 2 Amperes, 250 Volts

Schedule "S"

List No.			Diameter of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkz. Wt. Lbs.	Mfrs. W. E. List Price per Each Carton
29^	Solid Base	Plain	2 15 ins.	134 ins.	10	30	-1i	\$3.90\$15.56
129*	Slotted Base	Plain	$2\frac{15}{32}$ ins.	134 ins.	10	30	17	.90 16.56
229	Solid Base	Indicating	$2\frac{15}{32}$ ins.	134  ins.	10	30	17	1.00 18.10
329▲	Slotted Base	Indicating	$2\frac{15}{32}$ ins.	134 ins.	10	30	17	1.00 18.40

### 10 Amperes, 125 Volts; 5 Amperes, 250 Volts

2505 <sup>4</sup> 2506 <sup>4</sup> 2507 <sup>4</sup> 2508 <sup>4</sup>	Solid Base Slotted Base Solid Base Slotted Base	Plain Plain Indicating Indicating	$3_{16}^{1}$ ins $3_{16}^{1}$ ins.	$\begin{bmatrix} 2\frac{5}{32} & \text{ins.} \\ 2\frac{5}{32} & \text{ins.} \\ 2\frac{5}{32} & \text{ins.} \\ 2\frac{5}{32} & \text{ins.} \\ 2\frac{5}{32} & \text{ins.} \end{bmatrix}$	1 1 1 1	30 30 30 30	30 30 30 30 30	\$1.40 \$0.08 1.40 3.08 1.50 3.30 1.50 3.20
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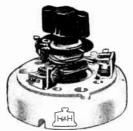
The above switches may be converted into lock switches by the use of the Lock Attachments.

- \*When specified, round handles will be furnished on the above switches without extra charge
- <sup>♠</sup>National Electrical Code Standard.

### "H & H" SURFACE SWITCHES







No. 2400



No. 2609



No. 2602

### Electrolier Type

#### TWO SECTIONS. CONNECTIONS 1, 2, OFF

These switches operate as follows: First turn connects section One. Second turn connects section Two. Third turn, Off.

*5	Amperes,	125	Volts;	2	Amperes,	250	Volts
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Schedule "S"

List No.			Diameter of Base	ScrewHoles Spaced on a Circle	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. W. E. List List Price per Each Carton
2611 <sup>*</sup> 2612 <sup>*</sup> 2613 <sup>*</sup> 2614 <sup>*</sup>	Solid Base	Plain Plain Indicating Indicating	$\begin{array}{c} 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \\ 2\frac{15}{32} \text{ ins.} \end{array}$	134 ins. 134 ins. 134 ins. 134 ins. 134 ins.	10 10 10 10	30 30 30 30	17 17 17 17	\$0.90 \$16.56 .90 16.56 1.00 18.40 1.00 18.40

#### 15 Amperes, 125 Volts; 10 Amperes, 250 Volts

2496▲	Solid Base	Plain	3½ ins.	$(2\frac{9}{16} \text{ ins.})$	1	30	38	1 \$1,701 \$3,74
2497	Slotted Base	Plain	$3\frac{1}{2}$ ins.	$2\frac{9}{16}$ ins.	1	30	38	1.70 3.74
2498	Solid Base	Indicating	$3\frac{1}{2}$ ins.	$2\frac{9}{16}$ ins.	1	30	38	1.80 4.00
2499	Slotted Base	Indicating	$3\frac{1}{2}$ ins.	$2\frac{9}{16}$ ins.	1	30	38	1.80 4.00

#### TWO SECTIONS. CONNECTIONS 1 & 2, 1, OFF

These switches operate as follows: First turn connects sections One and Two. Second turn connects section One. Third turn, Off.

#### \*5 Amperes, 125 Volts; 2 Amperes, 250 Volts

2607	Solid Base	Plain	$ 2^{\frac{15}{32}}$ ins.	13/4 ins.	10	30	17	\$0.90 \$16.56
<b>2</b> 608▲	Slotted Base	Plain	$2\frac{15}{22}$ ins.	13/4 ins.	10	30	17	.90 16.56
2609	Solid Base	Indicating	$2\frac{15}{2}$ ins.	134 ins.	10	30	17	1.00 18.40
2610▲	Slotted Base	Indicating	$2\frac{15}{32}$ ins.		10	30	17	1.00 18.40

#### 15 Amperes, 125 Volts; 10 Amperes, 250 Volts

2486	Solid Base	Plain	1 3½ ins.	2 % ins.	1	1 30	38	1 \$1.70   \$3.74
2487	Slotted Base,	Plain	$3\frac{1}{2}$ ins.	$2\frac{9}{16}$ ins.	1	30	38	1.70 3.74
2488*	Solid Base	Indicating	$3\frac{1}{2}$ ins.	$2\frac{10}{16}$ ins.	1	30	39	1.80 4.00
2489*	Slotted Base	Indicating	$3\frac{1}{2}$ ins.	$2^{\frac{10}{16}}$ ins.	1	30	39	1.80 4.00

## TWO SECTIONS. CONNECTIONS 1, 1 & 2, OFF \*5 Amperes, 125 Volts; 2 Amperes, 250 Volts

	Solid Base     Slotted Base     Solid Base	Plain Plain Indicating	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10 10 10	30 30 30	16 16 16	\$0.90 \$16.56   .90  16.56   1.00  18.40
<b>2</b> 605 <b>≜</b>	Slotted Base	Indicating	$2\frac{15}{32}$ ins. $1\frac{3}{4}$ ins.	10	30	16	1.00 18.40

#### 15 Amperes, 125 Volts; 10 Amperes, 250 Volts

2482▲	Solid Base	Plain	$  3\frac{1}{2} $ ins.	2 9 ins.	1	30	39	\$1,70 83,74
2483	Slotted Base,	Plain	$3\frac{1}{2}$ ins.	$2\frac{1}{16}$ ins.	1	30	39	1.70 3.74
2484	Solid Base	Indicating	$3\frac{1}{2}$ ins.	$2\frac{10}{16}$ ins.	1	30	39	1.80 4.00
2485	Slotted Base	Indicating	3 1/2 ins.	$2\frac{9}{16}$ ins.	1	30	39	1.80 4.00



The above switches may be converted into lock switches by the use of the Lock Attachments.

<sup>\*</sup>When specified, round handles will be furnished on the above switches without extra charge.

<sup>\*</sup>National Electrical Code Standard.

### "H & H" SURFACE SWITCHES

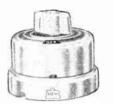
With Porcelain Covers and Handles







No. 2231



No. 2632



No. 2245

#### SINGLE POLE 5 Amperes, 125 Volts; 3 Amperes, 250 Volts

Schedule "S"

List No.			Diameter of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	List Price Each	List per Carton
2625 <sup>4</sup> 2626 <sup>4</sup> 2627 <sup>4</sup> 2628 <sup>4</sup>	Solid Pase	Plain Plain Indicating Indicating	$\begin{array}{c} 2\frac{5}{16} \cdot \text{ins.} \\ 2\frac{5}{16} \cdot \text{ins.} \\ 2\frac{5}{16} \cdot \text{ins.} \\ 2\frac{5}{16} \cdot \text{ins.} \\ 2\frac{5}{16} \cdot \text{ins.} \end{array}$	$\begin{array}{ c c c }\hline 1_{\frac{7}{16}} & \text{ins.} \\ 1_{\frac{7}{16}} & \text{ins.} \\ 1_{\frac{7}{16}} & \text{ins.} \\ 1_{\frac{7}{16}} & \text{ins.} \\ \end{array}$	1 1 1	30 30 30 30	17 17 17 17	\$0.32 .32 .36 .36	.71

## SINGLE POLE 10 Amperes, 125 Volts; 5 Amperes, 250 Volts

2231 <sup>*</sup> 2232 <sup>*</sup> 2205 <sup>*</sup> 2206 <sup>*</sup>	Solid Dase	Plain Plain Indicating Indicating	25% ins. 25% ins. 25% ins. 25% ins.	134 ins. 134 ins. 134 ins. 134 ins.	1 1 1 1	30 30 30 30	25 25 25 25 25	\$0.64 .64 .74 .74	\$1.41 1.41 1.63 1.63
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#### DOUBLE POLE 5 Amperes, 250 Volts

2629 <sup>A</sup> 2630 <sup>A</sup> 2631 <sup>A</sup> 2632 <sup>A</sup>	Solid BaseSlotted BaseSlotted BaseSlotted Base	Plain Plain Indicating Indicating	$\begin{array}{c} 2\frac{5}{16} \text{ ins.} \\ 2\frac{5}{16} \text{ ins.} \\ 2\frac{5}{16} \text{ ins.} \\ 2\frac{5}{16} \text{ ins.} \\ 2\frac{5}{16} \text{ ins.} \end{array}$	$1\frac{7}{16}$ ins. $1\frac{7}{16}$ ins. $1\frac{7}{16}$ ins. $1\frac{7}{16}$ ins.	1 1 1	10 10 10 10	8 8 8 8	\$0.52 .52 .60 .60	1.15
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#### DOUBLE POLE 10 Amperes, 250 Volts

2244 <sup>*</sup> 2245 <sup>*</sup> 2207 <sup>*</sup> 2208 <sup>*</sup>	Solid Base Slotted Base Solid Base Slotted Base	l'lain Plain Indicating Indicating	$2^{\frac{5}{8}}$ ins. $2^{\frac{5}{8}}$ ins. $2^{\frac{5}{8}}$ ins. $2^{\frac{5}{8}}$ ins.	134 ins. 134 ins. 134 ins. 134 ins.	1 1 1	10 10 10 10	9 9 10 10	\$0.85 .82 .92 .92	$\frac{1.81}{2.03}$
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#### THREE-WAY 5 Amperes, 125 Volts; 3 Amperes, 250 Volts

2634 Solid Ease Slotted Base	Plain Plain	$2\frac{5}{16}$ ins. $2\frac{5}{16}$ ins.	$1\frac{7}{16}$ ins. $1\frac{7}{16}$ ins.	1	10	8 8		\$1, 15 1, 15
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#### THREE-WAY 10 Amperes, 125 Volts; 5 Amperes, 250 Volts

Solid Case Slotted Base		$1\frac{3}{4}$ ins. $1\frac{3}{4}$ ins.		\$0.92 .92	

#### FOUR-WAY 5 Amperes, 125 Volts; 2 Amperes, 250 Volts

2234*   Solid Base   Plain	$2\frac{5}{8}$ ins. $1\frac{3}{4}$ ins. $2\frac{5}{8}$ ins. $1\frac{3}{4}$ ins.	1   10 1   10	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
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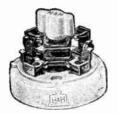


The above switches may be converted into lock switches by the use of the Lock Attachments. When specified, round handles will be furnished on the above switches in 3, 5, and 10 ampere sizes, without extra charge.

National Electrical Code Standard.

### "H & H" ROTARY SURFACE SWITCHES

With Porcelain Covers and Handle







No. 2676



No. 2246

### Electrolier Type

THREE SECTIONS. CONNECTIONS 1, 2, 3, OFF. 5 Amperes, 125 Volts; 2 Amperes, 250 Volts

Schedule "S"

List No.			Diameter of Base	ScrewHoles Spaced on a Circle	('arton ()uantity	Std. Pkg.	Lbs.	Listl'rice Each	W.E. List Price per Carton
2747 <sup>4</sup> 2748 <sup>4</sup> 2749 <sup>4</sup> 2750 <sup>4</sup>	Solid Base Slotted Base Solid Base Slotted Base	Plain Plain Indicating Indicating	25 g ins. 25 g ins. 25 g ins. 25 g ins. 25 g ins.	134 ins. 134 ins. 134 ins. 134 ins.	1 1 1	10 10 10 10	10 10 10 10	\$1.06 1.06 1.16 1.10	2.33

## THREE SECTIONS. CONNECTIONS 1, 1 & 2, 1 & 2 & 3, OFF 5 Amperes, 125 Volts; 2 Amperes, 250 Volts

2240 <sup>A</sup> 2241 <sup>A</sup> 2242 <sup>A</sup> 2243 <sup>A</sup>	Solid Base Slotted Base Solid Base Slotted Base	Plain Plain Indicating Indicating	$2^{5}$ $\zeta$ ins. $1^{3}$ $\zeta$ i.s. $2^{5}$ $\zeta$ ins. $1^{3}$ $\zeta$ ins. $2^{5}$ $\zeta$ ins. $1^{3}$ $\zeta$ ins. $2^{5}$ $\zeta$ ins. $1^{3}$ $\zeta$ ins. $1^{3}$ $\zeta$ ins.	1 1 1	1 1	0 0 0 0	9 9 9	\$1.06 1.06 1.16 1.16	\$2.33 2.33 2.55 2.55
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## TWO SECTIONS. CONNECTIONS 1, 2, 1 & 2, OFF \* 5 Amperes, 125 Volts; 2 Amperes, 250 Volts

2674*         Slotted Base         Plain         25 g ins.         13 ins.         1           2675*         Solid Base         Indicating         25 g ins.         13 ins.         1           2676*         Slotted Base         Indicating         25 g ins.         13 ins.         1           25 g ins.         13 ins.         1         25 g ins.         13 ins.         1	10 10 10	10	.96 1 06 1.06	2.11 2.33 2.33
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## TWO SECTIONS. CONNECTIONS 1, 1 & 2, 1, OFF \*5 Amperes, 125 Volts; 2 Amperes, 250 Volts

		1 10 1 10 1 10 1 10	9 9 9	\$0.96 \$2.11 .90 2.11 1.06 2.33 1.06 2.33
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## TWO SECTIONS. CONNECTIONS 1, 1 & 2, 2, OFF \*5 Amperes, 125 Volts; 2 Amperes, 250 Volts

2246   Solid Base	Plain	25% ins.   25% ins.	134 ins.   134 ins.	1	1	0 0	9	1	\$0.96 .96	\$2.11
2247 <sup>4</sup> Slotted Base 2248 <sup>4</sup> Solid Base 2249 <sup>4</sup> Slotted Base	Plain Indicating Indicating	$2\frac{5}{8}$ ins. $2\frac{5}{8}$ ins. $2\frac{5}{8}$ ins.	134 ins. 134 ins.	1	1 1	0	9 9		1.06	$\frac{2.33}{2.33}$

## TWO SECTIONS. CONNECTIONS 1, 2, OFF 5 Amperes, 125 Volts; 2 Amperes, 250 Volts

$egin{array}{cccccccccccccccccccccccccccccccccccc$	3
	2.3

The above switches may be converted into lock switches by the use of the Lock Attachments. When specified, round handles will be furnished on the above switches in 3. 5. and 10 ampere sizes, without extra charge.

\* Screws spaced on centers.

National Electrical Code Standard.

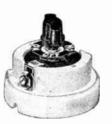
### "H\*&TH" BARRIER 600 VOLT SWITCHES







No. 2335



No. 3501/2



No 2166

### For Electric Railway Use

### 5 Amperes, 600 Volts **FUSED SWITCHES**

Schedule "S"

List No.		Diam. of Base	Screws Spaced on Centers	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfr. List Each	W. E. List per Carton
2336	Single pole, indicating, without fuse. Three-way, plain, without fuse. Two-circuit, indicating, without fuse.		3½ ins. 3¼ ins. 3¼ ins.	1 1 1	25 25 25	80 80 80	\$1.50 1.50 1.50	\$3.30 3.30 3.30
2018	Fuse for above, 5 amperes, 600 volts Schedule "H"		31,í ins.	10	100	1	.40	8.80

The above prices do not include fuses. Fuses will not be shipped with switches unless they are specifically ordered, and then they will be billed extra at the regular price.

#### SINGLE POLE 5 Amperes, 600 Volts

	50½4 150½4 250½4 350½4	Solid Base	Plain Plain Indicating Indicating	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1 1 1 1		50 50 50 50	37 37 37 37 37	\$0.66 .66 .76	1.67
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#### SINGLE POLE 10 Amperes, 600 Volts

2164	Solid Base	Plain	$3\frac{3}{16}$ ins. $2\frac{7}{16}$ ins.	1 1	1 50	74	[\$1.60]	\$3.52
2165	Slotted Base	Plain	$3\frac{3}{16}$ ins. $2\frac{7}{16}$ ins.	1	50	74	1.60	3.52
2166	Solid Base	Indicating	$3\frac{3}{16}$ ins. $2\frac{7}{16}$ ins.	1	50	74	1.70	3.74
2167	Slotted Base	Indicating	$3\frac{3}{16}$ ins. $2\frac{7}{16}$ ins.	1	50	74	1.70	3.74

#### SINGLE POLE 20 Amperes, 600 Volts

241½ 341½	Solid Base	Plain Plain	$\begin{vmatrix} 3\frac{1}{2} & \text{ins.} \\ 2\frac{1}{2} & \text{ins.} \end{vmatrix} = \begin{vmatrix} 2\frac{7}{16} & \text{ins.} \\ 2\frac{7}{16} & \text{ins.} \end{vmatrix}$	1	50		\$1.90	
44112	Solid Base	Indicating	$3\frac{1}{2}$ ins. $2\frac{7}{16}$ ins. $3\frac{1}{2}$ ins. $2\frac{7}{16}$ ins.	1 1	50 50			
54112	Slotted Base	Indicating			50	76		

#### DOUBLE POLE 5 Amperes, 600 Volts

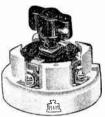
Slotted Base   Plain   2\frac{3}{2}\frac{1}{2}\text{ ins. } 1\frac{3}{2}\frac{1}{2}\text{ ins. } 1\frac{3}{2}\frac{1}{2}\text{ ins. } 1\frac{3}{2}\frac{1}{2}\text{ ins. } 1\frac{3}{2}\frac{1}{2}\text{ ins. } 1\frac{2}{2}\frac{1}{2}\text{ ins. } 1\frac{2}{2}\frac{1}{2}	50 50 50	36   \$0.90   36   .90   36   1.00   36   1.00	$\frac{1}{2.20}$
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#### DOUBLE POLE 10 Amperes, 600 Volts

2168	I C. I. I Dame	131 - 1	1 12 2 1	1 - N - P - T					
	Solid Base	Plain	$3\frac{3}{16}$ ins.	2 % ins. 1	1	50	1 74	1.81.801	\$3.96
2169*	Slotted Base	101				000	1 4:		
		Plain	$3\frac{3}{16}$ ins.	$2\frac{7}{16}$ ins.	1	1 50	1 74	1.80	-3.96
2170	Solid Base	Indicating	$3\frac{1}{16}$ ins.			20	1 2		
			0 16 IIIS.	$2\frac{7}{16}$ ins.	Ţ	1 50	1-1	1.1.90	4.18
2171	Slotted Base	Indicating	$3_{16}^{3}$ ins.	$2\frac{\pi}{16}$ ins.	1	50	74	1 1 00	4 10
		_ mineating	_1 016 1115.	1 476 108. (	1	1 00	14	1.90	4.18

The above switches may be converted into lock switches by the use of the Lock Attachments. A National Electrical Code Standard.

### "H & H" BARRIER 600 VOLT SWITCHES









No. 57

No. 2176

No. 162

No. 5004

### For Electric Railway Use

THREE-W	/A	Y
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Schedule '	"S"
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List No.		Amps. 600 Volts		Diam. of Base Inches	Screws Spaced Centers Inches	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Price Each	W. E. List per Carton
$\frac{53\frac{1}{2}}{153\frac{1}{2}}$	Solid Base Slotted base	5	Plain Plain	$\begin{array}{r} 2\frac{15}{32} \\ 2\frac{15}{32} \end{array}$	$\begin{array}{c} 1_{\frac{3}{3}\frac{5}{2}} \\ 1_{\frac{3}{3}\frac{5}{2}} \end{array}$	1	50 50	37 37	\$0.90 .90	\$1.98 1.98
2172 2173	Solid base Slotted base	10 10	Plain Plain	$3\frac{3}{16}$ $3\frac{3}{16}$	$\begin{array}{c} 2\frac{7}{16} \\ 2\frac{7}{16} \end{array}$	1	50 50	74 74	1.70 1.70	3.74 3.74

### Two-Circuit Switches

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	57▲ 157▲ 257▲	Solid base Slotted base Solid base	5 5 5	Plain Plain Indicating	$\begin{array}{r} 2\frac{15}{32} \\ 2\frac{15}{32} \\ 2\frac{15}{32} \\ 2\frac{15}{32} \\ 215 \end{array}$	1 2 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	1 1 1	50 50 50	37 37 37	\$0.90 .90 1.00	\$1.98 1.98 2.20
2177   Slotted base   10   Indicating   $3\frac{3}{16}$   $2\frac{7}{16}$   1   50   74   1.80   3.93	$\frac{2175}{2176}$	Slotted base	10 10	Plain Indicating	$3\frac{3}{16}$ $3\frac{3}{16}$	$\frac{2\frac{7}{16}}{2\frac{7}{16}}$	1 1 1 1	50 50	74 74		2.20 3.74 3.74 3.96

### Sectional Switches for Car Heaters

#### Connections 1, 2, 1 and 2, Off

2193 2194 2195 2196	Solid base Solid base	10 10 10 10	Plain Plain Indicating Indicating	$ \begin{array}{c} 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 5 \\ 5 \end{array} $	$ \begin{array}{c} 2\frac{7}{16} \\ 2\frac{7}{16} \\ 2\frac{7}{16} \\ 2\frac{7}{16} \\ 2\frac{1}{16} \end{array} $	1 1 1 1 1	50 50 50 50	75 75 75 75	\$1.70 1.70 1.80 1.80	\$3.74 3.74 3.96 3.96
799 800	Solid base	15 15	Plain Indicating	$\frac{45}{8}$ $\frac{45}{8}$	$\frac{31/2}{31/2}$	1 1	10 10	35 35	3.00 3.10	6.60

#### 35 Amperes, 600 Volts. Reciprocating

162	Solid base	   Indicating	$5\frac{5}{8}$	1 41/2 1	1   10	85	1 \$10 00 1\$22 00	

### Handles for Rotary Switches

List No.		Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Price Each	W. E. List Price Each
2910	Round handle of rubber composition for 5 and 10 ampere 250 volt switch, and for 3 and 5 ampere 600 volt switch.	100	21/4	\$0.06	\$0.13
5004	Handle of rubber composition for 5 and 10 ampere 250 volt	100	274	ФО.ОО	₩0.13
0001	switch, and for 3 and 5 ampere 600 volt switch.	100	2	.06	. 13
5005	Handle of rubber composition for 20 ampere 250 volt switch and		_	.00	. 10
	for 15 and 20 ampere 600 volt switch	100	31/2	.06	. 13
4242	Handle of rubber composition for 30 ampere 250 volt switch and				
0450	for 10 ampere 600 volt switch.	100	4	.06	. 13
2156	Handle of porcelain for 5 and 10 ampere 250 volt switch and for	100	.	0.1	
2157	3 and 5 ampere 600 volt switch	100	3	.06	. 13
4101	20 ampere 600 volt switch.	100	5	.06	. 13
2218	Handle of porcelain for 30 ampere 250 volt switch, and for 10	100	,,	.00	.13
	ampere 600 volt switch	100	5	.06	. 13

<sup>\*</sup>National Electrical Code Standard.

### "H & H" SWITCHES AND SWITCH PLATES









Schedule "S"

### Rotary Flush Switches

Mirs. Amperes W. E. Pkg. List List Without Plate Wt. List 125 250 Carton Std. Price per Volts No. Volts Pkg. Lbs. Carton Quantity Each 600 5 3 Single pole, plain 100 10 55 \$0.62 \$13.64 6014 Single pole, plain Single pole, indicating 10 5 .71 10 50 30 13.06 2881 10 5 10 50 30 .81 14.90602\* Double pole, plain...
Double pole, indicating..... 10 10 10 50 30 1.05 19.32 288**2**\* 10 10 10 50 30 1.15 21.162263\* 3 5 10 5030 .8215,09 603\* 10 10 50 30 1.05  $\frac{19.22}{15.75}$ 6044 Four-way, plain.... 10 10 1.05

		30 AMPERE, 250 VOLT ROTARY FL	.USH SV	VITCH	ES		
3061▲	 30	Single pole, plain	1	10	25	\$1.90	\$4.18
3004*	 30	Double pole, plain	1	10	25	1.90	4.18
3054▲	 30	Single plate, 4½ x 4%	10	10	12	1 50	9.95

These switches can be furnished with indicating dials. They can also be furnished in three-way, fourway and electrolier connections.

### Electrolier Type

				TWO SECTIONS. CONNECTIONS 1, 1 AND 2, 1, OFF
609 <b>^</b> 2886 <b>^</b>	5 5		$\frac{2}{2}$	Plain         10         10         8         \$1.05         \$15.75           Indicating         10         10         8         1.15         17.25
				TWO SECTIONS. CONNECTIONS 1, 1 AND 2, 2, OFF
619 <b>*</b> 2887 <b>*</b>	5 5		$\frac{2}{2}$	Plain
				TWO SECTIONS. CONNECTIONS 1, 2, 1 AND 2, OFF
2681 <sup>*</sup> 2888 <sup>*</sup>	5 5		$\frac{2}{2}$	Plain   10   10   8   \$1.05   \$15.75   Indicating   10   10   8   1.15   17.25
	TF	IRE	E	SECTIONS. CONNECTIONS 1, 1 AND 2, 1 AND 2 AND 3, OFF
605 <b>*</b> 2885 <b>*</b>	5 5		$\frac{2}{2}$	Plain
				THREE SECTIONS. CONNECTIONS 1, 2, 3, OFF
3055 <b>^</b> 2980▲	5 5		$\frac{2}{2}$	Plain

### Plates for Rotary Flush Switches

Plain List No.	Indicating List No.	Style	Size	Carton	Std.	Pkg. Wt.	Mfrs. List Price	W. E. List per
			ins.	Quantity	Pkg.	Lbs.	Each	Carton
4067		Single, struck up .040 in, brass	4½ x 2¾	25	*100	23	\$0.40	\$18.40
4031	2891	Single, solid 1/8 in. brass	$4^{1}2 \times 237$	25	*100	40	.60	27.60
4032	2892	2 gang, solid 16 in. brass	418 x 4 %	10	*50	35	1.20	-22.08

\*100 single plates, or the equivalent in gangs is a standard package. Larger gangs and tandem gangs can be furnished at proportionate prices.

When specified, round handles will be furnished on the above switches in 3, 5 and 10 ampere

sizes, without extra charge.

\*National Electrical Code Standard.

### "H & H" SWITCHES



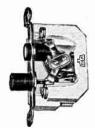
No. 2081



No. 2083-Lock



No. 2967



No. 4401

#### \*Push Button Switches

Schedule "S"

List No.	Amp 125 Volts	eres 250 Volts		Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mirs, List Price Each	List per Carton
2081 <sup>A</sup> 2082 <sup>A</sup> 2083 <sup>A</sup> 2084 <sup>A</sup>	10 10 10 10	5 10 5 5	Single Pole Double Pole Three-Way Four-Way		100 50 50 10	56 31 31 9	\$0.45 .70 .70 2.00	\$9.90 12.88 12.88 30.00

#### \*LOCK PUSH BUTTON SWITCHES

List No.		Amp 125 Volts	eres 250 Volts		Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	List Price Each	W. E. List per Carton
2082 <sup>A</sup> I 2083 <sup>A</sup> I 2084 <sup>A</sup> I	Lock Lock Lock Lock Key fo		5 5	Single Pole Double Pole Three-Way Four-Way Sutton Switch	10 10 10	100 50 50 10 100	56 31 31 8 2	\$1.06 1.30 1.30 2.50 .15	\$23.32 23.92 23.92 37.50 each .33

#### "NUTMEG" PUSH SWITCHES

4401 4403	10	5 5	Single Pole	10	100 50	48 28	.31	\$6.82 7.73

## \*Electrolier Type of Push Button Switches

This switch gives the same alternate, consecutive, or simultaneous control of a group of lights that can be obtained by using any other types of electrolier switches, and in addition it has a great advantage over other types because the lights can be extinguished at any time by simply pushing the black button.

This convenience appeals greatly to the householder who has hitherto had to snap an electrolier switch

through all its different combinations before the lights could be put out.

The external appearance and dimensions are the same as the regular push button switches, and this switch fits all standard plates and wall eases.

#### THREE SECTION CONNECTIONS

This switch operates as follows:

Pearl Button

Black Button

Lights section One. First Push:

Off

Off

Second Push: Lights sections One and Two.
Third Push: Lights sections One and Two and Three. Off

Schedule "S"

List No.	125 Volts	250 Volts	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Each	W. E. List per Carton
2967▲	10 Amperes	5 Amperes	10	10	8	\$1,15	\$17.25

#### TWO SECTION CONNECTIONS

These switches operate as follows:

No. 2968—One, Off, One and Two, Off. No. 3264—One, Off, Two, Off, One and Two, Off.

List No.	125 Volts	250 Volts	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	List Price Each	W. E. List per Carton
2968▲	10 Amperes	5 Amperes	10	10	8	६1,15	\$17.25

<sup>\*</sup>Depth of switches without plates,  $1\frac{33}{64}$  inches. Outside supporting screw holes,  $3\frac{9}{32}$  inches on centers. Inside supporting screw holes,  $2\frac{13}{16}$  inches on centers.

▲ National Electrical Code Standard.

## "H & H" SWITCHES AND RECEPTACLES



No. 3048



No. 3065



No. 2958

Schedule "S"

### Panel Board Switches

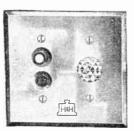
							410
List No.	Style	Ampere	Volts	Carton Std. Quantity Pkg.	Pkg. Wt. Lbs.	Mfrs. List Price Each	W. E. List per
*3018* *3065* 3522 3248	Push, double pole Rotary indicator, double pole Push, double pole Push, double pole	10 10 10 20	250 250 250 250 250	1 50 1 50 1 50 1 50 1 50	35 26 35 26	\$1.15 1.00 1.15 1.65	Carton \$2.53 2.20 2.53 3.63

2955▲	METAL CAP ROTARY	PANE	PANEL BOARD SWITCHES					Schedule "S"	
	Double pole indicator, square base square corners.  Double pole indicator, round base. Double pole indicator, square base	10	250 250	10 10	100 100	53 53	\$0.91 .86	\$20.00 18.92	
*7)	with round corners	10	250	10	100	53	.91	20.00	

<sup>\*</sup>Porcelain bases with black composition covers entirely covering all current carrying parts, and matching the slate of the panel.



No. 2001



No. 4149



No. 2999



No. 3000

### Momentary Contact Switches

For Use With Remote Control Devices

Schedule "H"

List		Carton	Std.	Pkg. Wt.	Mfrs. List Price	W. E. List
No. 2061▲	733	Quantity		Lbs.	Each	Carton
	Two button, two circuit switch, no plate Two button, two circuit lock switch, no plate	1	10	11	\$3.10	\$6.82
2179	One button, one circuit switch, no plate	1 1	10 10	11	$\begin{bmatrix} 2.85 \\ 1.90 \end{bmatrix}$	$\frac{6.27}{4.18}$
$\frac{2179L}{2363}$	One button, one circuit lock switch, no plate.  Momentary contact switch, no plate.		10	11	2.35	5.17
	participation of the participa	10	10	9	1.50	19.00

No. 2061. Pressure on either button closes its respective single pole switch, and the release of the button opens the circuit with a quick snap.

This switch can be installed in the regular deep wall case, and takes the regular push button flush plate.

No. 2363. This is a smaller switch that does not have the same quickness of snap nor length of break as the No. 2061.

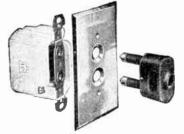
44.40.4	Pilot Lamp Recept				Schedu	ıle "H"
2999-	Comb. push plate and bull's eye, dimensions $4^{+}$ 2 x $4^{+}$ 6 Reept, with 2 C.P. 125 volt candelabra base lamp. Single plate $(4^{1}$ 2 x $2^{3}$ 4) with bull's eye. Comb. plate only $(4^{+}$ 2 x $6^{3}$ 5) for push switch, pilot	10	25 25 25 25	17 17 13	\$1.75 1.00 1.25	\$3.85 18.40 23.00
	lamp and plug receptacle	. 1	25	25	2.40	5.28

The receptacle base is 1 \( \frac{9}{16} \) inches deep. National Electrical Code Standard.

### "H & H" RECEPTACLES AND SWITCHES







No. 2934

No. 2034

No. 3087

Base	Board	Recep	ptac	le

Schedule	"H"

List No.		Amperes	Volts	Carton Quantity	Std. Pkg.	Wt. Lbs.	Each	List per Carton
2934	Receptacle complete	10	250	1	30	35		\$2.20
3001▲	Base only			10	30	16	,40	
3002▲	Plug only			10	30	7	.25	
3011	Plate only			10	30	15	.35	6.44

Dirt Proof Base Board Receptacles

SHUTTERS ON THE PLATE Schedule "H"								
2034	Receptacle complete	10	125	1	30	31	\$1.40[\$3.08	
2001	Receptacle base		1 1	10	30	15	50 9.20	
2002	Receptacle plug		1	10	30	5	.25 4.60	
2033*	Single plate for receptacle			15	30	15	,65 17.94	
LISED WITH STANDARD SWITCH PLATE								

3087	Receptacle complete	10	250	1	30	31	\$1.40 \$3	
2850	Receptacle base			10	30	15		1.72
200 <b>2</b>	Receptacle plug			10	30	30	.25 4	F. 00 77
2301	Single plate for receptacle			11	100	90		

These receptacle plates may be furnished in gangs, and also in gang combinations with switch plates. Receptacles in gangs are spaced 113 inches between centers. Outside supporting serew holes are spaced 3 9 inches on centers. Inside supporting screw holes are spaced 2 13 inches on centers.







No. 2532



No. 3047

### Pendent Switch

Schedule "H"

List No.		Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.		W. E. List per Carton
2532▲	S. P. 6 amp. 125 v.; 3 amp. 250 v	10	100	32	\$0.50	811.00

Standard finish polished brass. No extra charge for brush brass.

Automatic Door Switch				chedule "S"
2022* S. P. 6 amp. 125 v.; 3 amp. 250 v	10	30	22	\$2.25 \$41.40
	10	10	10	2.25 33.75

List No. 2022. Light on when door is opened. List No. 2023. Light on when door is closed.

The shell of the switch is of sheet steel .081 inch in thickness. Dimensions of plate, 3¾ x 1¼ inches. Opening required, 25% x 1 1 inches. Depth, 134 inches.

### Wall Case for Door Switch

Schedule "H"

A special wall case is made for this switch, to be used with flexible non-metallic conduit or with iron conduit, with knockout outlets for 5% inch and 7% inch conduit. 3047\* For one door switch 11/4 x 21/8 x 23/4 ins..... 20 \$0.40 \$0.88

\*National Electrical Code Standard.

### "H & H" BRASS PLATES











No. 4077

No. 4052

No. 4068

No. 3144

No. 3244

### Plates for Push Button Switches

Schedule "S"

List No.		Dimensions Height Length Inches Inches	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Price Each	W. E. List per Carton
$\frac{4077}{4078}$ $\frac{4079}{4079}$	For One Switch. For Two Switches. For Three Switches.	$4\frac{1}{2} \times 4\frac{9}{16}$	25 10 5	* * *	23 20 19	\$0.14 .28 .42	\$7,35 6,44 4,83

The above plates are stamped from .040-inch rolled brass and have reinforced bevelled edges to make them strong. The screw holes are deeply countersunk to rest upon the frame of the switch, so that the plate will not dip in under pressure of the screws.

### WITH REGULAR SQUARE EDGES

2302   For I wo Switches	$\frac{2301}{2302}$	For One Switch. For Two Switches.	$\frac{4\frac{1}{2} \times 2\frac{3}{4}}{4\frac{1}{2} \times 4\frac{9}{16}}$	25 10			\$0.35	
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The above plates are stamped from .060-inch rolled brass and are as strong and rigid as solid plates.

#### STANDARD SIZE SOLID PLATES

Made from 18-inch hard rolled brass.

4051	For One Switch	4½ x 2¾	25	i.	40	\$0.50	\$26.25
4052	For Two Switches	41/2 x 4 9	10	*	35	1.00	23.00
4053	For Three Switches	416 x 636	1 5	*	35	1.50	17.25
4054	For Four Switches	415 x 83	3	*	35	2 00	23.00
4055	For Five Switches.	416 x 10	ΙïΙ	*	35		
4056	For Six Switches	4½ x 11 13		*		3.00	6.90
4057	For Seven Switches	$4\frac{1}{2} \times 13\frac{16}{6}$			35	3,60	8.28
4058	For Eight Switches				35	4.20	9.66
1000	FOI Fagni Switches	$4\frac{1}{2} \times 15\frac{7}{16}$	<u> </u>	_ *	35	4.80	11.04

#### SMALL SIZE SOLID PLATES

Made from 1/8-inch hard rolled brass.

4041   For One Switch	
	15
4042 For Two Switches $\frac{4 \times 41\frac{4}{8}}{1}$ $\frac{1}{1}$ * $\frac{30}{28}$ $\frac{60.50}{1.00}$ $\frac{81}{2}$	. 20
4043   For Three Switches 4 x 515   1   *   98   1 50   9	45
4044 For Four Switches $4 \times \frac{73}{16}$ $1 \times 28 \times 2.00$ $3 \times 200$	CO

On horizontal gang plates, switches in gang are spaced  $1\frac{13}{16}$  inches between centers. TANDEM PLATES

Made from 1/2-inch hard rolled brass.

407.3	13 (1) (1) (1)						
4072	For Two Switches	8!x x 23/4   1	1 1	*	1 35	1 81 20 1	89 76
4073	For Thurs Switches	1127 027				·	422 10
4019	For Three Switches	11°4 X 2°4	1	*	35	1.80	4 1.1
4074	For Four Switches	153 2 932	1 1	*	13 "	5 40	£ 2.
1112	The state of the s	10.8 x 254	1		35	2.40	5.52
4075	For Five Switches	19 x 234	1 1	*	4) =	2 00	0.00
4070	1) (1: 41 : 1	10 1 - 74			- 00	3.00	-6.90
4076	For Six Switches	225 6 x 237	1 1	*	35	3.60	8.28
		22 ( 1, 1, 1	<u> </u>		1313	1 0.00 j	0.40

### STRUCK-UP BLANK PLATES (.040 IN.)

4068       For One Gang.       4½ x         4084       For Two Gang.       4½ x         4085       For Three Gang.       4½ x	$4\frac{9}{16}$ $10$ $10$ $20$ $44$ $10.56$	
---	---	--

#### STRUCK-UP TELEPHONE PLATES (.040 IN.)

3144	With One Hole	 25	1 1	23	80.23	\$10.93
3244	With Two Holes	 25	† † '	23	.24	11.40

On tandem plates, switches are spaced 3% inches between centers.

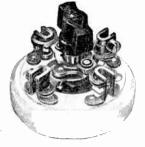
Tandem plates fit the standard wall cases,

\*100 single plates, or the equivalent in gangs, is a standard package.

†100 plates or 100 gangs is a standard package. ‡100 plates or 100 gangs is a standard package.

### DIAMOND "H" SURFACE SWITCHES









No. D-222

No. D-422

No. D-221

No. D-200

## SINGLE POLE 5 Amperes, 125 Volts, 3 Amperes, 250 Volts 10 Am

10 Amperes, 125 Volts, 5 Amperes, 250 Volts

List No.	Std. Pkg.	Mfrs. List Price	W. E. List Price		List No.	Std. Pkg.	Mfrs List Price	W. E. List Price
200 D200 220 D220 2200 D2200	250 250 100 100 100 100	\$0.28 .32 .36 .40 .36 .40	\$0.67 .77 .86 .96 .86	Pony, Slotted or Open, Plain Pony, Slotted or Open, Dial Concealed—Plain Concealed—Dial Slotted—Plain Slotted—Dial	221 D221 2210 D2210	100 100 100 100	\$0.48 .54 .48 .54	\$1.15 1.30 1.15 1.30
		0.1	107 1/ 1					

	20 Amper	es, 125 Volts		30 Amperes,	125 Vol	lts	
321 D321 3210 D3210	30   80.92 30   1.00 30   .92 30   1.00	\$2.21 2.40 2.21 2.40	Concealed—Plain Concealed—Dial Slotted—Plain Slotted—Dial	D421 4210 D4210	30 30 30 30	\$1.40 1.50 1.40 1.50	\$3.36 3.60 3.36 3.60

#### DOUBLE POLE

5 Amperes, 2	250 Volts	10 Amperes, 250 Volts
122   100   80.60   \$ D122   100   .64   1220   100   .60   D1220   100   .64	Concealed—Plain   Concealed—Plain   Concealed—Dial   1.44   Slotted—Plain   Slotted—Dial   Concealed—Dial   $ \begin{array}{c c c c c c c c c c c c c c c c c c c $	

20 Amperes, 250 Volts		30 Amperes, 2	50 Volts	
322         30         \$1.40         \$3.36           D322         30         1.50         3.60           3220         30         1.40         3.36           D3220         30         1.50         3.60	Concealed—Plain Concealed—Dial Slotted—Plain Slotted—Dial	422   D422   4220   D4220	20   \$1.70   \$4.08 30   1.80   4.32 30   1.70   4.08 30   1.80   4.32	2



No. 8022

### Series Parallel Switches

These switches have been specially designed for use on heating and cooking apparatus. They are arranged for three heats—"High-Medium-Low"— with an "Off" position, and are particularly suited to the control of ovens, hot plates, ranges, flatirons, etc. Dials are furnished for these switches in two styles. The regular standard switch dial carried by the switch mechanism under the metal shell, or an outside heavy metal dial which moves with the handle and completely covers the front of the switch. With the latter type ne dirt, soot or other objectionable material can get into the mechanism.

		e Dials	Outside		Inside Dials			
W. E. List Each	Mfrs. List Each	Std. I'kg.	List No.		W. E. List Each	Mfrs. List Each	Std. I'kg,	List No.
\$1.63	\$9.68	100	8012	$\left\{\begin{array}{c} 5 \text{ amperes, } 250 \text{ volts} \\ 5 \text{ amperes, } 125 \text{ volts} \end{array}\right\}$	\$1.63	\$0.68	100	801
		100	8022	5 amperes, 250 volts (10 amperes, 125 volts)	2.02	.84	100	802
2.02	.84			10 amperes, 250 volts } 20 amperes, 125 volts }	3.60	1.50	100	803
3.60	1.50	100	8032	(15 amperes, 250 volts)	4.32	1.80	30	801
4.32	[-1.80]	30	8042	(30 amperes, 125 volts)			1	

Delivery F. O. B. Factory, Hartford, Conn. For warehouse deliveries write nearest house.

### DIAMOND "H" PUSH BUTTON SWITCHES



No. 060



No. 060 Showing Heavy Porcelain Base



No. 065



No. 090

#### Push Button Switches

**Laboratory Ratings.** Single pole, 3 way and 4 way, 10 amperes, 125 volts—5 amperes, 250 volts, Double pole, 10 amperes, 250 volts. Shallow base,  $1\frac{1}{2}$  inches deep. Switch supporting screws  $3\frac{9}{32}$  inches center to center.

1			Mfrs.	W. E.
List	i	Std.	List	List
No.		Pkg.	Each	Price
†050	Single Pole, without plates	100	\$0.45	\$1.08
†060	Double Pole, without plates	50	.70	1.68
†070	3 Way, without plates	50	.70	1.68
†080	4 Way, without plates	10	2.00	4.80
†055	Single Pole, lock type, without plate	100	.90	2.16
†065	Double Pole, lock type, without plate	50	1.15	2.76
1075	3 Way, lock type, without plate	50	1.15	2.76
†085	4 Way, lock type, without plate	10	2.45	5.88

#### MOMENTARY CONTACT SWITCH

090	Momentary contact switch without plate	25	+ \$2.40	\$5.76
091	Single Button, momentary contact switch normally open	25	2.40	5.76
092	Single Button, momentary contact switch normally closed	$^{25}$	2.40	5.76
093	Momentary contact switch—with one side open one side closed	25	2.40	5.76
095	Momentary contact lock type without plate	$^{25}$	2.85	6.84
255	Key only for lock switch	25	.10	.24

#### PLATES FOR PUSH BUTTON SWITCHES

#### 100 Single Plates or Equivalent in Gauge in a Standard Package



No. T112

			Mirs.	W.E.
List		Size	List	List
No.		Inches	Each	Fach
111	Solid single plate 1/8-in. thick	$2\frac{3}{4} \times 4\frac{1}{2}$	\$0.50	\$1.20
112	Solid 2 gang plate 1/8-in, thick	$5\frac{1}{2} \times 4\frac{1}{2}$	1.00	2.40
113	Solid 3 gang plate 1/8-in. thick	$8\frac{1}{4} \times 4\frac{1}{2}$	1.50	3.60
114	Solid 4 gang plate 1/8-in. thick	$11 \times 4\frac{1}{2}$	2.00	4.80
115	Solid 5 gang plate 1/8-in, thick	$13\frac{3}{4} \times 4\frac{1}{2}$	3.00	7.20
116	Solid 6 gang plate 1/8-in, thick	$16\frac{1}{2} \times 4\frac{1}{2}$	3.60	8.61
1111	Single plate .060 stamped brass	$2\frac{3}{4} \times 4\frac{1}{2}$	.35	.84
1112	2 gang plate .060 stamped brass	$2\frac{3}{4} \times 8\frac{7}{16}$	.70	1.63
T112	2 gang tandem plate solid	$2^{34}_{24} \times 8^{7}_{16}$	1.20	2.88
T113	3 gang tandem plate solid	$2\frac{3}{4} \times 12\frac{15}{16}$	1.80	4.32
T114	4 gang tandem plate solid	$2\frac{3}{4} \times 17\frac{7}{16}$	2.40	5.76

#### SPECIAL SIZE PLATES

Plates of special dimensions can be furnished immediately upon receipt of order. Special automatic machinery enables us to make them up without delay.

Orders for special size plates should always be accompanied by a plainly marked sketch giving all dimensions.

Prices on application.

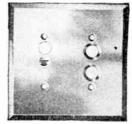
Push button plates can be supplied with rims of 1/8-inch brass, either 1/4-inch, 3/8-inch,

or 12-inch deep, at \$3.00 list per gang extra.

Delivery F. O. B. Factory, Hartford, Conn. For warehouse deliveries write nearest house.

## DIAMOND "H" RECEPTACLES AND SWITCHES





2 Gang Combination Push and Receptacle Plate



3 Gang Combination Tandem Plate

These receptacles operate automatically by inserting or withdrawing the plug. Plates can be furnished either singly, in gangs or in combination gangs with push buttons, or rotary flush switches and bull's-eye receptacle.

### 10 Amperes, 125 Volts—5 Amperes, 250 Volts

No.		Std. Pkg.	Mfrs. Price Each	W. E. List Price
6500 6510	Receptacle complete Plate only, .000 stamped brass Plate only, solid brass	100	\$1.40	\$3.36
6511 6520			.70	1.68 2.16
6530 6531	Plug only, brass cap		.40	.96 .84
	Plug only, black steel cap. Special two cord plug, black steel cap.		.30	.72 .84

### Combination Plates without Switches

No. Std. List Price Each  1460 Push Button Switch and Bulls'-Eye. 25 Units \$1.75  Rotary Switch and Bull's-Eye. 25 Units \$1.75					
1461 Rotary Switch and Bull's-Eye 25 Units \$1.75 \$4.20	No.			List	
1463       Bull's-Eye Plate       25 Units       2.65       6.36         1464       Bull's-Eye Plate with Lamp Receptacle       25 Units       1.25       3.00         1465       Receptacle and Push Button Switch       25 Units       1.00       2.40         3.36	1461 1462 1463 1464	Receptacle, Bull's-Eye and Push Button Switch Bull's-Eye Plate Bull's-Eye Plate Bull's-Eye Plate with Lamp Receptacle	25 Units 25 Units 25 Units	1.85 $2.65$ $1.25$ $1.00$	4.44 6.36 3.00 2.40

The price of a combination gang is the aggregate price of the units composing the gang.

### Pendant and Feed-through Switches

3 Amperes, 250 Volts—6 Amperes, 125 Volts

Finished in nickel, polished or old brass.



No. 700

List No. 700 702	Feed-through switch . Pendant Switch .	Std. Pkg. 100 100	Mfrs. List Each \$0.60	W.E. List Price Each \$1.44
	- Carrello F Williams	100	50	1.20

#### 20 Ampere Rotary Flush Switch



No. 702

	- Interpreted the state of the	-11		
List No.	Style	Std. Pkg.	Mfrs. List Each	W.E.List Price Each
1321 1322 1281	Single Pole. Double Pole. Wall Case.	30 30 30	\$1.20 1.60 .80	\$2.88 3.84 1.92

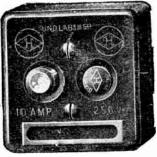
Delivery F. O. B. Factory, Hartford, Conn. For warehouse deliveries write nearest bouse.

World Radio History

### "DIAMOND H" SWITCHES



Without Cover



No. 61 DP Panel Board Surface Switch Push Button Type



No. 1222 DP Panel Board Switch Rotary Type



No. 1222 Without Cover

## Panel Board Type Surface Switches

#### Push Button Type

List	Style	Std. Pkg.	Mfrs. List Each	W. E. List Each
061	Double pole without cover	100	\$0.88	\$2.11
61		100	1.15	2.76

Rotary Type

10.11	Single pole	100	\$0.72	\$1.73
		100	1.00	2.40
1222	Double pole	1777	1 1.00	

Supporting screws 13 center to center cover 2 x 2 inches. Covers and bases slotted for bus bars spaced 1½-inch centers.





Showing

### **Battery Type Push Button Switches**

List No.	Туре	Std. Pkg.	Mfrs. List Each	W. E. List Each
31	Single pole	100	\$0.50	\$1.20 2.40
31 32 33	2 gang	50 35	$\frac{1.00}{1.50}$	3.60
34	4 gang	25	2.00	4.80

331	3 way single. Automatic door switch. 2 circuit.	100	\$0.75	\$1,80
631		100	.70	1.68
13		50	1.50	3.60

### Door Switches

#### 6 AMPERE 125 VOLT, 3 AMPERE 250 VOLT

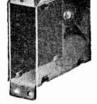


No. 601

List No.		Std. Pkg.	Mfrs, List Each	W. E. List Each
601 602 681	Light on with door open Light off with door open Conduit box with clamp	25 10	\$2.25 2.25 .40	\$5.40 5.40 56

Plates and strikes for door switch are made of hard brass  $\frac{3}{52}$  inch

Delivery F. O. B. Hartford, Conn. For warehouse deliveries write nearest house.



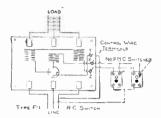
No. 681

World Radio History

### "DIAMOND H" REMOTE CONTROL SWITCHES



3 Pole Type F Remote Control Switch



Wiring D'agram Type F Switch

### Type F Remote Control Switch

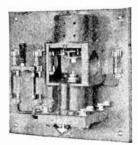
The remote control switch is located where the circuit is to be opened and closed. The push button may be located wherever convenient, at any distance from the switch or, if desired, several push buttons may be used to operate the same switch from different locations.

The remote control switch is useful for controlling small motors or groups of sign lamps, as well as for

the service mentioned above, and is a saver of time and trouble wherever used.

The solenoids that operate the switch are located at each end of the switch housing directly under the brush vokes, and give a straight pull without rocking or cramping. The releasing solenoid is in the center of the housing and operates on the locking mechanism direct. All working parts are entirely enclosed and cannot become damaged through rough usage. All wearing parts are of case-hardened and tempered steel,

		Amp.	Mfrs.	W. E.
List		Capac-	List	List
No.		ity	Each	Each
730	Double pole, single throw	25	\$36.00	\$64.80
740	Double pole, single throw.	50	48.00	86.40
750	Double pole, single throw.	7.5	60.00	108.00
760	Double pole, single throw.	100	93.60	168.48
770	Double pole, single throw.	150	108.00	194.40
880		200	122.40	220.32
	Double pole, single throw.	25	43 20	77.76
890	Triple pole, single throw	50	54 00	97.20
800	Triple pole, single throw	75	67.20	120.96
810	Triple pole, single throw	100	108.00	194.40
820	Triple pole, single throw		• ***	224.64
630	Triple pole, single throw	150	124.80	
640	Triple pole, single throw	200	139.20	250.56
610	Four pole, single throw	25	54.00	97.20
620	Four pole, single throw	50	68.00	122.40
630	Four pole, single throw	75	112.00	201.60
640	Four pole, single throw	100	128.00	230.40
0.10	a constitution of the contract			



Remote Control Switch Type A

## Type A Remote Control Switch

### CONTINUOUS CURRENT, NO VOLTAGE RELEASE

For remote control of small motors, for vacuum cleaners, automatic elevators, etc.

List No.	Pole	Amp. Capac- ity	Mfrs. List Each	W. E. List Each
605	Double pole	<b>3</b> 0	\$48.00	\$68.40
615	Double pole	50	54.00	97.20
625	Triple pole		60.00	108.00
635	Triple pole	50	68.00	122.40

#### Tank Switch



Tank Switch

		Mfrs.	W. E.
List		List	List
No.		Each	Each
72	Tank switch with float	\$25.00	\$45.00
721	Tanks witch without float	10.00	18.00

Delivery F. O. B. Factory, Hartford, Conn. For warehouse deliveries write nearest house.

### **CUTLER HAMMER BATTERY SWITCHES**

For Automobile Lighting



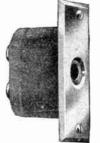
No. 7160 or 7170 With Plate No. 7161



No. 7172 With No. 7162 Gang Flush Plate



No. 7184 Switch With No. 7185 Plate





No. 7171 With Plate No. 7161

### Push and Pull Battery Switches

List No.	Switches Without Plates	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Price Each	List Frice per Carton
7100	Single, 10 amperes, 80 volts	20	100	20	\$0.56	\$8.40
7172	2 Gang, horizontal, 10 amperes, 80 volts	10	50	20	1.12	[-16.80]
7173	3 Gang, horizontal, 10 amperes, 80 volts	6	30	20	1.68	25.20
7174	4 Gang, horizontal, 10 amperes, 80 volts	5	25	20	2.24	33,60
7184	2 Gang, tandem, 10 amperes, 80 volts	10	50	20	1.12	16.80
7186	3 Gang, tandem, 10 amperes, 80 volts	6	30	20	1.68	25.20
7188	4 Gang, tandem, 10 amperes, 80 volts	5	25	20	2.24	33.60
7191	Single 3 wire switch, 10 amperes, 80 volts	20	100	20	. 64	9.60
7192	2 Gang, 3 wire switch, 10 amperes, 80 volts	10	50	20	1.28	19.20
7193	3 Gang, 3 wire switch, 10 amperes, 80 volts	6	30	18	1.92	28.80
7170	Single, 3 way switch, 10 amperes, 80 volts	20	100	20	1.00	15.00
7177	Series parallel switch, 10 amperes, 80 volts	10	50	20	1.40	21.00
7180	Momentary contact switch, 10 amperes, 80 volts.	20	100	20	. 45	6.80
7198	Plug ignition switch, 10 amperes, 80 volts	20	100	20	.64	9.60
7171	Plug switch for grounding magneto, 10 amperes,				1	
• -	80 volts	20	100	20	,64	9.60

Standard package discounts allowed on an assortment (in unbroken cartons) equivalent to 100 single switches. Standard finishes: Polished brass, brush brass, polished nickel, gun metal. Specify finish desired.

### Struck-up Switch Plate

List No.	Description	Dimensions Height Width	Std. Pkg.	Retail Price Each	List Price Each
7161 7162 7163 7164 7178	For one switch, in one horizontal row. For two switches, in one horizontal row. For three switches, in one horizontal row. For four switches, in one horizontal row. Special plate for No. 7177.	$\begin{array}{ c c c c c c }\hline 2\frac{9}{32} & x & \frac{16}{16} & \text{in.} \\ 2\frac{9}{32} & x & 1\frac{3}{24} & \text{ins.} \\ 2\frac{9}{32} & x & 2\frac{1}{2} & \text{ins.} \\ 2\frac{9}{32} & x & 2\frac{1}{2} & \text{ins.} \\ 2\frac{1}{2} & x & 2\frac{9}{32} & \text{ins.} \\ 2\frac{1}{2} & x & 2\frac{9}{32} & \text{ins.} \\ \end{array}$	100 50 30 25 50	\$0.12 .24 .36 .48 .36	\$0.22 .43 .65 .87 .68
7179	Special plate for No. 7177 and one additional switch	$3\frac{1}{4} \times 2\frac{9}{3\frac{9}{2}}$ ins.	30	.48	.87

Standard finishes: Polished brass, brush brass, polished nickel, gun metal. Specify finish desired.

### Solid Switch Plates (Tandem)

7185	For two switches, in one vertical row	358 x	15 in.	50	\$0.24	\$0.43
7187	For three switches, in one vertical row.	$5_{16}^{3} x$	$\frac{15}{16}$ in.	30	.36	.65
7189	For four switches, in one vertical row	65 € x	$\frac{15}{16}$ in.	25	.48	. 87

Standard package discount allowed on assortment of plates aggregating holes for 100 switches. Standard finishes: Polished brass, brush brass, polished nickel, gun metal. Specify finish desired.

No. 7195 Door Switch

## Door Switch FOR AUTOMOBILE DOOR

With finished brass plate  $2\frac{3}{16}$  inches high and  $\frac{15}{16}$  inch wide, and with round striking plate 1 inch in diameter.

List No.	Description	Carton Quantity	Std. Pkg.	Retail Price Each	List Price Pack
7195 7196	10 amperes, 80 volts	20 20	100 100	\$1.00 1.08	8

Standard finishes: Black oxidized. Dull black or polished nickel furnished as specified.

### TYPE "A" KNIFE SWITCHES

Be sure to note the following points when ordering Type "A" Switches.

Unless otherwise specified, back-connected switches will be furnished in polished finish and are so listed. Back-connected switches, plain finish, 30 to 400 amperes, deduct 10 per cent.; above 400 amperes, deduct 5 per cent.

All back-connected switches, 800 amperes and above, regularly equipped with square posts.

Screws for back-connected switches are for 1 inch slate, unless otherwise specified.

Back-connected switches packed unmounted. Wood templet for 30 to 600 amperes, inclusive, add 10 per cent. Above 600 amperes, wood templet regularly furnished.

Front-connected switches are listed in plain finish.

Front connection switches, polished finish, add 30 per cent. on 30 to 200 amperes; above 200 amperes, add 20 per cent.

Front-connected switches unmounted, without slate bases, deduct 10 per cent.

All double break switches, add 50 per cent. to single break prices.

All 125 volt spacing, same price as 250 volt.

Quick-break attachments, see page 21.

All 250 volt, single, double and three-pole switches, 800 amperes and above and all four-pole switches regularly equipped with spade handles.

All 500 volt, A.C., three-pole switches, 800 amperes and above, and all four-pole switches, regularly equipped with spade handles.

All 600 volt, three and four-pole switches regularly equipped with spade handles.

Spade handles for other sizes than those regularly so equipped or for extra handles, see listing on page 21.

Multiple blades are regularly used on switches 800 amperes and above.

All fusible 500 volt, A.C., switches arranged for 600 volt fuses.

No fuses included in list prices.

Box Sizes for front-connected switches, see pages 26 and 27.

Prices apply to arrangements listed only. Any deviation necessitates special work and must be charged for accordingly. Orders requiring special work are not subject to cancellation after our acceptance of same.

Current Carrying Parts. All Current Carrying Parts are made of pure hard drawn copper, and are of heavier stock than Underwriters' requirements, which demand a current density rating of 1000 amperes per square inch of copper, sliding contacts being rated 75 amperes per square inch.

All Type "A" Switches will easily carry 100 per cent. overload.

Finish (Plain). All metal parts of our plain-finished switches are emery finished over the entire surface and lacquered. This finish closely resembles draw file finish; gives all metal parts a uniform surface and a better contact, all scales, seams, roughness, unevenness in the metal being thus removed.

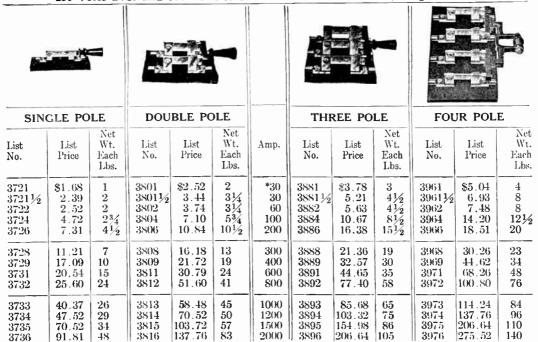
The bases are of high-grade black slate, oiled.

(Polished). All copper parts are polished, buffed and lacquered, the slate bases being of high-grade black slate, oiled. The fibre cross bars are polished and buffed.

#### TYPE A SWITCHES

FRONT CONNECTED

250 Volts D.C. and 500 Volts A.C. Plain Finish. No Fuse, Single Throw



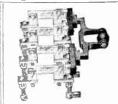
BACK CONNECTED

250 Volts D.C. and 500 Volts A.C. Polished Finish. No Fuse, Single Throw









SIN	GLE PO	LE	DOU	BLE PO	DLE		THE	REE PO	LE	FOUR POLE		.E
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
3761 3761½ 3762 3764 3766	\$2.01 3.02 3.15 5.33 8.18	$ \begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 2 \\ 2 \end{array} $	3841 3841½ 3842 3844 3846	\$3.65 5.42 5.66 9.66 14.91	3/4 11/2 11/2 3 5	*30 30 60 100 200	3921 3921½ 3922 3924 3926	\$5.36 8.19 8.53 14.21 18.97	1 21/4 21/4 41/4 8	4001 4001½ 4002 4004 4006	\$7.31 10.92 11.34 19.32 25.28	$ \begin{array}{r} 1\frac{1}{2} \\ 2\frac{3}{4} \\ 2\frac{3}{4} \\ 6 \\ 12 \end{array} $
3768 3769 3771 3772	12.48 17.80 21.72 58.20	3½ 5 8 10	3848 3849 3851 3852	19.22 27.41 39.52 67.08	8 13 19 25	300 400 600 800	3928 3929 3931 3932	28.84 40.12 53.30 98.28	12 19 29 36	4008 4009 4011 4012	40.87 52.28 81.15 131.04	15 26 38 48
3773 3774 3775 3776 3777	41.62 49.95 66.22 88.70 178.08 215.04	12 15 22 35 64 68	3853 3854 3855 3856 3857 3858	73.10 88.70 117.60 161.28 319.20 358.80	28 36 43 67 105 115	1000 1200 1500 2000 2500 3000	3933 3934 3935 3936 3937 3938	107.10 133.06 176.40 241.92 443.04 546.00	50 63 92 160	4013 4014 4015 4016	142.80 177.41 235.20 222.56	56 67 84 123
$3778 \\ 3779 \\ 3779 \\ 1/2$	315.84 390.00	86 100	3859	507.50 686.40	142 198	4000 5000 5000	3939	741.00 1029.90	210			

\*For 250 volts only.

### TYPE A SWITCHES

FRONT CONNECTED

250 Volts D.C. and 500 Volts A.C. Plain Finish. No Fuse, Double Throw.

SIN	GLE PO	N F	DOL	JBLE P	OL E			03				
	T T	Net		BLE P			TH	REE PO		FO	UR PO	
List No.	List Price	Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
$\frac{3741}{3741}$ $\frac{1}{2}$	\$2.48 3.32 3.65	$ \begin{array}{c c} 1\frac{1}{2} \\ 2\frac{1}{4} \\ 2\frac{1}{4} \end{array} $	$   \begin{array}{r}     3821 \\     3821 \frac{1}{2} \\     3822   \end{array} $	\$3.70 4.75 5.46	3 6 6	*30 30 60	3901 3901½ 3902	\$5.54 7.14 8.19	4 8 8	3981 3981½		6 13
3744 3746	7.01 11.21	$\begin{bmatrix} 3\frac{3}{4} \\ 6 \end{bmatrix}$	3824 3826	10.58 16.80	9½ 16½	100 200	3904 3906	15.75 21.36	13 23	3982 3984 3986	10.92 17.80 28.48	13 19 30
$\frac{3748}{3749}$	$\begin{vmatrix} 18.23 \\ 22.32 \end{vmatrix}$	9 13	3828 3829	$\frac{23.14}{33.46}$	19 26	300 400	3908 3909	34.71 48.50	33 46	3988	44.72	36
3751 3752	30.86 48.16	22 36	3831 3832	44.72 72.24	35 65	600 800	3911 391 <b>2</b>	67.08 105.84	54 94	3989 3991 3992	64.67 87.36 141.12	54 74 115
3753 3754	54.49 68.80	39 44		81.70 100.80	72 78	1000 1200	3913 3914	119.70 151.20	105 125	3993 3994	159.60 201.60	128 150
3755 3756	105.30  134.40	$\begin{bmatrix} 55 \\ 72 \end{bmatrix}$		157.92 201.60	94 126	1500 2000		236.88 302.40	141 170	3995	315.94 374.40	$\frac{175}{220}$

### BACK CONNECTED

250 Volts D.C. and 500 Volts A.C. Polished Finish. No Fuse, Double Throw

			93		in a		The state of the s	***************************************		S. Carrier	Central Color	
SIN	GLE PO	DLE	DOU	BLE PO	OLE		TH	REE PC	LE	FO	UR PO	LE
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
$3781 \\ 3781 \\ 2 \\ 3782 \\ 3784 \\ 3786$	\$2.90 4.04 4.28 7.40 11.76	$\begin{array}{c c} 112 \\ 112 \\ 2 \end{array}$	3861 3861½ 3862 3864 3866	\$5.24 7.26 7.76 13.44 18.16	2	*30 30 60 100 200	3941 3941½ 3942 3944 3946	\$7.88 10.92 11.68 20.16 27.24	$\begin{array}{c c} 23 & \\ 23 & \\ 51 & \\ \end{array}$	4021 4021½ 4022 4024 4026	\$10.50 14.70 15.54 22.78 36.14	$\frac{2}{3\frac{1}{2}}$
3788 3789 3791 3792	18.02 22.04 30.86 52.98	5 7 10 14	3868 3869 3871 3872	27.76 38.70 54.18 94.08	11 17 27 35	300 400 600 800	3948 3949 3951 3952	41.66 58.06 81.28 141.12	24 36	4028 4029 4031 4032	53.66 77.40 105.84 188.16	20
3793 3794 3795 3796	58.66 73.78 96.10 133.06	18 23 34 53	3873 3874 3875 3876	104.16 131.04 174.72 241.92	39 63 80 110	1000 1200 1500 2000	3953 3954 3955 3956	156.24 196.56 262.08 336.96	78 96	4033 4034 4035 4036	208.32 262.08 324.48 449.28	78 95 120 170
3797 3798 3799 3799½	265.44 315.84 411.84 574.08		3877 3878 3879 3879 <sup>1</sup> ⁄ <sub>2</sub>	436.80 533.52 748.80 1026.48	170 188 216 280	2500 3000 4000 5000	3957 3958 3959 3959½	661.44 812.76 1101.36 1528.80	265 300			

\*For 250 volts only.

Before ordering carefully refer to introductory page.

World Radio History

### TYPE A SWITCHES

**BACK CONNECTED** 

250 Volts D.C. and A.C.—Single Throw—Low Jaw—Polished Finish—
Fusible N.E.C. Standard

<b>*</b>		- Personal P		1					-	Bristish.		
SIN	GLE PO	LE	DOU	BLE PO	DLE		TH	REE PO	LE	FC	UR POL	E
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
4081 4082 4084 4086	\$2.40 3.82 13.06 10.64	3/4 1 2 4	4161 4162 4164 4166	\$4.34 6.93 12.80 19.32	1 . 134 314 614	30 60 100 200	4241 4242 4244 4246	\$6.51 10.42 19.24 24.56	$ \begin{array}{c} 1\frac{1}{4} \\ 2\frac{1}{2} \\ 5\frac{1}{4} \end{array} $	4321 4322 4324 4326	\$8.66 13.86 21.72 22.76	$\begin{array}{c} 2\\ 31/2\\ 7\\ 13 \end{array}$
4088 4090	19.26 27.66	8 12	4168 4170	35.04 48.58	16 24	400 600	4248 4250	50.78 72.86	22 39	4328 4330	71.94 100.80	31 52

#### BACK CONNECTED

### 600 Volts D.C. and A.C.-Single Throw-Low Jaw-Polished Finish-

#### Fusible N.E.C. Standard

### Equipped with Quick Break Attachments

4 <sup>2</sup> / <sub>2</sub>	To and	E.			W.		4			"Compa"		To a
SIN	IGLE PO	LE	DOU	JBLE PO	)LE		тн	IREE PO	LE	FC	OUR POL	Æ.
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
9160 9161 9162	\$5.34 5.80 9.24	$\frac{1\frac{1}{4}}{1\frac{1}{2}}$	9180 9181 9182	\$9.70 10.50 16.80	2 2½ 4	30 60 100	9280 9281 9282	\$15.54 16.80 22.78	$ \begin{array}{c c} 2\frac{1}{2} \\ 3\frac{1}{2} \\ 7 \end{array} $	9340 9341 9342	\$18.34 19.58 31.32	3 4½ 9
9163 9165 9166	13.86 24.50 33.28	5 9 14	9183 9185 9186	21.36 44.50 58.48	$     \begin{array}{r}       7\frac{1}{2} \\       18 \\       28     \end{array} $	200 400 600	9283 9285 9286	34.18 68.80 91.40	12 28 45	9343 9345 9346	45.42 92.40 126.42	16 36 60

#### Without Quick Break Attachments

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
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### TYPE A SWITCHES

FRONT CONNECTED

250 Volts D.C. and A.C.—Single Throw—Plain Finish—High Jaw

Fusible Bottom-N. E. C. Standard

~.5		2100			1							100
SII	NGLE PO	OLE	DO	UBLE P	OLE		TH	IREE PO	LE	F	OUR PO	LE
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
4361 4362 4364 4366	\$2.48 3.66 7.02 10.80	2 3 <sup>3</sup> / <sub>4</sub> 5 <sup>1</sup> / <sub>2</sub> 9	4381 4382 4384 4386	\$3.70 5.46 10.50 16.16	212 412 9 17	30 60 100 200	4401 4102 4104 4106	\$5.54 8.19 15.15 20.58	$egin{array}{c} 4 \\ 61/2 \\ 14 \\ 24 \\ \end{array}$	4421 4422 4424 4426	\$7.40 10.92 21.00 27.42	$ \begin{array}{c c}  & 6\frac{1}{4} \\  & 10\frac{3}{4} \\  & 21 \\  & 37 \end{array} $
4368 4370 4371 4872 4373	20.72 29.08 45.30 52.18 61.36	16 22 36 40 45	4388 4390 4391 4392 4393	31.08 43.62 67.94 78.26 89.88	29 44 65 72 80	400 600 800 1000 1200	4408 4410 4411 4412 4113	45.06 63.22 99.52 114.66 131.82	48 60 100 110 122	4 128 4 430 4 431 4 432 4 433	63.82 87.46 132.72 152.88 179.76	67 88 130 144 160

### BACK CONNECTED

250 Volts D.C. and A.C.—Single Throw—Polished Finish—High Jaw

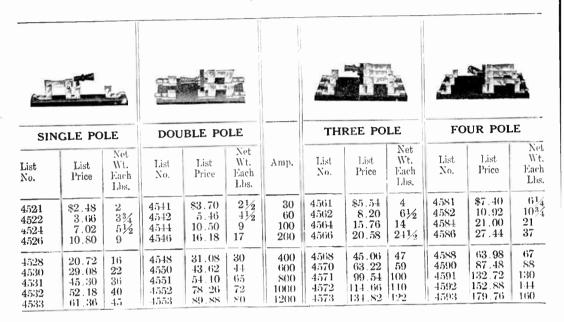
Fusible Bottom-N.E.C. Standard

ŢŤ	H	ij.		· · · · · · · · · · · · · · · · · · ·								P
SIN	GLE PO	DLE	DOI	JBLE P	OLE		TH	IREE PO	DLE	FC	OUR PO	LE
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
4441 4442 4444 4146	\$2.60 3.94 7.40 11.18	$\begin{bmatrix} \frac{3}{4} \\ 1\frac{1}{4} \\ 2\frac{1}{2} \\ 5 \end{bmatrix}$	4461 4462 4464 4466	\$4.70 7.18 13.44 20.28	$\begin{array}{c} 1 \\ 1\frac{3}{4} \\ 3\frac{1}{2} \\ 6\frac{1}{2} \end{array}$	30 60 100 200	4481 4482 4484 4486	\$7.06 10.80 20.16 25.82	$ \begin{array}{c c} 1\frac{1}{2} \\ 2\frac{3}{4} \\ 5\frac{1}{2} \\ 10 \end{array} $	4501 4502 4504 4506	\$9.40 14.36 22.78 34.38	2½ 4 8 15
4448 4450 4451 4452 4453	20.28 29.12 46.54 52.60 63.40	9 13 18 20 28	4468 4470 4471 4472 4473	36.50 51.16 84.62 93.40 112.56	16 25 40 44 62	400 600 800 1000 1200	4488 4490 4491 4492 4193	52.90 76.66 123.98 140.12 168.84	24 41 65 72 100	4508 4510 4511 4512 4513	74.93 106.18 165.32 186.82 225.12	33 55 88 100 130

### TYPE A SWITCHES

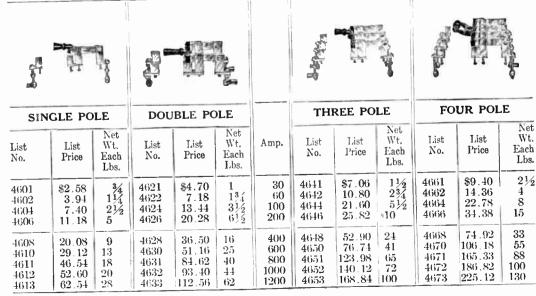
#### FRONT CONNECTED

250 Volts D.C. and A.C.—Single Throw—Plain Finish—High Jaw Fusible Top—N.E.C. Standard



#### BACK CONNECTED

### 250 Volts D.C. and A.C.—Single Throw—Polished Finish—High Jaw Fusible Top—N.E.C. Standard



Before ordering carefully refer to introductory page.

World Radio History

### TYPE A SWITCHES

### FRONT CONNECTED

250 Volts D.C. and A.C.—Double Throw—Plain Finish—Fusible N.E.C. Standard

SIN	GLE PO	LE	DOU	BLE PC	DLE •		ТН	REE PO	LE	FC	OUR POL	
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
4061	\$4.62	3	4141	\$7.14	5	30	4221	\$10.71	7	4301	\$14.28	12
4062	6.46	6	4142	9.66	8	60	4222	14.49	13	4302	19.32	19
4064	13.02	9	4144	19.52	15	100	4224	24.84	26	4304	32.94	40
4066	19.62	15	4146	24.92	25	200	4226	37.38	46	4306	48.16	67
4068	33.24	27	4148	48.16	49	400	4228	72.24	88	4308	94.08	117
4070	47.60	35	4150	71.38	74	600	4230	104.58	117	4310	139.44	166
4071	73.40	60	4151	107.52	105	800	4231	151.28	145	4311	215.04	200
4072	85.14	72	4152	127.68	130	1000	4232	191.52	160	4312	255.36	216
4073	98.58	80	4153	147.84	150	1200	4233	221.76	175	4313	295.68	240

### BACK CONNECTED

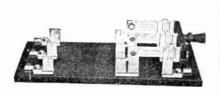
250 Volts D.C. and A.C.—Double Throw—Polished Finish—Fusible N.E.C Standard

			2	JBLE PO	DI E		TH	REE PO	LE	FO	UR POI	E
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbo.
4101 4102 4104 4106	\$5.54 6.46 11.55 18.02	$ \begin{array}{r} 1\frac{1}{4} \\ 1\frac{3}{4} \\ 2 \\ 5\frac{1}{2} \end{array} $	4181 4182 4184 4186	\$10.08 11.76 21.00 27.76	$ \begin{array}{c c} 1\frac{1}{2} \\ 3 \\ 5\frac{1}{2} \\ 11 \end{array} $	30 60 100 200	4261 4262 4264 4266	\$15.12 17.64 26.70 41.66	2½ 5 11 19	4311 4342 4314 4346	\$20.16 19.94 35.60 53.66	4 7 14 26
4108 4110 4111 4112 4113	32.82 43.14 73.78 83.72 96.10	11 16 25 29 40	4188 4190 4191 4192 4193	57.62 78.44 131.04 148.68 174.72	21 34 62 80 106	400 600 800 1000 1200	4268 4270 4271 4272 4273	84.42 114.92 196.56 223.02 262.08	43 73 95 105 140	4348 4350 4351 4352 4353	112.56 153.22 262.08 297.36 324.48	60 99 130 150 190

### TYPE A SWITCHES

FRONT CONNECTED

500 Volts A.C.—Single Throw—Plain Finish—High Jaw Fusible Bottom—N.E.C. Standard

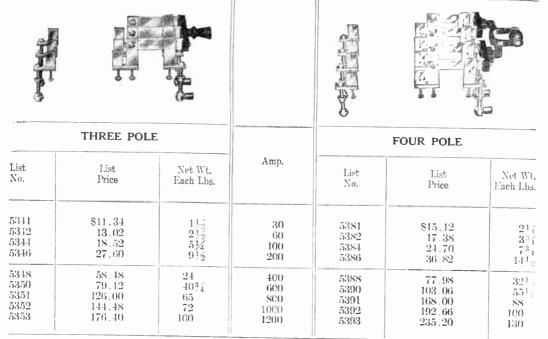




	THREE POLE			FOUR POLE				
List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt Each Lbs.		
5321 5322 5324 5326 5328 5330 5331 5332 5332 5333	\$8,40 9,66 17,22 23,32 49,02 68,80 104,16 117,60 141,12	$ \begin{array}{r} 7^{\frac{1}{2}} \\ 8^{\frac{3}{4}} \\ 17 \\ 25 \end{array} $ $ \begin{array}{r} 50 \\ 65 \\ 108 \\ 120 \\ 130 \end{array} $	30 60 100 200 400 600 800 1000 1200	5361 5362 5364 5366 5366 5370 5371 5372 5373	\$11,22 12,90 19,48 31,12 65,36 89,62 138,90 156,82 174,72	12 19 27 42 72 91 140 155 170		

### BACK CONNECTED

500 Volts A.C.—Single Throw—Polished Finish—High Jaw Fusible Bottom—N.E.C. Standard

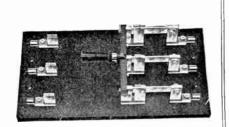


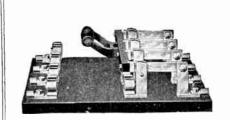
### TYPE A SWITCHES

FRONT CONNECTED

500 Volts A.C.—Single Throw—Plain Finish—High Jaw

Fusible Top-N.E.C. Standard



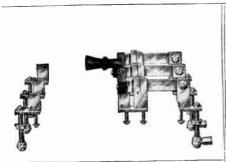


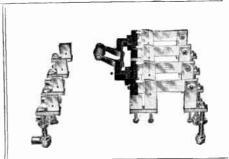
	THREE POL	E		FOUR POLE					
List	List	Net Wt.	Amp.	List	List	Net Wt.			
No.	Price	Each Lbs.		No.	Price	Each Lbs.			
5401	\$8.40	7½	30	5441	\$11.22	12			
5402	9.66	8¾	60	5442	12.90	19			
5404	17.22	17	100	5444	19.48	27			
5406	23.32	25	200	5446	31.12	42			
5408	49.02	51	400	5448	65.36	73			
5410	68.80	66	600	5450	89.62	93			
5411	104.16	108	800	5451	138.92	140			
5412	117.60	120	1000	5452	156.82	155			
5413	141.12	130	1200	5453	188.16	170			

### BACK CONNECTED

500 Volts A.C.—Single Throw—Polished Finish—High Jaw

Fusible Top-N.E.C. Standard



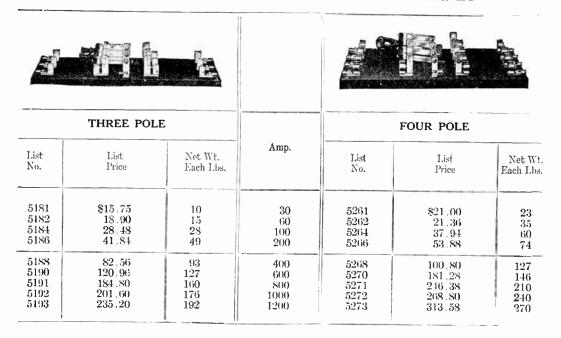


	THREE POL	E		FOUR POLE				
List	List	Net Wt.	Amp.	List	List	Net Wt.		
No.	Price	Each Lbs.		No.	Price	Each Lbs.		
5421	\$11.34	11/2	30	5461	\$15.12	$ \begin{array}{r} 2\frac{1}{4} \\ 3\frac{3}{4} \\ 7\frac{3}{4} \\ 14\frac{1}{2} \end{array} $		
5422	13.02	21/2	60	5462	17.38			
5424	18.52	51/4	100	5464	24.70			
5426	27.60	91/2	200	5466	36.80			
5428	78,48	24	400	5468	77.98	$ \begin{array}{r} 32\frac{1}{2} \\ 55\frac{1}{4} \\ 88 \\ 100 \\ 130 \end{array} $		
5430	79,12	403.4	600	5470	103.06			
541	126,00	65	800	5471	168.00			
5432	144,48	72	1000	5472	192.80			
5433	176,40	100	1200	5473	235.20			

### TYPE A SWITCHES

FRONT CONNECTED

500 Volts A.C.-Double Throw-Plain Finish Fusible-N.E.C. Standard



#### **BACK CONNECTED**

500 Volts A.C.-Double Throw-Polished Finish-Fusible-N.E.C. Standard

	THREE POLE				FOUR POLE	
List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.
5221 5222 5224 5226	\$17.64 20.50 32.94 44.72	$ \begin{array}{c} 2^{1} \stackrel{?}{\downarrow} \\ 4^{3} \stackrel{?}{\downarrow} \\ 10^{3} \stackrel{?}{\downarrow} \\ 18^{1} \stackrel{?}{\downarrow} \end{array} $	30 60 100 200	5301 5302 5304 5306	\$19.94 23.28 43.94 59.64	$\begin{array}{r} 3\frac{3}{4}\\ 6\frac{3}{4}\\ 13\frac{1}{2}\\ 26 \end{array}$
5228 5230 5231 5232 5233	91.56 126.00 218.40 241.92 282.24	43 72½ 95 105 140	400 600 800 1000 1200	5308 5310 5311 5312 5313	122, 10 168,00 290,64 322,56 349,44	59 96½ 130 150 190

#### TYPE A SWITCHES

#### FRONT CONNECTED

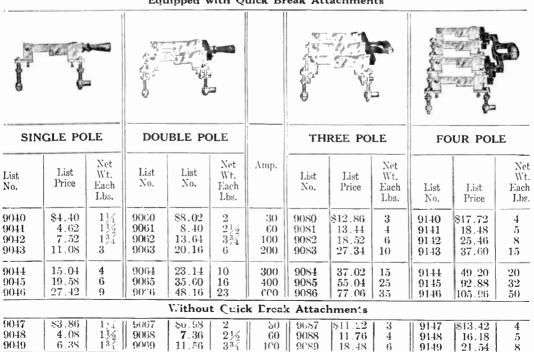
600 Volts D.C. and A.C.—Plain Finish—No Fuse—Single Throw
The National Code requires that switches designed for over 250 volts D.C. be provided with quick break attachments above 100 amperes, and recommends them on 100 amperes and below.

#### Equipped with Quick Break Attachments

, III	** 9				<b> </b>		É	7 2 P	ico.		- 3/5. 11 - 2 <u>V.</u> - 200 (1)	
SII	NGLE PO	) DLE	DOU	JBLE PO	DLE		TH	REE PO	LE	FC	OUR POL	.E
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
9000 9001 9003 9005	\$3.15 3.36 5.80 9.24	$ \begin{array}{c c} 2\frac{1}{4} \\ 2\frac{1}{2} \\ 3\frac{1}{2} \\ 6 \end{array} $	9100 9101 9103 9105	\$5.72 6.08 10.50 16.80	5 <sup>1</sup> / <sub>4</sub> 5 <sup>3</sup> / <sub>4</sub> 9 14 <sup>3</sup> / <sub>4</sub>	30 60 100 200	9200 9201 9203 9205	\$9.20 9.66 16.80 22.78	$   \begin{array}{c c}     7 \\     8 \\     14\frac{1}{2} \\     25   \end{array} $	9240 9241 9243 9245	\$12.64 13.40 19.58 31.32	10 11 20 33
9006 9007 9009	14.32 19.66 22.04	9 10 14	9106 9107 9109	22.08 30.26 40.06 Withou	18 26 32	300 400 600 k Brea	9206 9207 9209 k Attac	35.32 46.78 61.92 hments	30 45 54	9246 9247 9249	46.82 64.32 85.14	40 60 72
9010 9011 9013	\$2.48 2.68 4.94	$\begin{array}{ c c c c c }\hline 21/4 \\ 21/2 \\ 31/2 \\\hline \end{array}$	9110 9111 9113	\$4.46 4.83 8.40	$ \begin{array}{c c} 5\frac{1}{4} \\ 5\frac{3}{4} \\ 9 \end{array} $	30 60 100	9210 9211 9213	\$7.14   7.72   13.44	7   8   14½	$\begin{array}{ c c c }\hline 9250 \\ 9251 \\ 9253 \\ \hline \end{array}$	\$9.87 10.62 18.48	10 11 20

#### BACK CONNECTED

#### 600 Volts D.C. and A.C.-Polished Finish-No Fuse-Single Throw Equipped with Quick Break Attachments



### TYPE A SWITCHES

#### FRONT CONNECTED

### 600 Volts D.C. and A.C.-Plain Finish-No Fuse-Double Throw

The National Code requires that switches designed for over 250 volts D.C. be provided with quick break attachments above 100 amperes, and recommends them on 100 amperes and below.

#### Equipped with Quick Break Attachments

SII	NGLE PO	OLE	DOU	UBLE PO	DLE		TH	IREE PO	OLE .	FO	OUR POI	LE
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
9020 9021 9023 9025	\$5.54 5.80 8.56 13.86	$ \begin{array}{c c} 2\frac{3}{4} \\ 3 \\ 5 \\ 9 \end{array} $	9120 9121 9123 9125	\$5.00 10.50 15.54 21.36	10 11 15 22	30 60 100 200	9220 9221 9223 9225	\$16.04 16.80 21.08 34.18	15 161/4 24 38	9260 9261 9263 9265	\$18.74 19.58 28.98 45.40	$ \begin{array}{c c} 20 \\ 21 \frac{1}{2} \\ 32 \\ 51 \end{array} $
9026 9027 9029	20.80 24.50 31.32	15 17 22	9126 9127 9129	23.14 44.50 55.04	28 38 50	300 400 600	9226 9227 9229	49.54 68.80 86.02	45 68 80	9266 9267 9269	68.12 82.40 118.28	60 90 110
				Withou	t Quic	k Break	Attac	hments				
9030 9031 9033	\$4.96 5.20 7.52	$\begin{array}{c c} 234 \\ 3 \\ 5 \end{array}$	9130 9131 9133	\$8.94 9.46 13.66	10 11 15	30 60 100	9230 9231 9233	\$14.35 15.12 18.52	$begin{bmatrix} 15 \\ 1614 \\ 24 \\ \end{bmatrix}$	9270 9271 9273	\$19.78 20.79 25.46	20 21½ 32

# BACK CONNECTED 600 Volts D.C. and A.C.—Polished Finish—No Fuse—Double Throw Equipped With Quick Break Attachments

A Company			7		1		4					1
SIN	NGLE PO	LE	DO	UBLE PO	OLE		TH	IREE PO	LE	FC	OUR POI	LE
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
9050 9051 9052 9053	\$6.78 6.92 10.40 15.50	$1\frac{3}{4}$ $2$ $2\frac{1}{2}$ $4\frac{1}{2}$	9070 9071 9072 9073	\$12.06 12.60 18.90 23.86	3 3½ 5 9	30 60 100 200	9090 9091 9092 9093	\$19.40 20.16 25.64 38.16	4 5½ 10 16	9150 9151 9152 9153	\$22.64 23.50 35.24 50.70	5½ 7 12 22
9054 9055 9056	$\begin{bmatrix} 20.58 \\ 29.42 \\ 37.20 \end{bmatrix}$	6 8 12	9074 9075 9076	37.38 48.16 65.24	14 21 32	300 400 600	9094 9095 9096	57.80 77.06 102.14	26 38 50	9154 9155 9156	79.46 103.48 140.44	35 50 65

Without	Ouick	<b>Dreak</b>	Attachments

9058	5.88	$\begin{array}{c c} 134 & 9077 \\ 2 & 9078 \\ 21/2 & 9079 \end{array}$	+10.72	316	60    9098	17.14	516	9158	10 08	7.7

### Western Electric

### TYPE A SWITCHES

FRONT CONNECTED

#### 600 Volts D.C. and A.C.-Single Throw-Plain Finish-High Jaw Fusible Bottom-N.E.C. Standard

The National Code requires that switches designed for over 250 volts D.C. be provided with quick break attachments above 100 amperes, and recommends them on 100 amperes and below.

#### Equipped with Quick Break Attachments

	d e		يا ا	7	T					A		Ì
SI	NGLE PO	DLE	DOU	JBLE PO	OLE		TH	IREE PO	LE	F	OUR POI	LE
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt, Each Lbs,	List No.	List Price	Net Wt. Each Lbs.
9600 9601 9603	\$4.58 4.92 8.20	3½ 4½ 8½ 8½	9620 9621 9623	\$8.24 8.94 14.92	83/4 91/2 19	30 60 100	9640 9641 9643	\$13 22 14.32 20.22	15 15¾ 31	9660 9661 9663	\$18.18 19.70 21.80	20 21 41
9605 9607 9609	12.94 23.04 30.86	17 28 36	9625 9627 9629	19.94 41.84 54.20	32 49 62	200 400 600	9645 9647 9649	31.90 64.68 84.68	48 72 90	9665 9667 9669	42.38 86.86 116.42	64 96 120
				Withou	t Quic	k Break	Attac	hments				
9610 9611 9613	\$3.86 4.28 7.30	$ \begin{array}{c c} 3\frac{1}{2} \\ 4\frac{1}{2} \\ 8\frac{1}{2} \end{array} $	9630 9631 9633	\$6.98 7.78 13.23	$\begin{vmatrix} 8\frac{3}{4} \\ 9\frac{1}{2} \\ 19 \end{vmatrix}$	30 60 100	9650 9651 9653	\$11,22 12,44 17,94	$\begin{vmatrix} 15 \\ 15\frac{3}{4} \\ 31 \end{vmatrix}$	9670 9671 9673	\$15.42 17.10 24.68	20 21 41

### BACK CONNECTED

### 600 Volts D.C. and A.C.-Single Throw-Polished Finish-High Jaw Fusible Bottom-N.E.C. Standard Equipped with Quick Break Attachments

Į.	H	Ť.			7					NAME OF THE PARTY		
SIN	IGLE PO	DLE	DO	UBLE PO	DLE		TH	IREE PO	LE	F	OUR POI	_E
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
9360 9361 9362	\$5.58 6.20 9.82	$1\frac{1}{2}$ $1\frac{3}{4}$ $3\frac{1}{2}$	9370 9371 9372	\$10.12 11.34 17.84	2½ 3 5	30 60 100	9380 9381 9382	\$16.26 18.14 24.20	4½ 5½ 8	9390 9391 9392	\$18.94 21.14 33.24	6 7½ 11
9363 9365 9366	14.58 25.96 35.74	6 10 15	9373 9375 9376	$\begin{array}{c} 23.42 \\ 45.58 \\ 62.78 \end{array}$	9 20 30	200 400 600	9383 9385 9386	35.88 72.92 98.12	14 30 48	9393 9395 9396	47.68 97.94 134.90	19 40 64
				Withou	t Quicl	k Break	Attac	hments				

9367	\$4.92	1½   9377	\$8.86	21/2	30    9387	\$14.24	41/2    9397	\$19.58	6
9368	5.46	13/4   9378		3		15.80		18.40	71/2
9369	8.56	31/2   9379	15.54	5	100   9389	21.08	8   9399	28.98	11

### TYPE A SWITCHES

#### FRONT CONNECTED

600 Volts D.C. and A.C.-Single Throw-Plain Finish-High Jaw Fusible Top-N.E.C. Standard

The National Code requires that switches designed for over 250 volts D.C. be provided with quick break attachments above 100 amperes, and recommends them on 100 amperes and below.

#### Equipped with Quick Break Attachments

	- Die	7		A m						£.		
SIN	IGLE PO	LE	DOU	BLE PO	DLE		TH	REE PO	LE	FC	OUR POI	LE
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
9700 9701 9703	\$4.58 4.92 8.20	31/2 41/2 81/2	9720 9721 9723	\$8.24 8.94 14.92	834 912 19	30 60 100	9740 9741 9743	\$13.23 14.32 20.22	15 15¾ 31	9760 9761 9763	\$18.18 19.70 21.80	20 21 41
9705 9707 9709	12.94 23.04 30.86	17 28 36	9725 9727 9729	19.94 41.84 54.20	32 49 62	200 400 600	9745 9747 9749	31.90 64.68 84.68	48 72 90	9465 9467 9469	42.38 86.86 116.42	64 96 120

#### Without Ouick Break Attachments

9710 9711 9713	\$3.86 4.28 7.30	$3\frac{1}{2}$ $4\frac{1}{2}$ $8\frac{1}{2}$	9730 9731 9733	\$6.98 7.78 13.23	$\begin{bmatrix} 8\frac{3}{4} \\ 9\frac{3}{4} \\ 19 \end{bmatrix}$	$\begin{array}{c c} 30 & 9750 \\ 60 & 9751 \\ 100 & 9753 \end{array}$	$\begin{bmatrix} \$11.22 \\ 12.44 \\ 17.94 \end{bmatrix}$	$\begin{vmatrix} 15 \\ 15 \% \\ 31 \end{vmatrix}$	9770 9771 9773	\$15.42   17.10   24.68	20 21 41
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#### BACK CONNECTED

600 Volts D.C. and A.C.-Single Throw-Polished Finish-High Jaw

Fusible Top-N.E.C. Standard

### Equipped with Quick Break Attachments

		1						P		2 2 2 3	THE STATE OF THE S	
SIN	IGLE PO	LE	DOU	JBLE PO	DLE		TH	REE PO	LE	FC	OUR POI	_E
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
9440 9441 9442	\$5.58 6.20 9.82	$\begin{array}{c c} 1\frac{1}{2} \\ 1\frac{3}{4} \\ 3\frac{1}{2} \end{array}$	9450 9451 9452	\$10.12 11.34 17.84	2½ 3 5	30 60 100	9460 9461 9462	\$16.26 18.14 24.20	$\frac{4\frac{1}{2}}{5\frac{1}{2}}$	9470 9471 9472	\$18.94 21.14 33.24	6 71/4 11
9443 9444 9445	14.58 25.96 35.74	6 10 15	9453 9454 9455	23.42 45.58 62.78	9 20 30	200 400 600	9463 9465 9466	35.88 72.92 98.12	14 30 48	9473 9475 9476	47.68 97.94 34.90	$\begin{array}{c c} 18\frac{1}{2} \\ 38\frac{1}{2} \\ 62\frac{1}{4} \end{array}$

#### Without Quick Break Attachments

$\begin{array}{c cccc} 9446 & & \$4 & 92 \\ 9447 & & 5 & 46 \\ 9449 & & 8 & 56 \end{array}$	$\begin{array}{c cccc} 1\frac{1}{2} & 9456 \\ 1\frac{3}{4} & 9457 \\ 3\frac{1}{2} & 9459 \end{array}$	\$8.86 9.88 15.51	$\begin{bmatrix} 2\frac{1}{2} \\ 3 \\ 5 \end{bmatrix}$	30   9467 60   9468 100   9469	\$14.28 15.80 21.08	$     \begin{array}{c c}       41/2 \\       51/2 \\       8     \end{array} $	9177 9478 9179	\$19.58 18.40 28.98	$\begin{bmatrix} 6\\7\frac{1}{2}\\11\end{bmatrix}$
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## TYPE A SWITCHES FRONT CONNECTED

### 600 Volts D.C. and A.C.—Double Throw—Plain Finish—Fusible N.E.C. Standard

The National Code requires that switches designed for over 250 volts D.C. be provided with quick break attachments above 100 amperes, and recommends them on 100 amperes and below.

#### Equipped with Quick Break Attachments

SIN	GLE PO	OLE .	DO	JBLE PO	DLE.		TH	IREE PO	OLE .	FO	OUR POI	LE
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
9320	\$7.86	9½	9420	\$14.16	15	30	9520	\$19.29	26	9560	\$26,56	35
9321	8.56	10	9421	15.54	16	60	9521	21.17	27	9561	29,98	38
9323	14.44	15	9423	22.25	30	100	9523	35.60	52	9563	47,30	70
9325	18.60	28	9425	33.82	50	200	9525	$\begin{bmatrix} 52.28 \\ 96.76 \\ 145.16 \end{bmatrix}$	76	9564	71.90	102
9327	35.24	42	9427	61.92	74	400	9527		10	9567	133.06	135
9329	51.08	53	9429	92.88	90	600	9529		130	9569	199.58	175

#### Without Quick Break Attachments

	9331		9431	12,60	16	60    9531	18.51	27	9571	\$22.25 24.03 43.52	- 38
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#### **BACK CONNECTED**

# 600 Volts D.C. and A.C.—Double Throw—Polished Finish—Fusible N.E.C. Standard Equipped with Quick Break Attachments

37	TET TO	ET CT	F	The fi					and the same of th			
SIN	GLE PC	LE	DOI	JBLE PO	DLE		TH	IREE PO	LE	FC	OUR POI	LE
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
9170 9171 9172	\$7.86 8.70 14.44	$\frac{1^{1/2}}{2}$	9190 9191 9192	\$14.44 15.76 22.25	3 4 7	30 60 100	9290 9291 9292	\$19.29 21.36 25.60	5½ 7 14	9350 9351 9352	\$26.56 29.37 47.30	6 8 15
9173 9175 9176	18.12 36.24 49.20	6½ 13 20	9193 9195 9196	32.93 63.64 87.36	13 25 40	200 400 600	9293 9295 9296	50.92 99.46 139.78	22 50 80	9353 9355 9356	70.00 136.76 192,20	30 65 110

#### Without Quick Break Attachments

9177	1 \$6.68 1	1½    9197	\$12.10	3	30   9297	\$19.40	$5\frac{1}{2}$	9357	\$20.64	6
9178	7.52	2 9198	13.65	4	60   9298	18.51	7	9358	25.46	8
9179	12.73	4 9199	19.50	7	100   9299	31.33	14	9359	43.08	15

### TYPE C SWITCHES

#### Front Connected

## 250 Volts D.C. and 500 Volts A.C.—SP-DP-3P-4P-Single Throw—Plain Finish—No Fuse

ø			E				Æ					3
SI	NGLE PO	DLE	DOU	UBLE P	OLE		TH	REE PO	LE	FC	OUR POI	E
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
3001 3002 3003 3005 3006	$   \begin{array}{r}     \$0.80 \\     1.25 \\     1.41 \\     2.85 \\     5.13   \end{array} $	$\begin{bmatrix} 3/4 \\ 11/2 \\ 11/2 \\ 21/2 \\ 4 \end{bmatrix}$	3041 3042 3043 3045 3046	\$1.29 2.00 2.32 4.74 8.55	$ \begin{array}{c c} 1\frac{1}{4} \\ 2\frac{3}{4} \\ 3 \\ 5\frac{1}{2} \\ 10\frac{1}{4} \end{array} $	*30 30 60 100 200	3081 3082 3083 3085 3086	\$1.94 3.04 3.50 7.14 12.84	2½ 4 4¼ 8 15½	5901 5902 5903 5905 5906	\$2.58 4.06 4.04 9.50 17.10	$ \begin{array}{r} 4 \\ 7\frac{1}{4} \\ 7\frac{1}{2} \\ 12 \\ 20 \end{array} $

Unmounted switches, without Slate Bases, deduct 10 per cent.

### 250 Volts D.C. and 500 Volts A.C.-SP-DP-3P-4P-Double Throw-No Fuse

SIN	GLE PO	DLE	DOL	DOUBLE POLE			THREE POLE			FO	OUR POI	LE
List No.	List Price	Net Wt. Each Lbs.	List No.	List No.	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
3021 3022 3023 3025 3026	\$1.44 2.20 2.48 5.58 9.28	1 1/4 2 1/2 2 1/2 4 8	3061 3062 3063 3065 3066	\$2.20 3.24 3.80 8.55 14.25	3 5 5 <sup>1</sup> / <sub>4</sub> 8 <sup>1</sup> / <sub>2</sub> 16	*30 30 60 100 200	3101 3102 3103 3105 3106	3.42 5.06 5.89 13.11 19.48	$ \begin{array}{c c} 4 \\ 7 \frac{1}{4} \\ 7 \frac{1}{2} \\ 12 \\ 22 \end{array} $	5921 5922 5923 5925 5926	4.86 7.30 8.36 18.62 26.04	7 12 12½ 18 28

Unmounted switches, without Slate Bases, deduct 10 per cent.

125 volt switches same price as 250 volt.

Quick break attachments, see listing elsewhere.

All four pole switches regularly equipped with spade handles.

Spade handles, see listing elsewhere.

All type "C" switches are for front connections, plain finish only.

\*For 250 volts D.C. only.

### TYPE C SWITCHES

#### Front Connected

250 Volts D.C. and A.C.—SP-DP-3P-4P—Single Throw—Plain Finish—High Jaws
Fusible Bottom—N.E.C. Standard

SIN	GLE PC	DLE	DOL	BLE PO	OLE		THI	REE PO	LE	FO	OUR POL	F
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.		List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
1120 1121 1123 1124	\$1.33 3.24 4.52 8.36	$ \begin{array}{c c} 1 \\ 2\frac{1}{2} \\ 5 \\ 7\frac{1}{2} \end{array} $	1130 1131 1133 1134	\$2.01 3.42 6.95 12.84	2½ 4 8¾ 16	Amp. 30 60 100 200	1140 1141 1143 1144	\$3.04 5.13 10.45 16.93	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	1150 1151 1153 1154	\$4.03 6.84 13.87 22.53	$ \begin{array}{r} 6\frac{1}{2} \\ 10\frac{1}{2} \\ 20 \\ 36 \end{array} $

Unmounted switches without Slate Bases, deduct 10 per cent.

# 250 Volts D.C. and A.C.—SP-DP-3P-4P—Single Throw—High Jaws Fusible Top—N.E.C. Standard

SIN	SINGLE POLE		DOUBLE POLE				тн	REE PO	LE	FC	OUR POL	E
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs,	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
1160 1161 1163 1164	\$1.33 3.24 4.52 8.36	$\begin{bmatrix} 1 \\ 212 \\ 5 \\ 712 \end{bmatrix}$	1170 1171 1173 1174	\$2.01 3.42 6.95 12.84	$ \begin{array}{c c}  & 2\frac{1}{4} \\  & 4 \\  & 8\frac{3}{4} \\  & 16 \end{array} $	30 60 100 200	1180 1181 1183 1184	\$3.04 5.13 10.45 16.93	$ \begin{array}{c c} 3\frac{1}{2} \\ 6 \\ 13\frac{1}{2} \\ 24 \end{array} $	1190 1191 1193 1194	\$4.03 6.84 13.87 22.53	$\begin{array}{r} 6\frac{1}{2} \\ 10\frac{1}{2} \\ 20 \\ 36 \end{array}$

Unmounted Switches, without Slate Bases, deduct 10 per cent.

125 volt switches same price as 250 volt.

Quick break attachments, see listings elsewhere.

All four pole switches regularly equipped with spade handles.

Spade handles, see listing elsewhere.

All Type "C" switches are for front connections, plain finish only.

No fuses included in above prices.

### TYPE C SWITCHES

### Front Connected

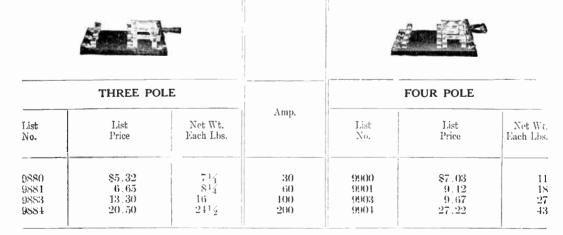
250 Volts D.C. and A.C.—SP-DP-3P-4P—\*Double Throw—Plain Finish
Fusible—N.E.C. Standard

SIN	SINGLE POLE		DOU	DOUBLE POLE			тн	THREE POLE			FOUR POLE		
List No. 3131 3132 3134 3135	List Price \$2.93 4.52 9.84 18.62	Net Wt. Each Lbs. 3 5 8 11½	List No. 3151 3152 3154 3155	List Price \$4.18 6,46 14.06 24.70	Net Wt. Each Lbs.  5 734 17 24	Amp.  30 60 100 200	List No. 3171 3172 3174 3175	List Price 86,69 10,34 19,89 34,94	Net Wt. Each Lbs. 6 12 26 41	List No. 3191 3192 3194 3195	List Price \$9.20 14.21 27.35 41.69	W1. Eac 1 Lbs. 11 18½ 41½ 59½	

Unmounted Switches, without Slate Bases, deduct 10 per cent.

#### TYPE C SWITCHES

500 Volts A.C.-3P-4P-Single Throw-High Jaws-Fusible Bottom-N.E.C. Standard



Unmounted switches, without Slate Bases, deduct 10 per cent.

All fusible 500 volt A.C. switches arranged for 600 volt fuses.

125 volt switches same price as 250 volt.

Quick break attachments, see listing elsewhere.

All four pole switches regularly equipped with spade handles.

Spade handles, see listing elsewhere.

All Type "C" switches are for front connections, plain finish only.

No fuses included in above prices.

\*All double throw fusible switches regularly equipped with high jaws

### TYPE C SWITCHES

Front Connected

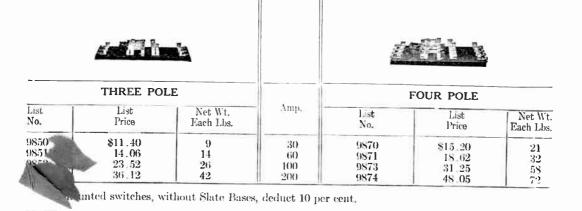
500 Volts A.C.-3P-4P-Single Throw-Plain Finish-High Jaws

Fusible Top-N.E.C. Standard

	$s^-$					
	THREE PO	LE			FOUR POLE	
List	List	Net Wt.	Amp.	List	List	Net Wt.
No.	Price	Each Lbs.		No.	Price	Each Lbs.
9920	\$5.32	71/4	30	9940	\$7.03	11
9921	6.65	81/4	60	9941	9.12	18
9923	13.30	16	100	9943	17.67	27
9924	20.50	241/2	200	9944	27.22	43

Unmounted switches, without Slate Bases, deduct 10 per cent.

## 500 Volts A.C.—3P-4P—\*Double Throw—Fusible—N.E.C. Standard



All fusible 500 volt A.C. switches arranged for 600 volt fuses.

Quick break attachments, see listing elsewhere.

All four pole switches regularly equipped with spade handles.

Spade handles, see listing elsewhere.

All Type "C" switches are for front connections, plain finish only.

No fuses included in above prices.

\*All double throw fusible switches regularly equipped with high jaws.

### TYPE C SWITCHES

Front Connected

251-600 Volts D.C.-501-600 Volts A.C.

### SP-DP-3P-4P-Single Throw-Plain Finish-No Fuse

The National Code requires that switches designed for over 250 volts D.C. be provided with quick break attachments above 160 amperes, and recommends them on 100 amperes and below.

### Equipped with Quick Break Attachments

SIN	SINGLE POLE		DOUBLE POLE				THREE POLE			FO	UR POL	Æ
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
6600 6601 6603 6604	\$2.05 2.28 2.05 7.98	2½ 2½ 3½ 5½	6620 6621 6623 6624	\$2.42 3.80 6.84 13.30	5 5½ 8 13	30 60 100 200	6640 6641 6643 6644	\$5.32 5.89 10.64 18.24	$ \begin{array}{c c} 6\frac{1}{2} \\ 7\frac{1}{2} \\ 13 \\ 23 \end{array} $	6655 6656 6657 6658	\$7.22 7.98 14.25 24.70	9 10 18 30

#### Without Quick Break Attachments

3200 3202 3204	\$1.52 1.82 3.61	$\begin{array}{c c} 2\frac{1}{4} & 3240 \\ 2\frac{1}{2} & 3242 \\ 3\frac{1}{2} & 3244 \end{array}$	\$2.55 3.04 6.00	5 5½ 8	30   3280 60   3282 100   3284	\$3.99 4.75 9.31	$ \begin{array}{c c} 6\frac{1}{2} \\ 7\frac{1}{2} \\ 13 \end{array} $	3305 3306 3307	$\begin{array}{ c c c } \hline \$5.32 & \\ 6.27 & \\ 12.52 & \\ \end{array}$	9 10 18
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Unmounted Switches, without Slate Bases, deduct 10 per cent.

251-600 Volts D.C.-501-600 Volts A.C.

SP-DP-3P-4P-†Double Throw-No Fuse

#### Without Quick Break Attachments

SINGLE POLE			DOUBLE POLE				THREE POLE			FOUR POLE		
List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
3220 3222 3224	\$3.15 3.61 7.41	2 <sup>3</sup> / <sub>4</sub> 3 4 <sup>1</sup> / <sub>2</sub>	3260 3262 3264	\$4.18 4.94 9.88	9 10 14	30 10 100	3300 3302 3304	\$7.03 8.17 16.34	14 15½ 22	3315 3316 3317	\$9,50 11,40 20,16	18 20 30

Unmounted Switches, without Slate Bases, deduct 10 per cent.

†Double throw switches, Type "C," with quick break attachments, are NOT made. Use Type "A." All three and four pole switches, 600 volt, regularly equipped with spade handles.

Spade handles, see listing elsewhere.

Slate barriers, see listing elsewhere.
All Type "C" switches are for front connections, plain finish only.

### TYPE C SWITCHES

#### Front Connected

251-600 Volts D.C.--501-600 Volts A.C.

SP-DP-3P-4P-Single Throw-Plain Finish-High Jaws

Fusible Bottom—N.E.C. Standard

The National Code requires that switches designed for over 250 volts D.C. be provided with quick break attachments above 100 amperes, and recommends them on 100 amperes and below.

# Equipped with Quick Break Attachments

SIN	IGLE PO		DOU	BLE PO	OLE		ТН	REE PO	LE	FC	OUR PO	E
List No. 6720 6721 6723 6724	List Price \$3.23 3.92 6.84 12.35	Net Wt. Each Lbs. 314 414 8	List No. 6730 6731 6733 6734	List Price \$4.94 5.70 10.45 16.80	Net Wt. Each Lbs. 814 914 18	30 60 100 200	List No. 6740 6741 6743 6744	List Price 87.90 9.12 16.72 26.88	Net Wt. Each Lbs. 13 14 28 43	List No. 6745 6746 6747 6748	List Price \$10.83 12.54 20.16 36.96	Net Wt. Each Lbs. 18 19 38 69

# Without Quick Break Attachments

3640 3641 3643	\$2.66 3.23 4.46	$ \begin{array}{c c} 3 & 3 & 3 & 3650 \\ 4 & 4 & 3651 \\ 8 & 3653 \end{array} $	\$4.18   8 4.94   9 9.50   18	$\begin{bmatrix} 14 \\ 14 \\ 14 \end{bmatrix} = \begin{bmatrix} 30 \\ 60 \\ 100 \end{bmatrix}$	3660   \$6.65 3661   7.90 3663   15.20	13 14 28	3665 3666 3667	\$9.20 10.83	18 19
					9009 [ 10,20	1 40 11	-3007	18 48 F	35

Unmounted Switches, without Slate Bases, deduct 10 per cent.

251-600 Volts D.C.-501-600 Volts A.C.

SP-DP-3P-4P-Single Throw-High Jaws-Fusible Top-N.E.C. Standard

# Equipped with Quick Break Attachments

SIN	GLE POLE		DOUBLE POLE				THREE POLE			FOUR POLE		
List No. 6750 6751 6753 6754	List Price \$3.23 3.92 6.84 12.35	Net Wt. Each Lbs. 31/4 41/4 8	List No. 6760 6761 6763 6764	List Price \$4.94 5.70 10.45 16.80	Net Wt. Each Lbs. 814 914 18 30	30 60 100 200	List No. 6770 6771 6773 6774	List Price 87.90 9.12 16.72 26.88	Net Wt. Each Lbs. 13 14 28 43	List No. 6775 6776 6777 6778	List Price \$10.83 12.54 20.16 36.96	Net Wt. Each Lbs.   18   19   38   60

# Without Quick Break Attachments

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $

Unmounted Switches, without Slate Bases, deduct 10 per cent.

All three and four pole switches, 600 volt, regularly equipped with spade handles. Spade handles, see listing elsewhere.

Slate barriers, see listing elsewhere.
All Type "C" switches are for front connections, plain finish only.

No fuses included in above prices.

Single Throw Plain finish. Polish finish

1500-2000 amperes

2500-5000 amperes

FOR TYPE "C" SWITCHES Plain Finish

Single Throw Only

cannot be equipped with quick

# TYPE C KNIFE SWITCHES

600 Volts D.C. and A.C.—Double Throw—Plain Finish Fusible—N.E.C. Standard Without Quick Break Attachments

		-61				l			άλ.			
SIN	IGLE PC	LE	DOU	BLE PO	OLE		TH	REE PO	LE	FC	UR POL	
List	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.	Amp.	List No.	List Price	Net Wt. Each Lbs.	List No.	List Price	Net Wt. Each Lbs.
3330 3331 3331	\$6.27 7.12 14.25	8 9 14	3350 3351 3353	\$8.36 9.50 16.80	14 15 28	30 60 100	3370 3371 3373	\$13.79 15.67 27.92	24 25 48	3385 3386 3387	\$16.80 19.32 38.64	32 34 66

Unmounted Switches, without Slate Bases, deduct 10 per cent. †Double throw switches, Type "C," with quick break attachments, are NOT made. Use Type "A."

#### STUDS FOR BACK CONNECTED SWITCHES Regular Length and Longer Than Regular

250 Volts	30 Amperes	60 Amperes	100 Amperes	200 Amperes	300 Amperes	400 Amperes	600 Amperes	800 Amperes	1000 Amperes	Amperes
200 1010	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
Length of regular studs below posts.		33/8	3 5 16	37/8	4 1 6	41/4	41/2	51/8	5½	$\frac{5\frac{7}{16}}{}$
List of regular studs (no nuts)	\$0.08	\$0.17	\$0.25	\$0.48	\$0.80	\$1.09	\$1.81	\$3,15	\$3.15	\$4.03
		No e	harge les	s than li	st for 3 i	nches of	extra stu	ad length	1	
Add per inch list for					1	1				

Add per inch list for			İ						
extra length of each stud \$0.04	60 00	en ne	en 13	\$0.19	80.29	\$0.48	\$0.55	\$0.55	\$0.74
stud \$0.04	1 80.00	50.08	50.10	1 60.10	40.25				

#### QUICK BREAK ATTACHMENTS

# FOR TYPE "A" SWITCHES

For 25	50-500 V	olts A.C	. Switch	nes Only	,		For 250–500 Volts A.C. Switches Only					
30 Amperes	(60) Amperes	100 Amperes	200 Amperes	300 Amperes	400 Amperes	600 Amperes	30 Amperes	60 Amperes	100 Amperes	Amperes		
\$0.76 1.01		en e t	80.97	\$1.34	\$1.68	\$1.93 2.68	\$0.80	\$0.87	\$0.95	\$1.06		
1.01	1 1,1%)	1.10	1.19				For	itches.	Throw u 125 volt	se Type switches		

Double Throw \$3.36 \$3.86 \$2.69 \$1.97 \$1.60 | \$1.72 | 5.38 break attachments. \$1.51 Plain finish. 4.703.70 2.10 2.312.862.00 Polish finish.

SPADE HANDLES

1047

Note: Prices listed above are for individual attachments. A double pole switch requires two attachments, a three pole requires three and a four pole four attachments. SLATE BARRIERS FOR 600 Volt D.C. and A.C. Switches

Cr t l.	. 4		Angle		Voit D.C. and move interest				
Straigh	List No.	List Price	Capacity	List No.	List Price	Amp.	No Fuse	Fuse Bottom	Fuse Top
30 amperes 60 amperes 100– 200 amperes 300– 600 amperes	1041 1042 1043 1044	\$0.73 1.01 1.59 2.53	30 amperes 60 amperes 100– 200 amperes 300– 600 amperes	1061 1062 1063 1064	\$0.73 1.01 1.59 2.53	30 60 100 200 300	\$0.71 .76 .76 .76 .76		\$1.13 1.26 1.40 1.40
800–1200 amperes	1045 1046	\$1.20 5.25	800–1200 amperes 1500–2000 amperes	1065 1066	\$4.20 5.25	list of re	egular sw "C" frou	rriers net to t connect switch	er Type tions.

Double pole switch requires 6.30 1067 6.30 | 2500-5000 amperes one barrier; three pole switch two barriers, etc.

# A. C. MOTOR STARTING SWITCHES

For N.E.C Standard Fuses-One End Only

TYPES "A" AND "C"



Type "C" Showing Straps on Back



Straps on Back. No. 1326. Type "A" Front Connections



No. 1408. Type "A" Back Connections

20.47

36.85

20

36

The motor is started on unfused contact, the blades are to be held against spring pressure for a few seconds until speed is up, when switch is thrown into fused end which carries normal load.

Marked "START" and "RUN" to assist in avoiding error by throwing into wrong contact.

The two outgoing ends of front connection switches (both Types "A" and "C") are connected on back by copper straps, placed in grooves in slate, so that load can be taken from either end of switch. Thus only six wires (three incoming and three outgoing) are needed on a three pole switch, eight wires on a four pole, etc.

Back connections are on slate base, mounted on corner feet of iron. Wires on back.

# TYPE "A" Front and Back Connections Front Connections—250 Volts D.C. and A.C.

	Front Connections—500 Volts A.C.	Amp. 30 60 100	List No. 1300 1301 1303	D. P. D. T. 88.65 11.55 18.69	Net Wt. Each Lbs.	List No. 1305 1306 1308	3 P. D. T. 811.55 15.33 24.92	Net Wt. Each Lbs.	List No.	4 P. D. T. \$15.53 20.47 33.21	Ne With Each Lbs 131/17 33
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#### 

18,06

131/2

1331

1333

1326

30	1400	\$15.22	16	1405	\$19.95	20	1410	\$20.91	27
60	1401	17 99	163.3	1406	18.69	23	1411	24.27	34
			30/2	1 108	36.04	43	1.113	48,06	66
100	1403	27.14	20	1100	90.03	1 20	1110	307.00	1 00

#### Back Connections-500 Volts A.C.

30	1420	\$15.75	17	1425	\$17.80	24	1430	\$23.58	32
60	1421	17.85	18	1426	20.19	27	1431	27.14	40
100	1423	28.48	32	1428	27.82	48	1433	49.45	72

# TYPE "C" Front Connections Only Front Connections—250 Volts D.C. and A.C.

Amp.	List No.	D. P. D. T.	Net Wt. Each Lbs.	List No.	3 P. D. T.	Net Wt. Each Lbs.	List No.	4 P. D. T.	Net Wt. Each Lbs.
30 60 100	1350 1351 1353	\$7.12 9.02 18.81	8 8½ 14	1355 1356 1358	\$9.50 11.97 22.18	$\begin{array}{ c c c }\hline 10 \\ 111\frac{1}{2} \\ 21\frac{1}{2} \end{array}$	1360 1361 1363	\$12.69 15.96 29.57	$ \begin{array}{c c}  & 13\frac{1}{2} \\  & 17 \\  & 33 \end{array} $

#### Front Connections-500 Volts A.C.

60	1370 1371	10 64	9	1376	\$11.40 14.25	131/2	1381	16.80	20
	1373	20.77	16	1378	18.32	24	1383	32.42	36

13.65

20.68

60

100

1321

#### MISCELLANEOUS SWITCHES

#### "STAR DELTA" MOTOR STARTING SWITCHES

Types "A" and "C"



Type "A" Fusible One End



Type "C" No Fuse

Used for starting 3 phase motors, where the device connected does not require at starting more than 60 per cent, of normal full load torque.

No starter is required, but motor must have both ends of phase windings brought out to the terminal block.

Line switch is also required as one end of the windings must be connected to the line before passing through the starting switch.

Starting current is approximately one and one-half times normal.

#### NO FUSE

#### FUSIBLE ONE END ONLY

Type "A"			Type "C"		Type "A"			Type "C"				
Amp.	List No.	3 P. D. T.	Net Wt. Each Lbs.	List No.	3 P. D. T.	Net Wt. Each Lbs.	List No.	3 P. D. T.	Net Wt. Each Lbs.	List No.	3 P. D. T.	Net Wt. Each Lbs.
30 60 100	1385 1386 1387	\$9,40   11,98   19,58	6 10 16	1395 1396 1397	\$7.98 9.20 17.64	6 10 16	1365 1366 1367	\$10.80 13.74 22.96	8 15 29	1390 1391 1392	$\begin{bmatrix} 88.74 \\ 10.46 \\ 20.16 \end{bmatrix}$	8 15 29

#### THE "KAPPA" SWITCH

#### 30 Amperes, 250 Volts-Front Connections-Plain Finish Only-Single Throw Only

#### No Fuse



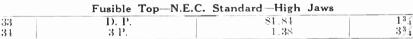
No. 22





No. 30

Fusible Bottom—N.E.C. Standard—High Jaws							
30	D. P.	\$1.84	134				
31	3 1'.	1.38	1 974				





No. 33

Unmounted Switches, without Slate Bases, deduct 10 per cent. No fuses included in above prices.

This switch is designed for comparatively light work. Made in one size only, 30 amperes, 250 volts, front connections, plain finish.



30

Amp.	List No.	S. P. D. T. List		D. P. D. T. List	List No.	3 P. D. T. List
30	8750	\$2.54	8752	\$3.80	8754	$\begin{bmatrix} \$5.70 \\ 7.72 \end{bmatrix}$
60	8751	3.96	8753	5.92	8755	

	Back Co	nnection	s (Polishe	<b>ed</b> )	
8760	\$2.92		\$5.32		\$7.98



No. 8762

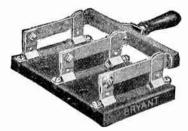
# BRYANT BABY KNIFE SWITCHES



List

No.





No. 1638

No. 1640

#### SLATE BASE-250 VOLTS Single Pole-Mounted

Single Pole—Mounted				Schedule "H"		
Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	List	W. E. List Price per Cart.	
15 Ampere, S. P., S. T	10	100	45	\$0.40	\$8.80	
30 Ampere, S. P., S. T	10	100	50	. 50	11.00	
15 Ampere, S. P., D. T	5	50	35	.68	7.48	
30 Ampere, S. P., D. T	5	50	37	.84	9.24	

	Single Pole—Unmounted					
1642	15 Ampere, S. P., S. T	1	100		\$0.40	\$0.88
1643 <b>^</b>	30 Ampere, S. P., S. T	1	100		.50	1.10
1648	15 Ampere, S. P., S. T., Fusible*	1	50		. 46	1.01
1649▲	30 Ampere, S. P., S. T., Fusible*	1	50		. 57	1.25
1660	15 Ampere, S. P., D. T	1	50		.68	1.50
1661	30 Ampere, S. P., D. T	1	50		.84	1.85
1666	15 Ampere, S. P., D. T., Fusible*	1	25	, .	.80	1.76
1667▲	30 Ampere, S. P., D. T., Fusible*	1	25		.98	2.16
	Double Pole-Mounted				Sahadul	~ "U"

	Double PoleMounted				Schedul	e "H"
1639*	15 Ampere, D. P., S. T.   30 Ampere, D. P., S. T.   15 Ampere, D. P., D. T.	5 5 5	100 100 50	100 105 75	\$0.50 .60 .86	\$5.50 6.60 9.46
1657▲	30 Ampere, D. P., D. T.	5	50	78	1.04	11.44
	D 11 D 1 11 .	,			~	******

	Double Fole—Unmounted				
1644	15 Ampere, D. P., S. T	1 100	١	\$0.50 +	\$1.10
1645▲	30 Ampere, D. P., S. T	1 100	, .	.60	1.32
1650	15 Ampere, D. P., S. T., Fusible*	1   50		.62	1.36
1651▲	30 Ampere, D. P., S. T., Fusible*	1   50		.74	1.63
1662	15 Ampere, D. P., D. T	1   50		.86	1.89
1663▲	30 Ampere, D. P., D. T	1   50	.,	1.04	2.29
1668	15 Ampere, D. P., D. T., Fusible*	1 25		1.10	2.42
1669▲	30 Ampere, D. P., D. T., Fusible*	1   25	٠.	1.32	2.90

	Triple Pole—Mounted				Schedu	le "H"
1641	15 Ampere, T. P., S. T. 30 Ampere, T. P., S. T. 15 Ampere, T. P., D. T. 30 Ampere, T. P., D. T.	5 5 1	$\begin{bmatrix} 25 \\ 25 \\ 10 \\ 10 \end{bmatrix}$	40 45 24 26	$\begin{bmatrix} \$1.04 \\ 1.30 \\ 1.40 \\ 1.64 \end{bmatrix}$	\$9.57 2.39 3.08 3.61

	Triple Pole—Unmounted					
1646	15 Ampere, T. P., S. T	1	25		1 \$1.04	\$2.29
<b>1647</b> ▲	30 Ampere, T. P., S. T	1	25		1.30	2.86
1652	15 Ampere, T. P., S. T., Fusible*	1	25		1.22	2.68
1653▲	30 Ampere, T. P., S. T., Fusible*	1	25		1.51	3.32
1664	15 Ampere, T. P., D. T	1	10		1.40	3.08
1665▲	30 Ampere, T. P., D. T	1	10		1.64	3.61
1670	15 Ampere, T. P., D. T., Fusible*	1	10		1.76	3.87
1671	30 Ampere, T. P., D. T., Fusible*	1	10		2.06	4.53

Mounted switches are plain finished, but will be furnished polished on special order at 20 per cent.

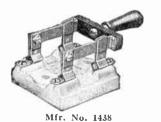
Unmounted switches are furnished in polished finish and with back connections suitable for switch-Plain finish switches will be furnished on special order board 1½ inches thick, unless ordered otherwise. at the same price.

 National Electrical Code Standard. \*To open length fuses.

### BRYANT BABY KNIFE SWITCHES







Mfr. No. 1440

#### PORCELAIN BASE-125 VOLTS

	PORCELAIN BASE—125	VOLTS						
	Single PoleMount	ed			Schedu	le "H"		
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List Price per Cart.		
1436 1437▲ 1454 1455▲	15 Ampere, S. P., S. T. 30 Ampere, S. P., S. T. 15 Ampere, S. P., D. T. 30 Ampere, S. P., D. T.	10 10 10 10	100 100 50 50	40 45 25 27	\$0.34 .44 .60 .74	\$7.50 9.70 11.04 13.62		
Single Pole—Unmounted Schedul								
1442 1443 <sup>a</sup> 1448 1449 <sup>a</sup> 1460 1461 <sup>a</sup> 1466 1467 <sup>a</sup>	15 Ampere, S. P., S. T. 30 Ampere, S. P., S. T. 15 Ampere, S. P., S. T., Fusible. 30 Ampere, S. P., S. T., Fusible. 15 Ampere, S. P., D. T. 30 Ampere, S. P., D. T. 15 Ampere, S. P., D. T. 15 Ampere, S. P., D. T., Fusible. 30 Ampere, S. P., D. T., Fusible.	1 1 1 1 1 1 1	100 100 50 50 50 50 50 25 25		\$0.34 .44 .40 .51 .60 .74 .72 .88	\$ .75 .97 .88 1.12 1.32 1.63 1.58 1.94		
Double Pole—Mounted Schedule "H"								
1438 1439 <sup>4</sup> 1456 1457 <sup>4</sup>	15 Ampere, D. P., S. T. 30 Ampere, D. P., S. T. 15 Ampere, D. P., D. T. 30 Ampere, D. P., D. T.	10 10 5 5	100 100 50 50	65 70 55 58	\$0 42 .50 .74 .90	\$9.24 11.00 8.14 9.90		
	Double Pole—Unmour	nted			Schedu	le "H"		
1444 1445 <sup>a</sup> 1450 1451 <sup>a</sup> 1462 1463 <sup>a</sup> 1468 1469 <sup>a</sup>	15 Ampere, D. P., S. T. 30 Ampere, D. P., S. T. 15 Ampere, D. P., S. T., Fusible. 30 Ampere, D. P., S. T., Fusible. 15 Ampere, D. P., D. T. 30 Ampere, D. P., D. T. 15 Ampere, D. P., D. T., Fusible. 30 Ampere, D. P., D. T., Fusible.	1 1 1 1 1 1 1 1	100 100 50 50 50 50 25 25		\$0.42 .50 .54 .64 .74 .90 .98 1.18	\$0.92 1.10 1.19 1.41 1.63 1.98 2.16 2.56		
	Triple Pole—Mounte	ed			Schedu	le "H"		
1440 1441 <sup>*</sup>	15 Ampere, T. P., S. T. 30 Ampere, T. P., S. T.	5 5	25 25	30 32	\$0.90	\$8.28 10.12		
	Triple Pole—Unmount	ted			Schedu	le "H"		
1446 1447 <sup>*</sup> 1452 1453 <sup>*</sup> 1464 1465 <sup>*</sup> 1470 1471 <sup>*</sup>	15 Ampere, T. P., S. T. 30 Ampere, T. P., S. T. 15 Ampere, T. P., S. T., Fusible 30 Ampere, T. P., S. T., Fusible 15 Ampere, T. P., D. T. 30 Ampere, T. P., D. T. 15 Ampere, T. P., D. T. 15 Ampere, T. P., D. T., Fusible 30 Ampere, T. P., D. T., Fusible	1 1 1 1 1 1 1 1	25 25 25 25 10 10 10		\$0.90 1.10 1.08 1.31 1.20 1.40 1.56 1.82	\$1.98 2.42 2.38 2.88 2.64 3.08 3.43 4.00		

Mounted Switches are plain finish, but will be furnished polished on special order at 20 per cent. advance. Unmounted Switches are furnished in polished finish and with back connections suitable for switch-board 1½ inches thick, unless ordered otherwise. Plain Finish Switches will be furnished on special order at the same price.

<sup>\*</sup> National Electrical Code Standard.

# BRYANT BABY KNIFE SWITCHES For Battery and Telephone Circuits







Mfr. No. 974

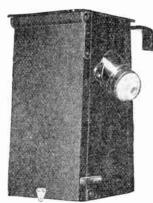


Mfr. No. 1102

	PORCELAIN BASE—TYPE "A"	SINGLE	POLE		Schedu	le "H"			
List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E List per Carton			
1001	15 Ampere, S. P., S. T	10	100	25	\$0.34	\$7.48			
977	30 Ampere, S. P., S. T	10	100	27	.44	9.68			
1039	15 Ampere, S. P., D. T	10	50	18	.60	11.04			
1040	30 Ampere, S. P., D. T	10	50	20	.74	13.62			
	PORCELAIN BASE—TYPE "A"	DOUBLE	E POLE		Schedu	le "H"			
974	15 Ampere, D. P., S. T	10	100	4()	\$0.42	\$9.24			
1041	15 Ampere, D. P., D. T		50	33	.74	6.81			
1042	30 Ampere, D. P., D. T	1	50	35	.90	1.98			
	SLATE BASE—TYPE "A" TRIPLE POLE								
1158	15 Ampere, T. P., D. T	1	1 10	15	\$1.20	\$2.64			
1159	30 Ampere, T. P., D. T	1	10	17	1.40	3.08			
		Schedu	ıle "H"						
1048	15 Ampere, S. P., S. T.	1	100	·	\$0.34	\$0.75			
1054	30 Ampere, S. P., S. T		100		.44	.97			
1050	15 Ampere, S. P., D. T		50		.60	1.32			
1056	30 Ampere, S. P., D. T	1	50		.74	1.63			
1049	15 Ampere, D. P., S. T	1	100		. 42	.92			
1055	30 Ampere, D. P., S. T	1	100		. 50	1.14			
1051	15 Ampere, D. P., D. T	1	50		.74	1.63			
1057	30 Ampere, D. P., D. T	1	50		.90	1.98			
1053	15 Ampere, T. P., S. T	1	25		.90	1.98			
1058	30 Ampere, T. P., S. T	1	25		1.10	2.42			
1150	15 Ampere, T. P., D. T	1	10		1.20	2.64			
1151	30 Ampere, T. P., D. T		10	١	1.40	3.08			
_	PORCELAIN BASE—TY	PE "B"			Schedu	ıle "H"			
1245	15 Ampere, S. P., S. T	10	100	25	\$0.20	\$4.40			
1246	30 Ampere, S. P., S. T.	10	100	27	.30	6,60			
1102	30 Ampere, S. P., S. T. 15 Ampere, D. P., S. T.	10	100	60	.35	7.70			
1074	30 Ampere, D. P., S. T	10	100	65	. 44	9.68			
			1 1 1	1.00		1			

Mounted Switches are plain finish, but will be furnished polished on special order at 20 per cent. advance. Unmounted Switches are furnished in polished finish and with back connections suitable for switch-board 1¼ inches thick, unless ordered otherwise. Plain Finish Switches will be furnished on special order at the same price.

### THE TYPE BF MATTHEWS FUSWITCH



Type BF Matthews Fuswitch

The Type BF Matthews Fuswitch is enclosed in a wooden box made of carefully seasoned clear cypress which is fastened with brass screws and conted with a high quality black paint. The roof is of asbestos board, moisture proof and of high insulation value. The door opens vertically with hinges at the top, and so designed that it stops at an angle to the box and holds there. It is equipped with an automatic catch, insulated hook and stop. The combination expulsion fuse and switch blades instantly expels molten fuse and gases through bottom of box and kills the line affected. Fuse renewal is less than 3 cents each. The base is of blue Vermont marble. The Type BF Fuswitch has an automatic indicator, removable asbestos board bottom and special porcelain insulator bushings which will with stand "flashover" test of 19,000 volts—12,400 volts more than the highest voltage for which they are recommended. The wrought iron cross-arm hangers are made to fit all sizes of cross arms. Specify width of arm when ordering. Sizes from top to bottom 14 inches. Depth at top 5% inches; depth at bottom 6¾ inches; width 7½ inches.

\*List Price List No.

BF Matthews Fuswitch, 6600 volts and less, 100 amperes and less \$28.00 \*Delivery F. O. B. Factory, St. Louis, Mo. For warehouse delivery

World Radio History

write nearest house.

#### MISCELLANEOUS SWITCHES

# ; "Junior" Battery Switches

ON COMPOSITION BASE





	25 Amperes								
List No.	Style	Car- ton		Wt. S. P. Boxed	Size Base Long, Wide Inches	Mfrs. List	W. E. List		
1 2 5	SPST SPDT (See Cut)	10 10 5	200 100 100	32 lbs. 20 lbs. 28 lbs.	1 16 x 2 16 1 16 x 2 1/4 1 1/4 x 2 1/4	\$0.20 .30 .40	\$0.40 .60 .80		

Spring holds lever in neutral position and in each contact. Blades cannot fall out of hinges even if screw is removed.

### Telephone or Battery Switches

FOR SWITCHBOARD WORK OR IN CONNECTION WITH FIRE AND BURGLARY ALARM SYSTEM
FOR BACK CONNECTIONS (UNMOUNTED)
PLAIN OR POLISHED COPPER OR NICKEL PLATED

25 Amperes Back Connections



No. 781 Projections on Posts prevent turning

		Std.	3174		Mfrs. List		"		
List No.	Style	Pkg.	Wt. S. P. Boxed	Plain	Polished	Nickel Plate	Plain	Polished	Nickel Plate
777	SPST	150	24 lbs.	\$0.34	80.48	\$0.52	80.68	\$0.96	\$1.04
778	SPDT	100	24 lbs.	. 50	.72	.78	1.00	1.44	1.56
779	DPST	100	33 lbs.	. 56	.80	. 86	1.12	1.60	1.72
780	DPDT	50	26 lbs.	. 80	1.16	1.25	1.60	2.32	2.50
781	1 3 P S T	50	18 lbs.	.81	1.20	1.30	1.68	2.40	2.60
789	3 P D T	1 50	23 lbs	1.25	1.71	1.92	2.50	3.48	3.84

 $1^{1}4$  in, Break Unless otherwise specified polished finish will be sent.

1 % in Separation

# Gas Engine Switches

FOR CHANGING FROM ONE SET OF BATTERIES TO ANOTHER OR FROM BATTERY TO. MAGNETO



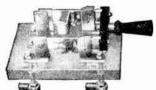
No. 980

#### Size Base Long, Wide Inches W, E. List Wt. S. P. Mfrs. List Car-Std. No. Style Pkg. Boxed List ton 42 lbs. 80.70 980 50 2 x 4 4 x 4 \$1,40 984 1.40 2.80

25 Amperes

# Field Discharge Switches

WITH QUICK BREAK ATTACHMENTS For Potentials not exceeding 250 volts Polished Finish—Back Connections ON WOOD TEMPLETS



No. 8739. 200 Amperes

### Cut Around Switches

FOR TESTING METER

Plain Finish



No. 8231 For 2 and 3 Phase 220 V. Power Installation D. C. and A. C.

List No.	Amperes	Net Each	Mfr's, List Double Pole Single	W. E.	List No.	Amperes	Net Wt. Each Lbs.	Mfr's. List S. P. S. T.	W. E. List
8734 8738 8739	60 100 200	1.bs. 21 <sub>2</sub> 5	Throw \$10,00 12,50 17,50	\$17.80 22.25 31.15	8228 8229 8231 8232	36 60 100 200	11 <sub>2</sub> 3 41 <sub>2</sub>	\$2.05 2.25 4.40 6.00	\$3.90 4.28 8.36 11.40
8740	200 et 10 % for	plain finish.	23.50	41.83	8223 8234 8235	300 400 600	11 15 23	9.00 14.00 17.00	16.74 24.92 30.26

# Western Electric

# **LUGS**





	*TY	PE N		DESCRIPTION		TYPE L			
Amp.	List	Li	st	Capacity Size of Wire Hole Amp. Li		List	Li	st	
	No.	Plain	Pol.	Wire Hole	Inches	Amp.	No.	Plain	Pol.
30 60 100 200 300 400 600 800 1000	1245 1246 1248 1249 1250 1251 1252 1253 1254	\$0.06 .13 .29 .50 .88 1.60 2.22 4.40 5.04	\$0.13 .21 .44 .73 1.30 2.10 2.73 5.24 6.08	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		\$0.13 .29 .50 .88 1.60 2.22 4.40 5.04	\$0.21 .44 .73 1.30 2.10 2.73 5.24 6.08		
*30, Type furnish Cast lu at same	60, 10 "N" lu ed stam igs furn e price.	0, 200 a gs are a ped fron ished on Cast lu	umperes, egularly tubing request gs are 90	1,800,000 C. M. Cable Two 1,000,000 C. M. Cables	134	1200	1229 1230	6.30	7.36
per cent. copper—tube lugs of pure copper—but as cast lugs are of larger area than tube lugs, the conductivity of both is the same.			ast lugs the lugs,	Two 1,400,000 C. M. Cables	1½	2000	1231	17.84	21.00





	TYPE	M	DESCRI	PTION	1	ANGLE		E	SINGLE HOLE			
Amp.	List No.	List Plain	Capacity of Wire Hole	Size W. II. Inches	Stud Hole	Amp.	List No.	List Plain	Amp. Switch	Stud. Hole	List No.	List Plain
60 100 200	1232 1234 1235	\$0.13 .29 .50	No. 5 No. 1 No. 0000 300,000	1/4 3/8 9 1/6	21 64 25 64 9	60 100 200	8700 8702 8703	\$0.21 .44 .76	1500 2000 2500	$1\frac{1}{2}$ $1\frac{25}{32}$ $2\frac{1}{32}$	8720 8721 8722	\$8.40 8.82 9.44
300	1236	.88	C. M. Cable	1 1 1 6	$\begin{smallmatrix}1&1\\1&6\end{smallmatrix}$	300	8704	1.43	300	$2_{\frac{5}{3}2}$	8723	10.08
400	1237	1.60	C. M. Cable 750,000	7/8	13	400	8705	2.60	4000	$2_{16}^{-7}$	8724	11.34
600	1238	2.22	C. M. Cable	$1\frac{3}{32}$	1	600	8706	3.62	5000	$2\frac{5}{8}$	8725	12.60
800	1239	4.40	1,000,000 C. M. Cable 1,400,000	11/4	1 3	800	8707	7.14	Cana	city of v	rire hole	1.000
1000	$1239\frac{1}{2}$	5.04	C. M. Cable	1/2	1 3	1000	8708	8.18	000 C. I	M. Cabl	e. Size	of wire
1200	1240	6.30	1,800,000 C. M. Cable	13/4	$1\frac{5}{16}$				1500.	4 inches 2000 an	d 2500	amnere
1500	1241	12,60	Two 1,000,000 C. M. Cables Two 1,400,000	11/4	15%				switche ampere	s requir , 3 lug	e 2 lugs s; 400	s; 3000 0 am-
2000	1242	17.84	C. M. Cables	11/2	17/8				pere, 4 lugs.	lugs; 50	J00 am	pere, 5

### Western Electric

# WIRE CONNECTORS

#### FOR STRANDED CABLE





No. 960

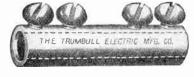
No. 970

#### WIRE HOLES EXTEND HALF WAY THROUGH CONNECTORS

List No. 960 961 962 963 964 965 966 967 968 969 971 971	Size of Stranded Cable 12 and 14 10 8 8 6 and 7 6 and 5 4 and 5 2 and 3 2 and 3 0 and 1 00	Screw 2 2 4 2 4 2 4 2 4 4 2 4 4 4 4 4	Size Hole Inch .110 .140 .140 .160 .160 .209 .209 .265 .265 .312 .312 .390 .437	Diameter Outside Inch Inch Inch Inch Inch Inch Inch Inch	Length Inches 11/4 11/4 11/2 11/4 11/2 11/4 11/2 11/4 11/2 11/8 11/2 11/8 11/2 11/8	Std. Pkg, 200 200 200 200 150 150 100 100 100 50	Net Weight Std. Pkg. Lbs. 3½ 5½ 6½ 5½ 6½ 5½ 6½ 5¼ 7 7 8½ 5¼ 7	Mfrs. List \$0.031/3 .04 .053/4 .041/4 .06 .05 .061/4 .07 .09 .08 .11 .14	W. E. List \$0.07 .09 .13 .09 .13 .11 .14 .15 .20 .18 .24 .31
		4 4 4		5/8 3/4 7/8		$\begin{array}{c} 50 \\ 25 \\ 25 \end{array}$	$\frac{7}{6\frac{1}{2}}$	.17 .28 .42	.37 $.62$ $.92$

#### WIRE CONNECTORS FOR SOLID AND STRANDED CABLE





No. 2200

No. 2208

Mfrs.

W. E

#### WIRE HOLES EXTEND ALL WAY THROUGH CONNECTORS

Two Screw Net Weight Largest Wire Outside Diam. of W. E. Std. Std. Pkg. Mfrs. Hole List Length Diam. List Solid Stranded Pkg. Lbs. List No. Inches Inches Inches 31/4 .106 \$0.05 \$0.11 12 100 11/2 2200 . 13 100 .062201 $\frac{11/2}{13/4}$ 3 .147 8 .1856 8 100 5 .07. 15 220263/4 17/8 17/8 17/8 17/8 100 .08 . 18 2203 .228 4 5 .22 $7\frac{1}{2}$ .10 2204 2 3 100  $4\frac{3}{4}$ .12  $\bar{0}$  $\bar{2}$ .26 50 2205 00 1 50 53/4 .14 .31 2206 Four Screw 71/2 17/8 17/8 17/8 17/8 \$0.09 \$0.20 5 100 .228 4 2207  $\frac{7}{16}$   $\frac{9}{16}$   $\frac{9}{16}$   $\frac{11}{16}$   $\frac{11}{16}$   $\frac{3}{4}$ 834 .24 22082 3 100 .11 .13 0 2 50 5 29 2209 1 .33 00 50 6 .152210 .22.48 000 00 50 7  $\frac{2}{2}$ 2211 81/4 .28 ,62 2212 0000 000 50  $\tilde{\tilde{2}}_{1\tilde{6}}^{\ 3}$  $6\frac{1}{4}$ .84 0000 25 .38



2213

No. 6114

#### Including Bolts, Nuts and Washers Dimensions of Bus Bar That List No.

Clamps Will Take	List	List
1½ x 1½ to 1¾ x 1¼	\$0.32	\$0.46
2 x 2	.50 .80	.72 1.15
4 x 4	1.30	1.87

SWITCHBOARD ACCESSORIES Bus Bar Clamps

**World Radio History** 

# DOSSERT SOLDERLESS WIRE CONNECTORS

These devices are used to connect conductors and make neat and strong joints without the use of solder.



Type A 2-Way

### 2-Way Connectors

#### TYPE A-STANDARD CONNECTOR

Type A connectors are for use on cables, stranded or solid wires, rods and tubing. They should not be used on a conductor that is subjected to heavy tensile strain. In ordering Type A connectors for solid wires, rods and tubing, give diameter of rod, wire or tubing or circular millage of rod.

### TYPE B-STRAIN CONNECTOR

Type B connectors are for use on stranded wires or cables and are designed to make a joint which will withstand heavy tensile strains. They are not made for wires smaller than 0.

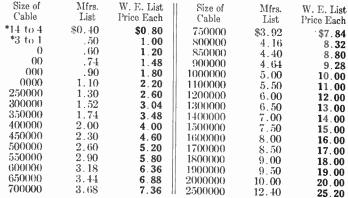
#### TYPE C-HIGH VOLTAGE CONNECTOR

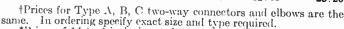
Type C connectors are made with round nuts and nipples for use on high tension circuits.

#### **ELBOW**

This elbow makes an admirable right angle connection, specially where a right bend is to be made with a solid conductor going into panels and in connection with oil switches.

†2-WAY CONNECTORS AND ELBOWS





\*Prices of 14 to 4 inclusive and 3 to 1 inclusive, respectively, are the same, but in ordering state exact size wanted, as inner bore of sleeve must be drilled to fit wire to be connected up.



Type B 2-Wav



Type C 2-Way



Elbow



Type Z Equalizer



Insulated Cover

#### TYPE Z EQUALIZER

Type Z equalizer, which is a combination of two eable taps, is used to equalize the load, between two power eables than run parallel, or at right angles, to The connections are made in the same each other. manner that a cable tap is secured to the main cable.

They can be furnished for equalizing the load on any two sizes of feeder. When ordering, give the distance between centers of eables, circular-nullage of cable, and state whether cables are concentric or rope laid, and whether they are parallel or at right angles to each other.

List No.	W. E. List Price Each
Type Z Equalizer	Prices on application

# INSULATED COVERS FOR CALLE TAPS

Insulating covers can be supplied for Dossert cable taps of any size up to  $500000\,\mathrm{CM}$ . These covers can be installed after the taps joint has been completed, and in case any changes in the wiring become necessary the covers may be taken off and put on at will.

Sizes	Mfrs. List	W.E.List
500000	CM main and branch\$2.00	\$4.00
500000	CM main, No. 00 branch 1.70	3.40
300000	CM main and branch 1.30	3.60
250000	CM main and branch 1 10	2.20
No. 0000	main and branch 1 00	2.00
No. 00	main and branch. 80	1.60
No. 1	main and branch60	1.20

### DOSSERT SOLDERLESS WIRE CONNECTORS

Cable Tan

# †Cable Taps 3-Way and "Y" Connectors

#### CABLE TAPS

The cable tap is used to connect a branch wire, rod or bleeder to a main wire, rod or feeder. It does not splice the main, but simply clamps on to it. The cable tap can be furnished to connect any size branch wire to any size main wire.

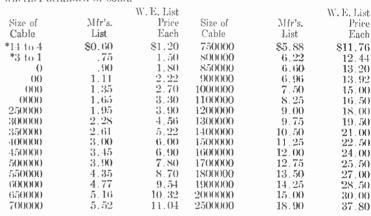
#### 3-WAY CONNECTOR

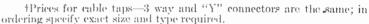
The 3 way connector is used to make a main line splice and to connect a branch wire at the joint.

#### "Y" CONNECTOR

The "Y" connector is used to make a 3 way splice when the cables are not at right angles to each other. It can be furnished to connect any three sizes or combinations of wire cable or rod.

When ordering for sizes from No. 14 to No. 0000, always specify whether stranded or solid.





\*Prices of 14 to 4 inclusive, and 3 to 1 inclusive respectively, are the same, but in ordering state exact size wanted, as the inner bore of sleeve must be drilled exactly to fit wire to be connected up.

#### REDUCERS

Reducers are made in 2 ways and 3 ways. The accompanying cut shows a 2-way reducer.

Any combination can be effected by means of these reducers, and they are used to a great extent in connecting solid round busses on switchboards to feeder cables.



#### STUD CONNECTORS

#### Type F

Stud connector Type F is used to connect a wire or cable to a stud or breaded rod.

When ordering Type F stud connectors, give diameter and number of threads per inch of stud or rod that the connector is screwed on to, the circular millage of cable or gauge number of wire and state whether wire is solid or stranded.

#### Type M

Type M is used to connect wires or cable to flat strips or blocks.

When ordering Type M stud connectors, give diameter and length of stud and number of threads per inch, the circular millage of cable or gauge number of wire, and state whether wire is solid or stranded.

List No.	List Price
Type F On a	pplication
Type MOn a	pplication





"Y" Connector



Reducer



Type F Stud Connector



Type M Stud Connector

# DOSSERT SOLDERLESS WIRE CONNECTORS



Front Connected Lug



Back Connected Lug



Angle Lug



Swivel Lug

# Dossert Cast Lugs

All lugs are regularly furnished with contact surfaces, undrilled, but if desired bolt holes will be drilled according to specifications without extra charge.

When ordering by List Nos, for sizes from No. 14 to No. 0000 always specify whether stranded or solid.

### †ANGLE, FRONT AND BACK CONNECTED LUGS

Size		W. E. List	Size		11: 11: 7: 4
of	Mfr's.	Price	of	Mfr's.	W. E. List
Cable	List	Each	Cable	List	Price Each
*14 to 4	\$0.30	\$0.60	750000	\$2.91	\$5.88
*3 to 1	.38	.76	800000	3.11	6.22
0	.45	.90	850000	3.30	6.60
00	.56	1.12	900000	3.48	6,96
000	.68	1,36	1000000	3.75	7.50
0000	.83	1,66	1100000	4.13	8.26
250000	. 98	1.96	1200000	4.50	9.00
300000	1.14	2.28	1300000	4.88	9.76
350000	1.31	2.62	1400000	5.25	10.50
400000	1.50	3.00	1500000	5.63	11,26
450000	1.73	3.46	1600000	6.00	12.00
500000	1.95	3.90	1700000	6.38	12.76
550000	2.18	4.36	1800000	6.75	13.50
600000	2.39	4.78	1900000	7.13	11.26
650000	2.58	5.16	2000000	7.50	15.00
700000	2.76	5.52	2500000	10.00	20.00

<sup>\*</sup>Prices of 14 to 4, inclusive, and 3 to 1, inclusive, respectively, are the same, but in ordering state exact size wanted, as inner bore of sleeve must be drilled exactly to fit wire to be connected up.

†For list prices of swivel lugs, double list prices of angles front and back connected lugs.



Insulated Joint Complete

#### DOSSERT INSULATING COVERS

The material used in the manufacture of this cover is heat-resisting, non-hygroscopic, of good dielectic strength, and mechanically very strong. The arrangement is in two parts, with a threaded coupling and shoulders which lock against the ends of the connectors, thus holding firmly in position. A wide range of conductor openings is provided to accommodate various thicknesses of insulation. This cover can be furnished for a number of types and sizes of Dossert Connectors.

Size	Mfr's, List	W. E. List
No. 00 cover for use on the No. 0 connectors	\$0.60 .46	\$1,20 .92 .52
No. 4 for use on No. 4 connector and takes all sizes from No. 4 to No. 14 connectors	. 20	. 40

**World Radio History** 

# Western Electric

# **FUSE HOLDERS**

Front Connections

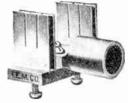


3 to 60 Amp 60 Amp. with Lugs

Fuse Holders are Furnished with Serews for Bases 1/2 in. thick, unless otherwise specified.







61 to 600 Amp. TYPE "K", 601 to 1200 Amp.

Plain Finish Will Be Sent When Finish Is Not Stated

		A 1011							
List	77.11	List per	Holder	Capacity					
No.	Volts	Plain	Polished	Cupuoty					
1048 1048½ 1049 1049½ 1051 1052 1053	250 600 250 600 250 250 250	\$0.42 .48 .67 .73 1.05 1.68 3.99	\$0.55 .61 .84 .94 1.34 2.10 4.72	3 to 30 amperes, no lug. 3 to 30 amperes, no lug. 31 to 60 amperes, with lugs. 31 to 60 amperes, with lugs. 61 to 100 amperes, with lugs. 101 to 200 amperes, with lugs. 201 to 400 amperes, with lugs.	F F F K K K				
1054 1055 1056	250 250 250 250	5.24 8.60 11.02	6.08 10.08 13.12	401 to 600 amperes, with lugs 601 to 800 amperes, with lugs 801 to 1200 amperes, with lugs	K K				

#### BACK CONNECTIONS



TYPE "F"
3 to 60 Amp.
60 Amp. with Lugs



Square Posts
TYPE "K"
61 to 600 Amp.



Extended Posts



TYPE "K" 601 to 1200 Amp. Double Fuses Used

List of Type "K" fuse holders apply to either square or extended posts.
Unless specified, square posts, Type "K" fuse holder will be furnished.
Extended posts. Type "K" not made above 600 amperes.
Fuse holders for back connection are furnished with lugs, lug nuts and studs for bases 1 inch thick, unless otherwise specified.

# Polished Finish Will Be Sent When Finish Is Not Stated

		Polishe	ed Finish	Will Be Sent when Finish is Not Stated		
List	Volts	List per		Capacity	Length Stud Inches	Туре
No.  1070 1070½ 1071½ 1071½ 1071½ 1075 1076 1077 1077½ 1078	250 600 250 600 250 250 250 250 250 250 600 250	Polished  \$0.52 .63 .84 .94 1.84 2.94 6.72 9.44 17.22 17.22 19.58	So. 42	3 to 30 amperes, no lug 3 to 30 amperes, no lug 31 to 60 amperes, with lugs. 31 to 60 amperes, with lugs. 61 to 100 amperes, with lugs. 101 to 200 amperes, with lugs. 201 to 400 amperes, with lugs. 401 to 600 amperes, with lugs. 601 to 800 amperes, with lugs. 601 to 800 amperes, with lugs. 801 to 1200 amperes, with lugs.	2 716 2 716 2 716 3388 3 388 3 388 3 318 3 718 4 172 5 178 5 178 5 716	F F F K K K K K K K K K
1079	600	19.58	21.00	801 to 1200 amperes, with lugs	1 • 716	

# PERKINS PANEL SWITCHES







No. 2700

No. 2599

No. 2300

# Perkins Panel Switches

Schedule "H"

Each branch is fitted with a 10 ampere double pose switch, which is mounted on a separate base and may be removed without disturbing either main or branch connections. These switches may be installed in any standard cabinet having a minimum depth of 3 inches.

# WITH CONNECTIONS FOR PLUG FUSES-10 AMPERES, 125 VOLTS

List	*With Dead Fronts and Push But	tton	Switches	;	Mfr's.	W. E.
No.	Ca	arton	Std. Pkg.	Pkg. Wt.		List Price er Carton
2698 <sup>4</sup> 2699 <sup>4</sup>	Double pole, single branch, 65% x 3 inches.  Double pole, double branch, 10½ x 3 inches.	1	10 10		\$2.25 3.50	\$4.05 6.30
2700*	Triple to double pole, double branch, $11\frac{5}{8} \times 3$ inches.	ī	10	• •	3.75	6.75
	*With Dead Fronts and Rotary	Swi	tches			
2598* 2599*	Double pole, single branch, 65% x 3 inches	1	10	27	\$2.00	\$3.60
26004	Triple to double pole, double branch, 115/8 x 3 inches.	1 1	10 10	45 45	$\frac{3.00}{3.25}$	$\frac{5.40}{5.85}$
	With Open Fronts and Rotary	Swit	ches		0.20	0.00
2400 <sup>4</sup> 2300 <sup>4</sup>	Double pole, single branch, 6½ x 3 inches	1	10	15	\$1.60	\$2.88
2360	Double pole, double branch, 10½ x 3 inches.  Triple to double pole, double branch, 115% x 3 inches.	1 1	10 10	$\begin{array}{c} 17 \\ 20 \end{array}$	$\frac{2.75}{3.00}$	$\frac{4.95}{5.40}$







No. 2685

No. 2688

No. 2535

# Perkins Panel Switches

# WITH CONNECTIONS FOR CARTRIDGE FUSES-10 AMPERES, 250 VOLTS

* ' '	*With Dead Fronts and Push B	utton	Switches		Mfr's.	W. E.
List					List	List Price
No.		Carton	Std. Pkg.	Pkg. Wt.	Each	per Carton
2684	Double pole, single branch, 778 x 3 inches	1	10		\$2.25	\$4.05
2685 <sup>4</sup> 2686 <sup>4</sup>	Double pole, double branch, 12 1 x 3 inches	1	10		4.25	7.65
2080~	Triple to double pole, double branch, 14 x 3 inches	1	10		4.75	8.55
	*With Dead Fronts and Rotar	v Swit	ches			
26874	Double pole, single branch, 7% x 3 inches.	1	10		<b>@</b> 2.00	90.00
2688	Double pole, double branch, $12\frac{13}{12} \times 3$ inches	î	10	• •	\$2.00 4.00	\$3.60
2689*	Triple to double pole, double branch, 14 x 3 inches	ī	10	• •	4.50	7.20 8.10
	With Open Fronts and Rotary		-l	••	1.00	0.10
2534	Double note single branch 77/ x 2 inch	Jawie				
25354	Double pole, single branch, 77% x 3 inches	1	10	27	\$1.60	\$2.88
25364	Triple to double pole, double branch, 14 x 3 inches	Ţ	10	45	3.25	5.85
	21. pro to dodolo polo, dodolo branch, 14 x 3 menes	ī	10	45	3.75	6.75
	MECHANISMS					
2595*						
25234	Rotary, without handle	10	100	• •	<b>\$</b> 0.71	\$12.78
±/D1	Push button	10	50		.80	12.00

\*The covers of these switches are steel, lined with insulating material. Each cover has an overhanging edge which engages with the cover of the adjoining switch, thereby effectively preventing accidental contact with any live parts. Covers are the same length as the bases. Orders will regularly be filled with switches having dull black covers. White enamel covers will be supplied when specified without extra charge. All other finishes on covers, add to list price \$1.10. To Mfrs. List \$0.50.

\*National Electrical Code Standard.

#### BRYANT ENTRANCE AND PANEL SWITCHES



Mfr. No. 1695



Mfr. No. 1692

#### Bryant Entrance Switches DOUBLE POLE, 30 AMPERES, 125 VOLTS

Schedule "I"

List No.	Description	Carton Quantity	Std. Pkg.	Wt. Lbs.	List Each	List per Carton			
1695▲ 1981▲	Fuses at the top	1 1	100 100	170 170	\$0,90 ,90	\$1.62 1.62			
	TRIPLE POLE, 30 AMPER	ES, 125 V	OLTS		Sched	iule "I"			
1693▲ 1986▲	Fuses at the top, same style handle as No. 1695 Fuses at the bottom, same style handle as No. 1695	1 1	50 50	150 150	\$1.40	\$2.52 2.52			
DOUBLE POLE, 30 AMPERES, 125 VOLTS Schedule "I"									
*1692 <b>^</b> *1985 <b>^</b>	Fuses at the top	$\begin{array}{ c c c c }\hline & 1 & \\ & 1 & \\ \end{array}$	100	240 240	\$1.00 1.00	\$1.80 1.80			



No. 1851



No. 1984



No. 1987

#### Bryant Panel Switches 30 AMPERE, DOUBLE POLE, SINGLE BRANCH

Schedule "I" Pkg. | Mfrs. | W. E.

List No.	Description	Carton Quantity	Std. Pkg.	Wt. Lbs.	List Each	List per Carton				
1851	Fuses at the top	1	100	210	\$1.00	\$1.80				
_1982▲	Fuses at the bottom	1	100	210	1.00	1.80				
	30 AMPERE, DOUBLE POLE,		BRAN	СН	Sched	ule "I"				
1852▲	For Vertical Mains	1	50	180	\$2.00	\$3.60				
_1983▲	For Horizontal Mains	1	50	180	2.00	3.60				
30 AMPERE, T. P. TO D. P., DOUBLE BRANCH Schedule "I"										
1947▲	For Vertical Mains	1	50	220	\$2.10	\$3.78				
1984*	For Horizontal Mains	1	50	220	2.10	3.78				
	Sched	ule "I"								

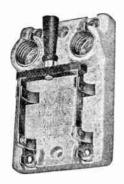
		•	•					
*1694* *19 87*	Fuses at the Fuses at the	top bottom		1	50	130	\$1.10 1.10	\$1.98 1.98

<sup>\*</sup> These Switches were approved for use on 250-Volt circuits prior to the change of rules adopted by the Underwriters' National Electrical Association at their meeting of March, 1909. We continue to list them as they have greater spacings than the 125-Volt switches of the same description listed above, and may, on that account, be preferred by some, although it will be understood that they will only be approved when installed on circuits of 125 volts and under.

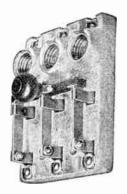
A National Electrical Code Standard.

# "D & W" ENTRANCE CUT-OUTS AND SWITCH BOXES

NATIONAL ELECTRICAL CODE STANDARD



Mfr. No. 25030



Mfr. No. 25031

# 30 Amperes, 125 Volts

For Plug Fuses

List No.	Ampere Capacity	Volts	Description	Carton	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	*W. E. List Each
*25030 25031	30 <b>3</b> 0	125 125	Double Pole	1	100 50	200 175	\$1.00	\$2.00 2.80

<sup>\*</sup> These Cut-outs are spaced and were formerly approved for 250 Volts.



Mfr. No. 25022 For Conduit Connection



Mfr. No. 25033 For Open Wiring

# Switch Boxes with Cut-outs

With Cover Hinged on End

List No.	Туре	Ampere Capacity	Volts	Description	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	*W.E. List Each
25022 25023 25024	J-6 J-7 J-8	30 30 30	125	Double Pole	25 25 25	160 225 340	\$3.00 3.50 4.00	\$6.00 7.00 8.00

#### With Cover Hinged on Side

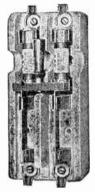
25034   J-3   30   125   Triple Pole	25032 25033 25034	J J-2 J-3	30 30 30	1 120	Double Pole. Double Pole. Triple Pole.	25 25 25	160 225 340	\$3.00 3.50 4.00	\$6.00 7.00
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<sup>\*</sup>Delivery F. O. B. Factory, Providence, R. I. For warehouse deliveries write nearest house.

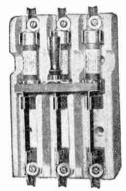
### Western Electric

# "D & W" ENTRANCE CUT-OUTS

NATIONAL ELECTRICAL CODE STANDARD



Mfr. No. 25050



Mfr No. 25051

# 60 Amperes, 250 Volts

#### For Cartridge Fuses

List No.	Ampere Capacity	Volts	Description	Carton	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	*W. E. List Each
25050 25051	31-60 31-60	125 125	Double Pole	1		42 lbs. 30 lbs.	\$1.95 2.80	\$3.90 5.60



Mfr. No. 25028



Mfr. No. 25029

# 30 Amperes, 125 Volts

#### For Plug Fuses

List No.	Ampere Capacity	Volts	Description	Carton	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	*W. E. List Each
25028 25029	30 30	125 125	Double PoleDouble Pole, Single Branch	1 1	100 100	150 190	\$0.90 1.00	\$1.62 1.80

\*Delivery F. O. B. Factory, Providence, R. I. For warehouse deliveries write nearest house.

# FUSE RIBBON AND LINK FUSES



### Fuse Ribbon

					1
List No.	Carrying Capacity Amperes	Standard Length Inches	Size in Inches	Feet per Lb.	List Price per Lb.
35315. 35325. 3533. 3534. 3535. 3536. 3537. 3538. 3539. 3540. 3541. 3542. 3542. 3543. 3544. 3545. 3546. 3547. 3548. 3549. 3550. 3551. 3550. 3551.	50 60 70 75 80 90 100 115 125 150 175 190 200 225 250 275 300 350 400 450 500 550 600	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	.36 x .047 .44 x .047 .47 x .047 .50 x .047 .375 x .078 .44 x .094 .375 x .125 .50 x .094 .57 x .094 .57 x .094 .875 x .094 1. x .094 1. x .110 1. x .130 1. x .150 1. 94 x .075 1. 125 x .20 1.125 x .20 1.25 x .20 1.25 x .20 1.37 x .20 1.50 x .20	13 10 9.55 9.1 7.1 6.1 5.2 4.4 4.4 3.5 3 2.6 2.2 1.9 1.65 1.4 1.43 1.1 .97 .85 .78	\$1.20 1.20 1.20 1.20 1.20 1.20 1.00

Standard package 10 lbs. assorted.





Slot 3/2 Inch Slot 3/8 Inch Slot 1/4 Inch 3 A Terminal. 5 A Terminal. 4 A Terminal.

6 A Terminal. Slot ½ lnch 8 A Terminal. Slot ¾ lnch 1 B Terminal. Slot ⅓ Inch

2½ B Terminal. Slot % Inch 10 C Terminal. Slot % Inch

Open Link Fuses

"A" terminals have one slot parallel and one slot perpendicular to the center line of the link, "B" terminals have both slots parallel and "C" terminals, both perpendicular to center line. Made in all styles except where specially noted.

-	_		List	Price per	100
List		No.	11/2 Inch	3½ Inch	5 Inch
No.	Amperes	Terminal	Centers	Centers	Centers
541474	1-5	1 B	\$4.00	\$6.00	\$8.00
541475	5-30		6.00	8.00	10.00
541476	35-100	3	6.00	10.00	12.00
541477	35-100	4	8.00	12.00	16.00
341477	1 1	ackage: 10		eigo.	
Sta	ndard pa	ackage: 10	JO OF OTHE	SIZC.	

51.93	ndaru packi	OHC BIZE		
000	1	List Price per 100		
List		No.	5 Inch	8 Inch
No.	Amperes	Terminal	Centers	Centers
541482	100-400	8	\$50.00	\$80.00
541483	410- 600	8	80.00	120.00
541484	610-800	8	110.00	160.00
541485	810-1000	8	150.00	200.00

Standard package: 25 assorte

			List	Price per	100
List		No.	21/2 Inch	5 Inch	8 Inch
No.	Amperes	Termina	l Centers	Centers	Centers
541478	25-100	5	\$20.00	\$30.00	\$40.00
541479	110-200	5 or 6	24.00	36.00	48.00
541480	210-400	6	30.00	45.00	60.00
	410-600	6	45.00	60.00	80.00
041401				orted siz	es.

Sta	andard bac	kage: 50 oi	assorted si	200.	
200	arrenem en france	List Price per 100			
List		No.	4 Inch	8 Inch	
No.	Amperes	Terminal	Centers	Centers	
541486	100- 200	10 C	\$80.00	\$120.00	
541487	210- 400	10 C	90.00	140.00	
541488	410- 600	10 C	100.00	160.00	
541489	610-800	10 C	120.00	180.00	
541490	810-1000	10 C	150.00	200.00	

Standard package: 25 assorted. Prices on larger sizes on application.

# FUSE LINKS AND WIRE



# Standard Car Fuses

These fuses are made with copper terminals and flat fuse strips. Length, center to center of slots, 2½ inches. Standard package contains 100 fuses.

List No. 541411 541412 541413 541414	Ampere Capacity 50 75 100 125	Style Round Flat Flat Flat	List Price per 100 \$7.00 7.00 7.00 8.40		List No. 541415 541416 541417 541418	Style Flat Flat Flat Flat	Ampere Capacity 150 200 225 250	List Price per 100 \$8.40 10.00 12.00
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# Round Fuse Wire

14 to 200 Amperes

List No.	Safe Carrying Capacity	Best Lengths for Use, and Fusing Currents for such Lengths.		Lgth. per Lb.		Mils.	One Package	List Price
	Amperes	Inches	Amperes	Ft.	In.	Diam.	Contains	per Lb.
3500	1/8 1/4 1/2 3/4	$1\frac{1}{2}$ $1\frac{1}{2}$ $1\frac{1}{2}$	$\frac{\frac{34}{110}}{110}$	10800		5	2 oz.	_
3501	1/4	1 1/2	1,70	2700		10	2 oz.	
3502	1/2	11/2	$3\frac{1}{2}$	950		17	2 oz.	\$5.50
3503		11/2	3 9	810		181/2	8 oz.	5.50
3504	1	$\begin{array}{c c} & 1\frac{1}{2} \\ & 1\frac{1}{2} \\ & 1\frac{1}{2} \end{array}$	4 3.	670		20	8 oz.	2.20
3505	11/2	112	$5_{10}^{10}$	510		23	8 oz.	2.10
3506	2	$\begin{array}{c c} 1\frac{1}{2} \\ 1\frac{1}{2} \\ 1\frac{1}{2} \\ 1\frac{1}{2} \end{array}$	6	430		25	8 oz.	2.10
3507	3	11/2	6 8	370		27	8 oz.	2.00
3508	4	11/2	8	300		30	1 lb.	2.00
3509	5	2	9	220		35	1 lb.	2.00
3510	6	2	10,10	185		38	i lb.	1.70
3511	7	2	123	140		44	1 lb.	1.70
3512	8	2 2 2 2 2 2 2 2 3 3 3 3 4 4 4	13 10	120		47	î lb.	1,60
3513	9	2	17	93		54	1 lb.	1.60
3514	10	2	$19_{10}^{1}$	80		58	1 lb.	1.60
3515 3516	12	3	19	70		62	î Îb.	1.60
3517	14	3	21	60		68	1 lb.	1.60
3517 3518	15	3	$22\frac{1}{2}$	52		70	1 lb.	1.50
3519	16	3	24	49		75	1 lb.	1.50
3520	18 20	3	27	43		80	1 lb.	1.50
3521	20 25	4	27	36		85	1 lb.	1.50
3522	30	4	30	32		90	1 lb.	1.50
3523	35	4	35	26		100	1 lb,	1.50
3524	40	4	40	22		110	1 lb.	1.50
3525	45	4	46	18		120	2 lbs.	1.50
3526	50	4	49	17		125	2 lbs.	1.50
3527	60	4	63	12	6	145	2 lbs.	1.50
3528	70	Đ E	70	10	3	160	2 lbs.	1,40
3529	75	e E	78	9		175	2 lbs.	1.40
3530	80	و و	83	8	3	180	2 lbs.	1.40
3531	90	Đ E	88	7	6	190	2 lbs.	1.40
3532	100	444555555555	94	6	8	200	2 lbs.	1.40
3554	125	Ð E	110	5	6	220	2 lbs.	1.40
3555	150	5 5	135	4	2	255	5 lbs.	1.40
3556	175		165	3	$\frac{1}{2}$	290	5 Ibs.	1.40
3557	200	5 5	200	2		330	5 lbs.	1,40
	tige wire is our		240	1	11	365	5 lbs.	1.40

All fuse wire is carefully wound on spools having heavy flanges, which effectually protect the soft fusible metal from abrasion or other mechanical injury; these are then placed in small caus that are properly labeled and sealed so that fuse wire may be stored away for an indefinite time without the slightest depreciation in quality or appearance. For the number of feet per pound, diameter in mils, and the proper length to obtain best results at rated capacity, see above.

# BRYANT CUT-OUTS 30 Amperes, 125 Volts



Mfr. No. 62569



Mfr. No. 62965



Mfr. No. 61935



Mfr. No. 8020

### Plug Cut-outs Schedule "I"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
62569	Single Pole, Main	10	150	70	\$0.18	\$3.24
62965	Double Pole, Main		150	100	.30	5.40
61935▲	Double Pole, Single Branch	5	100	95	.32	2.88
8020*	Double Pole, Single or Double Cross-over Branch	5	150	165	.36	3.24



Mfr. No. 62587



Mfr. No. 62199



Mfr. No. 62165

### Plug Cut-outs

Schedule "I"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
62587 <b>^</b> 62199 <b>^</b> 62165 <b>^</b>	Double Pole, Double Branch	5	100 100 100	160 170 102	\$0.62 .64 .44	\$5.58 5.76 3.96



Mfr. No. 8042



Mfr. No. 62135



No. 559 ( Actual Size)
Illustrating Method of Using
Plug No. 559

# Plug Cut-outs

Schedule "I"

List No.	Description	Carton Quantity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
8042 <sup>*</sup> 62135 <sup>*</sup>	Triple Pole, Single Branch		75 50	195 150	\$0.54 .90	\$0.97 1.62
					Schedu	le "H"

### **FUSE PLUGS**





Tiet



Paiste No 2203 Fuse Plug Complete



Paiste No. 203 Fusette



Paiste No. 200 Holder



Cross Section View "Paiste Fusette"

# Bryant "Pyrotite" Fuse Plugs Schedule "I"

List	Capacity	Carton	Std.	Pkg. Wt.	Mfrs. List	List Price
No.	Amperes	Quantity	Pkg.	Lbs.	Each	per Carton
66327▲	3	100	500	45	\$0.07	\$11.90
66329▲	6	100	500	45	.07	11,90
66331▲	10	100	500	45	.07	11.90
66333▲	12	100	500	45	.07	11.90
66335▲	15	100	500	45	.07	11.90
66337▲	20	100	500	45	.07	11.90
66339▲	25	100	500	45	.07	11.90
66341▲	30	100	500	45	.07	11.90

Carton quantity for fuse plugs is 100.

The above fuses can also be furnished with solid brass caps on special order. Add to List Price, \$0.009.

For Plug Fuses with Special Finish Caps, add to List Price \$0.05.

▲ National Electrical Code Standard.

# Paiste "Fusette" Fuse Plugs

This fuse plug consists of two parts; the interchangeable holder, into which will fit all the fusettes from 3 amperes to 30 amperes, and the fusette or fuse carrying part.

#### Fuse Plug Complete

List	Capacity	Carton	Std.	Mfrs. List	List Price
No.	Amperes	Quantity	Pkg.	Each	per Carton
2203	3	50	500	\$0.07	\$7.00
2206	6	50	500	.07	7.00
2210	10	50	500	.07	7.00
2212	12	50	500	.07	7.00
2215	15	50	500	.07	7.00
2220	20	50	500	.07	7.00
2225	25	50	500	.07	7.00
2230	30	50	500	.07	7.00
		Fusette	Only		
203	3	50	500	\$0.05	\$5.00
206	6	50	500	.05	5.00
210	10	50	500	.05	5.00
212	12	50	500	.05	5.00
215	15	50	500	.05	5.00
220	20	50	500	.05	5.00
225	25	50	500	.05	5.00
<b>2</b> 30	30	50	500	.05	5.00
		**	O 7 .		

#### Holder Only

List		Carton	Std.	Mfrs. List	List Price
No.	Description	Quantity	Pkg.	Each	per Carton
200	Holder only	50	500	\$0.04	\$0.305

List No. 190

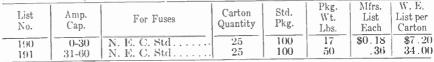
# "D & W" PLUG FUSE CASES AND FUSES

Plug Fuse Cases

NATIONAL ELECTRICAL CODE STANDARD

0-60 Amperes, 125 Volts

These fuse cases are made in two types, No. 190, 0-30 amperes, being designed for standard cartridge fuses within its range, and No. 191, 31 to 60 amperes, designed for standard cartridge fuses within that range.









List No. 410



After Blowing

# Type "C" Indicating Plug Fuses

3-30 Amperes, 125 Volts

These plug fuses are designed for standard Edison plug cut-outs, and afford a positive indication when the fuse has blown. These fuses may be reloaded.

*****	0110 1111						-		101		731	3.15	1 337 T.S
List No.	Amp. Capac- ity	Carton Quan- tity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton	List No.		Carton Quan- tity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List per Carton
403	3	25	100	9	\$0.43	\$12.69	412	12	25	100	9	\$0.43	\$12.69 12.69
404 405	4 5	$\begin{array}{c c} 25 \\ 25 \end{array}$	100 100	9	. 43	12,69 12,69	415 418	15 18	25 25	100 100	9	.43	12.69
406 408	6 8	25 25	100 100	9 9	.43	12.69 12.69	420 425	20 25	$\frac{25}{25}$	100 100	9	.43	$\begin{vmatrix} 12.69 \\ 12.69 \end{vmatrix}$
410	10	25	100	9	.43	12.69	430	30	25	100	9	.43	12.69

Above can be reloaded for W. E. List each \$0.35, at Mirs. List for \$0.25.



3-30 Amp.



35-75 Amp.

# Type "B" Plug Fuses 3-75 Amperes, 250 Volts Old Code

These fuse cartridges are for use in connection with Old Code Type B plug fuse eases, and are made in ranges of from 3 to 30 amperes, designed for 30 ampere, and from 35 to 75 amperes, designed for 75 ampere eases.

List No.	Amp. Capac- ity	Carton Quan- tity	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	W. E. List Carton	List No.	Amp. Capac- ity	Carton Quan- tity	Std. Pkg.	Wt. Lbs.	Mfrs. W. E. List List per Each Carton	
103	3	50	100	3	\$0.18	\$12,06	130	30	50	100	3	\$0.18 \$12.06	
104	4	50	100	3	.18	-12.06	135	35	25	100	12	.35 11.73	
105	5	50	100	3	.18	12,06	140	40	25	100	12	.35 11.73	
106	6	50	100	3	.18	12,06	145	45	25	100	12	.35  11.73	
108	8	50	100	3	.18	[-12.06]	150	50	25	100	12	.35 11.73	
110	16	50	100	3	.18	-12.06	155	55	25	100	12	.35 11.73	
112	12	50	100	3	.18	12,06	160	60	25	100	12	.35 11.73	
115	15	50	100	3	, 18	12,06	165	65	25	50	6	.90 30.15	
118	18	50	100	3	. 18	12,06	170	70	25	50	6	.90 30.15	
120	20	50	100	3	. 18	12.06	175	75	25	50	6	.90  30.15	F
125	25	50	100	3	.18	12.06							_

NATIONAL ELECTRICAL CODE STANDARD

The mechanical design of "D & W" fuses has been rendered as nearly correct in all particulars as possible to conform to the requirements of the National Electrical Code. Exceptionally heavy fibre tubes with extra long caps are used throughout. Where extreme rigidness is required, as in large fuses, the tubes are fitted inside with steel reinforcing rings which are so placed as to receive the ends of all the screws which hold on the fuse caps. The strength and rigidity obtained by passing these machine screws into the steel bands within the fibre tubes enable the fuse to withstand great mechanical abuse and the severest electrical conditions.

A special feature of "D & W" fuses is, that whenever possible, the copper terminal wires in the fusible links are fastened together so as to be both mechanically and electrically continuous, even before the application of solder.

An important and distinctive feature of "D & W" fuses is the so-called "Bull's-eye Indicator." The location of the indication is absolutely defined and the indication itself is extremely distinct, not requiring close inspection as is the case with other types.



Construction of Fuses from 3 to 60 Amperes

3 to 60 Amperes, 250 Volts

No. Canacity Inches Quantity Pkg. Net List per Pri					,				
91125   3					Pkg.	Net	List	per	Reload Price Each
91126				For 30 An	pere Cut-O	uts			
91136 20 2 10 100 4 lbs25 3.50 2 1137 25 2 10 100 4 lbs25 3.50 2 1138 30 2 10 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 100 100 100 100 100 100				10	100	4 lbs.	\$0.25	\$3.50	_
91136 20 2 10 100 4 lbs25 3.50 2 1137 25 2 10 100 4 lbs25 3.50 2 1138 30 2 10 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 100 100 100 100 100 100			2	10	100	4 lbs.	.25	3.50	r-1
91136 20 2 10 100 4 lbs25 3.50 2 1137 25 2 10 100 4 lbs25 3.50 2 1138 30 2 10 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 100 100 100 100 100 100		5	2	10	100	4 lbs.	.25	3.50	I
91136 20 2 10 100 4 lbs25 3.50 2 1137 25 2 10 100 4 lbs25 3.50 2 1138 30 2 10 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 100 100 100 100 100 100		6	2	10	100	4 lbs.	.25	3.50	m
91136 20 2 10 100 4 lbs25 3.50 2 1137 25 2 10 100 4 lbs25 3.50 2 1138 30 2 10 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 100 100 100 100 100 100		7	2		100	4 lbs.	.25	3.50	L A
91136 20 2 10 100 4 lbs25 3.50 2 1137 25 2 10 100 4 lbs25 3.50 2 1138 30 2 10 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 100 100 100 100 100 100			2	10	100	4 lbs.	.25	3.50	
91136 20 2 10 100 4 lbs25 3.50 2 1137 25 2 10 100 4 lbs25 3.50 2 1138 30 2 10 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 100 100 100 100 100 100			2	10	100	4 lbs.	.25	3.50	Ξ
91136 20 2 10 100 4 lbs25 3.50 2 1137 25 2 10 100 4 lbs25 3.50 2 1138 30 2 10 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 100 100 100 100 100 100			2	10	100	4 lbs.	.25	3.50	回
91136 20 2 10 100 4 lbs25 3.50 2 1137 25 2 10 100 4 lbs25 3.50 2 1138 30 2 10 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 4 lbs25 3.50 2 2 10 100 100 100 100 100 100 100 100			2	10	100	4 lbs.	.25	3.50	
91138   30   2   10   100   4 lbs.   .25   3.50			2		100	4 lbs,	.25	3.50	- F
91138   30   2   10   100   4 lbs.   .25   3.50			2	10	100	4 lbs.	.25	3.50	6
For 60 Ampere Cut-Outs  91139			2		100	4 lbs.	.25	3.50	Z
91139         35         3         10         100         10 lbs.         80.35         \$4.90         \$4.90           91140         40         3         10         100         10 lbs.         .35         4.90         \$4.	91138	30	2	10	100	4 lbs.	.25	3.50	
91140				For 60 Am	pere Cut-Ou	ıts			
91140	91139	35	1 3	10	100	10 lbs.	1 80.35	\$4.90	
91141	91140	40	3	10	100	10 lbs.			١ .
91143   50   3   10   100   10 lbs.   .35   4.90   2 = 4.90   100   10 lbs.   .35   4.90   2 = 4.90	91141	45	3	10	100	10 lbs.			단크림
91146 55 3 10 100 10 lbs	91143	50	3	10	100			4.00	
	91146	55	3	10	100	10 lbs.			AEA
	91147	60	3	10	100	10 lbs.	.35		



Construction of Fuses from 65 to 100 Amperes

### 65 to 100 Amperes, 250 Volts

List No.	Ampere Capacity	Length Inches	Carton Quantity	Std. Pkg. Quantity	Pkg. Net Wt.	Mfrs. List Each	W. E. List per Carton	Mfrs. Reload Each	W. E. Reload Price Ea.				
			For 100	Ampere	Cut-Out	8							
91149	65	57/8	5	50	14 lbs.	\$0.90	\$6.30	\$0.60	\$0.84				
91150	70	57/8	5	50	14 lbs.	.90	6.30	.60	.84				
91151	75	57/8	5	50	14 lbs.	.90	6.30	.60	.84				
91152	80	57/8	5	50	14 lbs.	.90	6.30	.60	.84				
91153	85	57/8	5	50	14 lbs.	.90	6.30	.60	.84				
91154	90	57/8	5	50	14 lbs.	.90	6.30	.60	.84				
91155	95	57/8	5	50	14 lbs.	.90	6.30	.60	.84				
91156	100	57/8	5	50	14 lbs.	.90	6.30	.60	.84				
			_										

Refilled Fuses

NATIONAL ELECTRICAL CODE STANDARD



Construction of Fuses from 110 to 1000 Amperes

### 110 to 1000 Amperes, 250 Volts

List No.	Ampere Capacity	Length Inches	Carton Quantity	Std. Pkg. Quantity	Pkg. Net Wt.	Mfrs. List Each	W. E. List per Carton	Mfrs. Reload Price Ea.	W. E. Reload Price Ea.				
For 200 Ampere Cut-Outs													
	ror 200 Ampere Cut-Outs												

91157	110	71/8	5	25	18 lbs.	\$2.00	\$11.80	\$0.90	\$1.26
91158	120	71/8	5	25	18 lbs.	2.00	11.80	.90	1.26
91161	125	71/8	5	25	18 lbs.	2.00	11.80	.90	1.26
91162	150	71/8	5	25	18 lbs.	2.00	11.80	.90	1.26
91163	175	71/8	5	25	18 lbs.	2.00	11.80	.90	1.26
91164	200	71/8	5	25	18 lbs.	2.00	11.80	.90	1.26

#### For 400 Ampere Cut-Outs

91165	225	85/8	5	25	40 lbs.	\$3.60	\$21.24	\$1.50	\$2.10
91166	250	85/8	5	25	40 lbs.	3.60	21.24	1.50	2.10
91167	275	85/8	5	25	40 lbs.	3.60	21.24	1,50	2.10
91168	300	85/8	5	25	40 lbs.	3.60	21.24	1.50	2.10
91169	325	85/8	5	25	40 lbs.	3.60	21.24	1.50	2.10
91170	350	85/8	5	25	40 lbs.	3.60	21.24	1.50	2.10
91171	375	85/8	5	25	40 lbs.	3.60	21.24	1.50	2.10
91172	400	85%	5	25	40 lbs.	3.60	21.24	1.50	2.10

#### For 600 Ampere Cut-Outs

91173 91174	450 500	103/8 103/8	1 1	10 10	28 lbs. 28 lbs.	\$5.50 5.50	\$7.70 7.70	\$2.00	\$2.80 2.80
$91175 \\ 91176$	550 600	103/8 103/8	1	10 10	28 lbs. 28 lbs.	$\begin{bmatrix} 5.50 \\ 5.50 \end{bmatrix}$	$\frac{7.70}{7.70}$	$\begin{bmatrix} 2.00 \\ 2.00 \end{bmatrix}$	$\frac{2.80}{2.80}$

#### \*For 800 Ampere Cut-Outs

91177 91178 91179	650 700 750	11½ 11½ 11½	1 1 1	10 10 10	45 lbs. 45 lbs.	12.00 12.00	\$18.72 18.72 18.72	4.00 4.00	$\frac{6.24}{6.24}$
91180	800	$11\frac{1}{2}$	1	10	45 lbs.	12.00	18.72	4.00	6.24

#### \*For 1000 Ampere Cut-Outs

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	60 lbs.   \$15.00   \$23.40   \$5.00   \$7.80 60 lbs.   15.00   23.40   5.00   7.80 60 lbs.   15.00   23.40   5.00   7.80 60 lbs.   15.00   23.40   5.00   7.80 7.80   7.80
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<sup>\*</sup>Underwriters' published approval only includes up to 600 amperes.

#### Refilled Fuses

VATIONAL ELECTRICAL CODE STANDARD



Construction of Fuses from 3 to 60 Amperes

### 3 to 60 Amperes, 600 Volts

List No.	Ampere Capacity	Length Inches	Carton Quantity	Std. Pkg. Quantity	Pkg. Net Wt.	Mfrs. List Each	W. E. List  oper Carton	Reload Price Each
			For 30	Ampere Cu	t-Outs			
28084 28085 28086 28087 28088 28089 28090 28091 28092 28093 28094 28095 28096	3 4 5 6 7 8 9 10 12 15 20 25 30	555555555555	10 10 10 10 10 10 10 10 10 10 10 10	100 100 100 100 100 100 100 100 100 100	14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs. 14 lbs.	\$0.40 .40 .40 .40 .40 .40 .40 .40 .40 .40	\$5.60 5.60 5.60 5.60 5.60 5.60 5.60 5.60 5.60 5.60 5.60 5.60 5.60	NOT REFILLABLE
			For 60	Ampere Cu	t-Outs			
28097 28098 28099 28100 28101 28102	35 40 45 50 55 60	5½ 5½ 5½ 5½ 5½ 5½ 5½ 5½	10 10 10 10 10 10	100 100 100 100 100 100	22 lbs. 22 lbs. 22 lbs. 22 lbs. 22 lbs. 22 lbs. 22 lbs.	\$0.60 .60 .60 .60 .60	\$8.40 8.40 8.40 8.40 8.40 8.40	NOT REFILL- ABLE



Construction of Fuses from 65 to 100 Amperes

# 65 to 100 Amperes, 600 Volts

List No.	Ampere Capacity	Length Inches	Carton Quantity	Std. Pkg. Quantity	Pkg. Net Wt.	Mfrs. List Each	W. E. List per Carton	Mfrs. Reload Price Ea.	W. E. Reload Price Ea.			
	For 100 Ampere Cut-Outs											
28103	65	77/8	5	50	23 lbs.	\$1.50	\$10.50	\$0.80	\$1.12			
28104	70	77/8	5	50	23 lbs.	1.50	10.50	.80	1.12			
28105	75	77/8	5	50	23 lbs.	1.50	10.50	.80	1.12			
28106	80	77/8	5	50	23 lbs.	1.50	10.50	.80	1.12			
28107	85	77/8	5	50	23 lbs.	1.50	10.50	.80	1.12			
28108	90	77/8	5	50	23 lbs.	1.50	10.50	.80	1.12			
28109	95	77/8	5	50	23 lbs.	1,50	10.50	.80	1.12			
28110	100	77/8	5	50	23 lbs.	1,50	10.50	.80	1.12			
	l	<u> </u>	<u> </u>		1		I					

#### Refilled Fuses

NATIONAL ELECTRICAL CODE STANDARD



Construction of Fuses from 110 to 1000 Amperes

# 110 to 1000 Amperes, 600 Volts

List No.	Ampere Capacity	Length Inches	Carton Quantity	Std. Pkg. Quantity	Pkg. Net Wt.	Mfrs. List Each	W. E. List per Carton	Mfrs. Reload Price Each	W. E. Reload Price Each
			For 200 A	mpere C	ut-Outs				
28111 28112 28113 28114 28115 28116	110 120 125 150 175 200	95/8 95/8 95/8 95/8 95/8	5 5 5 5 5 5 5 5 5 5 5	25 25 25 25 25 25 25 25	34 lbs. 34 lbs. 34 lbs. 34 lbs. 34 lbs. 34 lbs.	\$2.50 2.50 2.50 2.50 2.50 2.50 2.50	\$14.75 14.75 14.75 14.75 14.75 14.75	\$1.20 1.20 1.20 1.20 1.20 1.20	\$1.68 1.68 1.68 1.68 1.68 1.68
			For 400 A	mpere C	ut-Outs				
28117 28118 28119 28120 28121 28122 28123 28124	225 250 275 300 325 350 375 400	115/8 115/8 115/8 115/8 115/8 115/8 115/8 115/8	1 1 1 1 1 1 1 1 1 1	25 25 25 25 25 25 25 25 25 25	77 lbs. 77 lbs. 77 lbs. 77 lbs. 77 lbs. 77 lbs. 77 lbs. 77 lbs. 77 lbs.	\$5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50	\$7.70 7.70 7.70 7.70 7.70 7.70 7.70 7.70	\$2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00	\$2.80 2.80 2.80 2.80 2.80 2.80 2.80 2.80
			*For 600 A	mpere (	ut-Out	3			
28125 28126 28127 28128	450 500 550 600	13 <sup>3</sup> / <sub>8</sub> 13 <sup>3</sup> / <sub>8</sub> 13 <sup>3</sup> / <sub>8</sub> 13 <sup>3</sup> / <sub>8</sub>	1 1 1 1	10 10 10 10	49 lbs. 49 lbs. 49 lbs. 49 lbs.	\$8.00 8.00 8.00 8.00	\$11.20 11.20 11.20 11.20	\$3.00 3.00 3.00 3.00	\$4.20 4.20 4.20 4.20
			*For 800 A	Ampere (	Cut-Out	В			
28129 28130 28131 28132	650 700 750 800	14½ 14½ 14½ 14½ 14½	1 1 1 1	10 10 10 10	,60 lbs. 60 lbs. 60 lbs. 60 lbs.	\$15.00 15.00 15.00 15.00	\$23,40 23,40 23,40 23,40	\$5.00 5.00 5.00 5.00	\$7.80 7.80 7.80 7.80
			*For 1000	Ampere	Cut-Out	s			
28133 28134 28135 28136	850 900 950 1000	15 <sup>5</sup> / <sub>8</sub> 15 <sup>5</sup> / <sub>8</sub> 15 <sup>5</sup> / <sub>8</sub>	1 1 1 1	10 10 10 10	75 lbs. 75 lbs. 75 lbs. 75 lbs. 75 lbs.	\$18.00 18.00 18.00 18.00	\$28.08 28.08 28.08 28.08	\$6.00 £6.00 6.00 6.00	\$9.36 9.36 9.36 9.36

<sup>\*</sup>Underwriters' published approval only includes up to 400 Amperes.

#### Refilled Fuses

List

No.

7001

7002

8001

8002

8021

8022

8023

8024

8025

8026

Ampere

Capacity

0-30

31 - 60

0 - 30

31 - 60

35

40

45

50

55

60

W. E. List

Price Per

Carton

\$10.20

15.00

0.60

0.60

0.600.60

0.60

0.60

\$6.00

9.00

Mfrs. List

Price

.75

\$0.50

\$0.85

1.25

05

.05

.05

05

.05

-0.5

#### "D AND W" RENEWABLE FUSES



"D and W" Renewable Fuses

### "D and W" Renewable Fuses

The object of the renewable fuse is to afford less expensive protection. The mechanical construction of the D & W renewable fuse is simple and effective. The ferrule type consists of a fiber tube having a steel sleeve held in each end by two pins. The inside of each sleeve is threaded to receive a metal plug, which is securely attached inside of the brass ferrule. The sleeve has a seat beyond the threaded portion, on which a slotted washer rests. The link is clamped between this metal washer and the end of the metal plug, both of which are held in position by the threaded sleeve. By this means permanent electrical contact between the link and terminal structure is insured. This eliminates the trouble experienced with that type of renewable fuse in which the pressure necessary to maintain link contact is transmitted through a part of the fiber tube. The threaded metal plugs which serew into the sleeve are long enough in proportion to their diameter to be readily started into the thread, which receives them. The steel parts of the D & W renewable fuses are oxidized to prevent the molten or vaporized link metal from attaching itself to these parts. To refuse a D&W renewable fuse simply remove the caps, insert a new link through the washer, bend one end, and replace the caps.

# "D AND W" RENEWABLE FUSE CASES 0-60 Amperes 250 Volts

Std.

Pkg.

100

100

100

100

#### Cartridge Type

Carton

Quantity

10

10

10

10

0-60 Amperes 600 Volts

Length

Overall

2 ins.

3 ins.

5 ins.

 $5\frac{1}{2}$  ins.

			W'' RENEWABI Cartridge Fuse			
		3-6	0 Amperes 250	Volts		
List	Ampere	Length	Carton	Std.	Mfrs. List	W. E. List
No.	Capacity	Overall	Quantity	Pkg.	Price	Per Carton
7010	3		10	100	\$0.02	80.24
7011	4		10	100	.02	0.24
7012	5		10	100	.02	0.24
7013	6		10	100	.02	0.24
7014	8		10	100	.02	0.24
7015	10		10	100	.02	0.24
7016	12		10	100	.02	0.24
7017	15		10	100	.02	0.24
7018	20		10	100	.02	0.24
7019	25		10	100	.02	0.24
7020	30		10	100	.02	0.24
7021	35		10	100	.03	0.36
7022	40		10	100	.03	0.36
7023	45		10	100	.03	0.36
7024	50		10	100	.03	0.36
7025	55		10	100	.03	0.36
7026	60		10	100 -	.03	0.36
			0 Amperes 600	Volts		
8010	3		10	100	. 04	0.48
8011	4		10	100	.04	0.48
8012	5		10	100	.04	0.48
8013	6		10	100	.04	0.48
8014	8		10	100	.04	0.48
8015	10		10	100	.04	0.48
8016	12		10	100	.04	0.48
8017	15		10	100	.04	0.48
8018	20		10	100	.04	0.48
8019	20		10	100	.04	0.48
8020	30		10	100	.04	0.48

Delivery F. O. B. Providence, R. I. For warehouse deliveries write nearest house.

10

10

10

10

10

10

100

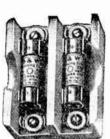
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100

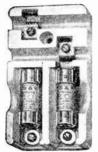
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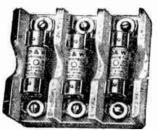
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# "D & W" ENCLOSED FUSE CUT-OUTS











List No. 91117

# 0 to 100 Amperes, 250 Volts

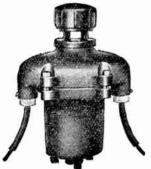
Porcelain

	I orceian										
List No.	Ampere Capacity	Description	Contact	Car-	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	W. E. List per Carton			
91101	0 - 30	Single Pole, Main Line, porc	Ferrule	-5	50	13	\$0.40	\$3,60			
91107	31 - 60	Single Pole, Main Line, porc	Ferrule	5	50	30	.65	5.85			
91114	61-100	Single Pole, Main Line, porc	Knife Blade	2	50	79	1.40	5.04			
91102	0- 30	Double Pole, Main Line, porc	Ferrule	ī	50	37	.55	1.00			
91108	31 - 60	Double Pole, Main Line, porc	Ferrule	i	50	81	1.40	2.52			
91119	61-100	Double Pole, Main Line, porc	Knife Blade	1 1	50	156	2.80	$\frac{5.03}{5.04}$			
91104	9-30	Double Pole, Single Branch, porc	Ferrule	1	50	60	.70	1.26			
91110	31- 60	Double Pole, Single Branch, porc.	Ferrule	1	50	121	1.75	3.16			
91106	0- 30	Double Pole, Double Branch, porc.	Ferrule	1	25	50	1.30	$\frac{3.10}{2.34}$			
91113	31- 60	Double Pole, Double Branch, porc.	Ferrule	1	25	134	3.50	6,30			
91103	0- 30	Triple Pole, Main Line, porc	Ferrule	1	50	51	.80	1.44			
91109	31- 60	Triple Pole, Main Line, porc	Ferrule	1	50	117	2.00	3,60			
91120	61-100	Triple Pole, Main Line, porc	Knife Blade	1	25	117	4.00	7.20			
91105	0~ 30	Triple Pole, Single Branch, porc	Ferrule	1	50	90	1.35	2.44			
91111	31- 60	Triple Pole, Single Branch, porc.	Ferrule	1	50	250	3.00	5.40			
91100	0- 30	Triple Pole, Double Branch, porc.	Ferrule	1	25	91	2.25	4.06			
91123	31- 60	Triple Pole, Double Branch, porc	Ferrule	1 !	10	95	6.00	10.80			
91121	0- 30	3 to 2 Wire, Double Branch, porc.	Ferrule	1	25	65	1.50	2.70			
91124	31- 60	3 to 2 Wire, Double Branch, pore.	Ferrule	1	25	158	4.20	7.56			
91122	0- 30	2 Wire Cross-over Branch, porc.	Ferrule	4	50	53	. 65	4.68			

#### 101 to 1000 Amperes, 250 Volts Slate Base

91115   101- 200   Single	Pole, Main Line, Slate	Knife Blade t 1 1	25	84	\$2.10 L	01.00
01117 901 400 8:1-	D-1- M-1- T. OL.	77 :0 731 1			92.10 L	\$4.00
31117   201- 400  Single	Pole, Main Line, Slate	Ixmite Blade  1	25	138	5.25	9.98
91118   401- 600  Single	Pole, Main Line, Slate	Krife Dlade 1	10			
01100 4001 000 00	Tole, shall lane, place	Eniic Diade   1	10	93	$7.20 \pm$	13.68
911901 *601-800  Single	Pole, Main Line, Slate	- Knife Blade   1	10	175	20.00	38.00
01101 *001 1000 0:-21-	D.1. M.: Time Of the	Tr ic Til	10	110		- 00 , UU
STIST SOIT TOOU SINGLE	Pole, Main Line, Slate	Knife Blade   1 !	10	200	$25.00 \pm$	47 50

<sup>\*</sup> Underwriters' published approval only includes up to 600 amperes.



Oil Fuse Cut-out

### Oil Fuse Cut-outs For High Tension Work

List No.	Description	Oil Required	Volts	Mfrs, List Each	W. E. List Each
D-10	50 amp., subway type	3 pts.	2500	\$30.00	\$33.00
D-11	100 amp., subway type	5 pts.	2500	40.00	44.00
D-12	200 amp., subway type	5 qts.	2500	50,00	55.00
1)	25 amp., oil fuse cut-out	1 1	,,,,,	***************************************	000.00
	pole type	3 pts.	2500	16.00	17.60
1)-1	50 amp., oil fuse cut-out	3 pts.	2500	20.00	22.00
D-2	100 amp., oil fuse cut-out	5 pts.	2500	30.00	33.00
D-3	200 amp., oil fuse cut-out	5 qts.	2500	40.00	44.00
542211	25 amp., capacity fuse			.30	.60
542199	50 amp., capacity fuse			.30	.60
542200	100 amp., capacity fuse		. <b></b>	.50	1.00
542201	200 amp., capacity fuse			1.20	$\frac{1.00}{2.40}$

Delivery F. O. B. Factory, Providence, R. I. For warehouse deliveries write nearest house.

### "D & W" CUT-OUTS

NATIONAL ELECTRICAL CODE STANDARD



List No. 28076



List No. 28078

### 0 to 100 Amperes, 600 Volts

#### Ferrule Contact-Single Pole Porcelain

Lis <b>t</b> No.	Ampere Capacity	Carton	Standard Package	Package Net Weight	Mfrs. List Each	W.E. List per Carton
28076 Without barrier	0-30	2	50	48 lbs.	\$0,60	\$2.16
28077 Without barrier	31-60	2	50	54 lbs.	.90	3.24
28074 With barrier	0-30	2	50	48 lbs.	.60	2.16
28075 With barrier	31-60	2	50	54 lbs.	.90	3.24

Knife-Blade	Contact—Single	Pole	Porcelain
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28078	61-100	2	50	102 lbs.	\$1.75	\$6.65
	·			<u>'                                      </u>	·	

### 101 to 1000 Amperes, 600 Volts

#### Knife-Blade Contact-Single Pole Slate

List No.	Ampere Capacity	Carton	Standard Package	Package Net Weight	Mfrs. List Each	W.E. List per Carton
28079	101- 200	1	25	106 lbs.	\$3,00	\$5.70
28080	201- 400	1	25	181 lbs.	8.00	15.20
28081	*401- 600	1	10	108 lbs.	12.00	22.80
28140	*601- 800	1	10	250 lbs.	21.00	39.90
28141	*801-1000	1	10	275 lbs.	26.00	49.40

<sup>\*</sup>Underwriters' published approval only includes up to 400 amperes.



List No. 60100



List No. 60123

# 0 to 100 Amperes, 2500 Volts

#### Knife-Blade Contact

List No.	Ampere Capacity	Description	Carton	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	W.E. List per Carton
60030 60060 60100	0- 30 31- 60 60-100	Single Pole Slate		25 25 25	81 lbs. 86 lbs. 91 lbs.	\$2.25 2.50 2.75	\$8.55 9.50 10.45

# 4400-22000 Volt Cut-Outs

#### Knife-Blade Contact

List No.	Description	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	W. E. List Each
60120	0-20 Amperes, 4400 Volts Marble Base	10		\$15.00	\$22.50
60121	0-15 Amperes, 6600 Volts Marble Base	10		15.00	22.50
60122	0-10 Amperes, 13200 Volts Marble Base	10		16,00	24,00
60123	0- 5 Amperes, 22000 Volts Marble Base	10		16.00	24,00

# "D & W" HIGH TENSION FUSES

Knife-Blade Contact







List No. 60113

# 3-100 Amperes, 2500 Volts

For 30 Ampere Cut-Outs

	ror 30 Ampere Cut-Outs										
List No.	Ampere Capacity	Inches Length	Carton	Std. Pkg.	Net Pkg.	Mfrs. List Each	W. E. List per Carton	Mfrs. Reload Each	W. E. Reload Each		
6003	3	10	10	50	28 lbs.	\$1.50	\$20.10	\$1.10	\$1.72		
6004	4	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6005	5	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6006	6	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6007	7	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6008	8	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6009	9	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6010	10	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6012	12	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6015	15	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6020	20	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6025	25	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
6030	30	10	10	50	28 lbs.	1.50	20.10	1.10	1.72		
				For 60 A	mpere Cut	-Outs					
6035	35	101/2	อ	25	30 lbs.	\$2.00	I\$13.40	\$1.30	\$2,02		
6040	40	101/2	5	25	30 lbs.	2.00	13.40	1.30	2.02		
6045	45	101/2	5	25	30 lbs.	2.00	13.40	1.30	2.02		
6050	50	$10\frac{1}{2}$	5	25	30 lbs.	2.00	13.40	1.30	2,02		
6055	55	101/2	5	25	30 lbs.	2.00	13.40	1.30	2.02		
6060	60	101/2	5	25	30 lbs.	2.00	13.40	1.30	2,02		
				For 100	Ampere Cu	t-Outs	1		,		
6065	65	11	5	25	42 lbs.	\$3.00	\$20.10	\$1.60	\$2,50		
6070	70	- 11	5	25	42 lbs.	3.00	20.10	1.60	2.50		
6075	75	11	5	25	42 lbs.	3.00	20.10	1.60	2,50		
6080	80	11	5	25	42 lbs.	3.00	20.10	1.60	2.50		
6085	85	11	5	25	42 lbs.	3.00	20.10	1.60	2.50		
6090	90	11	5	25	42 lbs.	3.00	20.10	1.60	2.50		
6095	95	11	5	25	42 lbs.	3.00	20.10	1.60	2.50		
6100	100	11	5	25	42 lbs.	3.00	20.10	1.60	2.50		
							·		, 3,,,,		

# Fuses 4400-22000 Volts

Knife-Blade Contact

List No.	Ampere Capacity	Volts	For Cut-Outs	Length Inches	Std. Pkg.	Mfrs. List Each	W. E. List Each	Mfrs. Reload Each	W. E. Reload Each
60110	0-20	4400	60120	14	25	\$3.50	\$5,26	\$2.50	\$3,76
60111	0-15	6600	60121	17	25	4.00	6.00	2.75	4.12
60112	0-10	13200	60122	20	10	4.50	6.76	3.00	4.50
60113	0- 5	22000	60123	23	10	5.00	7.50	3.50	5,26



#### Standard Dimensions

Volts	Amps.	A	В	C	D	E	F	G	H
4400 6600 13200 22000	1-20 1-15 1-10 1-5	14 17 20 23	13/4 13/4 13/4 11/2	3/4 3/4 3/4 3/4	1/8 1/8 1/8 1/8	178 178 178 178 158	13 16 19 22	1 1 1	12 15 18 21

# Western Electric

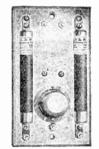
# "D & W" PROTECTORS







Mfr. No. 3104



Mfr. No. 3105

#### Fire Alarm Protectors

Combination Cut-outs furnished complete with fuses and sneak coils.

List No.	Description	Car- ton	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	*W.E.List Price per Carton
3100	Single Pole Cut-Out	2	50	42	\$0.50	\$1.50
3102	Single Pole Combination Cut-Out	2	50	54	1.10	3.30
3104	Double Pole Combination Cut-Out	1	50	101	1.75	2.62
3105	D. P Comb. Cut-Out with Arrester without Sneak Coils	1	50	100	1.40	2.10

FIRE ALARM FUSES—2000 VOLTS

		Type A-Screw	Clar	np Contact			
List No.	Ampere Capacity	Centres Inches	Car-	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	*W.E.List Price per Carton
3001	1 Ampere 2 Ampere 3 Ampere 4 Ampere	$\begin{array}{r} 5\frac{5}{32} \\ 5\frac{5}{3}2 \\ 5\frac{5}{3}2 \\ 5\frac{5}{32} \end{array}$	25 25 25 25 25	100 100 100 100	1½ lbs. 1½ lbs. 1½ lbs. 1½ lbs. 1½ lbs.	\$0.20 .20 .20 .20	\$7.50 7.50 7.50 7.50
	,	SNEAK				Mfrs.	W. E
		For Combina	ition	Cut-Out		Each	Each
3110	10 Ampere 10 Ampere 10 Ampere 10 Ampere 10 Ampere 10 Ampere	17/8 17/8 17/8 17/8 17/8		100 100 100 100 100	1/2 lb. 1/2 lb. 1/2 lb. 1/2 lb. 1/2 lb. 1/2 lb. 1/2 lb. 1/2 lb.	\$0.18 .18 .18 .18 .18	\$0.28 .28 .28 .28 .28

For telephone service we recommend a  $\chi_0^3$  ampere sneak coil, and for fire alarm service a  $\chi_0^5$  ampere sneak coil.



Mfr. No. 2753



Mfr. No. 2757

# Telegraph Protectors Without Fuses

List No.	Туре	Car- ton	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Each	*W.E.List Price per Carton
2750	Western Union S. P. without Lightning Arrester	2	50	24 lbs.	\$0.30	80.90
2751	Western Union D. P. without Lightning Arrester	1	50	48 lbs.	.50	.76
2752	Western Union S. P. with Lightning Arrester	2	50	25 lbs.	.60	.90
2753	Western Union D. P. with Lightning Arrester		50	50 lbs.	1.00	1.50
2754	Postal Type A, S. P. without Lightning Arrester		50	43 lbs.	.40	.60
2755	Postal Type C, S. P. without Lightning Arrester		50	43 lbs.	,40	,60
2756	Postal Type A, S. P. with Lightning Arrester		50	52 lbs.	.75	1.12
2757	Postal Type C, S. P. with Lightning Arrester		50	52 lbs.	.75	1.12

TELEGRAPH FUSES
For Telegraph Protectors

	101 1010514011 110000000											
List	Ampere	For	Length	Centres	Car-		Pkg. Wt.	Mfrs. List	*W.E.List Price			
No.	Capacity	Cut-Outs	Inches	Inches	ton	Pkg.	Lbs.	Each_	per Carton			
2760	0- 5	West. Un.	45/8		50	100	3 lbs.	\$0.20	\$15.00			
2761	0-10	Postal	45/8		25	100	7 lbs.	.20	7.50			
2762	0-10	Postal		$5\frac{5}{32}$	25	100	7 lbs.	.20	7.50			

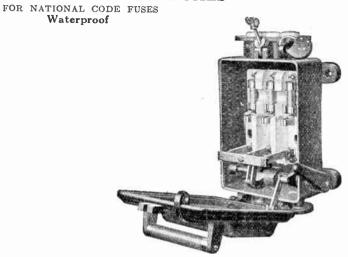
<sup>\*</sup>Delivery F. O. B. Factory, Providence, R. I. For warehouse deliveries write nearest house.

# "D & W" FUSED SWITCH BOXES

Waterproof



Type J-28 Closed

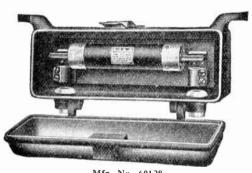


Type J-28 Open

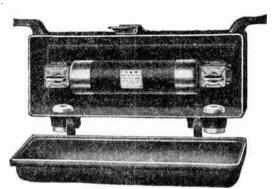
#### Waterproof Fused Switch Boxes 250 Volts

List No.	Туре	Description	Std. Pkg.	Net Wt. Each	Mfrs. List Price	*W.E.List Price Each
25075	J-25	0-30 Amperes, Double Pole		18 lbs.	\$11.00	\$16.50
25076	J-26	31-60 Amperes, Double Pole	20	26 lbs.	23.00	
25077	J-27	61-100 Amperes, Double Pole	10	35 lbs.	30.00	46.50
25078	J-28	0-30 Amperes, Triple Pole	20	20 lbs.	15.00	22.50
25079	J-29	31-60 Amperes, Triple Pole		30 lbs.	26.00	39.00
25080	J-30	61-100 Amperes, Triple Pole	10	40 lbs.	40.00	60.00

The above prices do not include fuse or padlock.



Mfr. No. 60128



Mfr. No. 68129

# "D & W" Railway Cut-Outs

Car Type-600 Volts

These Cut-outs consist of an asbestos-lined iron case with hinged cover, held in place by a spring catch.

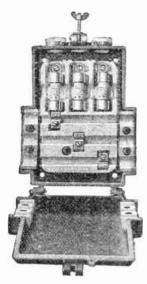
List No.	Туре	Description	Length of Fuse	Pkg. Quantity	Pkg. Net Wt.	Mfrs. List Price Each	*W.E. List Price Each
60128	R-5	Car Motor Cut-out for N. E. Code Std.					
60129	R-6	fuses 61 to 100 amperes, 600 volts Car Motor Cut-out for N. E. Code Std.		25	225 lbs.	\$6.75	\$10.12
		fuses bolted, 101 to 200 amperes, 600 volts		25	369 lbs.	9.25	13.88

Note: Type R-5 box can be fitted with screw clamp contacts, and Type R-6 with knife-blade contacts if desired. In ordering fuses for boxes specify the type of box.

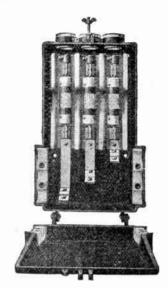
\*Delivery F. O. B. Factory, Providence, R. I. For warehouse deliveries write nearest house.

# "D & W" BRANCH BOXES AND OUTLET HOODS

FOR NATIONAL CODE FUSES-250 VOLTS







List No. 1952

# Triple Pole Single Branch

In the use of the branch boxes we would call particular attention to the split bushings mounted in the covers and boxes, which permit of the necessary connections without any break in the wiring, thereby greatly reducing the cost of installation. These boxes are not ordinarily gasketted, but can be so furnished if desired.

List No.	Туре	Description	Std. Pkg.	Pkg. Net W5.	Mfrs. List Each	*W.E. List Price Each
1950 1951 1952	JB-1 JB-2 JB-3	3- 30 Amperes, T. P. S. B. 31- 60 Amperes, T. P. S. B. 61-100 Amperes, T. P. S. B.	25 25 25 25	380 lbs.	\$6.00 8.00 13.00	\$9.00 12.00 19.50

### "D & W" Outlet Hoods

For Above Branch Boxes

List. No.	Туре	· Description	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	*W. E. List Price Each
1970	JB-1	End Connection Side Connection End Connection Side Connection End Connection End Connection Side Connection	25	81 lbs.	\$1.00	\$1.50
1971	JB-1		50	162 lbs.	1.00	1.50
1972	JB-2		25	113 lbs.	1.20	1.80
1973	JB-2		50	225 lbs.	1.20	1.80
1974	JB-3		25	163 lbs.	1.65	2.48
1975	JB-3		50	325 lbs.	1.65	2.48

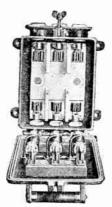
<sup>\*</sup>Delivery F. O. B. Factory, Providence, R. I. For warehouse deliveries write nearest house.

# "D & W" SERVICE SWITCHES AND FUSE BOXES

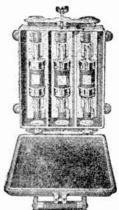
FOR NATIONAL CODE FUSES

#### Waterproof









No. 1906 Switch for Multiphase Circuit

No. 2205 Fuse Box Fuse Box

The service switch is constructed for use both as a cut-out and a switch. It consists of a set of enclosed fuses mounted in an iron box so that they can be made to swing with the cover and open the circuit or to remain in the fuse clip while the cover is open. The fuse box is a device similar to the service switch except that the cover is not provided with any mechanism for withdrawing the fuses from the circuit. They are so designed as to be used on the outside of buildings or in cellars where the wires enter from the subway. In the covers of the service switches are mounted the fuse guides to positively align the fuses in order that the boxes may be readily closed with the fuses properly engaging in the cut-outs. Withdrawal hooks are also mounted in the cover. These grasp the fuses when the levers outside the boxes are given a one-quarter turn. Thus the fuses can be withdrawn from the circuit if desired when the boxes are opened.

# "D & W" Service Switches, 250 Volts

List No.	Туре	Ampere Capacity	Poles	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	*W.E. List Pri e Each
1910	I-6	0- 30	2	25	175 lbs.	\$7.25	\$10.88
1900	1-7	31- 60	2	25	225 lbs.	8.25	12.38
1901	1-8	61-100	2	25	450 lbs.	12,50	18.76
1902	1-9	101-200	$^2$	20	560 lbs.	20.50	30.76
1903	I-10	201-400	2	20	920 lbs.	42.00	63.0€
1904	l-11	401-600	2	10	680 lbs.	70.00	105,06
1911	I-()	0- 30	3	25	218 lbs.	9.00	13,50
1905.,	l	31- 60	3	25	275 lbs.	10.00	15.00
1906	1-2	61-100	3	25	550 lbs.	15.00	22.50
1907	1-3	101-200	3	20	680 lbs.	26,00	39.00
1908	l1	201-400	3	20	1140 lbs.	56.00	84,00
1909	1-5	401-600	3	10	880 lbs.	96,00	144.00

Note: For D. C. Three-Wire Circuits these boxes are equipped with two hooks operated by individual levers, and for Multiple Circuits with three books operated simultaneously by one lever. Unless otherwise specified, boxes for D. C. circuits will be shipped.

# "D & W" Fuse Boxes, 250 Volts

List No.	Туре	Ampere Capacity	Poles	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	*W.E. List Price Each
2210	K-19	0- 30	2	25	150 lbs.	\$5,00	\$7.50
2200	K-20	31- 60	2	25	190 lbs.	6.40	9.60
2201	K-21	61-100	2	25	380 lbs.	8.40	12.60
2202	K-22	101-200	2	20	475 lbs.	17.50	26.26
2203	K-23	201-400	2	20	780 lbs.	35.00	52.50
2204	K-24	401-600	2	10	580 lbs.	52.50	78.76
2211	K-25	0-30	3	25	190 lbs.	6.50	9.76
2205	K-26	31- 60	3	25	235 lbs.	8.00	12.00
2206	K-27	61-100	3	25	470 lbs.	11.00	16.50
2207	K-28	101-200	3 3	20	580 lbs.	24,00	36.00
2208	K-29	201-400	3	20	970 lbs.	47.50	71.26
2209	K-30	401-690	3	10	748 lbs.	77.00	115,50

<sup>\*</sup>Delivery F. O. B. Factory, Providence, R. I. For warehouse deliveries write nearest house.

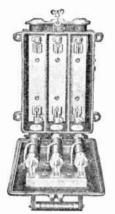
# "D & W" SERVICE SWITCHES AND FUSE BOXES

FOR NATIONAL CODE FUSES

#### Waterproof



No. 1811 Service Switch



No. 1819 Service Switch



No. 1831 Fuse Box



No. 1839 Fuse Box

The service switch is constructed for use both as a cut-out and a switch. It consists of a set of enclosed fuses mounted in an iron box so that they can be made to swing with the cover and open the circuit or to remain in the fuse clip while the cover is open. The fuse box is a device similar to the service switch except that the cover is not provided with any mechanism for withdrawing the fuses from the circuit. They are so designed as to be used on the outside of buildings or in cellars where the wires enter from the subway. In the covers of the service switches are mounted the fuse guides to positively align the fuses in order that the boxes may be readily closed with the fuses properly engaging in the cut-outs. Withdrawal hooks are also mounted in the cover. These grasp the fuses when the levers outside the boxes are given a one-quarter turn. Thus the fuses can be withdrawn from the circuit if desired when the boxes are opened.

# "D & W" Service Switches, 600 Volts

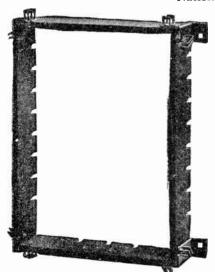
List No.	Туре	Ampere Capacity	Pol s	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Lach	*List Price Each
1811	()	0~ 30	2	25	300 lbs.	\$8,25	\$12.38
1812	()-2	31~ 60	• •	25	362 lbs.	10.00	15 00
1813	0-3	61-100	2	25	500 lbs.	17.50	26.26
1814	0-4	101-200	2	20	600 lbs.	35.00	52.50
1815	()-5	201-400	2	20	1000 lbs.	80.00	120 00
1816	O-6	401-600	2	10	818 lbs.	133.00	199 50
1817	0-7	0- 30	3	25	400 lbs.	10.00	15 00
1818	0-8	31- 60	3	25	432 lbs.	12.00	18.00
1819	()-9	61-100	3	25	732 lbs.	23.00	34.50
1820	()-}()	101-200	3	20	928 lbs.	42.00	63.00
1821	0-11	201-400	3	20	1840 lbs.	102.00	153.00
1822	0-12	401-600	3	10	1168 lbs,	175.00	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

# "D & W" Fuse Boxes, 600 Volts

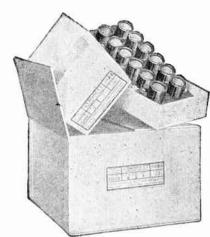
List No.	Туре	Ampere Capacity	Poles	Std. Pkg.	Pkg. Net Wt.	Mfrs. List Each	*List Price Each
1831 1832	1, 1,-2	0- 30 31- 60	2 2	25	262 lbs.	\$6.00	\$9.00
1833	L-3	61-100	2	$\frac{25}{25}$	325 lbs. 450 lbs.	$\begin{array}{ c c c c c }\hline 7.50 \\ 16.00 \end{array}$	$\begin{bmatrix} 11.26 \\ 24.00 \end{bmatrix}$
1834	14	101-200	2 2	20	560 lbs.	28.00	42.00
1835 1836	L-5 L-6	201-400 401-600	2 2	20 10	950 lbs. 785 lbs.	63.00	$\begin{bmatrix} 94.50 \\ 150.00 \end{bmatrix}$
1837 1838	L-7 L-8	0- 30 31- 60	3 3	25	344 lbs.	8.00	12.00
1839	L-9	61-100	3	25 25	388 lbs. 672 lbs.	9.50	14,26 30,00
1840 1841	L-10 L-11	101-200 201-400	3	20	870 lbs.	42.00	63,00
1841 1842	L-11 L-12	401-600	3	20 10	1760 lbs. 1112 lbs.	84.00 137.00	126,00 205,50
	·					1 207.00	2(N).170

<sup>\*</sup>Delivery F. O. B. Factory, Providence, R. I. For warehouse deliveries write nearest house.

National Electrical Code Standard



Composition Barrier For Type SA Stock Panels



Standard Package Type RA Stock Panels

# Description and Specifications

Standard Unit Panels: Stock panels are made in standard units of 4, 6, 8 and 10 eircuits only; in 2-2 and 3-2 wire.

Bases: The bases are molded of strong high-grade, fireproof composition which has high dielectric strength, and is unaffected by heat, moisture, oil or acids.

Bus Bars: The bus bars are formed from hard drawn copper and are concealed in the base. Branch bus bars are double riveted to the mains, which insures a safe and permanent connection under all conditions, both mechanically and electrically.

Circuit Switches: Type SA stock panels are arranged for three styles of 10-ampere enclosed switches in branches: Rotary snap switches with polished copper covers, rotary snap switches with composition covers, and push switches with composition covers; also for 30-ampere knife switches in branches.

Barriers: Barriers illustrated on this page and listed with stock panels are 3% inch thick, slotted to receive branch circuit and main wires, and arranged to telescope the panel. They are held rigidly in position by slotted corner irons so constructed that by loosening two wing nuts any side of the frame may be adjusted readily, or removed completely, without interfering with the other sides.

Weight and Size: Stock panels weigh less than 50 per cent. of any corresponding size and type of slate panel board. In square inches of space occupied they are, circuit for circuit, the smallest panel boards made.

Packing: Stock panels are put up in individual boxes, so labeled that each panel may be identified on the shelf in stock. 4-circuit Type RA stock panels are packed in standard packages of twelve. 6, 8 and 10-circuit Type RA panels are packed in standard packages of six. Types SA and SB are packed in individual cartons only. Barriers are packed in individual labeled boxes, with necessary corner irons and wing nuts, complete for each size of panel.

Stock panels are divided into several types as described below:

Type RA steck panels have Edison plug fuse receptacles only in branches. Panels only and barriers only are shown on the following pages. These panels with cabinets, but without barriers, are shown and listed under Type RC, on another page.

Type SA stock panels have fuse receptacles as above, together with snap, knife or push switches in branches, and are listed with barriers. These panels with cabinets, but without barriers are shown and listed under Type SC, on another page.

Type SB dead front stock panels and barriers are listed on the following page.

National Electrical Code Standard

#### TYPE RA

4, 6, 8 and 10 Circuit Panels Only-Without Cabinets Mains—2 or 3 Wire, 125 Volts, With Lugs Only Branches—With Edison Plug Fuse Receptacles Only

Bases: Strong, fireproof composition.

Bus Bars: Hard drawn copper, concealed in base.

Finish: Bases, dead black; terminals, bright copper, lacquered.

#### 2 Wire Mains, 125 Volts

	Panel OnlyBarrier Only						Depth of
		W. E.		W. E.	-Size of	f Panel-	Cabinet
No.	List	Price	List	Price	Inc	ches	Required
Cir	No.	Each	No.	Each	Width	Height	Inches
4	75004	\$8.26	80044	84.86	$51_{8}$	85%	$3\frac{1}{2}$
6	75006	11.02	80046	5.83	$5\frac{18}{8}$	$11\frac{5}{8}$	$3\frac{1}{2}$
8	75008	13.61	80048	6.48	$5\frac{1}{8}$	$14\frac{5}{8}$	$3\frac{1}{2}$
10	75010	16.20	80050	6.80	$5\frac{1}{8}$	$17\frac{5}{8}$	$3\frac{1}{2}$

#### 3 Wire Mains, 125 Volts

	Pane	el Only	——Barri	er Only-	_		Depth of
		W. E		W. E.	—Size of	Panel-	Cabinet
No.	List	Price	List	Price	Inc	hes	Required
Cir.	No.	Each	No.	Each	Width	Height	Inches
4	75054	\$8.59	80074	\$5.67	514	85%	$3\frac{1}{2}$
6	75056	11.34	80076	5.99	$51\dot{g}$	$11\frac{5}{8}$	$3\frac{1}{2}$
8	75058	14.09	80078	6.64	513	$14\frac{5}{8}$	$3\frac{1}{2}$
10	75060	16.85	80080	6.97	$5\frac{1}{8}$	$17\frac{5}{8}$	$3\frac{1}{2}$

#### TYPE SB-DEAD FRONT

4, 6, 8 and 10 Circuit Panels Only—Without Cabinets
Mains—2 or 3 Wire, 125 Volts, with Lugs Only
Branches—With Edison Plug Fuse Receptacles and
10 Ampere Double-pole Push Switches with
Dead Front Composition Covers

Bases: Strong, fireproof composition.

Bus Bars: Hard drawn copper, concealed in base.

Terminals: Main and branch terminals have composition

Finish: Dead black.

These dead front panels are supplied in the same sizes as the regular stock panels, but with push switches in the branches only. Each unit is packed in a labeled box suitable for carrying on the shelf. In this type of dead front standard unit panel the main terminals are completely enclosed by fireproof, composition covers. Branch hus bars and branch terminals are protected by composition covers, which also enclose the switch mechanisms.

#### 2 Wire Mains, 125 Volts

	l'anel	Only-	Barrie	er Only—	_		Depth of
		W. E.		W.E.	-Size of	Panel-	Cabinet
No.	List	Price	List	Price	Inc	hes	Required
Cir.	No.	Each	No.	Each	Width	Height	Inches
4	75504	\$22.52	85044	\$5.99	$10^{5}$	$8^{5/8}$	$\frac{3\frac{1}{2}}{3\frac{1}{2}}$
6	75506	31,10	85046	6.32	$10^{5}$	115/8	$3\frac{1}{2}$
8	75508	39.85	85048	6.97	$10\frac{5}{8}$	$14\frac{5}{8}$	$3\frac{1}{2}$
10	75510	48.11	85050	7.29	1058	175/8	$3\frac{1}{2}$

#### 3 Wire Mains, 125 Volts

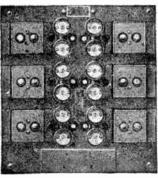
	Panel	Only-	Barri	er Only	,		Depth of
		W. E.		W.E.	-Size of	Panel-	Cabinet
No.	List	Price	List	Price	Inc	hes	Required
Cir.	No.	Each	No.	Each	Width	Height	Inches
4	75554	\$23.81	85074	<b>\$</b> 6.3 <b>2</b>	$10^{5}$	85/8	$3\frac{1}{2}$
6	75556	32.08	85076	6.64	105/8	113/8	$3\frac{1}{2}$
-8	75558	41.31	85078	7.29	$10\frac{5}{8}$	$14\frac{5}{8}$	$3\frac{1}{2}$
10	75560	50.22	85080	7.61	105/8	$17\frac{5}{8}$	$3\frac{1}{2}$



No. 75006

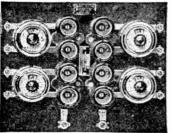


No. 75056



No. 73556

National Electrical Code Standard



No. 75104

# TYPE SA

Schedule 8

4, 6, 8 and 10 Circuit Panels Only—Without Cabinets Mains—2 or 3 Wire, 125 Volts, With Lugs Only Branches—With Edison Plug Fuse Receptacles and Switches

Bases: Strong, fireproof composition.

Bus Bars: Hard drawn copper, concealed in base.

Finish: Bases, dead black; terminals, polished copper, lacquered.

# SNAP SWITCHES WITH POLISHED COPPER COVERS

### 2 Wire Mains, 125 Volts

	, 120 vota										
	Pan	el Only	-Barrio				Depth of				
		W. E.		W. E.	—Size of	f Panel—	Cabinet				
No.	List	Price	List	Price		hes	Required				
Cir.	No.	Each	No.	Each	Width	Height	Inches				
4	75104	\$18.96	85044		$10\frac{5}{8}$	85/8	31%				
6	75106	26.56	85046		105%	115%	31/2 31/2 31/2 31/2				
8	75108	34.34		6.96	105 8	145/8	912				
10	75110	41.64	85050		$10^{-8}$		9.12				
* ()	*0110	*1.07	00000	1.00	107.8	17.78	0/2				
		3 7	Wire Mai	ins, 125 \	Volts						
4	75154	\$20.26	85074	\$6.32	$10^{5}$ g	85/8	31/6				
6	75156	27.54	85076	6.64	105%	$11\frac{5}{8}$	31%				
8	75158	35.80		7.30		145/8	$\frac{31/2}{31/2}$				
10	75160	43.74		7.62	105%		313				
	***************************************	10.11	C-7000	02	10/8	11 >8	•3 / 2				
	SNAP S	WITCHE	s with	COMP	OSITION	COVE	RS				
		2 V	Vire Mai	ns, 125 V	Volts						

4 6 8 10	75204 75206 75208 75210	\$18.96 26.56 34.34 41.64	85044 85046 85048 85050	\$6.00 6.32 6.96 7.30	$10\frac{5}{8}$ $10\frac{5}{8}$ $10\frac{5}{8}$ $10\frac{5}{8}$	$8\frac{5}{8}$ $11\frac{5}{8}$ $14\frac{5}{8}$ $17\frac{5}{8}$	$\frac{3\frac{1}{2}}{3\frac{1}{2}}$

#### 3 Wire Mains, 125 Volts

<b>4</b> 6	75254 $75256$	$$20.26 \\ 27.54$	85074 85076	\$6.32 6.64	$\frac{10^{5}/8}{10^{5}/8}$	$\frac{85/8}{115/8}$	$\frac{31}{2}$
8 10	$75258 \\ 75260$	$\frac{35.80}{43.74}$	85078 85080	$\frac{7.30}{7.62}$	$10^{5}$ 8 $10^{5}$ 8	$14\frac{5}{8}$ $17\frac{5}{8}$	$\frac{3\frac{1}{2}}{3\frac{1}{2}}$

#### KNIFE SWITCHES

#### 2 Wire Mains, 125 Volts

4	$75304 \\ 75306$	\$13.78 18.80	85044 85046	\$6.00 6.32	105/8	85/8	334
8 10	$75308 \\ 75310$	23.98 28.68	85048 85050	6.96 7.30	$10\frac{5}{8}$ $10\frac{5}{8}$ $10\frac{5}{8}$	$11\frac{5}{8}$ $14\frac{5}{8}$ $17\frac{5}{8}$	$     \begin{array}{r}       3\frac{3}{4} \\       3\frac{3}{4} \\       3\frac{3}{4}    \end{array} $

# 3 Wire Mains, 125 Volts

4	75354	\$15.06	85074	\$6.32	105/8	85/8	334
6	75356	19.76	85076	6.64	$10^{5}$ /8	115%	334
8	75358	25.44	85078	7.30	$10\frac{5}{8}$	$14\frac{5}{8}$	
10	75360	3 <b>0.7</b> 8	85080	7.62	$10\frac{5}{8}$	$17\frac{5}{8}$	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$

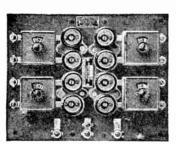
### PUSH SWITCHES WITH COMPOSITION COVERS

### 2 Wire Mains, 124 Volts

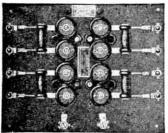
4 6 8 10	75304 75306 75308 75310	\$20.26 28.52 36.94 41.88	85044 85046 85048 85050	\$6.00 6.32 6.96 7.30	$10^{5/8} \\ 10^{5/8} \\ 10^{5/8} \\ 10^{5/8}$	$8\frac{5}{8}$ $11\frac{5}{8}$ $14\frac{5}{8}$ $17\frac{5}{8}$	$\frac{3\frac{1}{2}}{3\frac{1}{2}}$ $\frac{3\frac{1}{2}}{3\frac{1}{2}}$
		2.1	T:	40431			

#### 3 Wire Mains, 125 Volts

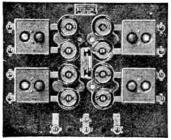
4	75454	\$21.54	85074	\$6.32	105%	85/8	31/2
6	75456	29.46	85076	6.64	105/8	$11\frac{5}{8}$	$3\frac{1}{2}$
-8	<b>7</b> 5458	38.40	85078	7.30	105/8	1458	$3\frac{1}{2}$
10	75460	46.98	85080	7.62	105%	$17\frac{5}{8}$	31/3



No. 75254



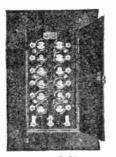
No. 75304



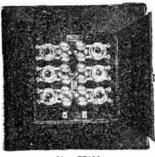
No. 75454

#### National Electrical Code Standard

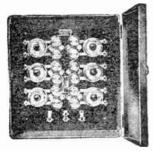
No. 76006 Panel with Surface Cabinet 2-wire Main



No. 77056 Panel with Flush Cabinet 3-wire Main



No. 77106 Panel with Flush Cabinet 2-wire Main



No. 76156 Panel with Surface Cabinet 3-wire Main

# With 11/2 Inch Wiring Space All Sides of Panel

Bases: Strong, fireproof composition.

Bus Bars: Hard drawn copper, concealed in base.

Boxes: No. 14 gauge steel, with 1½ inch wiring space all sides of panel; ½ inch knockouts all around, arranged for wires to leave cabinet directly opposite their terminal connections.

Doors: For surface installation, No. 14 gauge steel flanged

door hinged to side of box.

list price.

4

6

8

10

Fronts: For flush installation, No. 14 gauge steel. Door is hinged to matt and closes against ¼ inch rabbet. Matt extends beyond box on all sides. All doors have combined latch and knob. Locks: Cylinder lock and key furnished at \$1.72 advance in

TYPE RC

# 4, 6, 8 and 10 Circuits Only—With Cabinets—No Barriers Mains—2 or 3 Wire, 125 Volts, With Lugs Only Branches—With Edison Plus Fuse Receptacles Only 2 Wire Mains, 125 Volts

Combination List Price Panel with Cabinet -Surface Cabinet --- Flush Cabinet ---Flanged Door Plain Front W. E. -Dimensions of Cabinet-W. E. Size in Inches, Outside List Price No List Price Width Height Depth No. Each Cir. No. Each 81/4 81/4 81/4 81/4 33/4 \$21.22  $11\frac{3}{4}$   $14\frac{3}{4}$ 76004 77004 \$14.74 33/4 7700623.98 76006 17.501734 33/4 27.54 20.7477008 76008 77010 203/4 33/4 23.98 31.10 76010

#### 3 Wire Mains, 125 Volts

Combination List Price Panel with Cabinet -Surface Cabinet - -- Flush Cabinet --

	- Dulla	C ( ammor	-						
	Flans	ged Door	Plair	Front					
	`	W. E.		W. E.		sions of C			
No.	List	Price	List	Price	Size in	. Inches, O			
Cir.	No.	Each	No.	Each	Width	Height	Depth		
4	76054	\$15.06	77054	\$21.54	81/4	$11\frac{3}{4}$	$3^{3}4$		
$\bar{6}$	76056	17.82	77056	24.30	81/4	$14\frac{3}{4}$	$3\frac{3}{4}$		
8	76058	21.22	77958	28.02	81/4	$17\frac{3}{4}$	$3\frac{3}{4}$		
10	76060	24.62	77060	31.76	81/4	$20\frac{3}{4}$	$3\frac{3}{4}$		
TYPE SC									

# 4, 6, 8 and 10 Circuits Only-With Cabinets-No Barriers Mains—2 or 3 Wire, 125 Volts, With Lugs Only Branches—With Edison Plug Fuse Receptacles and Snap Switches With Polished Copper Covers

2 Wire Mains, 125 Volts

Combination List Price Panel with Cabinet

Surface Cabinet-			—-Flush Cabinet—							
		i Door	Plain	Front		~				
	J	W. E.		W. E.		-Dimensions of Cabinet-				
No.	List	Price	List	Price		Inches, O				
Cir.	No.	Each	No.	Each	Width	Height	Depth			
4	76104	\$25.76	77104	\$33.38	$13\frac{3}{4}$	$11\frac{3}{4}$	$3\frac{3}{4}$			
6	76106	34.02	77106	41.80	133/4	$14\frac{3}{4}$	33/4			
- 8	76108	42.44	77108	50.38	$13\frac{3}{4}$	$17\frac{3}{4}$	31/4			
10	76110	50.38	77110	58.48	$13\frac{3}{4}$	$20\frac{3}{4}$	$3\frac{3}{4}$			
	3 Wire Mains, 125 Volts									

# Combination List Price

Panel with Cabinet

	-Surfac	e Cabinet-	-Flus	h Cabinet-	~		
		ged Door	Pla	in Front			~
		W.E.		W.E.			Cahinet-
No.	List	Price	List	Price	Size in		Outside
Cir.	No.	Each	No.	Each	Width	Height	
4	76154	\$27.06	77154	\$34.66	$13\frac{3}{4}$	$11\frac{3}{4}$	
6	76156	35.00	77156	42.76	$13\frac{3}{4}$	$14\frac{3}{4}$	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$
8	76158	43.90	77158	51.84	$13\frac{3}{4}$	$17\frac{3}{4}$	33/4
10	76160	52.48	77160	60.58	133/4	$20\frac{3}{4}$	$3\frac{3}{4}$
10	10100	04.20					

National Electrical Code Standard

Schedule 8

### With 11/2 Inch Wiring Space All Sides of Panel

Bases: Strong, fireproof composition.

Bus Bars: Hard drawn copper, concealed in base.

Boxes: No. 14 gauge steel, with 1½ inch wiring space all sides of panel; ½ inch knockouts all around, arranged for wires to leave cabinet directly opposite their terminal connections

For surface installation, No. 14 gauge steel flanged Doors: door, hinged to side of box.

Fronts: For flush installation, No. 14 gauge steel. Door is hinged to matt and closes against 1/4 inch rabbet. Matt extends beyond box on all sides.

All doors have combined latch and knob.

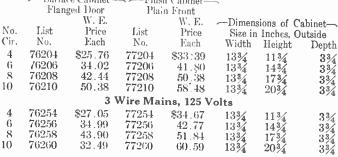
Locks: Cylinder lock and key furnished at \$1.78 advance in list price.

#### TYPE SC

# 4, 6, 8 and 10 Circuits Only—With Cabinets—No Barriers Mains—2 or 3 Wire, 125 Volts, With Lugs Only Branches—With Edison Plug Fuse Receptacles and Snap Switches with Composition Covers

#### 2 Wire Mains, 125 Volts

Combination List Price Panel with Cabinet -Surface Cabinet -- Flush Cabinet-



#### TYPE SC

4, 6, 8 and 10 Circuits Only—With Cabinets—No Barriers Mains-2 or 3 Wire, 125 Volts, with Lugs Only Branches—With Edison Plug Fuse Receptacles and 30 Ampere Knife Switches

2 Wire Mains 125 Volte

2 WHE Mains, 125 VOIES									
76304	\$20.57	77304	\$28.19	133/4	113/	33/4			
76306	26.24	77306	34.02	$13\frac{3}{4}$		334			
76308	32.08	77308	40.01						
76310	37.42	77310	45.52	$13\frac{3}{4}$	$20\frac{34}{4}$	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$			
	3 '	Wire Mai	ins, 125 V	olts	-				
76354	\$21.87	77354	\$29.48	$13\frac{3}{4}$	113/	33/4			
76356	27.22	77356	34.99			334			
76358	33.53	77358				33/4			
76360	39.52	77360	47.63	1334	$20\frac{3}{4}$	33/4			
	76306 76308 76310 76354 76356 76358	76304 \$20.57 76306 26.24 76308 32.08 76310 37.42 37.42 37.76354 \$21.87 76356 27.22 76358 33.53	76304 \$20.57 77304 76306 26.24 77306 76308 32.08 77308 76310 37.42 77310 3 Wire Maj 76354 \$21.87 77354 76356 27.22 77356 76358 33.53 77358	76304 \$20.57 77304 \$28.19 76306 26.24 77306 34.02 76308 32.08 77308 40.01 76310 37.42 77310 45.52 3 Wire Mains, 125 V 76354 \$21.87 77354 \$29.48 76356 27.22 77356 34.99 76358 33.53 77358 41.47	76304 \$20.57 77304 \$28.19 13¾4 76306 26.24 77306 34.02 13¾4 76308 32.08 77308 40.01 13¾4 76310 37.42 77310 45.52 13¾4  76354 \$21.87 77354 \$29.48 13¾4 76356 27.22 77356 34.99 13¾4 76358 33.53 77358 41.47 13¾4	76304 \$20.57 77304 \$28.19 13¾ 11¾ 76306 26.24 77306 34.02 13¾ 14¾ 76308 32.08 77308 40.01 13¾ 17¾ 76310 37.42 77310 45.52 13¾ 20¾ 20¾ 3 Wire Mains, 125 Volts  76354 \$21.87 77354 \$29.48 13¾ 11¾ 76356 27.22 77356 34.99 13¾ 14¾ 76358 33.53 77358 41.47 13¾ 17¾ 77¾ 77354 329.48 13¾ 11¾ 76358 33.53 77358 41.47 13¾ 17¾ 77¾ 77354 34.99 13¾ 17¾ 77354 34.99 13¾ 17¾ 77358 34.99 13¾ 14¾ 7734 13¾ 7734 13¾ 14¾ 7734 13¾ 7734 13¾ 13¾ 13¾ 13¾ 13¾ 13¾ 13¾ 13¾ 13¾ 13¾			

#### TYPE SC

4, 6, 8 and 10 Circuits Only-With Cabinets-No Barriers Mains-2 or 3 Wire, 125 Volts, with Lugs Only Branches-With Edison Plug Fuse Receptacles and Push Switches with Composition Covers

2	Wire Mai	ins, 125 V	olts		
\$27.05 35.96 45.04 53.62	77404 77406 77408 77410	\$34.67 43.74 52.97 61.72	$13\frac{3}{4}$ $13\frac{3}{4}$ $13\frac{3}{4}$ $13\frac{3}{4}$	$   \begin{array}{c}     11\frac{3}{4} \\     14\frac{3}{4} \\     17\frac{3}{4} \\     20\frac{3}{4}   \end{array} $	3 <sup>3</sup> / <sub>4</sub> 3 <sup>3</sup> / <sub>4</sub> 3 <sup>3</sup> / <sub>4</sub>
			- ' -		0/4

 $20\frac{3}{4}$ 

 $20\frac{3}{4}$ 

33/4

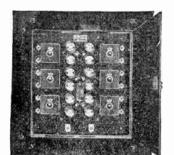
33/4

334

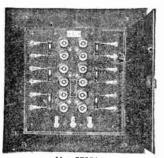
3 Wire Mains, 125 Volts \$28.35 133/4 77454\$35.96 113/4 1334 36.941434 77456 44.711334 46.4977458 54.43

 $13\frac{3}{4}$ 

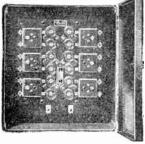
63.83



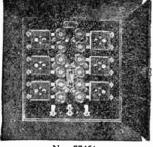
No. 77206 Panel with Flush Cabinet



No. 77356 Panel with Flush Cabinet 3-wire Main



No. 76406 Panel with Surface Cabinet 2-wire Main



No. 77456 Panel with Flush Cabinet 3-wire Main

World Radio History

55.73

77460

76404

76406

76408

76410

76454

76456

76458

76460

6

8

10

6

8

10

#### National Electrical Code Standard

#### Schedule 8

# With 3 Inch Wiring Gutter All Sides of Panel

Bases: Strong, fireproof composition.

Bus Bars: Hard drawn copper, concealed in base.
Barriers: 38 inch composition and adjustable.

Boxes: No. 14 gauge steel, with 3 inch wiring gutter on all sides of panel; ½ inch knockouis all around.

Fronts: No. 14 gauge steel. Door is hinged to matt and

closes against 1/4 inch rabbet. Matt extends beyond box on all sides.

Locks: All doors have evlinder lock and key.



4, 6, 8 and 10 Circuits Only-With Cabinets and Barriers Mains-2 or 3 Wire, 125 Volts, with Lugs Only Branches-With Edison Plug Fuse Receptacles Only

#### 2 Wire Mains, 125 Volts

Dlain Luant

Combination List Price Panel with Barrier and Cabinet Surface Cabinet -- Flush Cabinet-

Dlain Enont

	Liai	и гтопь	1 141	H LIOHE			
		W.E.		W. E.	—Dimen	sions of C	abinet—
No.	List	Price	List	Price	Size in	Inches, O	utside
Cir.	No.	Each	No.	Each	Width	Height	Depth
4	76504	\$28.36	77504	\$28.36	$12\frac{1}{4}$	$15\frac{3}{4}$	$3\frac{3}{4}$
$\tilde{6}$	76506	32.40	77506	32.40	$12\frac{1}{4}$	$18\frac{3}{4}$	33/4
8	76508	36.62	77508	36.62	$12\frac{1}{4}$	$21\frac{3}{4}$	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$
10	76510	40.50	77510	40.50	$12\frac{1}{4}$	$24\frac{3}{4}$	$3\frac{3}{4}$
		3 7	Wire Ma	ins, 125 V	olts		
4	76554	\$28,84	77554	\$28.84	$12\frac{1}{4}$	$15\frac{3}{4}$	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$
Ĝ	76556	32.88	77556	32.88	$12\frac{1}{4}$	1834	33/4
8	76558	37.26	77558	37.26	$12\frac{1}{4}$	$21\frac{3}{4}$	$3\frac{3}{4}$
10	76560	41.32	77560	41.32	$12\frac{1}{4}$	$24\frac{3}{4}$	33/4

#### TYPE SC

4, 6, 8 and 10 Circuits Only—With Cabinets and Barriers
Mains—2 or 3 Wire, 125 Volts, with Lugs Only
Branches—With Edison Plug Fuse Receptacles and Snap Switches with Polished Copper Covers

	2 Wire Mains, 125 Volts									
4	76604	\$42.94	77604	\$42,94	$17\frac{3}{4}$	$15\frac{3}{4}$	$3\frac{3}{2}$			
6	76606	51.84	77606	51.84	$17\frac{3}{4}$	$18\frac{3}{4}$	$3^{3}$ .			
8	76608	61.24	77608	61.24	$17\frac{3}{4}$	$21\frac{3}{4}$	$3\frac{3}{2}$			
0	70010	20.00	77010	ദേ ഭാ	173/	2/13/	23.			

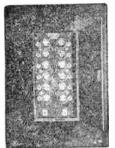
LU	10010	00.02	LIOTO	00.00	1. /4	1/4	0/4
		3 7	Wire Mai	ins, 125 V	olts		
4	76654	\$44.56	77654	\$44.56	$17\frac{3}{4}$	$15\frac{3}{4}$	334
6	76656	53.14	77656	53.14	$17\frac{3}{4}$	$18\frac{3}{4}$	$3\frac{3}{4}$
8	76658	63.02	77658	63.02	$17\frac{3}{4}$	$21\frac{3}{4}$	33/4
10	76660	72.26	77660	72.26	$17\frac{3}{4}$	$24\frac{3}{4}$	$3\frac{3}{4}$

#### TYPE SC

4, 6, 8 and 10 Circuits Only—With Cabinets and Barriers
Mains—2 or 3 Wire, 125 Volts, with Lugs Only
Branches—With Edison Plug Fuse Receptacles and Snap Switches with Composition Covers

2 Wire Mains, 125 Volts									
\$42.94 51.84 61.24 69.82	77704 77706 77708 77710	\$42.94 51.84 61.24 69.82	$17\frac{3}{4}$ $17\frac{3}{4}$ $17\frac{3}{4}$ $17\frac{3}{4}$	$15\frac{3}{4}$ $18\frac{3}{4}$ $21\frac{3}{4}$ $24\frac{3}{4}$	$3\frac{3}{4}$ $3\frac{3}{4}$ $3\frac{3}{4}$ $3\frac{3}{4}$				

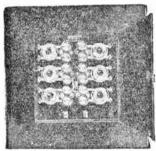
3 \	Vire Mai	ns, 125 V	olts		
\$44.56	77754	\$44.56	$17\frac{3}{4}$	$15\frac{3}{4}$	33/4
$53.14 \\ 63.02$	77756 77758	$\frac{53.14}{63.02}$	$17\frac{3}{4}$ $17\frac{3}{4}$	$\frac{18\frac{3}{4}}{21\frac{3}{4}}$	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$
72.26	77760	72.26	$17\frac{3}{4}$	$24\frac{3}{4}$	33/4



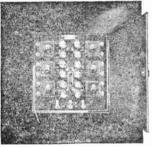
No. 76506 Panel with Surface Cabinet 2-wire Main



No. 77556 Panel with Flush Cabinet 3-wire Main



No. 76606 Panel with Surface Cabinet 2-wire Main



No. 77756 Panel with Flush Cabinet 3-wire Main

World Radio History

\$44

72.26

77760

76704 76706

76708

76710

76754

76756

76758

76760

6

8

10

4

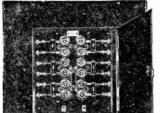
6

8

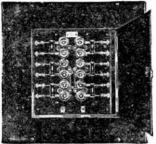
10

National Electrical Code Standard

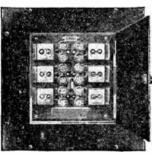
Schedule 8



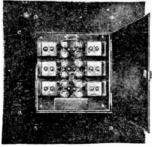
No. 76806 Panel with Surface Cabinet 2-wire Main



No. 77956 Panel with Flush Cabinet 3-wire Main



Nd. 76936 Panel with Surface Cabinet 2-wire Main



No. 77986 Panel with Flush Cabinet 3-wire Main

## With 3 Inch Wiring Gutter All Sides of Panel

Bases: Strong, fireproof composition.

Bus Bars: Hard drawn copper, concealed in base.

Barriers: 3/8 inch composition and adjustable.

Boxes: No. 14 gauge steel, with 3 inch wiring gutter on all

sides of panel; ½ inch knockouts all around.

Fronts: No. 14 gauge steel. Door is hinged to matt and closes against 1/4 inch rabbet. Matt extends beyond box on all

Locks: All doors have eylinder lock and key.

#### TYPE SC

4, 6, 8 and 10 Circuits Only—With Cabinets and Barriers Mains—2 or 3 Wire, 125 Volts, With Lugs Only Branches—With Edison Plug Fuse Receptacles and 30 ampere Knife Switches

#### 2 Wire Mains, 125 Volts

Combination List Price Panel with Barrier and Cabinet -Surface Cabinet --- Flush Cabinet --

1

	Plain	Front	Plain	Front			
		W. E.		W. E.	—Dimen	sions of C	abinet—
No.	List	Price	List	Price	Size in	Inches, O	utside
Cir.	No.	Each	No.	Each	Width	Height	Depth
4	76804	\$37.75	77804	\$37.75	$17\frac{3}{4}$	$15^{3}4$	$3^{3}4$
6	76806	44.06	77806	44.06	1734	$18\frac{3}{4}$	3%
8	76808	50.87	77808	50.87	1734	$21\frac{3}{4}$	$3\frac{3}{4}$
10	76810	56.86	77810	56.86	$17\frac{3}{4}$	$24\frac{3}{4}$	$3\frac{3}{4}$

### 3 Wire Mains, 125 Volts

4	76854 $76856$	$$39.37 \\ 45.36$	77854 $77856$	$\frac{$39.37}{45.36}$	$\frac{17^{3}}{17^{3}}$	$15\frac{3}{4}$ $18\frac{3}{4}$	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$
8 10	76858 76860	$\frac{52.65}{59.29}$	77858 $77860$	$\begin{array}{c} 52.65 \\ 59.29 \end{array}$	$17\frac{3}{4}$ $17\frac{3}{4}$	$\frac{2134}{2434}$	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$

#### TYPE SC

4, 6, 8 and 10 Circuits Only-With Cabinets and Barriers Mains—2 or 3 Wire, 125 Volts, with Lugs Only Branches—With Edison Plug Fuse Receptacles and Push Switches with Composition Covers

#### 2 Wire Mains, 125 Volts

4 6 8	76904 76906 76908 76910	\$44.23 53.78 63.83 73.06	77904 77906 77908 77910	53.78 53.83 63.83 73.06	17%4 $17%4$ $17%4$ $17%4$ $17%4$	$18\frac{3}{4}$ $21\frac{3}{4}$ $24\frac{3}{4}$	$\begin{array}{c} 3\%4 \\ 3\%4 \\ 3\%4 \\ 3\%4 \\ 3\%4 \end{array}$
-		3 7	Wire Mai	ins, 125 V	olts		
4	76954	\$45.85	77954	\$45.85	$\frac{17}{17}$	$\frac{15\%}{18\%}$	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$
6 8	76956 $76958$	$\frac{55.08}{65.61}$	77956 $77958$	$\frac{55.08}{65.61}$	1734	$\frac{1874}{2134}$	$\frac{334}{3}$
iñ	70000	75.40	77060	75 49	1734	$24\frac{3}{3}$	334

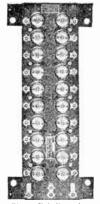
# TYPE SC-DEAD FRONT

4, 6, 8 and 10 Circuits Only-With Cabinets and Barriers Mains—2 or 3 Wire, 125 Volts, with Lugs Only Branches—With Edison Plug Fuse Receptacles and Push Switches with Dead Front Composition Covers

#### 2 Wire Mains, 125 Volts

4 6 8 10	76934 76936 76938 76940	$\begin{array}{c} \$46.49 \\ 74.38 \\ 66.73 \\ 76.14 \end{array}$	77934 77936 77938 77940	\$46.49 74.38 66.74 76.14	$17^{3}4$ $17^{3}4$ $17^{3}4$ $17^{3}4$	$\frac{18\frac{3}{4}}{21\frac{3}{4}}$	334 334 334 334						
	2 W: - W-: 125 Volta												

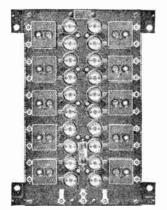
4	76984	\$48.11	77984	\$48.11	1734	$15\frac{3}{4}$	$\frac{3\frac{3}{4}}{3\frac{3}{4}}$
6	76986	57.67	77986	57.67	1784	$18\frac{3}{4}$	$3\frac{3}{4}$
Ś	76988	68.53	77988	68.53	1734	$21\frac{34}{4}$	$3\frac{3}{4}$
M.	78000	78 73	77000	78 73	1737	$24\frac{3}{4}$	$3\frac{3}{4}$







Showing Back View of Plate with Offset for Air Space



Type SA Panel with Mounting Plate

#### MOUNTING PLATES

#### For Types RA, SA, SB, RG and SG Panels

Standard unit panels of the above types are provided with special mounting plates. Front and back views of these plates, as they appear when attached to panels, are illustrated above.

Data and diagrams giving the necessary information for drilling cabinets are given below.

Cabinets should be drilled and tapped for four % inch No. 14-20 machine screws, which are furnished with the panels.

The Underwriters require an air space behind panel when mounted in cabinet. This is provided for by an offset in the mounting plate, as shown.

The four mounting holes in plates are 14 inch in diameter so that adjustments can be made where necessary on account of inaccuracy in locating tapped holes in cabinet.

Where barriers are used, the corner irons supporting them are fastened to these mounting plates by four screws, furnished with the barriers.

Panel complete with barrier may be lifted from eabinet as one unit after the removal of four mounting plate screws or the barrier only may be taken out as a unit after the removal of four screws fastening barrier corner irons to mounting plates.

Special mounting plates, together with the necessary serews and washers for attaching to panel, are packed, unassembled, with the panels.

### Locations of Mounting Holes

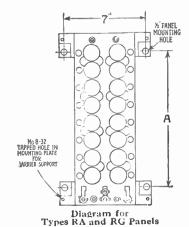
Fixed dimensions are shown by figures in diagrams. Letters indicate variable dimensions, which are explained in tables.

#### For Types RA and RG Panels

No. of	I	imen.
Circuit:	Mains .	Ins. A
	2 and 3 wire	534
Ü	2 and 3 wire	
8	2 and 3 wire,	$11\frac{3}{4}$
10	2 and 3 wire	$14\frac{3}{4}$

#### For Types SA, SB and SG Panels

No. of		Dimen.
('ircui	Mains	Ins. B
4	and 3 wire	
6	and 3 wire	
- 8	and 3 wire	
10	and 3 wire	 . 143/4



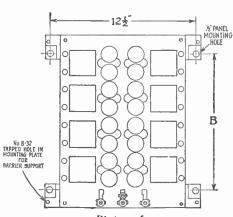


Diagram for Types SA, SB and SG Panels

# BENJAMIN-STARRETT CABINETS

National Electrical Code Standard

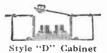
# For Panels Numbered 75004 to 75410 Inclusive

#### CABINETS FOR TYPE "RA" STOCK PANELS









Style	7 %	Cammer

List		f Panel ches	Style	e "A" eeCab.		e ''B'' i Cab.		e "C" e Cab.		e ''D'' h Cab.		nsion of Inches,	f Cab. Inside			of Cab Inside
No.of Panel		Height	List	W. E. List	List	W. E. List	List	W. E. List	List	W. E.	Styles	"A" ar	ıd "B"	Styles	ı''C'' aı	ıd "D"
			No.	Price	No.	Price	No.	Price	No.	Price	Width	Height	Depth	Width	Height	Depth
75004			57004							\$15.39		1154	334	1218	$15^{5}_{8}$	334
$75006 \\ 75008$		115g 145g	57006 57008							16.42 17.44		145 <sub>8</sub> 175 <sub>8</sub>	334	$12\frac{1}{8}$ $12\frac{1}{8}$	$\frac{18^{5}\%}{21^{5}\%}$	334
75010 $75054$		175% 85%	57010 57004					18.47 15.39				$\frac{20^{5}}{11^{5}}$	337	121%	245 g 155 s	33/4
75056	51/8	115%	57006	8.04	57106	14.20	57206	16.42	57306	16.42	81/8	$145_{8}$	337	$12^{1}$ 8	1858	334 334
75058 75060			57008 57010		57108 57110			17.44 18.47		17.44 18.47		175 g 205 g	334	121 <sub>q</sub>	215 g 2153	33/4

#### CABINETS FOR TYPE "SA" STOCK PANELS









Style "A" Cabinet

Style "B" Cabinet

Style "C" Cabinet

Style "D" Cabinet

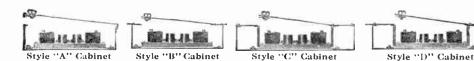
List	Size of Panel   Style "A"   Surface Cab.		b. Flush Cab Surface Cab.			b. Flush Cab. Size Inches, Inside				Dimension of Cab. Size Inches, Inside						
No. of Panel	Width	Height	List	W. E. List	List	W. E. List	List	W. E. List	List	W. E. List	Styles	"A" ai	id "B"	Styles	"C" ar	id "D"
1 dire.			No.	Price	No.	Price	No.	Price	No.	Price	Width	lleight	Depth	Width	Height	Depth
75104	$\frac{10^{5} \pm 0}{10^{5} \pm 0}$	85% 115%	57054 57056	\$8.89 9.58	57154 57156			\$18.99 20.02	57354 57356	\$18.99 20.02	135%	11 % 14 5 5	334	175% 175%	$15^{5}  {g}$ $18^{5}  {g}$	334
75106 $75108$	105%	1454	57058	10.26	57158		57258	21.01	57358	21.04	135/8	175%	337	175%	2158	337
75110	$10^{5}_{8}$	175/8	57060	10.94	57160		57260	22.07	57360	22.07	135%	2058	337	175%	2458	337
75154	1058	858	57054		57154		57254	18.99	57354	18.99	135%	115%	334	1758	1558	334
75156	$\frac{10^{5} \%}{10^{5} \%}$	115/8 145/8	57056	$\frac{9.58}{10.26}$	57156 57158		57256	20.02 21.04	57356 57358	$20.02 \\ 21.04$	135%	145%	334 334	175% 175%	$\frac{18^{5}}{21^{5}}$	337
$75158 \\ 75160$	1054	175/8	57060	10.94	57160		57260	22.07	57360	22.07	135%	205%	337	175%	245	384
75204	105%	85/8	57051	8.89	57154	15.23	57254	18.99	57354	18.99	135%	115%	334	175%	155%	337
75206	$10^{5} s$	115/8	57056	9.58	57156		57256	20.02	57356	20.02	1356	1458	334	175/8	185%	334
75208	105 g 105 g	145% 175%	57058 57060	[10.26]	57158 57160		57258 57260	$21.04 \\ 22.07$	57358 57360	$\begin{vmatrix} 21.04 \\ 22.07 \end{vmatrix}$	135g 135g	1758 2056	337	175% 175%	215 g 245 g	334
75210 $75254$	1078	85%	57051	8.89	57154		57251	18.99	57354	18.99	1352	115%	337	175%	1558	334
75256	105%	115%	57056	9.58	57160	16.07	57256	20.02	57356	20.02	135%	145%	337	175%	185%	334
75258	105%	1458	57058	10.26		16.94		21.04	57358	21.04	1358	1758	334	175%	215	334
75260	1058	175%	57060 57054	10.94 8.89	$ 57160  \\  57154 $		57260 57254	$\frac{22.07}{18.99}$	57360 57354	$\begin{bmatrix} 22.07 \\ 18.99 \end{bmatrix}$	135 g 135 g	2054 1154	334	175% 175%	245 ( 155 (	334
75304 75306	105%	8 <sup>5</sup> / <sub>8</sub>	57056	9.58	57156		57256	20.02	57356	20.02	135%	145%	337	1753	1853	334
75308	105%	145%	57058	10.26	57158	16.94		21.04	57358	21.04	135%	175%	337	175%	215%	334
75310	105%	175%	57060	10.94	57160		57260	22.07	57360	22.07	1358	2058	331	175%	2458	334
75354	1058	856	57054	8.89	57154		57254	$\frac{18.99}{20.02}$	57354 57356	18.99 20.02	135%	1116	$\frac{3^{3}4}{3^{3}4}$	1758	$15^{5}_{8}$ $18^{5}_{8}$	334
75356 75358	105 g 105 g	1158 1456	57056 57058	9.58	$\begin{bmatrix} 57156 \\ 57158 \end{bmatrix}$		57256 57258	21.04	57358	21.01	135%	17 %	337	17% 17%	215%	334
75360	105%	175%	57060		57160		57260	22.07	57360	22.07	135%	205%	347	175%	245	3 3 1
75401	105%	85%	57054	8.89	57154		57254	18.99	57354	18,99	1358	115%	334	175%	1558	337
75406	105/8	115/8	57056	9.58	57156	16.07		20.02	57356	20.02	1354	1458	334	175%	$18^{5}_{8}$	334
75408 75410	105% 105%	$\begin{vmatrix} 14^{5/9} \\ 17^{5/8} \end{vmatrix}$	57058 57060	10.26	57158 57160	16.94 17.78	57260	$\begin{bmatrix} 21.04 \\ 22.07 \end{bmatrix}$	57358 57360	21.04 22.07	135%	175/8 205/8	334 334	175/8 175/8	$\begin{vmatrix} 21^{5} & 24^{5} & 24^{5} & 24^{5} \end{vmatrix}$	334
75410	10%8	2178	1077000	117.772	. 177 1007	A F . F(1)	012000	22.07	31000	OTT	*** / K	217/8	1 22 4	. x . 78	- 4778 I	0%

# BENJAMIN-STARRETT CABINETS

National Electrical Code Standard

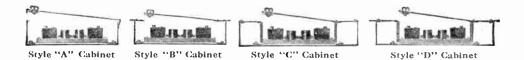
#### For Panels Numbered 75454

CABINETS FOR TYPE "SA" STOCK PANELS (Cont'd)



List	In	Panel ehes	Surfac	e Cah.	Flust	e "B" i Cab.	Surfac	e Cab.	Flush	e "D" h Cab.		nsi <b>on</b> of nches, I		nsion of nches, I	
No. of Panel	Width	Height	List	List	List	W. E. List Price	List	List	List	W. E. List Price			nd "B" Depth		
$75456 \\ 75458$	105/8	$\frac{1158}{1458}$	57056 57058	$\frac{9.58}{10.26}$	57156 57158	16.07 $16.94$	57256 57258	20.02 $21.04$	57356 57358	\$19.00 20.02 21.04 22.07	$\frac{135\%}{135\%}$	$\begin{array}{ c c c }\hline 11^{5}_{8} \\ 14^{5}_{8} \\ 17^{5}_{8} \\ 20^{5}_{8} \\ \end{array}$	$\frac{3^{3}}{3^{3}}$	$\begin{array}{c} 15^{5} \frac{1}{8} \\ 18^{5} \frac{1}{8} \\ 21^{5} \frac{1}{8} \\ 24^{5} \frac{1}{8} \end{array}$	334 334 334 334

#### CABINETS FOR TYPE "SB" DEAD FRONT STOCK PANELS



	-{ Size of Panel [   Style "A"						e ''D'' ]	Dim	ension (	of Cab.	Dime	nsion of	Cab.			
List	st Inches Surface Cab.		e Cab.	Flusi	ı Cab. [	Surfac	e Cab.	Flusl	h Cab.	Size	Inches.	Inside	Size I	nches, I	nside	
No. of				W. E.		W. E.		W. E.		W. E.	Sev-low	44 5 22 00 20	d "B"	Stules	s "C" aı	VI 441244
Panel	Width	Height	List	List	List	List	List	List	List		-					
		_	No.	Price	No.	Price	No.	Price	No.	Price	Width	Height	Depth	Width	[Height]	Depth
						[ <del></del>							1			
-75504	105%	85%	57054	\$8.89	57154	\$15.23	57254	\$19.00	57354	\$19.00	1356	$11^{5}$ 8	334	175%	155%	334
75506	105%	115%	57056	9.56	57156	16,07	57256	20.02	57356	20.02	135%	145%	334	175%	185%	334
75508	$10^{5}$ g					16.94					$13^{5}_{8}$	175	334	175/8	215/8	.334
	$10\frac{5}{8}$	175/8	57060			17.78						$20^{5}$	334	175%	245/8	334
-75554			57054		57154					19,00	1354	$-115_{3}$	334	175%	$15\frac{5}{4}$	334
75556		115%	57056		57156					20.02		145.	334	175%	185%	334
75558						16.94					135 s	175 s	334	175%	215%	334
75560	10%	$ 17^{5}_{8} $	57060	-10.94	57160	17.78	57260	22.07	57360	22.07	$13^{5}_{8}$	$20^{5}_{-8}$	331	175%	$ 24\frac{5}{8} $	33/4

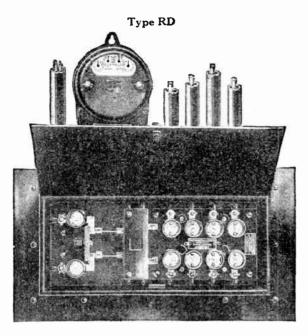
# Benjamin-Starrett

#### STANDARD UNIT PANELS

Used in planning your wiring on electric lighting installations will save time, material and labor, unavoidable when other designs of panel boards are specified.

# BENJAMIN-STARRETT RESIDENCE PANEL BOARDS

National Electrical Code Standard



Typical Benjamin-Starrett Residence Panel Installation

Type RD residence panels are standard unit panels for residence lighting. They are of high quality and, at the same time, moderate in price. The electrical apparatus which is visible in dwellings is an index to the character of the whole installation. Therefore, from the standpoint of buyer, seller or renter, the trace of the read board and its mountings should indicate quality and good workmanship. The appearance of the panel board and its mountings should indicate quality and good workmanship. demand of the present is for that kind of electrical installation which is safe for the occupants to handle when renewing fuses, which reduces the fire risk to a minimum, and which, with all these advantages, is still economical to install.

These residence panels conform to the peculiar requirements of electrical installations in residences. They make a fireproof and permanent installation which will add value to any building. They also present structural advantages in the way of small size, minimum weight, unit mounting and ease of installation

which recommend them to contractors and architects.

Residence Panels Units: Type RID panels are furnished in combination units only, that is, panels with cabinets. These panels have fused knife switches in mains, scaled meter loop connections, and are listed and supplied only in the following sizes:

Bases: Bases are made of strong, fireproof composition. Panel base is so constructed that when

mounted in cabinet it covers the back wiring space.

Bus Bars: Bus bars are o hard drawn copper, concealed in the base. Branch bus bars are double riveted to the mains, insuring a safe and permanent connection under all conditions, both mechanically and electrically.

Back Wiring Space: The residence panel is mounted on steel brackets in such a manner as to provide a wiring space between back of panel and cabinet. This space permits service and branch circuit wires, as well as meter loop connections, to be brought in from any or all sides of cabinet, and easily and quickly connected to proper terminals. This feature enables the meter or meters to be set in any position relative to the panel in the cabinet. All of the electrician's work can be done without bending conduit or using conduit fittings of any kind. This lessens labor and decreases cost of installation materially.

Meter Seal: Meter loop connection is enclosed by a composition cover, and has provision for seal,

to prevent tampering with connections.

the corners.

Cabinets: Boxes for these panels are formed from one piece of No. 14 gauge steel, overlapping at corners. They are provided with ½ inch knockouts on all four siles.

Doors: All doors are of No. 14 gauge steel, and are equipped with combined latch and knob. Door for surface mounting box is flanged all around, overlapping the box 1/2 inch. It is hinged directly to the upper side of box and arranged to close by gravity. Door for flush mounting cabinet is also hinged at top and arranged to close against a ¼ inch rabbet formed on box.

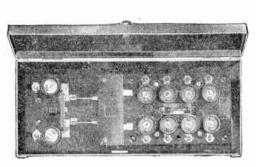
Matts: Made from No. 14 gauge steel. They extend beyond the box on all sides.

Finish: Cabinets are finished black. Bases of panels are dead black finish. Terminals are bright

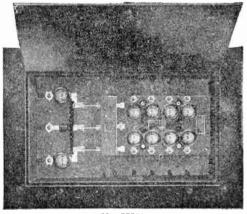
copper, lacquered.

# BENJAMIN-STARRETT RESIDENCE PANEL BOARDS

National Electrical Code Standard
Schedule 8



No. 76034



No. 77534

#### TYPE RD

#### Mains-2 or 3 Wire, 125 Volts, with Fused Knife Switches Branches-With Edison Plug Fuse Receptacles Only

Bases: Strong, fireproof composition.

Bus Bars: Hard drawn copper, concealed in base.

Meter Loop: Meter loop connection covered and arranged for seal,

Conduits: Back wiring space makes it unnecessary for conduits to enter cabinet directly opposite terminals.

Boxes: No. 14 gauge steel, ½ inch knockouts all around.

Doors: For surface installation, No. 14 gauge steel flanged doors with combined latch and lock.

Fronts: For flush installation, No. 14 gauge steel. Door has combined latch and knob, is hinged to matt, and closes against a  $\frac{1}{4}$  inch rabbet formed on the box.

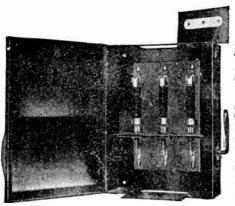
#### 3, 4 and 5 Circuits Only—With Cabinets 2 Wire Mains, 125 Volts

		ation List Price—Panel	with Capit	1et				
	Surface	e Cabinet	Flusi	n Cabinet	——Dimensions of Cabinet——			
	Flang	ed Door	Pla	in Front	Size in Inches Outside			
No. Cir.	List No.	W. E. Price, Each	List No.	W. E. Price, Each	Width	Height	Depth	
3	76033	\$13.94	77033	\$19.12	15	$6^{3} \pm 6^{3}$	$4\frac{1}{4}$	
4	76034	16.04	77034	21.70	15	63/8	$4\frac{1}{4}$	
5	76035	18.14	77035	24.30	18	$6\frac{3}{8}$	$4\frac{1}{4}$	

#### 4, 6, 8 and 10 Circuits Only—With Cabinets 3 Wire Mains, 125 Volts

	Combin	ation List Price—Panel	With Cabin	net———				
	Surfac	e Cabinet	Flus	h Cabinet	—Dimensions of Cabinet—			
	Flang	ged Door	Pla	in Front	Size in Inches Outside			
No. Cir.	List No.	W. E. Price, Each	List No.	W. E. Price, Each	Width	Height	Depth	
4	76534	\$18.64	77534	\$25.1 <b>2</b>	15	81/8	$4\frac{1}{4}$	
6	76536	21.38	77536	27.86	18	81/8	$4\frac{1}{4}$	
8	76538	24.78	77538	31.60	21	81/8	41/4	
10	76540	28.18	77540	35.3 <b>2</b>	24	$8\frac{1}{8}$	$4\frac{1}{4}$	

# "SQUARE D" STEEL ENCLOSED SWITCHES



# Description

"Square D" Steel Enclosed Switches are designed for use in connection with installations whenever it is desirable to completely enclose all terminal wires and live parts for the advancement of "Safety First" principles, standardization of equipment, the prevention of tampering with circuits and the elimination of accident

#### SAFETY

The switch and cutout unit are completely enclosed in a sheet steel box provided with a hinged cover which is held closed with a simple spring catch. The switch is operated by a crank handle located outside the box. The switch may be locked in the "off" position to prevent accidents while repairs are made on apparatus controlled by the switch, or may be locked in the "off" position permanently, it it is desired that the apparatus be not used.

Means are also provided to scal the cover shut to prevent unauthorized persons over-fusing the switch or tampering with live connections.

All "Square D"Steel Enclosed Fused Switches of over 30 ampere capacity for circuits of more than 250 volts are of the quick break type, and are designed for the use of enclosed fuses—Edison Plug type Showing Detachable End Plates. The Quick- Fuses for 25 voltswitches and National Electrical Code Standard Cartridge Showing in These Switches Insures All D.C. Spacings for live metal parts are as given in the National Blades Opening at the Same Time.

#### CONVENIENCE

Removable and interchangeable end plates are provided,

These plates are furnished blank, with knockouts, or with porcelain outlet covers, according to installation requirements, Convenient knockouts are furnished in sides of boxes

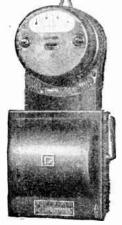
All boxes are designed so that ample wiring space is provided inside to make the necessary connections.

"Square D" Cabinets are constructed of sheet steel.

Corners are electrically welded.

The crossbar attached to switch blades is of steel, heavily insulated, and will not warp or bend.

Switch and cutout unit is mounted complete within the box, ready for immediate installation.



With I-14 G. E. Meter



No. 56211. Closed



No. 56211. Open



No. 56211 With Type O.A. Westinghouse



No. 56343

# "Square D" Steel Enclosed and Service Switches

BEAR UNDERWRITERS' FIRE AND ACCIDENT LABEL

The Underwriters' Laboratories, Inc., have inaugurated a new label service called the Casualty Label Service.

The most prominent casualty insurance companies who insure under employers' liability and workmen's compensation Acts, are subscribers to the merit classification service and accident prevention inspection of the Workmen's Compensation Service Bureau.

Devices labeled with the Underwriters' Fire and Accident label are not subject to charge under the analytic schedule of the Workmen's Compensation Service Bureau, but devices without this label may be responsible for a much higher rate.

Workmen's Compensation Service Bureau, but devices without this laber may be responsible for a finder ingher rate.

The factory has been manufacturing enclosed electrical switches and motor starters for several years. It has always advocated the complete housing of all live metal parts in electrical installations, realizing the danger of exposed live parts, both from fire and accident standpoints. When it learned that the Underwriters' Laboratories, working together with the Workmen's Compensation Service Bureau, were to inaugurate this new label service, it at once submitted its devices for examination and approval.

After several months' severe examination and tests, it was given permission, in May 1915, to use the new fire and accident label on its enclosed electrical switches. Its switches were the first to be given this "safety" label privilege.

The labels are serially numbered. No. 1 was issued to that company. Their products now bearing the Underwriters' Fire and Accident label are "Square D" Steel Enclosed Service Switches, Pronclad Induction Motor Starters and Pronclad Switches.

This significant action on the part of the Underwriters' Laboratories shows to what extent they regard the importance of enclosing all live metal parts of electrical installations.

"SQUARE D" STEEL ENCLOSED SWITCHES

Boxes are made with openings at each end in which end plates are to be inserted to meet any desired wiring requirements and it is necessary to order end plates with each box to have the box complete. End plates are classified under the class of the box for which they are ordered. Schedule "A"

plates are cla	assified under the cla	iss of the box	for which the	y are ordered.	C 1.	dule "A"
	125 VOLTS, FO		PLUG FUSI	S AT BOTTOM		List Price
List No.		Amperes	Depth of Box	End Plates to Fit	Weight	\$5.74
56211	Double pole	30	3 ins.	Class A	5½ lbs. 6 lbs.	6.08
*5211B	Double pole	30	3 ins.	Class A	7 lbs.	9.60
56311	Triple pole	30	3 ins.	Class A	8½ lbs.	10.34
*5311B	Triple pole	30	3 ins.	Class A	11 lbs.	11.98
56411	Four pole	30	3 ins.	Class A Class A	12 lbs.	12.56
*5411B	Four pole	30	3 ins.			22.00
			. E. C. S. F	USES AT BOTTO	6 lbs.	\$6.48
56251	Double pole	30	3 ins.	Class A	$11\frac{3}{4}$ lbs.	17.14
56252	Double pole	60	4 ins.	Class B	21½ lbs.	$\frac{11.11}{27.32}$
56253	Double pol <b>e</b>	100	4 ins.	Class B Class C	41 lbs.	44.60
56254	Double pole	200	5 ins.	Class C Class C	80 lbs.	67.66
56255	Double pole	400	5 ins. 6 ins.	Solid ends	100 lbs.	134.48
56256	Double pole	600 800	6 ins.	Solid ends	125 lbs.	201.76
56257	Double pole	1200	6 ins.	Solid ends	190 lbs.	303.40
56258	Double pole	30	3 ins.	Class A	8 lbs.	11.24
56351	Triple pole	60	4 ins.	Class B	20 lbs.	23.04
56352	Triple pole	100	4 ins.	Class B	30 lbs.	35.43
56353	Triple pole	200	5 ins.	Class C	58 lbs.	61.50
56354 56355	Triple pole Triple pole	400	5 ius.	Class C	95 lbs.	98.40
56356	Triple pole	600	6 ins.	Solid ends	145 lbs.	196.80
56357	Triple pole	800	6 ins.	Solid ends	170 lbs.	301.76
56358	Triple pole	1200	6 ins.	Solid ends	375 lbs.	410.00
56451	Four pole	30	3 ins.	Class A	12 lbs.	13.62
56452	Four pole	60	4 ins.	Class B	25 lbs.	30.66
56453	Four pole	100	5 ms.	Class C	51 lbs.	51.98
56454	Four pole	200	5 ins.	Class C	77 lbs.	84.06
56455	Four pole	400	5 ins.	Class C	120 lbs.	120.54
56456	Four pole	600	6 ins.	Solid ends	170 lbs.	262.40
56457	Four pole	800	6 ins.	Solid ends	310 lbs.	574.00
56458	Four pole	1200	6 ins.	Solid ends	430 lbs.	374.00
	500 VOLTS	A.C. FOR	N. E. C. S.	FUSES AT BOTT	OM II	\$22.46
†56341	Triple pole	30	4 ins.	Class B	22 lbs.	25.10
†56342	Triple pole	60	4 ins.	Class B	$\begin{array}{cc} 23 & \text{lbs.} \\ 32 \% & \text{lbs.} \end{array}$	38.04
†56343	Triple pole	100	4 ins.	Class B	$\frac{32}{4} \frac{10s}{10s}$ .	29.84
‡56441	Four pole	30	4 ins.	Class B	33 lbs.	33.62
\$56442	Four pole	60	4 ins.	Class B Class C	56 lbs.	55.76
‡56443	Four pole	100	5 ins.			000
			N. E. C. S.	FUSES AT BOTT	21 lbs.	\$22.14
56261	Double pole	30	4 ins. 4 ins.	Class B Class B	21 lbs.	23.78
56262	Double pole	60	5 ins.	Class C	42 lbs.	38.22
56263	Double pole	100 200	5 ins.	Class C	62 lbs.	59.94
56264	Double pole	400	6 ins.	Solid ends	135 lbs.	164.00
56265 56966	Double pole Double pole	600	7 ins.	Solid ends	160 lbs.	278.8 <b>0</b>
56266 5 <b>62</b> 67	Double pole	800	6 ins.	Solid ends	175 lbs.	393.60
56268	Double pole	1200	7 ins.	Solid ends	325 lbs.	524.80
56361	Triple pole	30	4 ins.	Class B	30 lbs.	28.64
56362	Triple pole	60	4 ins.	Class B	30 lbs.	31 . 16
56363	Triple pole	100	5 ins.	Class C	67 lbs.	51.6 <b>6</b>
56364	Triple pole	200	5 ins.	Class C	95 lbs.	83.40
5636 <b>5</b>	Triple pole	400	6 ins.	Solid ends	160 lbs.	213.20
56366	Triple pole	600	7 ins.	Solid ends	315 lbs.	393.60
56367	Triple pole	800	<u>6</u> ins.	Solid ends	370 lbs.	580 . 56 754 . 40
56368	Triple pole	1200	7 ins.	Solid ends	430 lbs. 37 lbs.	41.00
56461	Four pole	30	4 ins.	Class B	37 lbs. 40 lbs.	44.60
56462	Four pole	60	4 ins.	Class B	83 lbs.	67.90
56463	Four pole	100	5 ins.	Class C Class C	120 lbs.	172.20
56464	Four pole	200	5 ins.	Solid ends	180 lbs.	275.52
56465	Four pole	400	6 ins. 7 ins.	Solid ends	325 lbs.	508.40
56466	Four pole	600	6 ins.	Solid ends	400 lbs.	754.40
56467	Four pole	$\frac{800}{1200}$	7 ins.	Solid ends	525 lbs.	1008.60
56468	Four pole	0 VOLT SE	AEDE CEDA.	CE SWITCHES		
E0051		0 VOLI SE	4 ins.	Class B	11¾ lbs.	\$16.49
50251	Two pole	30 30	4 ins.	Class B	20 lbs.	23 04
50351 50451	Three pole Four pole	30	Aine	Class B	25 lbs.	50.06
*With a	single branch connection	s at top of cuto	ut base. †200		over listed under	B pole, 600 volt
switches.	single branch connection 1200 ampere capacity	and over listed	under 4 nole 60	) voit switches.		
Delive	ery F. O. B. Factory,	Detroit. Fo	or warehouse d	cuveries write near	DU HOUDO.	

# "SQUARE D" STEEL ENCLOSED SWITCHES

Single Throw-Not Fusible

250 Volts D.C. and 500 Volts A.C

All switches quick break except Nos. 51251, 51351 and 51451.

List No.		Amperes	Depth of Box In.	End Plates to Fit	Weight Lbs.	List Price
51251	Double pole	30	3	Class A	10	<b>\$</b> 5. <b>66</b>
51242	Double pole	30 and 60	4	Class B	11	14.76
51243	Double pole	100	4	Class B	13	19.68
51244	Double pole	200	4	Class B	23	39.26
51245	Double pole	400	5	Class C	39	62.32
51246	Double pole	600	6	*Solid ends	60	127.92
51247	Double pole	800	6	*Solid ends	80	206.64
51248	Double pole	1200	6	*Solid ends	110	295.20
51351	Triple pole	30	3	Class A	14	9.84
51342	Triple pole	<b>30</b> and 60	4	Class B	15	22.14
51343	Triple pole	100	4	Class B	17	32.80
51344	Triple pole	200	5	Class C	3.4	52.48
51345	Triple pole	400	5	Class C	70	98.40
51346	Triple pole	600	6	*Solid ends	90	196.80
51347	Triple pole	800	6	*Solid ends	120	291.88
51348	Triple pole	1200	6	*Solid ends	160	439.52
51451	Four pole	30	3	Class A	15	12.30
51442	Four pole	<b>30</b> and 60	4	Class B	17	28.30
51443	Four pole	100	4	Class B	20	41.00
51444	Four pole	200	4	Class B	43	72.16
51445	Four pole	400	5	Class C	90	131.20
51446	Four pole	600	6	*Solid ends	110	262.40
51447	Four pole	800	6	*Solid ends	145	426.40
51448	Four pole	1200	6	*Solid ends	255	590.40

600 Volts						
51262	Double pole	30 and 60	4	Class B	13	\$22.14
51263	Double pole	100	5	Class C	20	39.36
51264	Double pole	200	5	Class C	33	59.04
51265	Double pole	400	6	*Solid ends	62	150.88
5126 <b>6</b>	Double pole	600	7	*Solid ends	85	270.60
51267	Double pole	800	6	*Solid ends	86	387.04
51268	Double pole	1200	7	*Solid ends	125	511.68
51362	Triple pole	30 and 60	5	Class C	23	29.52
51363	Triple pole	100	5	Class C	26	49.20
51364	Triple pole	200	5	Class C	56	77.08
51365	Triple pole	400	6	*Solid ends	90	205.00
51366	Triple pole	600	7	*Solid ends	130	377.20
51367	Triple pole	800	6	*Solid ends	130	565.80
51368	Triple pole	1200	7	*Solid ends	250	738.00
51462	Four pole	30 and 60	5	Class C	25	41.00
51463	Four pole	100	5	Class C	4.1	62.32
51464	Four pole	200	5	Class C	65	164.CO
51465	Four pole	400	6	*Solid ends	125	262.40
51466	Four pole	600	7	*Solid ends	230	492.00
51467	Four pole	800	6	*Solid ends	260	738.00
51468	Four pole	1200	7	*Solid ends	300	1139.80

<sup>\*</sup>Ends of six-inch boxes can be drilled to order at 45 cents list per hole.

Prices do not include fuses.

Delivery F. O. B. Faetory, Detroit, Mieh. For warehouse deliveries write nearest house.

52368

52462

52463

52464

52465

52466

52467

52468

Triple pole

Four pole

Four pole

Four pole

Four pole

Four pole

Four pole

Four pole

# "SQUARE D" STEEL ENCLOSED SWITCHES

		Double Throw	—Not Fusib	ole—125 Volt		•
List No.		Amperes	Depth of Box In.	End Plates to Fit	Weight Lbs.	List Price Each
52311	Three pole	30	3	Class A	$5\frac{3}{4}$	\$11.32
		250 Volts D.	C. and 500	Volts A. C.		
52251	Double pole	30	3	Class A	11	\$13.12
52242	Double pole	30 and 60	4	Class B	14	19.68
52243	Double pole	100	4	Class B	16	32.80
52244	Double pole	200	4	Class B	30	<b>5</b> 2.48
52245	Double pole	400	5	Class C	52	86.92
52246	Double pole	600	6	*Solid ends	90	172.20
52247	Double pole	800	6	*Solid ends	110	262.40
52248	Double pole	1200	6	*Solid ends	260	354.24
52351	Triple pole	30	3	Class A	16	19.68
52342	Triple pole	30 and 60	4	Class B	18	29.52
52343	Triple pole	100	4	Class B	23	49.20
52344	Triple pole	200	4	Class B	43	78.72
52345	Triple pole	400	5	Class C	90	131.20
52346	Triple pole	600	6	*Solid ends	145	262.40
52347	Triple pole	800	6	*Solid ends	155	393.60
52348	Triple pole	1200	6	*Solid ends	400	557.60
52451	Four pole	30	3	Class A	17	26.24
52442	Four pole	30 and 60	4	Class B	21	39.36
52443	Four pole	100	4	Class B	27	<b>5</b> 9.04
52444	Four pole	200	4	Class B	65	106.60
52445	Four pole	400	5	Class C	110	183.68
52446	Four pole	600	6	*Solid ends	175	360.80
52447	Four pole	800	6	*Solid ends	260	<b>537</b> .92
52448	Four pole	1200	6	*Solid ends	500	<b>7</b> 34.72
			600 Volts			
5226 <b>2</b>	Double pole	30 and 60	4	Class B	19	\$42.64
52263	Double pole	100	5	Class C	26	65.60
52264	Double pole	200	5	Class C	52	114.80
52265	Double pole	400	6	*Solid ends	90	190.21
52266	Double pole	600	7	*Solid ends	140	373.92
<b>5</b> 2267	Double pole	800	6	*Solid ends	143	557.60
52268	Double pole	1200	7	*Solid ends	315	754.40
52362	Triple pole	30 and 60	5	Class C	27	65,60
52363	Triple pole	100	5	Class C	41	98.40
52364	Triple pole	200	5	*Solid ends	80	177.12
52365	Triple pole	400	6	*Solid ends	130	303.40
52366	Triple pole	600	7	*Solid ends	200	527.92
52367	Triple pole	800	6	*Solid ends	270	774.08
E0960	Tuisdo valo	1000	₩	* 1 1: 1 1	400	

1200

30 and 60

100

200

4()()

600

800

Delivery F. O. B. Factory, Detroit, Mich. For warehouse deliveries write nearest house.

7

5

5

5

6

7

6

7

\*Solid ends

\*Solid ends

\*Solid ends

\*Solid ends

\*Solid ends

Class C

Class C

Class C

490

38

55

100

180

350

380

600

1029.92

91.84

131.20

229.60

367.36

708.48

1016.80

1344.80

<sup>1200</sup> \*We will drill to order ends of 6 inch boxes at 45 cents list each per hole.

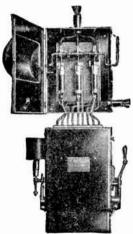
# SOUARE "D" MOTOR STARTING AND COMPENSATOR SWITCHES



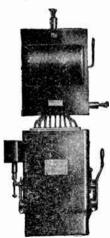
Nos. 66351 and 65351



No. 66341



No. 58342 installed with Starting Compensator (Open)



No. 58342 installed with Starting Compensator (Closed)

# Steel Enclosed Double Throw Motor Starting Switches

Square "D" steel enclosed motor starting switches are designed for starting 3 phase motors. The switch is of the double throw knife blade type with the running side arranged for fases.

A steel latch inside the cabinet prevents throwing switch from off to running position without first being thrown into starting position. This latch also makes necessary a quick change from starting to running position.

The switch is equipped with a lockoff device by means of which careless closing of the switch can be availed while someone is working on the line or apparatus controlled by the switch.

The Square "D" motor starting switch can be farnished with Star-Delta starting connections—see List Nos. shown below—and when so used a separate main line switch must be installed ahead of the starting switch in accordance with the National Electrical Code. STRAIGHT INDUCTION TYPE-3 PHASE AND

	SIRAIGHT INDUCTION THE STRASE AND							
List	No	STAR-D	ELTA TYPE	-3 PHASE				
Straight	Star			Depth	End Plates		List Price	
Ind.	Delta		Amperes	of Box	to Fit	Weight	Each	
66351	65351	250 volts, triple pole	30	3 ins.	Class A	14 ½ lbs.	\$18.04	
66352	65352	250 volts, triple pole	60	4 ins.	Class B	27 lbs.	37.72	
66553	65353	250 volts, triple pole	100	4 ins.	Class B	30 lbs.	57.40	
66341	65341	500 volts, triple pole	30	4 ins.	Class B	27 lbs.	29.52	
66342	65342	500 volts, triple pole	60	4 ins.	Class B	$27\frac{1}{2}$ lbs.	46.74	

# Steel Enclosed Compensator Switches

			,			
List			Depth	End Plates		List Price
No.		Amperes	of Box	to Fit	Weight	Each
58351	250 volts, triple pole	-30	4 ins.	Class B	20 !b <sub>5</sub> .	\$24,60
58352	250 volts, triple pole	60	4 ins.	Class B	21 lbs.	25.52
58353	250 volts, triple pole	100	4 ins.	Class B	32 lbs.	40.36
58354	250 yolts, triple pole	200	5 ins.	Class C	61 lbs.	69.70
58355	250 volts, triple pole	400	5 ins.	Class C	95 bs.	137.76
<b>5</b> 8356	250 volts, triple pole	600	6 ins.	*Solid ends	145 lbs.	236.16
<b>5</b> 83 <b>5</b> 7	250 volts, triple pole	800	6 ins.	*Solid ends	170 bs.	352.60
58358	250 volts, triple pole	1200	6 ins.	*Solid ends	375 lbs.	475.60
58451	250 volts, four pole	30	4 ins.	Class B	24 lbs.	29.52
58452	250 volts, four pole	60	4 ins.	Class B	25 bs.	34.44
58453	250 volts, four pole	100	5 ins.	Class C	51 bs.	65.60
58454	250 volts, four pole	200	5 ins.	Class C	77 bs.	101.68
58455	250 volts, four pole	400	5 ins.	Class C	120 lbs.	147.60
58456	250 volts, four pole	600	6 ins.	*Solid ends	170 lbs.	295.20
58457	250 volts, four pole	800	6 ins.	*Solid ends	310 lbs.	446.08
58458	250 volts, four pole	1200	6 ins.	*Solid ends	430 lbs.	603.52
58341	500 volts, triple pole	30	4 ins.	Class B	23 bs.	25.76
58342	500 volts, triple pole	60	4 ins.	Class B	24 lbs.	30.02
		100	4 ins.	Chass B	34 lbs.	44.62
58343	500 volts, triple pole				04 105.	44.02
E0261	mpere capacity and over listed	30	4 ins.	Class B	30 'bs.	32.80
58361	600 volts, triple pole	60	5 ins.	Class C	30 lbs.	
58362	600 volts, triple pole	100	5 ins.	Class C	67 lbs.	34.44
58363	600 volts, triple pole	200		Class C		65.60
58364	600 volts, triple pole	400	5 ins.	*Solid ends	95 lbs. 160 lbs.	96,96
58365	600 volts, triple pole		6 ins.			229.60
58366	600 volts, triple pole	600	7 ins.	*Solid ends	315 lbs.	446.08
58367	600 volts, triple pole	800	6 ins.	*Solid ends	370 lbs.	639.60
58368	600 volts, triple pole	1200	7 ins.	*Solid_ends	430 lbs.	859.36
58461	600 volts, four pole	30	4 ins.	Class B	37 !bs.	49.20
58 <b>4</b> 6 <b>2</b>	600 volts, four pole	60	5 ins.	Class C	40 lbs.	59.04
58463	600 volts, four pole	100	5 ins.	Class C	83 lbs.	85.28
59464	600 volts, four pole	200	5 ins.	Class C	120 lbs.	180.40
<b>5</b> 846 <b>5</b>	600 volts, four pole	400	6 ins.	*Solid ends	180 lbs.	<ul> <li>298.48</li> </ul>
58466	600 volts, four pole	600	7 ins.	*Solid ends	325 lbs.	537.92
58467	600 volts, four pole	800	6 ins.	*Solid ends	400 lbs,	787.20
5846 <sup>8</sup>	600 volts, four pole	1200	7 ius.	*Solid ends	525 lbs.	1036,48
Almo	re energify Liet New of and plat	oe wonted				

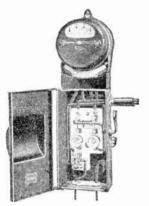
Always specify List Nos. of end plates wanted.

Dimensions same as for standard D steel enclosed switches of like capacities.

\*Will drill to order ends of 6 inch box at \$0.45 each per hole.

Delivery F. O. B. Factory, Detroit, Mich. For warehouse deliveries write nearest house.

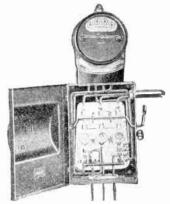
# SQUARE "D" ENTRANCE SERVICE SWITCHES







Test Plugs



Three Wire Switch (Open)

#### ENTRANCE SERVICE SWITCHES

List Nos	76211	76311	77311
Type	2 wire	3 wire	3 wire
Voltage	125	125-250	125-250
Amperes	30	30	30
Test Feature	1 coil	Coils—tested separately with resistance or phantom load or tested in series across 220 volts with resistance load.	Coils tested in series from outside wire to neutral with resistance load or tested in series with phantom load.
Fuses	Ed. Plug	Ed. Plug	Ed. Plag
Fused	Bottom	Bottom	Bottom
End Plates	Class A	Class A	Class A
Depth	3 ins.	3 ins.	3 ins.
Weight	$5\frac{1}{1}$	$7\frac{1}{2}$	71/2
Price without end-plate and meter protective trim	\$6.56	\$11.48	\$12.14
Price with conduit end-plate but without meter pro-			
tective trim	\$6.72	\$11.80	\$12.30
Price with open-wiring end- plate but without meter			
protective trim	\$6.88	\$11.98	\$12.46

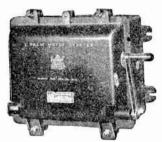
# 

70121	Small plug	.98	.98	.98
70131	Small plug	.98	.98	.98
Туре		List No.	List No.	List No.
		76211	76311	77311
A		10 11	$10\frac{11}{16}$	$10\frac{11}{16}$
B		$3\frac{1}{8}$	318	31/8
C		2	$2\frac{5}{8}$	25/8
		3/4	34	3/4
E		878	912	$9\frac{1}{2}$
F		$3\frac{1}{2}$	578	$5\frac{7}{8}$
$G\dots\dots$		$5_{16}^{7}$	71/8	$7\frac{1}{8}$
II		14	1/4	1/2
J		43/8	438	43/8
K		7/8	1	1

# SQUARE "D" IRONCLAD SWITCHES, MOTOR STARTERS AND END PLATES







No. 6351 Motor Starter

No. 6361 Motor Starter

# Square "D" Ironclad Switches and Motor Starters

Both Ironclad switches and motor starters are provided with openings at the top and bottom of the boxes. The switch meel-anism has a quick make and a quick break action. The starters are designed for use with motors up to and including 7½ 11.1'. or motors which may be started by switching them directly on to full voltage.

SQUARE "D" IRONCLAD SWITCHES
250 Volts for N. E. C. Fuses

f.ist No. 7251	Double Pole	Ampere 39	End Plates to Fit Class 1	Weight Not Boxed 12 lbs.	sist Price Each \$14.36
	SQUARE	"D" IRONCLAD	MOTOR STARTERS		
List	•		End Plates	Weight	List Price
No		Ampere	to Fit	Not Boxed	Each
6351	250 volts, three phase	-3-)	Class 1	25 lbs.	\$36.90
6451	250 volts, two phase	3:)	Class 1	28 Ps.	45.18
6361	600 volts, three phase	3:1	Class 2	76 lbs.	82.16
-			THE REAL PROPERTY.		









Standard End Plates

Schedule "A"

For Use Only With Ironclad Switches and Ironclad Motor Starters of 30 Amperes Capacity, 250 Volts SHEET STEEL END PLATES

			Class.			
	He	oles in		Weight		
List	l'o	reclain	Carton	Carton	Std.	List
No.	No.	Diam.	Quanti	ty Quantity	Pkg.	Each
19700			10	2 lbs.	100	\$0.16
19721	2	5 in.	10	214 lbs.	100	.33
19722	2	13 in.	10	214 lbs.	100	.33
19731	3	36 in.	10	214 lbs.	100	.33
19732	3	1] in.	10	214 lbs.	100	.33
19741	4	3 in.	10	2 1/4 lbs.	100	.33
19742	4	₫in.	10	21. Ibs.	100	.33
			Class	2		

For Use Only With Ironclad Motor Starters, 30 Amperes

			600 Vol	ts		
	110	les In		Weight		
List	Po	rcelain	Carton	Carton	Std.	List
No.	No.	Diam.	Quantity	Quantity	Pkg.	Ea∘dı
19800			10	5 lbs.	50	\$0.46
19822	2	43 in.	5	3!4 lbs.	50	.87
19823	2	% in.	5	314 Hrs.	50	.87
19832	3	∰in.	5	3 14 lbs.	50	.87
19833	3	16 in.	5	314 lbs.	50	.87
19842	4	li in.	5	3 + 1 lbs,	50	. 87
19843	4	å in.	5	3!1 lbs.	50	.87



				Weight		
List	No.	Size of		Carton	Std.	List
No.	Conduits	Conduits 4 1	Qty.	Qtv.	Pkg.	Each
18711	1	¹₫ in.	5	315  lbs.	50	\$0.66
18712	1	34 in.	5	31½ lbs.	50	.66
18713	1	1 in.	5	312 lbs.	50	. 74
18711	1	114 in.	5	3½ lbs.	50	.66
18721	2	∮g in.	5	4 1/2 lbs.	50	.82
18722		34 in.	5	4 1 g lbs.	50	.90
18723	2	1 in.	5	$4 \downarrow_2$ lbs.	50	.90

Class 2

For Use With Ironclad Motor Starters, 30 Amperes, 600 Volts

	List No.	No. Conduits	Size of Conduits		Weight Carton Qty.	Std. Pkg.	List Each
Ц	18813	1	1 in.	- 5	814 lbs.	25	\$1.15
Ш	18814	1	114 in.	5	814 lbs.	25	1.15
	-18823	2	1 in.	5	9 lbs.	25	1.56
H	18821	2	11/4 in.	5	9 lbs.	25	1.56



Steel Knockout Seal

STEEL KNOCKOUT SEALS For Closing Unused Conduit Holes

			- 11
List No. 1901 1902 1903	Diameter Openings ½ in. 1½ ins. 1½ ins.	To Slip Conduit Size 1/2 in. 37 in. 1 in.	List   per 100   \$6 26   9,22   12,34

Seals are made of 16 gauge sheet steel and furnished with

cotter pin.

Standard package 200. Carton quantity 100.

Delivery F. O. B. Factory, Detroit, Mich. For warehouse deliveries write nearest house.









Porcelain Bushings PORCELAIN BUSHINGS

ĺ		For Use	in Cond	luit Kno	ckout O	penings	
				Equi.			
		Diam.	Outside		Car- Std.	Weight	List
I	List	Wire	Dia. of	Size	ton Pkg.	Std.	per
ľ	No.	Hole	Shank	Con.	Qty. Qty.	Pkg.	100
I	17111	₁⁵g in.	⅓} in.	1/2 in.	50 250	121/2 lbs.	\$5.32
	17112	⅓3 in.	13 in.	½ in.	50 250	121/2 lbs.	5.32
	17212	₹3 in.	1 in.	37 in.	25 - 150	6 lbs.	8.54
	17213	% in.	1 in.	3. in.	25 - 150	6 lbs.	8.54
			114 ins.	1 in.	25 - 100	6 lbs.	11.40
			$1^{5}$ ins.	11/4 ins.	25 - 50	5 lbs.	14.06
	Price	includes	spring wi	re elamp	with each	bushing.	
	17314 17416 Price	includes	15% ins.	1 in.	25 50		11.40 14.06

# METER PROTECTIVE TRIMS AND ADAPTER END PLATE



List Nos. 11501 and 11511 Top of Box Trim for Bottom Connected Meter



List No. 11512 Bottom Trim



List No. 11506 Reversible Top or Bottom Trim Also III. Gen. Const. of No. 15510-11513



List No. 11514 Bottom of Box Trim for Top Connected Meter



List No. 11503 Trim for Bottom Connected Meter



List No. 11508 Top of Box Trim for Bottom Connected Meter



List No. 11502 Bottom of Box Trim for Top Connected Meter



List Nos. 18483 and 18583

### Meter Protective Trims

Square D meter protective trims are used primarily with Class A boxes (3 inches deep). Class B boxes (4 inches deep) require the use of adapter end plates, List No. 18483 with the meter trim. Class C boxes (5 inches deep) require adapter end plate, List No. 18583, with the meter trim.

"Top" trims are used at top of square D boxes; "bottom" trims at bottom of boxes.

Bottom connected meters require top trims; top connected meters require bottom trims.

Reversible trims may be used at either top or bottom of box.

List No. 11512 is a bottom trim for use with G. E. Type 1-14 or F. W. Type K-5 meters. These meters are both bottom connected and List No. 11512 trim is so designed that these bottom connected meters may be used at bottom of the box to meet special requirements.

special requirements.

All meter trims are made of sheet steel except List Nos. 11515 and 11516 which are of non-magnetic metal. List Nos. 11515 and 11516 are for use with high capacity direct currect meters which are affected by stray magnetic fields.

It trims are required for types of meters not mentioned below, quotation will be furnished on request.

11 (11	For Top	Make		, , , , , , , , , , , , , , , , , , , ,	No.	•		
List	or Bottom	of			of			
No.	of Box	Meter	Type	Service	Wires	Volts	Amperes	Each
				Single phase	2 and 3	110-220	3-75	\$0.77
11508	Top	Can. G. E	1, 9	Single phase	2 and 3	100-610	5 200	. 82
11517	Top	C&H	A-1		3	200-600	5-100	.82
11517	Top	C%11	N-1	Single phase	2	110-600	5-25	.41
11505	Тор	Duncan	M-2	Single phase			5-15	, 41
11505	Top	Duncan	M-2	Single phase	3	110-600		
11503	1'01)	Ft. W.	K-5	Single phase	2 and <b>3</b>	$110_{-220}$	5 25	.41
11507	Top	Ft. W.	K-4 Form S A.A.	Single phase	2	110	5 25	.49
11507	Top	Ft. W.	K-4 Form S.A.A.	Single phase	2 and 3	220	5 15	. 49
11511	Bottom	Ft. W.	K-3 Form S.B.A.	Single phase	• 2	100 - 625	5 50	.49
11511	Bottom	Ft. W.	K-3 Form S.B.A.	Single phase	3	200 - 500	5-50	. 49
11518	Bottom	Ft. W.	K Form S.A.A.	Single phase	2	100	5 25	1.89
11512	Bottom	1 t. W.	K-5	Single phase	2 and 3	110 220	5 25	1.92
11524	Reversible	Ft. W.	K-3 Form M.A.B.	Single phase	3 and 4	110	5 25	2.87
11501	Top	Gen. Elec.	1-10	Single phase	2	110-220	5 25	.49
		Gen. Elec.	1-10	Single phase	$\frac{2}{3}$	110-220	5 15	. 49
11504	Top	Gen. Elec.	1-14	Single phase	2 and 3	110-220	5 25	.37
11503	Тор	Gen. Elec.	1-14	Single phase	2 and 3	110 - 220	50.75	1.07
11526	Тор	Gen. Elec.	1-14	Single phase	2 and 3	110-220	5-25	1.92
11512	Bottom	Gen. Elec.	1	Single phase	2	100-650	3-25	1.89
11506	Reversible		1	Single phase	$\frac{2}{3}$	200-650	3-25	1.89
11506	Reversible	Gen. Elec.	i	Single phase	9	100-600	50-75	2.33
11510	Reversible	Gen. Elec.		Single phase	2 3	220	50.75	2.33
11510	Reversible	Gen. Elec.	1	D.C.	1)	110 220	5 50	2.71
11515	Reversible	Gen. Elec.	('-6)	D.C.	2 3	200	5 50	2.71
11515	Reversible	Gen. Elee.	('-6	D.C.	2	500-600	5 50	3.69
11516	Reversible	Gen. Elec.	C-7	2 and 3 phase	$\bar{3}$	100-600	3 75	2.87
11513	Reversible	Gen. Elec.	D-3		4	100-600	3-75	2.87
11513	Reversible	Gen. Elec.	D-3	2 and 3 phase	3 and 4	220 and 440	5 25	2.33
11525	Reversible	Gen Elec.	D-6	2 and 3 phase		110	5 15	.49
11521	Top	Sangamo	H Old Model	Single phase	2 2 3 2	110-550	5-15	.41
11505	Top	Sangamo	H New Model	Single phase	2	110-440	5-15	.41
11505	Top	Sangamo	H New Model	Single phase		100-200-400	5 10	.49
11501	Top	West	Q. A.	Single phase	3	100-200-400	5 10	.49
11501	Top	West	O. Ą.	Single phase			5 10	.49
11523	Top	West	O. A.	Single phase	3	100 400		.49
11523	Top	West	Q. A.	Single phase	3	100 200	5-10 15-80	, 49
11511	Top	West	O. A.	Single phase	2 3	100 200-400		.49
11511	Top	West	O. A.	Single phase	3	100 -200	15-60	
11522	Top	West	O. A.	Single phase	2 3 3	100-400	15-80	. 49
11522	Top	West	O. A.	Single phase	3	100-200	15-60	. 49
11519	Reversible	West	O. A.	2 phase		100 500	5-300	2.46
11519	Reversible	West	O. A.	2 phase	-1	100 500	5-300	2.46
11519	Reversible	West	O. A.	3 phase	3	100 500	5-300	2.46
11519	Reversible	West	O. A.	3 phase	4	100-500	5-25	2.46
11502	Bottom	West	C.	Single phase	2	100-200	5-20	.49
11502	Bottom	West	C.	Single phase	2 2 3	100-500	5-20	. 49
11520	Reversible	West	C. *	2 phase	3	100-500	5-40	2.46
11520	Reversible	West	C.	3 phase	3	100-500	5-40	2.46
11520	Reversible	West	Ċ.	2 phase	4	100-500	5-40	2.46
11520	Reversible	West	C.	3 phase	4	100-500	5-40	2.46
Dali	very F (). B	Factory, Detro		ouse deliveries wri	te nearest h	ouse.		
17611	AOLA T. O. D.		,					

# STANDARD END PLATES

Detachable and Interchangeable
End plates listed are divided into three classes, A, B and C, according to depth of "Square D" boxes, for which they are designed.

designed.

Class A end plates are for use with Class A boxes (3 inches deep).

Class B end plates are for use with Class B boxes (4 inches deep).

Class C end plates are for use with Class C boxes (5 inches deep).

End plates for use in end openings of the "Square D" steel enclosed switch boxes are furnished as listed below; blank, or with knockouts for use with rigid conduit, or with multiple hole porcels in outlet covers for open wiring installations.

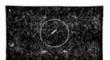


Slotted End Plate List No. 19484





List No. 18415



List No. 18516

#### SLOTTED FIBRE BUSHED END PLATES

Schedule "A" Class Class A Class B Class C

List No.		
19382		
19484		
19586		
10000		

List Price \$0.41 .98 1.64

		0				
	CO	NDUIT END F	PLATES			
List			Carton	Weight Carton	Std.	List
No.	Description	Class	Quantity	Quantity	Pkg.	Each
18300			10	2½ lbs.	100	\$0.16
18312	1 knockout for ¾ in. conduit	Class A	10	2½ lbs.	100	.16
18313	1 knockout for 1 in, conduit	Class A	10	$2\frac{1}{2}$ lbs.	100	, 16
18322	2 knockouts for 34 in. conduit	Class A	10	2½ lbs.	100	. 16
18323	2 knockouts for 1 in. conduit	Class A	10	2½ lbs.	100	. 16
18331	3 knockouts for 1/2 in. conduit	Class A	10	2½ lbs.	100	.16
Class	s A end plates are of sheet steel, 41/2 inches		a wide.	-/2/	100	* * * * *
18400	********		5	3¼ lbs.	50	\$0.46
18412	1 knockout for 34 in. conduit	Class B	5	31/4 lbs.	50	.46
18413	1 knockout for 1 in. conduit	Class B	5	3 1/4 lbs.	50	.46
18414	1 knockout for 117 in. conduit	Class B	5	3¼ lbs.	50	.46
18415	1 knockout for 11/2 in. conduit	Class B	5	3¼ lbs.	50	.46
18423	2 knockouts for 1 in. conduit	Class B	5	3¼ lbs.	50	.46
18424	2 knockouts for 1 1/4 in. conduit	Class B	5	3½ lbs.	50	.46
18425	2 knockouts for 116 in. conduit	Class B	5	3 ¼ lbs.	50	,46
18431	3 knockouts for 1/2 in. conduit	Class B	5	3¼ lbs.	50	.46
18432	3 knockouts for 34 in. conduit	Class B	5	314 lbs.	50	.46
18485	Adapter end plate		5	1½ lbs.	50	.36
	·		_			
18500	***************************************	Class C	5	434 lbs.	25	\$0.76
18515	1 knockout for 11/2 in, conduit	Class C	5	434 lbs.	25	. 76
18516	1 knockout for 2 in. conduit	Class C	5	434 lbs.	25	.76
18525	2 knockouts for 11g in, conduit	Class C	5	434 lbs.	25	. 76
18583	Adapter end plate		5	3¾ lbs.	25	.66



List No. 19321



List No. 19433



List No. 19341



List No. 19535

		OPEN WIRING	END PLATES	WITH PORCE	ELAIN COVERS		
List	Holes	in Porcelain		Carton	Weight Carton	Std.	List
No.	No.	Diameter	Class	Quantity	Quantity	Pkg.	Each
19321	2	τ <sub>6</sub> in.	Class A	10	3 lbs.	100	\$0.32
19322	2	3/8 in.	Class A	(0)	3 lbs.	100	.32
19331	3	η <sup>5</sup> ε in.	Class A	10	3 lbs.	100	,32
19332	3	3% in.	Class A	.0	3 lbs.	100	.32
19341	4	β in.	Class A	10	3 lbs.	100	.32
19342	4	3≤ in.	Class A	10	3 lbs,	100	.32
19351	5	ı, in.	Class A	.0	3 lbs.	100	.32
19352	5	3% in.	Class A	10	3 lbs.	100	.32
19422	2	3% in.	Class B	5	4 lbs.	50	\$0.87
19423	2	ι% in.	Class B	5	4 lbs.	50	.87
19424	2	¾ in.	Class B	5	4 lbs.	50	.87
19432	3	3/8 in.	Class B	5	4 lbs.	50	.87
19433	3	16 in.	Class B	5	4 lbs.	50	.87
19434	3	84 in.	Class B	5	4 lbs.	50	.87
19442	4	¾ in.	Class B	5	4 lbs.	50	.87
19443	4	16 in.	Class B	5	4 lbs.	50	.87
19444	4	¾ in.	Class B	5	4 lbs.	50	.87
19452	, 5	3/8 in.	Class B	5	4 lbs.	50	.87
19493	{ 1	¾ in.	Cass B	5	4 lbs.	50	.87
	} 4	ή in.	Class B	5	4 lbs.	50	.87
19494	{ <del>1</del>	3% in.	Class B	5	4 lbs.	50	.87
	\ 4	34 in.	Class B	5	4 lbs.	50	.87
19524	2	3/4 in.	Class C	5	5½ lbs.	25	\$1.18
19525	2	l in.	Class C	5	7 lbs.	25	1.61
19534	3	3 <u>4</u> in.	Class C	5	5½ lbs.	25	1.18
19535	3	1 in.	Class C	5	7 lbs.	25	1.61
19544	4	¾ in.	Class C	5	5½ lbs.	25	1.18
19594	1.1	3% in.	Class C	5	5½ lbs.	25	1.18
	- F O D F-	% in.	Class C	5 .	5½ lbs.	25	1.18
Deliver	у г. О. В. Га	ctory, Detroit, Mich	. For warehous	e delivery write	nearest house.		

# PLUGS AND RECEPTACLE





No. 5001 Plug Inserted

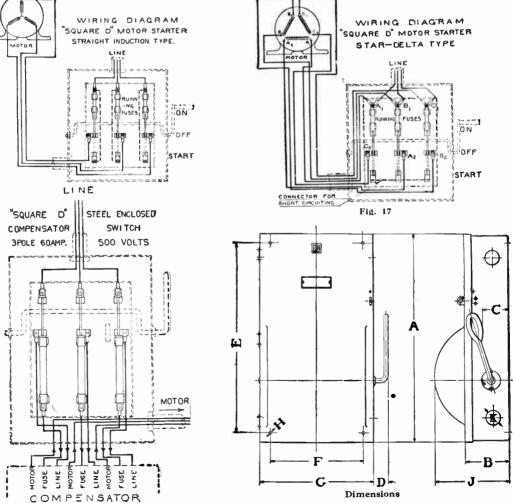
No. 5001 Cover Open Plug Inserted

# Square "D" Fused Plug Receptacle and Attachment Plug

Square "D" fused plug receptacles are designed primarily to increase the field of activity and efficiency of portable electrical units in industrial plants and wherever it is more economical to move the units than the material.

	FUSED	PLUG RECEPTACLE—DO	OUBLE POLE	
List No. 5001	Ampere 30	Volts 250	Weight $4\frac{1}{4}$ lbs.	List Price Each \$6.16
5021	30 ATT.	ACHMENT PLUG—DOUB	LE POLE 1/4 lb.	\$2.64

# Wiring Diagrams for Motor Starting and Compensator Switches



Delivery F. O. B. Factory, Detroit, Mich. For warehouse deliveries write nearest house.

(Sherardized)

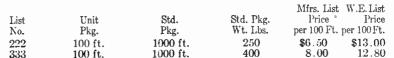


No. 222



No. 222 Metal Molding is designed for two No. 14 Single Braid R. C. Wire, but ample space is provided to accommodate two No. 14 Double Braid or two No. 12 Single Braid R. C. Wires.

No. 333 Metal Molding is designed for four No. 14 Single Braid R. C. or for three No. 14 or three No. 12 Single or Double Braid R. C. Wire.





No. 223

No. 244

No. 255

No. 333

# FITTINGS FOR No. 222 MOLDING ONLY

No. 223 Spring Clip

For securing capping of No. 222 molding to base. Should be used every 18 inches.

No. 244 Base Coupling

For use in connecting two lengths of No. 222 Molding. Simply snap the base of the molding into the base of the coupling and apply a spring clip over the joint.

No. 255 Ground Clamp

A necessary fitting for grounding a No. 222 System.



Consists of a base and cap, ample space is provided for making splices. No screws are required to connect the molding, base of which is simply snapped into the base of the fitting.



Design is similar to the above, with one prong eliminated. Connections are made in the same way. Ample room for splices.

#### No. 236 90° Flat Blbow

For making right angle turns of lines in No. 222 System.

#### No. 237 45° Flat Elbow

Similar to above but used where it is desired to make a turn at an angle of 45 degrees.

#### No. 238 Internal Elbows

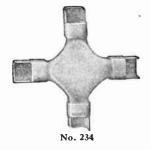
Used to continue a line inside corners or from wall to ceiling.

#### No. 239 External Elbows

Used for carrying a line around corners, beams or girders.

#### No. 277 Bushing

Must be used in making entry of No. 222 Molding into fittings and devices having twistouts designed primarily for this molding. Base is provided with a flanged tongue, which fits into slots in the fittings.



No. 236

No. 238

Schedule "R" Mfrs. List W.E. List Std. Pkg. Unit Std. Price Price List per 100 Pkg. Pkg. Wt. Lbs. per 100 No. Spring Clip..... Base Coupling... \$0.80 223 100 1000 10 \$1.60 2.505.00244 20 100 7 255 4.00 8.00 Ground Clamp... 10 100 20.00 33.60 45 234 Cross..... 10 100 31 14.00 23.52235 20 100 Tee. 20 8.00 16.00 236 90° Elbow..... 100 11 45° Elbow..... 8.00 16.00237 10 100 10 16.00 238 Internal Elbow.. 10 100 11 8.0010 100 11 8.00 16.00239 External elbow... 6.00 20 100 9 3.00Bushing.....

(Sherardized)







Nos. 290-291

# FITTINGS FOR NO. 222 MOLDING ONLY (Continued)

No. 278 reducing bushing, for connecting No. 222 Molding to fittings designed primarily for use with No. 333 Molding.

Nos. 290 and 201 Spanner Strips are used for attaching canopy type devices at conduit box outlets, either directly to conduit box lugs or where open covers

No. 301 Box Connector is used to connect No. 222 Molding to panel or junction boxes having ½ inch knockouts. This connector in combination with a ½ inch conduit coupling is also used in connecting No. 222 Molding to rigid conduit.





No. 279

# Schedule "R"

$\frac{290}{291}$	Reducing bushing	Unit Pkg. 10 10 10 20	Std. Pkg. Wt. Lbs. 9 19 19	Price	W.E. List Price per 100 \$6.00 12.00 12.00 20.16

#### FITTINGS FOR NO. 333 MOLDING ONLY

No. 279 Reducing Bushing for connecting No. 333 Molding to fittings and devices designed primarily for use with No. 222 Molding. Base is provided with flanged tongue which fits into slots in the fittings.

No. 334 Cross consists of cap and base. Ample space is provided for making splices. Screws for making connection to molding are upset to prevent falling out. No. 335 Tec. Design is similar to above with one prong eliminated. Recessed

cover provides ample space for splices.

No. 336 90° Degree Flat Elbow, for making right angle turns. Connecting screws are upset to prevent falling out.

No. 437 45° Degree Flat Elbow for making a turn at an angle of 45 degrees. Connecting screws are upset to prevent falling out.

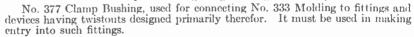
No. 337 External Elbow, used for carrying a line of No. 333 Molding around corners, beams or girders.

No. 338 Internal Elbows, used for carrying a line of No. 333 Molding from wall to ceiling, or inside corners.

No. 344 Base Coupling used for connecting two lengths of No. 333 Molding. Connecting screws are upset to prevent falling out.

No. 436 Fitting Connector, used for making close connection of two fittings or devices. Provided with two key hole slots to engage screws in base of fittings or devices.

No. 355 Ground Clamp is a fitting for grounding No. 333 System.



No. 433 Double Clamp Bushing used for connecting two lines of No. 333 Molding to fittings and devices having twistouts designed primarily for this molding.











No. 355



No. 377

Schedule "R"

					Mfrs. List	W.E. List
List		Unit	Std.	Std. Pkg.	Price	Price
No.		Pkg.	Pkg.	Wt. Lbs.	per 100	per 100
279	Reducing bushing	10	100	9	\$3.00	\$6.00
334	Cross	30	120	$^{26}$	17.00	28.56
335	Tee	30	120	23	14.00	23.52
336	90 Degree Flat Elbow	30	240	30	11.00	18.48
437	45 Degree Flat Elbow	20	100	7	11.00	18.48
337	External Elbow	30	60	8	11.00	18.48
338	Internal Elbow	30	120	12	11.00	18.48
344	Base Coupling	50	500	15	2.50	5.00
436	Fitting Connector	50	250	4	1.50	3.00
355	Ground Clamp	20	40	2	6.00	12.00
377	Clamp Bushing	50	200	8	3.50	7.00
433	Double Clamp Bushing	10	100	10	12.00	20.16

(SHERARDIZED)

# 4

No. 345



No. 354



No. 434



No. 435



No. 428



No. 369



No. 404



Nos. 401 and 401A



Nos. 402 and 402A



Nos. 405 and 405A



No. 415

#### FITTINGS FOR NO. 333 MOLDING ONLY (Continued)

No. 345 Single Plain Clamp for fastening molding to uneven surfaces.

No. 354 Double Plain Clamp for fastening two lines of molding to all surfaces, especially recommended for uneven surfaces

No. 434 Single Base Plate Clamp is recommended for use on uneven plastered surfaces, as it is necessary to use but one supporting screw, the hole for which is hidden by the molding.

No. 435 Double Base Plate Clamp is designed for supporting two lines of molding to uneven plastered surfaces.

No. 425 Plain Strap Clamp used on jobs where the surfaces over which the molding is run is so nneven that the capping cannot be made to stay snapped to base.

No. 428 Base Strap Clamp is used in the same manner as No. 425, except that it is designed to also support the molding, as it is punched and contersunk for No. 8 wood screw or toggle bolt of the same size.

No. 369 Wood Molding Coupling used for connecting No. 333 Molding to existing installations of wood molding, either in a straight line or at right angles.

No. 404 Open Wood Couplings for two wire work, use with No. 367 Covers and for three wire work with No. 308 Covers.

No. 367 Open Work Coupling Covers for 2 wire installations.

No. 368 Open Work Coupling Covers for 3 wire installations.

Nos. 401 and 401A Box Connectors are used for connecting to panel cabinet or other boxes having conduit knockouts. Furnished complete with locknuts.

Nos. 417 and 417A Angle Box Connectors similar to above, but used when it is desired to run molding at right angle from knockout.

Nos. 402 and 402A Conduit Couplings are used for connecting No. 333 molding to rigid conduit, especially when passing through floors.

m Nos.~403 and 403A Angle Conduit Couplings, similar to above, but used when it is desired to change direction of the line.

Nos. 405 and 405A Conduit Couplings are used for running a line of molding at right angle from a line of conduit.

No. 415 Right Hand Conduit Coupling for connecting to ½ inch rigid conduit and changing direction to the right.

 $N_{\rm O}$ , 416 Left Hand Conduit Coupling, same as above, except for changing direction of conduit to the left.

SCHEDULE "R"

Mileo

W E

List No.		Unit Package	Std. Pkg.	Std. Pkg. Wt. Lbs.	List Price per 100	List Price per 100
345	Single Plain Clamp	100	1000	10	\$0.75	\$1.50
354	Double Plain Clamp	50	100	_3	1.50	3.00
434	Single Base Plate Clamp	100	1000	22	3.60	7.20
435	Double Base Plate Clamp	50	200	. 8	4.50	9.00
425	Plain Strap Clamp	100	1000	10	.75	1.50
428	Base Strap Clamp	100	1000	8	1.50	3.00
369	Wood Molding Coupling	10	20	4	15.00	25.20
	Open Work Coupling	10	20	7	18.00	30.24
367	Open Work Coupling Covers, 2 Wire	10	20	4	10.00	16.80
368	Open Work Coupling Covers 3 Wire.	10	20	4	10.00	16.80
401	Box Connectors 1/2 inch	30	60	8	15.00	25.20
401A	Box Connectors 34 inch	10	20	3	20.00	33,60
417	Angle Box Connectors 1/2 inch	20	40	8	18.00	30.24
417A	Angle Box Connectors 34 inch	10	20	4	22.00	36.96
402	Conduit Couplings 1/2 inch	30	60	10	15.00	25.20
402A	Conduit Couplings 34 inch	10	20	3	20.00	33.60
403	Angle Conduit Couplings 1/2 inch.	20	40	8	18.00	30.24
403A	Angle Conduit Couplings 34 inch	10	20	4	22.00	36.96
405	Conduit Couplings 1/2 inch	10	20	15	35.00	58.80
	Conduit Couplings 1/4 inch	5	10	10	40.00	67.20
415	Right Hand Conduit Coupling	10	50	9	18.00	30.24
416	Left Hand Conduit Coupling	10	50	9	18.00	30.24
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(SHERARDIZED)



Nos. 411 and 411A



No. 397



No. 348



Nos. 429 and 429A

FITTINGS FOR NO. 333 MOLDING ONLY (Continued)

Nos. 411 and 411A Conduit Couplings are used for tapping from the back of a line of molding to rigid conduit as from a ceiling to the floor above.

No. 414 Conduit Coupling for connecting armored conductors to No. 333 molding system. Must be used in conjunction with No. 341 Box or similar fitting having twistouts.

No. 397 Key Receptacle. Base Plate permits of its use for either continuous or "dead end" work. When for "dead end" work it is necessary to twist off the blanking end.

No. 356 Keyless Receptacle, similar to No. 397.

No. 395 Pull Chain Receptacle, similar to No. 397.

Nos. 360 and 360A Attachment Plugs are fitted with base plate for use in either "dead end" or continuous work. Furnished with either porcelain or composition cap.

No. 348 Porcelain Rosette Base Plate permits of its use for either continuous or "dead end" work. When for "dead end" work twist off the blanking end.

No. 431 similar to above, but with an Extension for drop cord. Nos. 430 and 430A Fixture Rosette, similar to No. 431, with metal bushing tapped for either ½ or ¾ inch gas pipe.

Nos. 429 and 429A Fixture Rosette, provided with special tapped bushings. Used for installing fixtures at intersecting lines of No. 333 molding in conjunction with Nos. 423 or 424 sub-bases.

No. 392 5 Ampere Indicating Snap Switch. Has standard base plate for either continuous of "dead end" work. When for "dead end" work twist off the blanking ear.

No. 391 5 Ampere Non-indicating Snap Switch similar to above.



No. 414



Nos. 360 and 360A



No. 431



No. 391

	Schedule "R"				Mfrs. List	W.E.List
List		Unit	Std.	Std. Pkg.	Price	Price
No.		Pkg.	Pkg.	Wt. Lbs.	per 100	per 100
411	Conduit coupling ½ inch	10	20	6	\$25.00	\$42.00
411A	Conduit coupling 3/4 inch	10	10	4	30. <b>00</b>	50.40
414	Conduit coupling	10	20	3	20.00	33.60
	Schedule "X"					
397	Key receptacle	10	100	51	44.00	76.56
356	Keyless receptacle	10	100	39	38.00	66.12
395	Pull chain receptacle	10	100	50	70.00	121.80
360	Attachment plug poreclain cap	10	100	55	38.00	66.12
360A	Attachment plug composition cap	10	100	52	41.00	71.34
348	Porcelain rosette	20	120	35	10.00	17.40
431	Porcelain rosette	10	120	52	28.00	48.72
430	Fixture rosette \( \frac{1}{8} \) inch cap	10	80	30	40.00	69.60
430A	Fixture rosette 3% inch cap	10	80	30	40.00	69.60
429	Fixture rosette \( \frac{1}{8} \) inch cap	10	10 <b>0</b>	35	35.00	60.90
$429\Lambda$	Fixture rosette 3/8 inch cap	10	100	35	35.0 <b>0</b>	60.90
392	Snap switch, indicating	10	100	49	45.00	78.30
391	Snap switch, non-indicating	10	100	49	41.00	71.34



No. 241

FITTINGS FOR EITHER NO. 222 OR No. 333 MOLDING

No. 241 Junction Box. Four molding twistouts on sides and 1/2 inch conduit knockout in bottom, cap is secured to base without screws, Use either Nos. 277 or 279 Bushings.

No. 276 Corner and Twist Box, six molding twistouts on sides

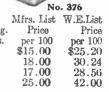
and 1/2 inch conduit knockout in back. Designed as a distribution box or for changing plane of molding lines. Use either Nos. 277 or 279 bushings.

No. 269 Combination coupling. For use in connecting either Nos. 222 or 333 two-wire molding system to wood molding or open work systems. Easily applied.

No. 376 Corner Box. Provided with 1/2 inch conduit Knockout in back and four molding twistouts in sides. Use either Nos. 377 or 278 bushings.



Schedule "R



No. 276

					110	. 0.0
					Mfrs. List	
List		Unit			Price	
No.		Pkg.	Pkg.	Wt. Lbs.	per 100	per 100
241	Junetion box.				\$15.00	\$25.20
276	Corner and twist box		100	- ×	18. <b>00</b>	30.24
269	Combination coupling	10	100	20	17.00	28.56
376	Corner box	10	20	8	25.00	42.00

(SHERARDIZED)

FITTINGS FOR EITHER NO. 222 OR NO. 333 MOLDING (Continued)

No. 426 Two Line Suspension Strip for use in supporting two parallel runs of molding on concrete or brick surfaces, as the number of holes is reduced one-half.



No. 426



No. 424



No. 341



No. 410



No. 383



Nos. 365 and 366

No. 427 Three-line Suspension Strip for use in supporting three lines of molding. Center line of molding must be secured at the same time as the strips.

No. 423 Sub-base for installing devices at intersecting lines of molding. Has one opening and three molding twistoffs. Use No. 278 Bushing with No. 222 System and no bushing with No. 333 System.

No. 424 Angle Sub-base used in same manner as No. 423.

No. 339 Cord Drop Box Cover has bushing for reinforced cord. Four molding twistouts in sides and ½ inch conduit knockout in bottom. Use either No. 278 or No. 377 Bushing.

No. 341 Junction Box is similar in all respects to No. 339, except that it is for use as a junction box only. Use either No. 278 or No. 377 Bushing.

Nos. 342 and 342R Switch Bases have the general design of No. 341. For mounting any standard snap switch, also sub-base type of molding devices. Furnished with screws. Use either No. 278 or No. 377 Bushing.

Nos. 410 and 410A Fixture Box Covers are provided with special tapped hard fibre bushings, making these complete outlets for lighting fixtures. Tapped for ½ or ¾ inch pipe. Use either No. 278 or No. 377 Bushing.

No. 375 Junction Box used in connection with special covers Nos. 378, 379, 380, 381 and 383. Provided with four molding twistouts. Use either No. 278 or No. 377 Bushing.

No. 383 Junction Box Cover is a plain blank cover for use in connection with No. 375 Junction Box.

Nos. 378, 379, 380 and 381 Porcelain Box Covers, similar to above, but arranged drop cord 1, 2, 3 and 4 holes.

Nos. 365 and 366 Canopy Bases have four molding twistouts. Used for installing fixtures on straight metal molding systems. Bases are provided with one ½ inch conduit knockout and two "Flextube" knockouts. Any standard fixture stud may be used. Bushings Nos. 278 and 377 are employed.

No. 363 Adapter Plate is for use with No. 363BC over in picking up and extending circuits from fixture outlets without removing the fixture. Plate is arranged with slots and holes for fastening to any 3 or 4 inch outlet box. It can be fastened to open covers.



No. 423



No. 339



No. 342



No. 375



No. 363

Schedule "R"

					Mfrs. List	W.E. List
List		Unit	Std.	Wt. Lbs.	Price	Price
No.		Pkg.	Pkg.	Std. Pkg.	per 100	per 100
426	Two Line Suspension Strip.	50	100	3	\$4.00	*8.00
427	Three Line Suspension Strip	20	50	5	5.50	11.00
423	Sub-base	10	100	35	20.00	33.60
424	Angle Sub-base.	10	100	50	30.00	50.40
339	Cord Drop Box	20	60	20	25.00	42.00
341	Junction Box	20	120	39	25.00	42.00
342	Switch Base, 10 Ampere	20	120	35	25.00	42.00
342R	Switch Base, 5 Ampere	20	120	35	25.00	42.00
410	Fixture Box 1/8 Inch Pipe	10	100	40	35.00	58.80
410A	Fixture Box 3/8 Inch Pipe	10	100	40	35.00	58.80
375	Junction Box	20	120	30	20.00	33.60
383	Junction Box Cover	20	40	4	5.00	10.00
378	Box Cover 1 Hole	10	40	10	10.00	16.80
379	Box Cover 2 Hole	10	40	10	10.00	16.80
380	Box Cover 3 Hole	10	40	10	10.00	16.80
381	Box Cover 4 Hole	10	40	10	10.00	16.80
365	Canopy Bases 4½ Inch	10	40	30	35.00	58.80
366	Canopy Bases 6 Inch	10	40	53	50.00	84.00
363	Adapter Plate	10	20	8	15.00	25.20
363A	Blank Cover	10	20	8	15.00	25.20
<b>363</b> B	Split Cover	10	40	18	17.00	28.56

(SHERARDIZED)

FITTINGS FOR EITHER NO. 222 OR NO. 333 MOLDING (Continued)

No. 399 Keyless Receptacle used in conjunction with No. 423 or No. 424 Sub-base, where a receptacle is desired at a cross tee or elbow.



No. 399



No. 398B



Nos. 474 and 475





No. 398 Key Receptacle, same characteristics as above. No. 396 Pull Chain Receptacle, same as above. Used at intersecting lines of molding. Must be mounted on sub-bases No. 423 or No. 424.

No. 399B Keyless Receptacle. Base is provided with four twistouts for molding. Use either No. 277 or No. 279 Bushing.

No. 398B Key Receptacle. Same characteristics as above.

No. 396B Pull Chain Receptacle, same as above. Nos. 474 and 475 Keyless Receptacles, 31/2 inch brush brass finish. Has four openings for molding. Base of No. 474 has four "Flextube" knockouts in bottom and No. 475 has necessary openings for wires for installation at outlets with spanner strips. Use with No. 278 Bushing for No. 222 Molding and no bushing for No. 333 Molding.

Nos. 476 and 477 Keyless Porcelain Receptacle, 314 inch. Has same general characteristics as Nos. 474 and 475, but is made entirely of porcelain.

Nos. 470 and 471 Keyless Receptacle,  $4\frac{1}{2}$  inch. Brush brass finish. Same as Nos. 474 and 475, except in size.

Nos. 472 and 473 Keyless Porcelain Receptacle, inch. Same as Nos. 476 and 477, except in size. No. 575B Keyless Receptacle, 3½ inch. Brush

brass finish. Four molding twistouts in sides, four "Flextube" knockouts, and large knockout (to be removed when installing at conduit box outlets) in bottom. Use either Nos. 277 or 279 Bushing.

No. 577B Keyless Porcelain Receptacle, 31/2 inch. Same as No. 575B, except made entirely of porcelain. No. 571B Keyless Receptacle, 4½ inch. Brush

brass finish. Same as No. 575B, except for size. No. 573B Keyless Porcelain Receptacle, 4½ inch.

Same as No. 577B, except for size.

Nos. 486 and 487 Pull Chain Receptacle, 4½ inch.

Brush brass finish. Has four openings for molding,
No. 486 is for use on straight molding jobs. No. 487
is for use on conduit box outlets. For No. 222 molding use No. 278 Bushing. No Bushing required

for No. 333 Molding No. 587B Pull Chain Receptacle, 4½ inch. Brush brass finish. Four molding twistouts in sides and four "Flextube" knockouts in bottom, also a large knockout for mounting on conduit box outlets. Use either Nos. 277 or 279 Bushing.



No. 398



No. 396B



Nos. 470 and 471



No. 577B



No. 587B Schedule "X"

0	11000 100 0000 100				Mfrs. List	W.E.List
List		Unit	Std.	Std. Pkg.	Price	Price
No.		Pkg.	Pkg.	Wt. Lbs.	per 10 <b>0</b>	per 100
399	Keyless receptacle	10	10Ŏ	40	\$27.00	\$46.98
398	Key Receptacle	10	100	45	39.00	67.86
396	Pull chain receptacle	10	100	44	62.00	107.88
399B	Keyless receptacle	10	100	38	38.00	66.12
398B	Key receptacle	10	100	46	44.00	76.56
396B	Pull chain receptacle	10	100	46	70.00	121.80
474	Keyless receptacle, molding work	1	100	97	60.00	104.40
475	Keyless receptacle, conduit box outlets	1	100	97	62.00	107.88
476	Keyless receptacle, molding work	1	100	100	50.00	87.00
477	Keyless receptacle, conduit box outlets	1	100	100	52.00	90.48
470	Keyless receptacle, molding work	1	100	145	90.00	156.60
471	Keyless receptacle, conduit box outlets	1	100	145	92.00	160.08
472	Keyless receptacle, molding work	1	100	133	60.00	104.40
473	Keyless receptacle, conduit box outlets	1	100	133	62.00	107.88
575B	Keyless receptacle	1	100	90	60.00	104.40
577B	Keyless receptacle	1	100	94	50.00	87.00
571B	Keyless receptacle	1	100	127	90.00	156.60
573B	Keyless receptacle	1	100	128	60.00	104.40
486	Pull chain receptacle, molding work	1	50	97	128,00	222.72
487	Pull chain receptacle, conduit box outlets	1	50	97	130.00	226.20
587B	Pull chain receptacle	1	50	90	128.00	222.72
00.2						

(Sherardized)

# FITTINGS FOR EITHER NO. 222 OR NO. 333 MOLDING



No. 390

Nos. 390 and 390A Attachment Plugs are of the sub-base pe and are used at a cross, tee or elbow. They must be

Nos. 390 and 390A Attachment Plugs are of the sub-base type and are used at a cross, tee or elbow. They must be mounted on either No. 423 or No. 424 sub-base.

Nos. 390B and 390C Attachment Plugs have base with four moldling twistouts. Use either Nos. 277 or 279 bushing.

Nos. 480 and 481 Drop Cord Rosette, 3½ inches. Brush brass finish. Has four openings for molding. No. 480 is used on straight molding work and No. 481 has necessary openings for wires. For mounting at conduit box outlets with No. 222 molding No.278 bushing is used, and no bushing with No. 333 molding.

molding No.278 bushing is used, and no bushing with No. 333 molding.

Nos. 478 and 479 Drop Cord Rosette, 4½ inches. Brush brass finish. Same as Nos. 480 and 481, except in size.

No. 581B Drop Cord Rosette, 3½ inches. Brush brass finish. Has four inolding twistouts in sides, four "Flectube" and one large knockout in bottom for mounting at conduit box outlets. Use either Nos. 277 or 279 bushings.

No. 579B Drop Cord Rosette, 4½ inches. Brush brass finish. Same as No. 581B, except in size.

No. 432 Drop Cord Rosette, sub-base type, for use where a drop cord is desired at intersecting lines of molding. Must be mounted on sub-base.

No. 432 Drop Cord Rosette, sub-base type, no.

No. 432 Drop Cord Rosette. Base has four molding twistous.

No. 432B Drop Cord Rosette. Base has four molding twistouts.

No. 432B Drop Cord Rosette. Base has four molding twistouts.

No. 432B Drop Cord Rosette. Base has four molding twistouts in sides of base.

No. 485 Portelain Rosette. Base has four molding twistouts in sides of base. Use either Nos. 277 or 279 bushing.

Nos. 484 and 485 Fixture Rosette, 3½ inches. Brush brass finish. Has four openings for molding and four "Flextube" knockouts. No. 485 has necessary openings for wires for mounting at conduit box outlets. Use No. 278 bushing with No. 222 molding, and no bushing with No. 333 molding. Tapped for 3½ inch gas pipe only.

Nos. 482 and 483 Fixture Rosette, 4½ inches. Brush brass finish. Same as Nos. 484 and 485, except in size.

No. 585B Fixture Rosette, 3½ inches. Brush brass finish. Base is provided with four molding twistouts in sides, four "Flextube" knockouts, and large knockout in bottom for mounting on conduit box outlets. Tapped for 3½ inch gas pipe only. Use either Nos. 277 or 279 bushing.

No. 583B Fixture Rosette, 4½ inches. Brush brass finish. Same as No. 585B, except in size.

Nos. 429B and 429C Fixture Rosettes for ½ inch and 3½ inch gas pipe. Has standard base with four molding twistouts. Use either Nos. 277 or 279 bushing.

No. 393B 5 Ampere Snap Switch, Non-indicating. Base is provided with four molding twistouts. Use either No. 277 or 279 bushing.

279 bushing.
No. 394B 5 Ampere Snap Switch. Same as No. 393B, ex-



Nos. 480 and 481

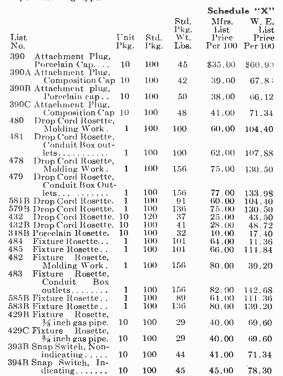
No. 432



Nos. 484 and 485



No. 429B





No. 390B



No. 581B



No. 432B



No. 348B



No. 585B



No. 393B

(Sherardized)

# FITTINGS FOR EITHER NO. 222 OR NO. 333 MOLDING



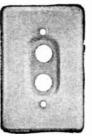




No. 448 Blank Plate



No. 447 Plug Plate



No. 451 Push Plate



No. 441 Flush Switch Adapter

No. 438 Switch Box is a complete flush switch outlet consisting of a special shallow type flush switch box on which is mounted a molding adapter. All standard flush plates will fit. Provided with four molding twistouts. Use either Nos. 278 or 377 bushing.

					Scheut	116 1
List Xo. 438 Switch box. 448 Flush plate, blank, single gang 447 Flush plate, plug, single gang 451 Flush plate, push, single gang 452 Flush plate, push, two gang 453 Flush plate, push, three gang	Sherardized Sherardized	Unit Pkg. 10 10 10 10 10	Std. Pkg. 20 100 100 100 50 25	Std. Pkg. Wt. Lbs. 20 15 15 16 16 13	Mfrs. List Price per 100 \$40.00 12.00 12.00 12.00 24.00 36.00	W.E.List Price per 100 \$67.20 20.16 20.16 20.16 40.32 60.48

No. 441 Flush Switch Adapter used for extending circuits from any standard flush switch outlet. It may be mounted on any standard flush switch box, provided with four molding twistouts. Will take any standard switch plate.



No. 442 Two-Gang Switch Adapter



No. 443



No. 444



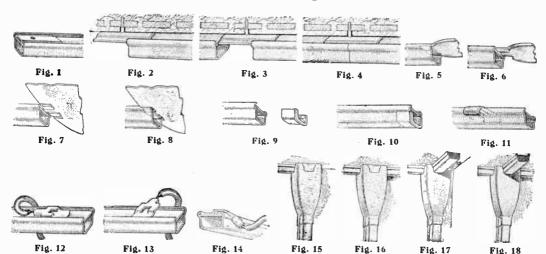
No. 445

### SWITCH ADAPTER SPACERS

No. 442 Flush Switch Adapter, double split type. For use in the same manner as No. 441, except that it is designed for gang work. By using spacers as many gangs as may be desired can be built up. All standard flush plates will fit these combinations. Use either Nos. 278 or 377 bushings.

4.77 4	. 1 A. alato will fit these combinal	tions. Use eith	er mos.	410 UI	of the proper	mes.	
All sta	ndard flush plates will fit these combinate					Sched	ule "R"
List No. 442	Flush switch adapter, double split type.		Unit Pkg. 10	Std. Pkg. 100	Std. Pkg. Wt. Lbs. 50	Mfrs. List Price per 100 \$55.00	W.E. List Price per 100 \$92.40
List No. 443 444 445 446	Single spacer.  Double spacer.  Triple spacer.  Quadruple spacer.	Build No. 442 Into 3 gang 4 gang 5 gang 6 gang	Unit Pkg. Pairs 10 4 2	Std. Pkg. Pairs 100 20 4 4	Std. Pkg. Wt. Lbs. 13 6 1 2	Mfrs. List Price per 100 \$20.00 40.00 60.00 80.00	W.E. List Price per 100 \$33.60 67.20 110.80 134.40

# Western Electric WIREMOLD



Wiremold, like rigid conduit, is furnished with one Base Coupling No. 501 to each length, as shown in

Fig. 1, but extra couplings must be used where short lengths are installed.

To install Wiremold, push the coupling forward until screw hole is clear and then fasten to wall with a No. 8 flat head wood serew as shown in Fig. 2. Slip the next length over edges of coupling, as shown in

Fig. 3, and close up as in Fig. 4.

Base plates of all Wiremold fittings of cross, tee and elbow types are provided with ribbed tongues, as in Fig. 5. In coupling, the tongues are slipped into the grooved edges of the molding, as in Fig. 6, either before or after the fitting has been serewed to the wall. Ribbed tongues are also cut in the base plate of fittings of the outlet box type, as in Fig. 7. Wiremold is coupled to such plates by slipping tongues into the grooved edges of the molding, as is illustrated by Fig 8, either before or after the plate has been screwed to the wall.

No. 502 Molding Bushing should be used wherever Wiremold enters fittings. It is slipped into the end of Wiremold in manner illustrated by Figs. 9 and 10 and should be installed in all cases before molding is

assembled with fittings. It is locked tightly in place by the base plates of fittings.

No. 503 Supporting Clip is designed to support Wiremold in the middle of lengths of where tongues of fittings do not serve the purpose. It is secured to the wall with a No. 8 flat head wood screw and Wiremold snapped into it, as shown in Fig. 11. The screw hole is slotted to allow clip to be adjusted to the line of the molding.

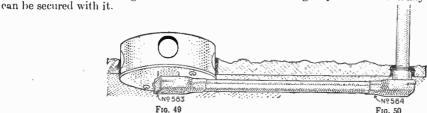
No. 504 Supporting Strap is designed for use where exceptionally rigid support is required.

No. 509 Ground Clamp is a standard, screwless ground coupling, and to install, the ground wire is first soldered into its lug. The coupling is then laid against the molding base in the position shown in Fig. 12, given a quarter turn to position shown by Fig. 13, and the lug bent down as in Fig. 14, which locks it firmly into the grooved edges of the molding capping.

Note that coupling must be in place before Wiremold is installed.

No. 519 Corner Box has been designed to provide in a single fitting for most of the corner combinations necessary where a run of Wiremold rises on the sidewall and must be turned and run close up in the corner on the ceiling or vice versa.

Fig. 15, for example, shows the box used as a twisted elbow, Fig. 16 as a twisted tee, Fig. 17 as another form of twisted tee and Fig. 18 as a twisted cross—these being only a few of the many combinations which



No. 581 is a 1/2 inch box connector provided at one end with a tongue for coupling Wiremold and at

the opposite end with a male hub having standard ½ inch conduit thread.

No. 582 is a ½ inch conduit coupling tapped at one end for standard ½ inch conduit and provided at the opposite end with a tongue for coupling Wiremold.

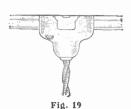
One-half inch elbow box connector No. 583 is equipped with a removable steel cover and has coupling. tongue for Wiremold spaced far enough back from the threaded hub to allow ample fish room around the elbow

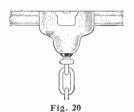
No. 585 ½ inch elbow conduit coupling differs from No. 583 in no particular save that its hub is tapped for standard ½ inch conduit instead of being furnished with male thread.

No. 583 is for use where an elbow coupling between Wiremold and some fitting having knockout for inch conduit is necessary, as with outlet box shown in Fig. 49.

No. 584 is for use where a direct elbow coupling must be made between Wiremold and 1/2 inch conduit, as in Fig. 50, where molding is coupled with conduit to pass through ceiling to floor above.

# WIREMOLD





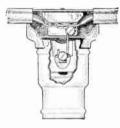


Fig. 21

Fig. 19 illustrates the use of Nos. 521 and 522 as standard drop cord rosettes.

Fig. 20 illustrates the use of No. 523 for hanging any small fixture having ½ inch stem.

Fig. 21 is an exploded view of No. 525 installed, showing circuit wires passing across the contact block and tap wires passing to the terminal lugs of a standard socket body.

These contact blocks are furnished complete with two tap wires and make installation of socket bodies on No. 525 extremely simple.

No. 521 is a one piece metal shell rosette equipped with standard porcelain bushing for drop cords.

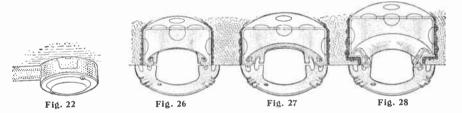
It is 21/4 inches in diameter and has four twistouts for Wiremold entrance.

No. 522 is a two piece rosette identical with No. 521 save that it is equipped with contact block having terminals for circuit and tap wires similar to block shown in Fig. 11.

No. 523 Fixture Rosette differs from No. 522 only in its bushing which is of insulating material and threaded for 1/8 inch fixture stems. It can be furnished with 1/8 inch bushing only.

No. 525 Receptacle Base is an insulated type steel receptacle base equipped with standard fluted ring to permit sockets, ceiling switches and all similar fittings of fluted type to be mounted upon it.

It is 21/2 inches in diameter, has four twistouts for Wiremold entrance and is provided with special easyto-wire contact block.



 $N_0$ , 531 is a  $2\frac{1}{2}$  inch blank cover designed for use with boxes Nos. 532 and 533 where they are used for junction purposes only, as illustrated in Fig. 22 above.

No. 532 is a 2½ inch outlet box designed primarily as a base for 5 ampere snap switches, but may also be used as an outlet box with Type G or H condulct and similar style eovers.

No. 533 is a 3 inch outlet box designed primarily as a base for 10 ampere snap switches, but like No. 532, may also be used with many Type G or H condulct covers or those of similar design.

No. 536 is a 4 inch blank cover for use with boxes Nos. 537 and 538 where they are used for junction work only, as in Fig. 32.

No. 537 is a 4 inch extension box for use in extending with Wiremold from existing conduit outlets in the manner shown in Figs. 26, 27 and 28, its base plate being arranged with special slots for the purpose.

Fig. 26 is a sectional view of 31/4 inch conduit box and Fig. 27 of a 4 inch conduit box—both flushed into the wall-showing method of hanging base plate of No. 537 on their cover serews, in making extensions from such outlets with this fitting.

Fig. 28 illustrates the method of hanging base plate of No. 537 on standard open covers with the special clamps furnished for the purpose with No. 537.



No. 538 is a 4 inch fixture box primarily designed for use in hanging fixtures, but is also arranged for a number of other purposes, as shown by Figs. 29 to 34.

Where fixtures having round or square canopies larger than 4 inch are hung on No. 538, canopy rings Nos. 541, 542, 543 or 544 must be used.

Note that in addition to four twistouts for molding entrance, No. 538 has five knockouts for ½ inch con-

Mote that in addition to four twistours for molding entrance, No. 558 has five knockouts for  $\frac{1}{2}$  first conduit in its base arranged as in standard 4 inch conduit boxes.

Fig. 29 shows a conduit "pancake" box mounted on the surface and Fig. 39 shows "pancake" box removed and base plate of No. 538 substituted for it, thus indicating the ease with which Wir mold extensions may be made from "pancake" type outlets if the original box has been mounted on the surface.

Fig. 31 shows base plate of No. 537 installed at old knob and tube outlet preparatory to extension with

Wiremold.

### WIREMOLD



Most fittings which can be mounted on 314 inch or 4 inch conduit boxes can also be mounted on Nos. 537 and 538. Fig. 32, for example, shows 314 inch blank cover on one of these fittings, Fig. 33 a 4 inch drop cord cover and Fig. 34 a large base surface receptacle of the size used for 314 inch concealed conduit outlets.

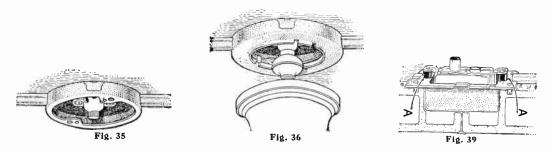


Fig. 35 illustrates the No. 538 Box installed complete with fixture stud ready to hang fixture. Fig. 36 illustrates the method of assembling round canopy rings Nos. 541 and 542 with the No. 538 Box, which is done by simply bending back the four small ears of these rings to engage over the flange of the No. 538 Box.

The Nos. 543 and 544 square canopy rings are assembled with the No. 538 Box in the same way as the round canopy ring.

To install the No. 550, first cut a hold in the wall 2 inches wide, 3 inches long and 11/4 inches deep and mount the base of the No. 550 in it.

Then mount any standard push button switch on this base with the serews and spacer pieces furnished with each No. 550 for the purpose.

Next mount the No. 550 cover on the switch in the same manner ordinary flush switch plates are mounted, using cover screws furnished for the purpose with each No. 550.

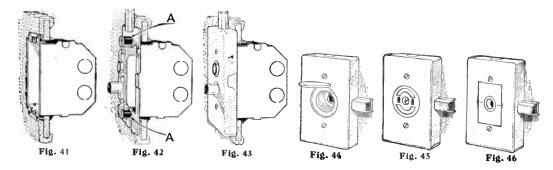


Fig. 41 is a sectional view showing a standard flush switch box installed in a wall in the usual manner. Fig. 42 shows the No. 551 Plate and any standard push switch mounted over the box shown in Fig. 41. Fig. 43 shows the assembly of push switch outlet complete with a No. 561 Cover.

Nos. 551, 552 and 553 are for use in coupling Wiremold with standard flush switch boxes in the manner shown in Fig. 42.

Nos. 561, 562 and 563 are special push switch covers of standard type for use with the Nos. 551, 552 and 553 plates. These covers furnished in enamel finish only.

Nos. 571, 572 and 573 are not complete in themselves, but are designed to be covered with any standard style of plate desired, as illustrated by 1 igs. 44, 45 and 46.

None of the above items are complete in themselves. An equal number of plates must be included in all cover orders.

The 560 series covers provide for installation of push switches with Wiremold, but where rotary switches or flush plug receptacles, as shown in Figs. 44, 45 and 46, are required the 570 series must be used together with the usual cover required for various types of attachment plugs or switches.

# Western Electric

# STANDARD CONDUIT



#### Rigid Conduit

# Black Enameled and Galvanized Rigid Conduit

Mfr's. List price in effect August 1st, 1913. Weights and dimensions are nominal.

	CONDUIT						1	COUPLINGS			ELBOWS				
Size	Diam	eters	Thick-	Wt. Per	Threads Per	Std.	Mfrs. Std. List	Wt.	Std.	Mfrs. Std. List	Wt. Per	Radius	Offset	Std.	Mfrs Std. List
17144	External	Internal		Foot	Inch	Pkg.	Price Per Foot	100 Lbs.	Pkg.	Price Each	100 Lbs.	Inches	Inches	Pkg.	Price Each
1/4 3/8 1/2 3/4	. 540	. 364	.088	. 425	18	100	\$0.081/2	6.0		\$0.05	42 53	4.250	7.500 7.500	200 150	\$0.19
12	.675 .840	.493	.091	. 568	18 14	100	.081/2	9.5		.06	75	4.250 4.250	7.375	125	.19
3,1	1.050	.824	.113	1.134	14	50	.111/2	20.9	400	. 10	120	5.375	8.375	100	. 25
1 '	1.315	1.049	. 133	1.684	1112	50	.17	34.3		. 13	200	5.750	9.500	50	. 37
1 1/4	1.660	1.380	. 140	2.281	111/2	30	. 23	53.3		. 17	300	7.250	10.875	25	.45
1 1/2	1.900	1.610	.145	2.731	111/2	10	.271/2			. 21	427	8.250	12.625	20	. 60
2	2.375	2.067	.154	3.678	11½ 8	10 10	.37	120.8		.28	700 1300	9.500	15.250 17.375	15 10	1.10
2½ 3	2.875 3.500	2,469 3,068	.203	$\frac{5.819}{7.616}$	8	10	.5816 .7612	$\frac{172.0}{249.8}$		.40	1700	13.000	19.500	8	4.80
31/2	4.000	3.548	226	9.202	8	10	.92	424.1	15	.80	2300	15.000	21.250	6	10.60
4	4.500	4.026		10.889	8	10	1.09	474.1	10	1.00	2700	16.000	22.500	4	12.25
41/2	5.000	4.506		12.642	š į	10	1.27	550.0		1.50	3100	18,000	24.375		18.55
5	5.563	5.047	, 258	14.810	8	10	1.48	700.0		1.65	5500	24,000	32.000		25.75
6	6.625	6.065	. 280	19.185	8	10	1 92	750.0		2.40	9000	30.000	39.750		32.00

Tubes in 10 foot lengths, threaded both ends, with one coupling.

# Conduit Sizes for Different Size Wires

No.	Circular	Amperes	Siz	e of Cond	uit	No.	Circular	Amperes	Size of Conduit		
B.&S.	Mils	Rubber	1 Wire	2 Wire	3 Wire	B.&S.	Mils	Rubber	1 Wire	2 Wire	3 Wire
18 16 14 12 10 8 6 5 5 4 4 3 2 2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1020 2583 4107 6530 10380 16510 26250 33100 41740 52630 66370 83690 105500 137800 211600 200000 350000 400000 450000	3 6 12 17 24 33 46 54 65 76 90 107 127 150 177 210 200 235 270 330 380 380		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		500000 550000 550000 600000 650000 700000 750000 800000 900000 11000000 1200000 1400000 1500000 1700000 1800000 1900000 2000000	390 420 450 475 500 525 575 600 625 650 690 730 770 810 850 930 970 1010	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4	3 4 4 4 4 4 4 4 4 4 5 5 5 6 6 6 6 7 7 7 7

Conduits in 10 foot lengths, threaded on both ends with one coupling. Conduit pipe is known and spoken of by its nominal inside diameter.

# Non-metallic Flexible Conduit



Flexible Conduit

Size Inches	Feet in Coil	Wt. per 1000 Feet	Mfrs. Standard List per Foot	W. E. List Per 1000 Feet In Coil Lots
12 (2/n) 14 (15) 38 22 34 1 1 14 1 152 1 184 2 2 14	250 250 250 250 200 100 100 100 100 Odd lengths	50 58 75 90 120 196 250 400 480 590 800 810	\$0.05½ .06 .09 .12 .15 .18 .25 .33 .40 .47 .55	\$5.50 6.90 9.00 12.00 15.00 25.00 33.00 40.00 47.00 55.00 65.00
Discount	s on application.			

Discounts and prices on special sizes, bends and lengths on application.

The above list prices are not subject to a discount of 50%.

### FLEXIBLE STEEL CONDUIT



Single Strip Conduit



**Double Strip Conduit** 

# Single Strip Type

This conduit is designed particularly for fireproof construction, but is equally adaptable to new nontireproof work, or for the wiring of finished buildings.

It differs from the Double Strip Type in that it is formed with a single strip of galvanized steel, interlocked and gasketed in such a manner as to be highly suitable for concrete construction.

In ordering Single Strip Type always specify S. S. Type.

#### Data and List Prices

	Nominal Inside	Approximate	Weight	Approximate	List Price
List	Diameter	Outside Diameter	per 100 Feet	Feet in	per
No.	in Inches	in Inches	in Lbs.	Coil	100 Feet
580388	5 16	.476	18	<b>2</b> 50	\$10.00
580389	3/8	.573	29	<b>25</b> 0	15.00
580390	1/2	.875	54	100	14.80
580391	3/4	1.062	68	50	19.24
580392	1	1.359	114	50	31.08
580393	11/4	1.625	138	50	38.48
580394	$1\frac{1}{2}$	1.875	182	25-50	51.80
580395	2	2.375	252	25-50	66.60
580396	$2\frac{1}{2}$	3.	280	25	76.96

# Double Strip Type

Where it is desired to make use of a conduit in existing buildings, we strongly recommend this Double Strip Type on account of its extreme flexibility.

In ordering Double Strip Type of conduit always specify D. S. Type.

#### Data and List Prices 580397 .503 \$10,00 34 250 15.00 580398 .635580399 .890 63 14.80 19.24 31.08 1.166 80 580400 580401 1.460144 176 38.48 580402 1.782 580403 2.02551.80 580404 2.520 25 - 5066.60



Armored Lamp Cord

Reinforced Armored Lamp Cord

# Flexible Armored Lamp Cord

#### Twin Conductors FSL

			List Price	List Price
	Approximate	Weight	per	per
Size	Feet per Coil	per 1000 Feet	100 Feet	1000 Feet
No. 18 B. & S.	150-250	200 lbs.	\$13.00	\$117.00
No. 16 B. & S.	150-250	210 lbs.	16.00	144.00
No 14 B. & S.	150-250	250 lbs.	23.00	207.00
	No. 18 B. & S. No. 16 B. & S.	Size         Feet per Coil           No. 18 B. & S.         150-250           No. 16 B. & S.         150-250	Size         Feet per Coil         per 1000 Feet           No. 18 B. & S.         150-250         200 lbs.           No. 16 B. & S.         150-250         210 lbs.	Approximate Weight per Size Feet per Coil per 1000 Feet 100 Feet No. 18 B. & S. 150-250 200 lbs. \$13.00 No. 16 B. & S. 150-250 210 lbs. 16.00

# Flexible Reinforced Armored Lamp Cord

#### Twin Conductors FSRLC

580352	No. 18 B. & S.	150-250	245 lbs.	\$22.20	<b>\$</b> 199.80
580353	No. 16 B. & S.	150-250	255 lbs.	25.00	225.00
580354	No. 14 B. & S.	150-250	450 lbs.	35.00	<b>315.00</b>

# Western Electric

# ARMORED CONDUCTORS



Armored Conductors

# **Armored Conductors**

Armored conductors are designed for severe service and are built electrically and mechanically to meet these demands. The flexible lead covered armored conductors are moisture proof and will give satisfactory results when installed in moist places, such as packing plants, cold storage buildings, breweries, etc., and are also adaptable for underground work.

Single Conductor, Type S

				List Price	List Price				
List		Approximate	Weight	per	per				
No.	Size	Feet per Coil	per 1000 Feet	100 Ft.	1000 Feet				
580309	No. 14, B. & S. Solid	250	190 lbs.	\$12.20	\$109,80				
580310	No. 12, B. & S. Solid	250	200 lbs.	14.20	127.80				
580311	No. 10, B. & S. Solid	250	220 lbs.	18.00	162.00				
580312	No. 8, B. & S. Solid	250	270 lbs.	21.20	190.80				
580313	No. 6, B. & S. Solid	250	500 lbs.	29.00	261.00				
580314	No. 10, B. & S. Stranded	250	220 lbs.	19.00	171.00				
580315	No. 8, B. & S. Stranded	250	270 lbs.	23.00	207.00				
580316	No. 6, B. & S. Stranded	250	500 lbs.	32.00	288.00				
580317	No. 4, B. & S. Stranded	250	570 lbs.	41.00	369.00				
180318 580319	No. 2, B. & S. Stranded	200	690 lbs.	53.20	478.80				
990919	No. 1, B. & S. Stranded	100	960 lbs.	59.22	567.00				
Twin Conductors, Type FS									
580320	No. 14, B. & S. Solid	250	400 lbs.	\$20.80	\$187.20				
580321	No. 12, B. & S. Solid	250	452 lbs.	<b>27</b> .00	243.00				
580322	No. 10, B. & S. Solid	200	510 lbs.	37.00	333.00				
580323	No. 8, B. & S. Stranded	150	780 lbs.	47.00	423.00				
580324	No. 6, B. & S. Stranded	100	940 lbs.	69.56	666.00				
580325	No. 4, B. & S. Stranded	100	1210 lbs.	108.10	1035.00				
	Thre	e Conductors,	Type FS3						
580326	No. 14, B. & S. Solid	250	458 lbs.	<b>\$27</b> .60	\$248.40				
580327	No. 12, B. & S. Solid	250	505 lbs.	34.00	306.00				
580328	No. 10, B. & S. Solid	200	600 lbs.	47.00	423.00				
580329	No. 8, B. & S. Stranded	150	.862 lbs.	65.00	585.00				
580320	No. 6, B. & S. Stranded	100	1160 lbs.	88.54	849.60				
	Land Com	- 1 4	101.						
			ed Conduct	ors					
		le Conductors							
580331	No. 10, B. & S. Stranded	250	460 lbs.	<b>\$27</b> .60	\$247.20				
580332	No. 8, B. & S. Stranded	200	520 lbs.	33.25	298.70				
580333 580334	No. 6, B. & S. Stranded	200	790 lbs.	43.08	403.76				
580335	No. 4, B. & S. Stranded No. 2, B. & S. Stranded	150	880 lbs.	57.27	512.94				
580336	No. 1, B. & S. Stranded	150 100	1180 lbs. 1600 lbs	$69.23 \\ 83.03$	$657.14 \\ 799.28$				
00000	2,0, 2,0,0,0,0,0,0,0	100	1000 103	60.00	199.28				
		Conductors,							
580337	No. 14, B. & S. Solid	100-200	647 lbs.	<b>\$</b> 37.72	\$337.84				
580338	No. 12, B. & S. Solid	100-200	693 lbs.	48.53	434.66				
580339	No. 10. B. & S. Solid	100-150	900 lbs.	58.65	525.30				
580340 580341	No. 8, B. & S. Stranded	100-150	1210 lbs.	79.35	710.70				
080041	No. 6, B. & S. Stranded	100	1900 lbs.	133.75	1287.50				
	Th	ree Conductor	s, FSL3						
580342	No. 14, B. & S. Solid	100-150	740 lbs.	<b>\$51</b> .06	\$457.34				
580343	No. 12, B. & S. Solid	100-150	906 lbs.	66.70	597.40				
580344	No. 10, B. & S. Solid	100-150	1040 lbs.	74.75	669.50				
580345	No. 8, B. & S. Stranded	100-150	1040 lbs.	103.50	927.00				



FLEXIBLE CONDUIT FITTINGS

Sprague Box Connectors



Malleable Iron Box Connectors

Stamped Steel Connectors

Sprague Dox Connectors												
				Weight	List	List						
List	Description	Unit	Std.	Std.Pkg.	Price	Price						
No.	•	Pkg.	Pkg.	in Lbs.	Each	per 10 <b>0</b>						
7118	10, 12, 14D, 16 and 18E Cord (1/2 inch knockout)	50	100	17	\$0.20	\$15.00						
7119	5 inch D.S. Conduit; 8D, 16 and 18 EM Cord (1/2 inch											
• • • • •	knockout)	50	100	16	.20	15.00						
$7119\frac{1}{2}$	knockout). For 5 inch S.S. Conduit (1/2 inch knock out)	50	100	16	.20	15.00						
7120	3% inch S.S. and D.S. Conduit; 14BX, 12B1X, 4BX3 and											
0	6D Cable: 14E and 14EM Cord (½ inch knockout).	50	100	12	. 20	15.00						
6121	For Nos. 12BX and 10BX, 14BX3, 12BX3, 14BXL,											
	14BXL3, 14 and 12BM, 4D and 6DL Cable (1/2 inch											
	knockout)	50	100	13	.20	15.00						
6122	For Nos. 10BM, 12BXL, 12BXL3, 2D, 4DL and 2DL											
0	and 10BX3 Cable (1/2 inch knockout)	50	100	15	.20	15.00						
*7123	For Nos. 8BX, 8BX3, 10 and 8BXL, 10BXL3, 1D											
,	Cable, and ½ inch S. S. and D. S. Conduit (½ inch											
	knockout)	50	100	17	.20	15.00						
*6124	knockout) For Nos. 6BX, 8BXL3 Cable and ¾ inch S. S. Conduit											
	(3/4 inch knockout)	25	100	33	. 23	19.00						
*61241/2	For Nos. 4BX, 6BX3 and 6BXL Cable (1 inch knock-											
0/2	out)	20	100	43	. 35	28.00						
*6125	For 1 inch S. S. Conduit (1 inch knockout)	20	100	39	.35	28.00						
*6126	For 11/4 inch S. S. Conduit (11/4 inch knockout)	20	100	49	.50	40.00						
*6127	For 1½ inch S. S. Conduit (1½ inch knockout)	20	100	65	.75	60.00						
*6128	For 2 inch S. S. Conduit (2 inch knockout)	10	50	48	1.00	80 00						
*6129	For 21/2 inch S. S. Conduit (21/2 inch knockout)	5	25	43	2.25	180.00						
*6131	For 3/4 inch D. S. Conduit (3/4 inch knockout)	25	100	31	.23	19.00						
*6132	For 1 inch D. S. Conduit (1 inch knockout)	20	100	48	. 35	28.00						
*6133	For 11/4 inch D. S. Conduit (11/4 inch knockout)	20	100	53	. 50	40.00						
*61331/2	For 11/2 inch D. S. Conduit (11/2 inch knockout)	10	50	48	.75	60.00						
*6134	For 2 inch D. S. Conduit (2 inch knockout)	10	, 50	.66	1.00	80.00						
	the contract of the contract o											

\* These connectors are not of the stamped steel type, but are made of malleable iron of the clamp type and are furnished in hot galvanized finish.

Above prices include locknuts.



1/8 inch Socket Adapter With Connector



3/8 inch Socker Adapter
With Connector



Rosette Adapter With Connector

#### Sprague Galvanized Adapters For Flexible Reinforced Cord Types "E" and "EM"

Weight List List Std.Pkg. Price Price Unit Std. Description List Pkg. in Lbs. Pkg. Each per 100 No. 3/8 inch socket adapter and squueze connector, nipple 7116 end with 3/8 in. thread, without locknut; will fit all standard 3/8 in. threads and Nos. 16 and 18E cord. \$0.20 \$15.00 50 100 12 3% in. socket adapter, same as above except that it will 7117 .20 accommodate 16 and 18EM cord. 15.0050 100 11 1/8 in. socket adapter fitted with No. 7116 3/8 in. socket 7110 adapter. Will take 16 and 1815 cord. 18 in. socket adapter, fitted with No. 7117 38 in. socket 1/10 23 . 44 35.00 50 7111 adapter. Will take 16 and 18EM cord.... . .... .44 22 35,00 50 100 3/8 in socket adapter, fitted with No. 7120 box con-7112 .44 35.00 50 100 24 nectors. Will take 14E cord. 3/8 in. socket adapter, fitted with No. 6121 box con-7113 nector. Will take 14EM cord . . 50 100 26 .44 35.00Rosette adapter, fitted with No. 7116 3/8 in. socket adapter. Will take 16 and 18E cord.

Rosette adapter, fitted with No. 7117 3/8 in. socket adapter. Will take 16 and 18EM cord. 7114 43.00100 24 .547115 100 23 5442.00

Above prices are for the Adapter only, and do not include connectors. List Nos. 6119, 7120 and 6121 Box Connectors, shown above, are illustrated only for the purpose of showing their use.

# FLEXIBLE CONDUIT FITTINGS



Nos. 6136 to 6139 and 6144½ to 6149 Malleable Iron Panel Box Connectors



Nos. 6135 and 6140 to 6144 Stamped Steel Panel Box Connectors



45° Connector Nos. 6190 and 6191



90° Connector Nos. 6192 and 6193

# Sprague Panel Box Connectors

For Greenfield Flexible Steel Conduit and Armored Cables-Galvanized Finish

T ink				Weight	List	List
List	D 11	Unit	Std.	Std. Pkg.	Price	Price
No.	Description	Pkg.	Pkg.	in Lbs.	Each	per 100
6135	For ½ inch D. S. Conduit and Nos. 8BX3, 10 and					
	8BXL, 10BXL3 and 1D Cable (1/2 inch knockout).	25	100	27	\$0.37	\$30.00
*6136	For 34 inch D. S. Conduit (34 inch knockout)	10	100	44	.40	32.00
*6137	For 1 inch D. S. Conduit (1 inch knockout)	10	100	61	. 47	38.00
*6138	For 1¼ inch D. S. Conduit (1¼ inch knockout)	10	100	78	.62	50.00
$*6138\frac{1}{2}$	For 1½ inch D. S. Conduit (1½ inch knockout)	10	50	58	. 92	74.00
*6139	For 2 inch D. S. Conduit (2 inch knockout)	10	50	75	1.42	114.00
6140	For Nos. 14BX, 12BX, 14BX3 and 6D Cable. 14E					
	Lamp Cord and 3g inch S. S. and D. S. Conduit (1/2)					
	inch knockout)	50	100	19	. 32	26.00
6141	For Nos. 10BX, 14 and 12BX3, 12BXL, 14BXL,					=0.00
	14BXL3, 14BM, 12BM, 4D and 6DL Cable (1/2					
	inch knockout)	50	100	23	.32	26.00
6142	For Nos. 10BX3, 12BXL3, 2D, 4DL and 2DL and					_0.00
	10BM Cable (½ inch knockout)	50	100	27	.32	26.00
6143	For ½ inch S. S. Conduit and Nos. 8BX, 8BX3, 10					
	and 8BXL, 10BXL3 and 1D Cable (1/2 inch knockout).	25	100	30	.32	26.00
6144	For 34 inch S. S. Conduit and Nos. 6BX and 8BXL3					_0.00
	Cable (3/4 inch knockout)	20	100	41	. 45	36.00
*61441/2	For Nos. 4BX, 6BX3 and 6BXL Cable (1 inch knock-					30.00
	out)	10	100	53	. 45	36.00
*6145	For I meh S. S. Conduit (1 inch knockout)	10	100	49	.52	42.00
*6146	For 11/4 inch S. S. Conduit (11/4 inch knockout).	10	100	67	.75	60.00
*6147	For $1\frac{1}{2}$ inch S. S. Conduit ( $1\frac{1}{2}$ inch knockout)	10	50	48	1.00	80.00
*6148	For 2 meh S. S. Conduit (2 meh knockout)	10	50	50	1.38	108.00
*6149	For $2\frac{1}{2}$ inch S. S. Conduit ( $2\frac{1}{2}$ inch knockout)	5	25	45	2.50	200.00
* The	ese connectors are not of the Stamped Steel Type, but are	made	of malle	able iron o	the Cla	nn Tyne
and and fo	unichalinates all utility to the				Cable	P - J PC

\* These connectors are not of the Stamped Steel Type, but are made of malleable iron of the Clamp Type and are furnished in a hot galvanized finish. Panel box connectors with an extra locknut may be used with cast-iron boxes having a wall thickness too great for the box connectors.

Above prices include locknuts.

# Angle Box Connectors

For Greenfield Flexible Steel Conduit and Armored Conductors—Malleable Iron—Hot Galvanized

			-010 11011	1100 00	ranized
List	<b>Finish</b> Unit	Std.	Weight Std. Pkg.	List	List
No.	Description Pkg.	Pkg.	in Lbs.	Price Each	Price per 100
6190	For Nos. 14BX, 12BX and 14BX3 Cable, 14E and 14EM Lamp Cord (½ inch knockout) 45 degree con-	Ü			p = 200
6191	rector 20 For ½ inch S. S. and D. S. Conduit (½ inch knockout)	100	28	\$0.30	\$24.00
6192	45 degree connector	100	31	.30	24.00
6193	Lamp Cord (½ inch knockout) 90 degree connector. 20 For ½ inch S. S. and D. S. Conduit (½ inch knockout)	100	38	.30	24,00
	90 degrees	100	44	.30	24.00
List		Std.	Wt. Std.	List Price	List Price
No.	Adapted for	Pkg.	Pkg.	Each	per 100
*6194	34 inch S. S. or D. S. Conduit (34 inch knockout) 45 degrees.	10	5	\$0.75	\$60.00
*6194A *195	34 inch S. S. or D. S. Conduit (34 inch knockout) 90 degrees.	10	8	.75	60.00
*6196	1 inch S. S. or D. S. Conduit (1 inch knockout) 90 degrees 114 inch S. S. or D. S. Conduit (11/2 inch knockout) 90 degrees	10	9	1.50	120.00
*6197	1½ inch S. S. or D. S. Conduit (1½ inch knockout) 90 degrees	10 10	14 19	$\frac{1.87}{2.50}$	150.00 200.00
	1/2 men knockout) 90 degrees	10	19	00. ث	400.00

\*Specify whether connector is wanted for S. S. or D. S. Conduit. This information is absolutely essential.

# FLEXIBLE CONDUIT FITTINGS

# Sprague Galvanized Couplings



Nos. 6160 to 6162 Nos. 6063 to 6067



Nos. 6072 to 6077 Combination Coupling Used to join Rigid Pipe to D. S. Flexible Steel Conduit or vice versa

#### \*Couplings for D. S. and S. S. Conduit 16 Inch to 1/2 Inch Only

List No. †6160 6162	Size of Conduit For 5 inch For ½ inch	D. S. and S. S.	cription Conduit Conduit		Jnit Pkg. 10 10	Std. Pkg. 100 100	Weight Std. Pkg. in Lbs. 18 52	List Price Each \$0.20	List Price per 100 \$16.00 18.50
		*Couplings	for D. S. Condu	uit La	rger	than 1	2 Inch		
†6062 6063 6064 6065 6066 6067	For 34 inch For 1 inch For 11/4 inch For 11/2 inch	D. S. Conduit D. S. Conduit D. S. Conduit D. S. Conduit D. S. Conduit			10 10 10 10 10 10	100 100 100 50 50 50	24 72 121 61 78 102	\$0.22 .30 .40 .55 .75	\$17.00 24.00 32.00 44.00 60.00 86.00
	Combinat	ion Coupling	for D. S. or S. S.	with	Rigi	d Cond	uit for $\frac{1}{2}$	Inch only	
6072	For ½ inch	D. S. or S. S. w	vith Rigid Conduit.		10	100	45	\$0.31	\$25.00
		Combinati	on Couplings for	D.S.	and	Rigid C	onduit		
6073 6074 6075 6076	For 1 inch For 1¼ inch	D. S. and Rig D. S. and Rig	id Conduitid Conduitid Conduitid Conduitid Conduit		10 10 10 10	100 100 50 50	74 111 54 82	\$0.40 .52 .75 1.00	\$32.00 42.00 60.00 80.00



For 2 inch D. S. and Rigid Conduit......

6077

Nos. 6163 to 6168 Couplings



1.50

50

104

120.00

Nos. 6173 to 6177 Combination Coupling

#### \*Couplings for S. S. Conduit

List No.	Size of Conduit Description	Unit Pkg.	Std. Pkg.	Weight Std. Pkg. in Lbs.	List Price Each	List Price per 100
†6161 6163	For $\frac{3}{8}$ inch S. S. Conduit. For $\frac{3}{4}$ inch S. S. Conduit.	10 10	100 100	$\frac{24}{73}$	\$0.22 .30	\$17.00 24.00
$6164 \\ 6165$	For 1 inch S. S. Conduit. For 1¼ inch S. S. Conduit.	10	100 50	98 57	.40 .55	32.00 44.00
6166 6167	For 1½ inch S. S. Conduit	10	50 50	67 111	.75 1.07	60.00
6168	For $2\frac{1}{2}$ inch S. S. Conduit	5	10	39	1.87	150.00

#### Combination Couplings for S. S. and Rigid Conduit

6173 6174 6175 6176 6177	For ¾ inch S. S. and Rigid Conduit.  For 1 inch S. S. and Rigid Conduit.  For 1½ inch S. S. and Rigid Conduit.  For 1½ inch S. S. and Rigid Conduit.  For 2 inch S. S. and Rigid Conduit.	10 10 10	100 100 50 50 50	66 97 71 81	\$0.40 .52 .75 1.00	\$32.00 42.00 60.00 80.00 120.00
6177	For 2 inch S. S. and Rigid Conduit	10	50	101	1.50	120

\* In ordering couplings it is advisable to order one coupling to every coil of Greenfield Flexible Steel

t These couplings are furnished with only two cars and two securance bolts.

### FLEXIBLE CONDUIT FITTINGS



Watertight Stuffing Bushing

Fish Plug



No. 6112



No. 6115









No. 6115 Dis-assembled

# Fish Plugs

These fish plugs, which are made for  $\frac{3}{8}$  inch,  $\frac{1}{2}$  inch and  $\frac{3}{4}$  inch Greenfield Conduit, will be furnished free on application, and will be found very useful in drawing in either D. S. or S. S. Type of conduit in finished buildings where it is desired to fish it under floors or in partitions.

After the conduit has been cut squarely off in the special vise, the fish plug may be screwed into the tube and the fish wire or drawing-in line should then be attached to the eyelet on the end of the plug.

### Watertight Stuffing Bushings

These bushings are made in two parts consisting of a male nipple having one end drilled out in a cup shape, and a hexagonal female clamping nipple having a clamp on one end which when screwed together securely holds the cable. The cable is inserted into the clamping nipple and the steam packing is then wrapped around the lead covering of the conductors. The male nipple is then screwed into the female clamping nipple which forces the steam packing into the cup-shaped space, also against the shoulder in the bottom of female clamping nipple making an absolutely watertight joint in the bushing.

				wgt.	Tyst	List
List		Carton	Std.	Pkg.	Price	Price
No.	Description	Quantity	Pkg.	Lbs.	Each	per 100
6106	Bushing for 14BXL and 12BXL Cable		100	<b>3</b> 6	\$0.80	\$64.00
6107	Bushing for 14BXL3 and 12BXL3 Cable	20	100	36	.80	64.00
6108	Bushing for 10BXL and 10BXL3 Cable	20	100	59	1.05	84.00

# Insulated Brass Connectors For Steel Armored Flexible Cord Type "E"

These connectors are for use with Steel-Armored Flexible Cord as they thoroughly insulate the armor of the cord from the boxes and covers, also from the shell of the socket. They may be used in connection with box covers, sockets, rosettes, plug receptacles and attachment plugs.

List No.	Description	Carton Quantity			Price Each	Price per 100
6111 6113	Brass nipple for Hubbell attachment plugs Nos. 5815 at 6116 when used with No. 6115 bushing	50	200	5	\$0.20	\$16.00
	cap For Nos. 16 and 18 Type E Cord Brass Cap for No. 6115	50	200 200 200	13 10 1	.43 .25 .05	35.00 20.00 4.00

# Mfrs. List No. Comparative Index on Metallic Conduit Fittings

Thomas &	National Metal		Thomas &	National Metal		Thomas &	National Metal	_
Betts	Molding	Pratt Chuck	Betts	Molding	Pratt Chuck	Betts	Molding	Pratt Chuck
580	2092			2187	6065-6165		2205	6146
253	2163	6120 - 6121		2188	6066-6166		2206	6147
201	2164	6122	1	2189	6067-6167		2207	6148
254	2166	6123-6130	230	2190	6070	265	2208	6190
255	2167	6124	231	2191	6073-6173	267	2209	6191
256	2169	6125	232	2192	6074-6174	266	2210	6192
257	2170	6126	233	2193	6075 - 6175	268	2211	6193
258	2171	6127	234	2194	6076-6176	250	2220	6115
259	2172	6128	235	2195	6077-6177		2220A	6115
	2182	6160	220	2200	6140-6141		2221	6115
	2183	6161		2201	6142	251	2222	6116
45	2184	6162	221	2202	6143-6135		2224	6117
	2185	6063-6163	222	2203	6144		2225	6117½–6118
	2186	6064-6164		2204	6145		2226	6119

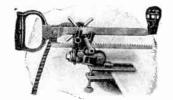
# FLEXIBLE CONDUIT FITTINGS AND CUTTERS



Nos. 6080-6084 Bushing for Armored Conductors



Lead Bushing



No. 6811 BX Armor Cutter Attached to Bench



No. 6812 BX Hand Armor Cutter

	D T . ID 1.				
	Brass Terminal Bushings			Weight	List
List	_	Unit	Std.	Std. Pkg.	Price
No.	Description	Pkg.		in Lbs.	per 100
6080	For 14, 12 BX, and 14E Lamp Cord	100		8	\$5 00
6081	For 14, 12 BX3 and 10 BX	100	200	7	9.50
6082	For 10 BX3	100	200	ż	9.50
6083	For 8 BX	50	100	7	12.50
6084	For 8 BX3	50	100	7	13.50
					10.00

Lead Bushings

List No. 6040 6041 6042	Size of Conduit 3/8 in. 1/2 in. 3/4 in.	Std. Pkg. 100 100 50	Weight Std. Pkg. in Lbs.  1 2 2	List Price per 100 \$1.80 1.90 2.60		List No. 6043 6044 6045 6046	Size of Conduit  1 in. 114 in. 112 in. 2 in.	Std. Pkg. 50 25 25 25	Weight Std.Pkg. in Lbs. 2 2 3 4	List Price per 100 \$3.40 5.00 10.00 15.00
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# **Armor Cutters**

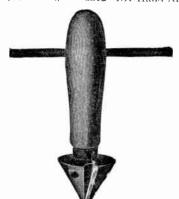
List No.		Wt. Lbs.	List Price Each				List Price
	BX Armor Cutter	812	\$9.00	6812	BX Hand Armor Cutter	Lbs.	Each \$1.50



No. 6815 Bushing Tool



No. 6813



No. 6810 Reamer for S. S. Type of Flexible Steel conduit



No. 6814 Special Vise

**Bushing Tools** 

		ist No. 6815	For D. S.	Type of F	lexible Stee	l Conduit		
	Weight per 100	List Price		Weight per 100	List Price	ĺ	Weight	List
Size	in Lbs.	Each	Size	in Lbs.	Each	Size	per 100 in Lbs.	Price Each
3/8 in.	19	\$0.60	1 in.	156	\$1.00	1½ ins.	20	\$1.50
½ in. ¾ in.	44 106	.60 .80	11/4 ins.	13	1,50	2 ins.	38	1.50

Tools for 3% inch to 1 inch inclusive, made of machine steel.

Tools for 1¼ inch to 2 inches inclusive, made of hard wood.

List	Armor Cutters, Reamer and Vise	Weight	List Price
No.	December 41.		Each
6813	Cord Armor Cutter.	71/	\$1.10
OOTO	Reamer	1/	$\frac{$1.10}{1.50}$
6814	Special Vise.	12	5.00

# Western Electric

# **CONDUIT FITTINGS**





Bushing

	Unit	Std.	Weight	List Price
Size	Pkg.	Pkg. per	·Std. Pkg.	per 100
½ inch	100	1000	45 lbs.	\$8.40
3/4 inch	100	1000	60 lbs.	11.20
1 inch		1000	90 lbs.	15.00
1½ inch		500	60 lbs.	20.00
1½ inch		200	30 lbs.	25.00
2 inch		100	20 lbs.	40.00
2½ inch		100	30 lbs.	60.00
		100	40 lbs.	70.00
3 inch		25	14 lbs.	160.00
4 inch		25	20 lbs.	240.00
4½ inch		20	24 lbs.	256.00
5 inch		20	30 lbs.	320.00
6 inch		15	34 lbs.	384.00

Bushings

#### Locknuts



2001111111							
	Unit	Std.					
Size	Pkg.	Pkg.	per Std. Pkg.	per 100			
½ inch	100	5000	70 lbs.	\$5:00			
3/4 inch	100	5000	128 lbs.	7.00			
1 inch		1000	40 lbs.	8.40			
1½ inch		500	40 lbs.	14.00			
1½ inch		250	30 lbs.	15.00			
2 inch		100	16 lbs.	20.00			
2½ inch		100	20 lbs.	30.00			
3 inch		100	30 lbs.	50.00			
3½ inch		25	9 lbs.	56.00			
4 inch		25	12 lbs.	80.00			
4½ inch		20	15 lbs.	112.00			
5 inch		20	18 lbs.	128.00			
6 inch		15	28 lbs.	-160.00			

# Squeeze Connectors

# For Connecting Flexible Conduit to Outlet Boxes



Locknut

			Weight	List
List		Std.	per 100	Price
No.	Size	Pkg.	Lbs.	Each
254	For 12 in, flexible conduit.	100	9	\$1.42
255	For $\sqrt[3]{4}$ in, flexible conduit.	100	14	1.90
256	For 1 in, flexible conduit.	50	19	2.84
257	For 1¼ in. flexible conduit.	50	22	3.95
	Price includes loc	knut.		

### **Hood Connectors**

### For Connecting Flexible Armored Conductor to Outlet Boxes



Armored Conductor Bushing

				Weight	List	List	
List			Std.	per 100	Price	Price	
No.	Size		Pkg.	Lbs.	Each	per 100	
		For No. 14-2W armored conductor	100	8	\$0.13	\$11.86	
201	3/8 in.	For No. 12-3W, 14-BXL-2W or					
		14-BX-3	100	10	.13	-11.86	
		Price includes locknu	t.				

# G. V. Pipe Caps



G. V. Pipe Cap

List No. 1012 1034 1001 1114 1112	Size  1/2 in. 3/4 in. 1 in. 11/4 in. 11/2 in.	Each \$0.64 .80 1.24 1.48 2.08	10.00 9.00 10.00	No. 1212 1003 1312 1004 1006	Size 2½ in. 3 in. 3½ in. 4 in. 6 in.	Each \$5.44 7.36 9.86 11.64 38.40	List Price per Box 26.16 44.16 59.16 62.88 207.36
1002	2 in.	3.04	14.65		0 111.	38.40	207.30

1/2, 3/4 and 1 inch put up ten in a box. 11/4 and 11/2 inch put up six in a box.

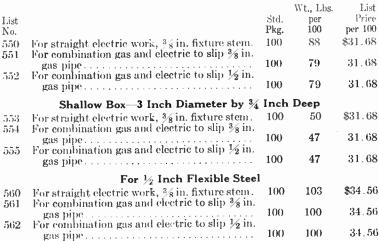
#### CONDUIT FITTINGS

#### "DEAD GROUND" CABLE BOXES

#### For Armored Conductors

These boxes have the simplest, yet absolutely the most effective connecting and grounding device which entirely does away with a multiplicity of These boxes are easy to install.





#### STANDARD BOX FOR ARMORED CONDUCTORS

Designed for finished house work. Fits flush with the surface of the wall Two sides of this box are made on an angle, making installation easy.

160	For straight electric work, 38 in. fixture stem.	100	74	\$29.20
	For combination gas and electric, to slip 3% in. gas pipe	100	76	29.20
280	3/8 in. connector for use with above	100	10	11.86

#### SPLIT TEES

Malleable iron, heavily galvanized. Bushed and flanged at joints to prevent entrance of dust or grit.

685 686 687 688 689 690	34 in. run through 34 in. run through 1 in. run through 1 in. run through	1/2 in. tap off. 1/2 in. tap off. 3/4 in. tap off. 1/2 in. tap off. 1/3 in. tap off. 1 in. tap off.	$     \begin{array}{r}       100 \\       50 \\       50 \\       25 \\       25 \\       25 \\     \end{array} $	32 37 39 65 66 67	On Appl.
--	--	---	---	----------------------------------	-------------

#### SPLIT ELBOWS

Malleable iron, heavily galvanized. Bushed and flanged at joints to prevent entrance of dust or grit.

	CHA ( HELITHICO OF CLASS OF B			
695	For ½ in. conduit	100	$\frac{27}{34}$	On
696	For 3/4 in. conduit	50	34	Annl
697	For 1 in. conduit	25	34	) Tribbin

#### SPLIT COUPLINGS

Malleable iron, heavily galvanized. Bushed and flanged at joints to

prev	ent entr	ance	of dust of gift.			
			conduit	100	18	On
856	For 3	in.	conduit	50	25	Appl.
857	For 1	in.	conduit	25	37	\ rebby.

#### BRASS FLOOR COUPLINGS

Designed for use with bushed elbows and "bulb" tees, and can be used to great advantage with ordinary conduit elbows.

to great t	Carrena Composition of				
List		Outside	Std.	Wt., Lbs.	List Price
No.	Size	Diam.	Pkg.	per 100	per 100
480	½ in.	$1\frac{5}{16}$ in.	100	23	\$137.60
481	34 in.	1 16 in.	100	35	163.40
482	1 in.	$1_{16}^{15}$ in.	25	58	197.80
483	1¼ in.	$2\frac{3}{8}$ in.	10	95	438.00



No. 551



No. 161



No. 683



No. 695



No. 855



No. 480

# **CONDUIT FITTINGS**



Fish Wire

#### Fish Wire

This wire is regularly furnished in 100, 200, 250 and 300 feet lengths, but can be furnished in any length desired.

List No	LIST LITTLE DEF.	00 Feet
1000	Fish Wire, ½ in. (standard size)	\$4.00
1001	Fish Wire, $\frac{3}{16}$ in Fish Wire, $\frac{1}{4}$ in	6.00
	1101 /4	8.00







Nippie



Coupling

# Wrought Pipe Hooks

Size	Black Finish			Pkg. Wgt.	List Price per 100		
$\frac{1}{2}$ $\frac{3}{4}$ $1$ $1\frac{1}{4}$ $1\frac{1}{2}$	in. pipe hook in. pipe hook in. pipe hook in. pipe hook in. pipe hook in. pipe hook in. pipe hook in. pipe hook in. pipe hook		• • • • • •	13/8 lbs. 23/4 lbs. 23/8 lbs. 31/4 lbs. 47/8 lbs. 51/2 lbs. 121/2 lbs.	Prices on application		
List No.	Chase Nipples	Wgt. per 10J in lbs.	Std. Pkg.	List Price Each pe	List Price		
840 841 842 843 844 845 846 847 848 849 850	14 in. nipples 38 in. nipples 15 in. nipples 34 in. nipples 16 in. nipples 17 in. nipples 18 in. nipples 19 in. nipples 29 in. nipples 20 in. nipples 30 in. nipples 30 in. nipples	103 m ms. 2 3 5 6 12 19 27 45 68 108 122	100 100 100 100 100 100 100 50 50 25 25 20	\$0.09 .09 .09 .14 .27 .32 .36 .54 .90 1.44 4.50	r Std. Pkg. \$6.00 6.00 9.60 18.00 21.60 24.00 36.00 60.00 96.00 300.00		
Chase Couplings							
830 831 832 833	1/4 in. coupling. 3/8 in. coupling. 1/2 in. coupling. 3/4 in. coupling. Standard gas pipe threaded.	4 5 7 10	100 100 100 100	\$0.11 .11 .11 .16	\$7.20 7.20 7.20 10.80		

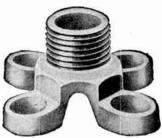
# FIXTURE STEMS, BEAM STRAP AND FIXTURE HANGERS







Fixture Stem 1/2 Inch Solid



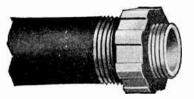
Fixture Stem
3/8 Inch Hollow

#### Fixture Stems

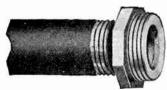
List			Std.	List Price	List Price
Ma	Description	Finish	Pkg.	Each	per 100 \$7.50
1300	% in. soli	Sherardized	10Ŭ	\$0.09	\$7.50
1301	½ in, solid	Sherardized	100	.12	9.76
1305	% in. hollow	Sherardized	100	.09	7.50
1305	½ in. hollow.	Sherardized	100	.12	9.76
1306	led in cortons containing 100 stems.	~ iio. Wi dibod	-00		

Enameled finish also furnished at same price as sherardized. Stove bolts with nuts are not included in price of stems. Two bolts usually specified for each fixture stem.

2000 bolts with nuts for 1000 fixture stems, \$7 net.



No. 1326



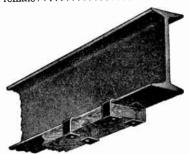
No. 1327 and 1325

# Conduit Bushing Adapters

	Collidate Bushing Adapters	List Price	List Price
List		23120	
No.	Sizes	Each	per 100
	34 in. male x ½ in. female	\$0.20	\$16.00
1325	1/2 in. male x 3/2 in. female	35	32.00
1326	1/2 in. male x 3/4 in. female	.35	32.00
1327	1 in. male x ¾ in. female		



No. 1316



Showing Application to Beam



Beam Strap

# Hickey Fixture Hangers

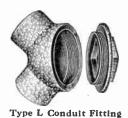
	222020	List Price	List Price
List		Each	per 100
No.	Sizes		\$48.00
1315	% in male ½ in female	.53	48.00
1216	Is in male v 1/2 in temale		48.00
	3/8 in. male x 3/4 in. female	.53	48.00
1318	½ in. male x ¾ in. female	,	

# Beam Strap

		Std.	List Price	List Price
List		Pkg.	Each	per 100
No	Finish	100	\$0.06	\$5.25
700	Sherardized Delivery F. O. B. Factory, Pittsburgh, Pa. For warehouse deliveries w	rite nea	rest house.	-

**World Radio History** 

#### CONDUIT ACCESSORIES





Conduit Coupling

# Bendhick's Conduit Elbow

#### Type L

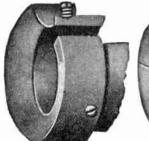
			List				List
List	Size	Std.	Price	List	Size	Std.	Price
No.	Conduit	Pkg.	Each	No.	Conduit	Pkg.	Each
L. $\frac{1}{2}$	$\frac{1}{2}$ in.	100	\$0.66	$L.1\frac{1}{2}$	$1\frac{1}{2}$ ins.	20	\$3,30
L. 3/4	$\frac{3}{4}$ in.	100	.78	L.2	2 ins.	10	6.60
L.1	1 in.	50	1.00	$L.2\frac{1}{2}$	$2\frac{1}{2}$ ins.	4	8.80
$L.1\frac{1}{4}$	$1\frac{1}{4}$ ins	24	2.76	L.3	3 ins.	4	11.00

# Erickson Conduit Coupling

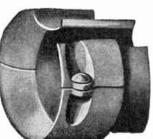
Does away with running threads. Permits opening of conduit at any point.

		List			List
	Std.	Price		Std.	Price
Size	Pkg.	Each	Size	Pkg.	Each
½ inch	Pkg. 100	\$0.45	11/4 inches	25	\$1.40
3/4 inch	50	. 56	1½ inches	25	1,62
1 inch	25	~0	, 2	_0	1,02

The above coupling furnished tinned or black at the same price.







SPLIT



THREADED

# Krantz Porcelain Lined Bushings

Porcelain Lined Threaded and Set Screw Bushings

These bushings are a great convenience where it is found difficult to place a thread on the conduit. Size of Conduit,

Olde of Conduct,										
Inches		3/4	1	11/4	11/2	2	21/2	3	31/2	4
List Price each	\$0.32	\$0.36	\$0.45	$\$0.\overline{5}0$	\$0.59	\$0.68	\$0.97	\$1.19	\$1.44	\$1.76
Standard Package	100	100	60	60	50	20	20	20	10	10

#### Porcelain Lined Split Bushings

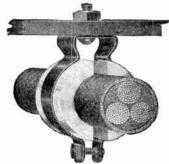
These bushings are designed to be used on conduits which have already been equipped with wire. Size of Conduit.

Size of Conduit,										
Inches	1/2	3/4	1	11/4	11/6	2	21/6	3	31/2	4
List Price each	\$0.54	\$0.54	\$0.68	\$0.79	<b>\$</b> 0.86	<b>3</b> 0 99	\$1 35	\$1.62	<b>\$</b> 1 08	<b>e</b> 2 25
Standard Package	100	100	60	60	50	50	20	20	10	10

# HANGERS AND CONDUIT FITTINGS



Hanger Used Alone



Porcelain Bushing Used with Hanger

# MINERALLAC CABLE AND CONDUIT HANGERS



No. 2 and 4 Universal Bushing

List No.	Size of 250 Volt Lead-Covered Cable	Size Conduit		meter pening Max.	Approx. Weight per Pkg.	Std. Pkg.	List Price per 100	
	3 cond. No. 14 to 7 cond. No. 14. No. 1 to 2-0	½ in. to 34 1 in. 114 ins. 112 ins.	5% in. 7% ins. 114 ins. 112 ins. 134 ins. 2 ins.	$\begin{array}{c} ^{27}_{32} \text{ in.} \\ 1\frac{1}{16} \text{ ins.} \\ 1\frac{32}{32} \text{ ins.} \\ 1\frac{232}{32} \text{ ins.} \\ 1\frac{312}{32} \text{ ins.} \\ 2\frac{1}{32} \text{ ins.} \end{array}$	4½ lbs. 7½ lbs. 10 lbs. 10 lbs. 14 lbs. 11 lbs.	100 100 100 100 100 50	\$8.79 9.69 13.89 13.89 17.22 18.48	
	4-0)	$2\frac{1}{2}$ ins.	$2\frac{1}{2}$ ins.	3 ins.	$12\frac{1}{2}$ Hbs.	50	20.67	

Standard finish japan. The above prices do not include stove bolts. For galvanized add \$0.02 each.

# PORCELAIN BUSHINGS-FOR MINERALLAC HANGERS



No. 911 Conduit Clamp

List No.		Diameter Min.	of Opening Max.	Approx. Weight per Pkg.	Std. Pkg.	List Price per 100
1	8-2-0			8 lbs.	0	
2	3-0-4-0		32 in.	8 ins. 12 lbs.	100 100	\$10.05 11.49
3	250 M450 M	7% in.	$1\frac{32}{32}$ ins.	13 lbs.	100	12.63
4	500 M700 M	$1\frac{1}{3}$ ins.	$1\frac{9}{32}$ ins.	22 lbs.	100	14 64
5	750 M1000 M	$1\frac{5}{16}$ ins.	$1\frac{1}{2}$ ins.	14 lbs.	50	16.25
6	1125 M2500 M	$1\frac{17}{32}$ ins.	2 ins.	5 lbs.	50	17.67

#### UNIVERSAL BUSHINGS

Universal Bushings are approved by the National Board of Fire Underwriters.

List		Std.	List P	rice
No.	33 F. C. 1	Pkg.	Each	Per 100
2	For $\frac{5}{8}$ in. knockout, $\frac{1}{4}$ in. and $\frac{3}{18}$ in. tubing	100	\$0.06	\$4.50
3	For $\frac{7}{8}$ in. knockout, $\frac{1}{4}$ in. and $\frac{1}{16}$ in. tubing. For $\frac{5}{8}$ in. knockout, $\frac{3}{32}$ in tubing.	100	. 07	5.26
4	For $\frac{7}{8}$ in. knockout, $\frac{32}{32}$ in. tubing.	100	.06	4.50
_	/ o	100	.07	5.26



Conduit Hanger

	H AND H CONDUIT CLAN	ΙP	Sched	lule "H"
List		Std.	List	Price——
No.	(1 1 1 50	Pkg.	Each	Per 100
911	Conduit Clamp, for armored conductor	100	\$0.15	\$19.80

#### CONDUIT HANGERS

Size	Weight	7	434 3 331		t Price——
	~	Length	Std. Pkg.	Each	Per 100
3/8 in.	11 lbs.	4 ins.	100	\$0.15	\$5.50
½ in. ¾ in.	11 lbs.	4 ins.	100	.15	5.50
	11 lbs.	4 ins.	100	.15	5.50
l in.	11 lbs.	4 ins.	100	.15	5.50
11/4 ins.	14 lbs.	$4\frac{1}{2}$ ins.	100	.15	5.72
1½ ins. 2 ins.	14 lbs.	$\frac{1}{2}$ ins.	100	. 15	5.72
2½ ins.	16 lbs.	$\frac{5}{2}$ ins.	100	. 15	572
272 ms.	17 lbs.	$5\frac{1}{2}$ ins.	100	.15	6.16

### CONDUIT OUTLET BOXES







No. FM

#### Round Outlet Boxes

#### NO. YA CEILING BOX

Dimensions-31/2 inches diameter, 5/8 inch deep. Outlets-8 1/4 inch Circular Loom Outlets and one 3/4 inch Rigid Conduit Outlet in bottom.

		Mfrs.	W. L. List
List		List	Each
		per 100	Galv.
No. YA	Ceiling Box	\$14.00	\$0.28
IA	Coming Don't I I I I I I I I I I I I I I I I I I I		

#### NO. ZA OUTLET AND RECEPTACLE BOX

Dimensions—3¼ inches diameter, 1¾ inches deep.
8¼ inch Circular Loom and 1¾ inch Rigid Conduit Knock-out in bottom.
4¼ inch Circular Loom and 4½ inch Rigid Conduit Knock-out in the side. Depth--134 inches. Screw holes spaced for all FA box covers.

Screw h	oles spaced for all FA box covers.	Mfrs.	W. E. List
List		List	Each
No.	Receptacle Box	per 100 \$25.00	Galv. \$0.50
ZA	Receptacle Dox		•

#### NO. FM OUTLET BOX

Dimensions— $3\frac{1}{4}$  inch diameter,  $\frac{3}{4}$  inch deep;  $3\frac{1}{2}$  inch Outlets only in bottom. Outlets— $3\frac{1}{2}$  inch Rigid Conduit Outlets in bottom.

0	- /2	Mfrs.	W. L. List
List		List	Each
No.		per 100	Galv.
MO. FM	Outlet Box	<b>\$</b> 18.00	\$0.36
I, TAX	Outlet Box		



N F





No. BBA

### Round Outlet Boxes NO. AA ROUND OUTLET BOX

3½ x ¾ inches deep. No knock-outs in sides.
7½ inch Circular Loom Knock-outs and 1¾ inch Rigid Conduit Knock-out in bottom. Screw-holes spaced for all FA box covers.

	•	Mirs.	W. L. List
List		List	Each
No.		per 100	Galv.
AA	Round Box with Lugs	\$18.00	\$0.36
AA.	Trought Doy and Dago		

#### NO. BBA ROUND OUTLET BOX

3¼ x ¾ inch deep. No Knock-outs in sides. 7 ¼ inch Circular Loom Knock-outs and 1 ¾ inch Rigid Conduit Knock-out in bottom. Screw holes spaced for all FA box covers.

001011		Mfrs.	W. E. List
List		List	Each
No.		per 100	Galv.
BBA	Round Box without Lugs	\$14.00	\$0.28
DDA	Itouna Don William Dagotti		

#### STEEL PLATE

\$0.24 Steel Plate, 31/4 inches, no sides..... 12.00 580620

For enameled boxes deduct 10%.

# CONDUIT OUTLET BOXES AND COVERS







No. FA

NO. EA RECEPTACLE BOX

For G. E. Receptacle No. 50746 and Bryant Receptacle Nos. 40507, 50744 and 50746 Dimensions—3¼ inches diameter 15% inches deep. Outlets—Four outlets in sides.
Size Outlets—For ½ inch conduit only.
Note—Box cannot be furnished with bottom outlet.

List		Mfrs. List	W. E. List Each
No. EA	Round Receptacle Box	100	Galv. \$0.60

NO. FA AND FAO RECEPTACLE BOX

Dimensions-31/4 inches diameter, 15/8 inches deep. Outlets-Four outlets in sides and one in bottom.

Size Outlets-For 1/2 inch conduit only.

Fixture Stems—Boxes are drilled for fixture stems.

For Outlet and Junction purposes No. FA box with covers, FG and FH, can be used where a small box is necessary.

List		Mfrs.	W. E. List
No.		List	Each
FA	Round Receptacle Box. Octagon Receptacle Box.	per 100 \$20.00 20.00	Galv. \$0.40 .40







No. FB



No. FE

COVERS FOR 31/4 INCH ROUND BOXES

List			Mfrs.	W. E. List
No.			List	Each
ED	Flugh Steel Corres	Finish	per 100	Galv.
EB	Flush Steel Cover	Galv.	\$10.00	\$0.20
EE	Flush Brass Cover.		50.00	1.00
EC	Dapped Steel Cover	Calm	10.00	. 20
	Lapped Drass Cover		54.00	1.08
	Steel Cover (Bryant No. 1508 Plug Recentacia)	Calm	10.00	.20
I II	Steel Cover Flush (G. E. Recentacle No. 0307)	Calm	10.00	.20
FC	Polished Brass Cover.		50.00	1.00
				4.00









No. FF

No. FG No. FH

COVERS FOR 31/4 INCH ROUND BOXES

List No.	A1		Mfrs. List	W. E. List Each
FF	Steel Corren (lanned) C. F. D N	Finish	per 100	Galv.
FD	Steel Cover (lapped) G. E. Receptacle No. 9397	Galv.	\$10.00	\$0.20
FG	Polished Brass Cover (lapped). Closed Steel Cover.		54.00	1.08
FĤ	Open Steel Cover (Knowles Box Receptacle No. 2889) P. & S.	Galv.	9.00	.18
121	Receptacies Nos. 61877, 61988 and 61577	Galv.	10.00	. 20
FI	Steel Cover, with % inch insulated highing	Calm	12.00	.24
FS	Polished Brass Cover, with 3/8 inch insulated bushing	Cuit.		
For er	nameled boxes deduct 10%.	• • • • •	<b>56</b> .00	1.12

# Western Electric

# Mail Orders Filled at Prevailing Prices

# CONDUIT BOX COVERS







140. 11

# COVERS FOR 31/4 ROUND BOXES

	COVERS FOR 3/4 ROOMS BOILES		Mfrs.	W. E.
List			List	List
No.		Finish	per 100	Each
FK	Cover, Steel for P. & S. Receptacles Nos. 61777 and 61977	Galv.	\$10.00	\$0.20
FL	Cover, Brass for P. & S. Receptacles Nos. 61777 and 61977		50.00	1.00
FO	Polished Brass Cover (lapped) for Federal Receptacles		54.00	1.08
FP	Steel Cover (Flush)	Galv.	10.00	. 20
FN	Polished Brass Cover (Flush) for Federal Receptacles		50.00	1.00







#### COVERS FOR 31/4 ROUND BOXES

			Mfrs.	W. E.
Liet			List	List
No.		Finish	per 100	Each
$\mathbf{FQ}$	Flat Steel Cover, drilled for 5 Amp. Snap Switches			\$0.24
FR	Snap Switch Steel Cover	Galv.	12.00	. 24
$\mathbf{FT}$	Flat Brass Cover		50.00	1.00









	COVERS FOR 3¼ ROUND BOXES	Mfrs.	W. E. List
List		List	Each
No.		per 100	Galv.
FU	Closed Steel Cover, ½ inch Knock-out Center	\$10.00	\$0.20
FV	Steel Cover for ¼ inch bushing	10.00	. 20
$\mathbf{FW}$	Steel Cover for Hubbell Receptacle No. 5506	10.00	. 20
$\mathbf{FY}$	Raised Steel Cover for Freeman Receptacle No. 140	12.00	. 24
	For enameled boxes, deduct 10%.		

# CONDUIT OUTLET AND JUNCTION BOXES







NO. CA OUTLET BOXES

Dimensions—4 inch diameter, 15% inches deep. Outlets—Four outlets in side and five in bottom. Size Outlets—For ½ inch or ¾ inch conduit only. Fixture Stems—Boxes are drilled for fixture stems.

		Mirs.	W. E. List
List		List	Each
No.		per 100	Galv.
CA	Round Box	\$25.00	\$0.50
CAO	Octagonal Box.	25.00	.50

#### NO. DA OUTLET BOX

Dimensions—4 inches diameter, 2½ inches deep. Outlets—Four outlets in sides and five in bottom. Note: Size Outlets—For ½ inch, ¾ inch and 1 inch conduit—No bottom outlets are provided in boxes arranged for 1 inch conduit.

Fixture Stems-Boxes are drilled for fixture stems.

		Mfrs.	W. E. List
List		List	Each
No.		per 100	Galv.
DA	Round Box	\$32.00	\$0.64



No. QA



No. RA



No. WA

#### NOS. QA AND RA OUTLET BOXES For Combination Gas and Electric Fixtures

Dimensions-4 inches diameter; depth for brick work, 15% inches; for lath and plaster, 21/4 inches. Outlets—Four in sides and four in bottom for 1/2 inch pipe. Where 3/4 inch pipe is used, box cannot be furnished with bottom outlets.

Center Nipple—Will pass ½ inch gas pipe.

		Mfrs.	W. E. List
List		List	Each
No.		per 100	Galv.
QA	Round box for brick, 15% inches deep	\$40.00	\$0.80
RA	Round box for lath and plaster, 21/4 inches deep	52.00	1.04

#### WA OUTLET AND JUNCTION, BOX For Rigid and Flexible Conduits

Dimensions—4 inches diameter, 15% inches deep. Outlets—21 outlets: 4 ½ inch knock-outs in side; 8 circular loom knock-outs in side; 6 circular loom knock-outs in bottom; 3 ½ inch knock-outs in bottom; drilled for fixture stems.

The state of the s		
****	Mfrs.	W. E. List
List	List	Each
No.	per 100	Galv.
WA Round Box	\$25.00	\$0.50
For enameled boxes, deduct $10\%$ .		•

# CONDUIT OUTLET BOXES AND COVERS







NO. GA RECEPTACLE BOX

#### For Norbitt, Trumbull, P. & S. and G. E. Receptacles

Dimensions—4 inches diameter, 15% inches deep.

Outlets—Four side outlets only.

Size Outlets—For ½ inch or ¾ inch conduit only. No provision is made for fixture stems.

Note—Box cannot be furnished with bottom outlets.

List No. GA	Round Box	Finish Galv.	Mfrs. List per 100 \$25.00	W. E. List Each \$0.50
	COVERS FOR 4 INCH ROUND BOXES			
GB GD GI GK	Steel Cover for No. C-33½ Norbitt Rosette. Brass Cover for No. C-33½ Norbitt Rosette. Steel Cover for G. E. Receptacle No. 9397. Brass, for G. E. Receptacle No. 9397.	Galv.	\$14.00 62.00 14.00 62.00	\$0.28 1.24 .28 1.24







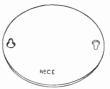
**COVERS FOR 4 INCH ROUND BOXES** 

List No.		Finish	Mfrs. List	
	0.10	rinish	per 100	Each
GC	Steel Cover for C-227 Norbitt Receptacle, P. & S. Receptacles Nos. 61877, 61988 and 61577	Galv.	\$14,00	\$0.28
GE	Brass Cover for C-227 Norbitt Receptacle, P. & S. Receptacles Nos. 61877, 61988 and 61577		62.00	1.24
$\mathbf{GF}$	Steel Cover for Trumbull Receptacle	Galv.	14.00	. 28
$\mathbf{G}\mathbf{G}$	Brass Cover for Trumbull Receptacle		62.00	1.24
$\operatorname{GL}$	Cover, Steel, for P. & S. Receptacles Nos. 61877 and 61988	Galv.	14.00	. 28
GM	Cover, Brass, for P. & S. Receptacles Nos. 61877 and 61988		62.00	1.24









No. CE

**COVERS FOR 4 INCH ROUND BOXES** 

T18£			Mfrs. List	W. E. List
No.		Finish	per 100	Each
CB	Open Cover, Steel	Galv.	\$14.00	\$0.28
$^{\rm CC}$	Closed Cover, Steel	Galv.	14.00	.28
CM	Steel Closed Cover, with ½ inch knockout in center	Galv.	14.00	.28
CD	Steel Cover, with 3/8 inch insulated bushing	Galv.	16.00	.32
$\mathbf{C}\mathbf{K}$	Polished Brass Cover, with 3/8 inch insulated bushing		66.00	1.32
$\mathbf{CE}$	Flat Steel Cover	Galv.	12.00	.24
$\mathbf{CL}$	Flat Polished Brass Cover		65.00	1.30
T) '111'	14 i N OTHE I I I I I I I I I I I I I I I I I I I			

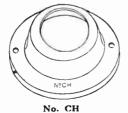
Drilling and tapping cover No. CE for any standard rosette, net extra, 10 cents each. For enameled boxes, deduct 10%.

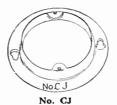
# Western Electric

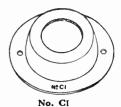
# CONDUIT BOX COVERS



No. CF





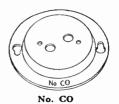


COVERS FOR 4 INCH ROUND BOXES

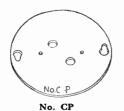
			Mfrs.	W. E.
List			List	List
No.		Finish	l'er 100	Each
$\mathbf{CF}$	Flat steel cover drilled for standard 10 ampere snap switches	Galv.	\$16.00	\$0.32
$\mathbf{CH}$	Polished brass cover "lapped" for Federal sockets		65.00	1.30
CJ	Open cover steel with lips drilled and tapped $\frac{8}{32}$ inch	Galv.	14.00	. 28
CI	Steel cover (flush) for Federal sockets	Galv.	12.00	. 24
CG	Polished brass cover (flush) for Federal sockets		62.00	1.24



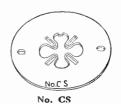




	COVERS FOR 4 INCH ROUND BOXES		W.E.
		Mfrs.	List
List		List	Each
No.		Per 100	Galv.
$\mathbf{CM}$	Closed cover, steel with ½ inch outlet in center	\$14.00	\$0.28
CN	Flat cover, steel ½ inch knockout in center	12.00	. 24
CO	Closed cover, steel for G. E. Rosette No. 39237.	14.00	.28





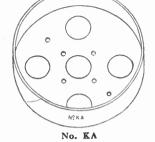


	COVERS FOR 4 INCH ROUND BOXES		W.E.
		Mfrs.	List
List		List	Each
No.		Per 100	Galv.
CP	Flat steel cover for G. E. Rosette No. 39237	\$14.00	\$0.28
CQ	Flat steel cover for P. & S. Receptacles Nos. 61777 and 61997	14.00	. 28
CS	Flat steel snap switch cover	14.00	. 28

For enameled boxes, deduct 10%.

### CONDUIT OUTLET BOXES







No. HA CEILING BOX

Dimensions—4 inches diameter, ¾ inch deep. Size Outlets—For ½ inch or ¾ inch conduit only. Fixture Stems—Boxes are drilled for fixture stems.

List No. HA Ceiling box HA Ceiling box with lugs.	Mfrs. List per 100 \$16.00 18.00	W. E. List Each Galv. \$0.32 .36
No. KA CEILING BOX		
Dimensions—5½ inches diameter, ¾ inch deep.		
Outlet—Five in bottom.		
Size Outlets—For ¾ inch conduit only.  KA Ceiling box	30.00	.60
KA Cenning box	00.00	.00
No. IA CEILING BOX		
Dimensions—4 inches diameter, ½ inch deep.		
Outlets—Five in bottom.		
Size Outlets—For ½ inch or ¾ inch conduit only.	15 00	20
IA Ceiling box	15.00	.30





No. BA

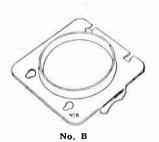
#### No. A OUTLET BOX

### For Combination Gas and Electric Fixtures

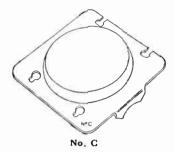
Dimensions—4-inch square, 15% inches deep.
Outlets—Eight conduit outlets in sides and five in bottom.
Gas Outlets—One in each of two opposite sides for ½ inch gas pipe only.
Size Outlets—For ½ inch or ¾ inch conduit only.
Fittings—Boxes are drilled and tapped for gas elbows.

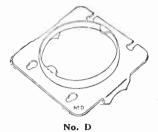
List No. A	Mfr. No. Square box	List per 100 \$30.00	Each Galy. \$0.60
	No. BA SWITCH OUTLET OR JUNCTION BOX		
	Dimensions—4 inch square, 15% inches deep. Outlets—Eight outlets in side, five in bottom. Size Outlets—For ½ inch or ¾ inch conduit only.		
$\mathbf{B}\mathbf{A}$	Square box	30,00	. 60
	For enameled boxes, deduct 10%.		

# CONDUIT BOX COVERS



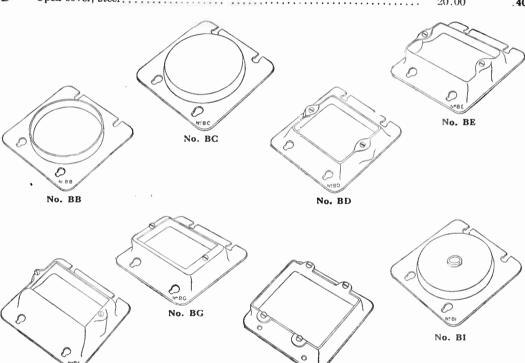
No. BF





COVERS FOR 4 INCH SQUARE BOXES

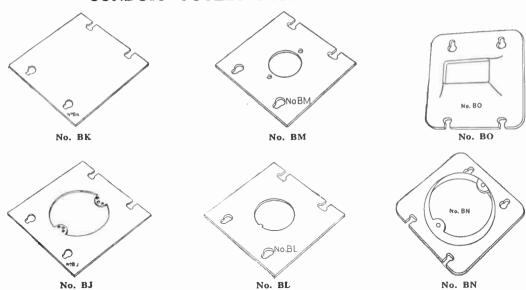
List		Mfrs.	W. E. List
Link		List	Each
No.		per 100	Galy.
В	Open cover, steel.	\$20.00	\$0.40
D	Closed cover, steel Open cover, steel	20.00	.40
	- TTTTTMENDINGSANGALISHNING INNERHOL	20.00	. 40



List No.	COVERS FOR 4 INCH SQUARE BOXES	Mfrs. List per 100	W. E. List Each Galv.
BB	Open cover, steel.	\$14.00	\$0.28
BC	Closed cover, steel	14.00	. 28
BD	Steel cover for Hart round base rotary switches	20.00	.40
BE	Steel cover for Perkins round base rotary switches.	20.00	. 40
$\mathbf{BF}$	Deep Cover for Std. push button or rectangular base switches or flush		
20	plug receptacles	20.00	. 40
BG	Shallow Cover for Std. push button or rectangular base switches or flush		
	plug receptacles.  Cover for two push-button switches.	20.00	.40
BH	Cover for two push-button switches.	25.00	.50
$\mathbf{BI}$	Cover with % inch insulated bushing	18.00	.36
	For enameled boxes, deduct 10%.		

No. BH

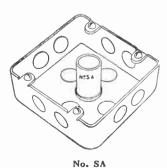
# CONDUIT OUTLET BOXES AND COVERS



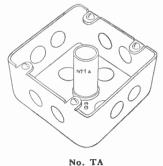
**COVERS FOR 4 INCH SQUARE BOXES** 

No. BL

		Mfrs.	W. E. List
List		List	Each
No.		per 100	Galv.
BJ	Flat Steel, drilled for Std. 10-ampere rotary snap switch	\$20.00	\$0.40
BK	Flat Steel Cover	14.00	. 28
	Drilling and tapping BK for any Std. receptacle, 10 cents each net extra.		
BL	Flat Steel Cover for Federal Receptacles	14.00	. 28
BM	Flat Steel Cover for P. & S. Receptacles Nos. 61777 and 61977.	14.00	. 28
BN	Steel, Open Cover with lips drilled and tapped 32 inch	12.00	. 24
BO	French Cover, Steel.	45.00	90



No. BJ



### NO. SA AND TA OUTLET BOXES AND COVERS

#### For Combination Gas and Electric Fixtures

Dimensions—411 inches square; depth for brick work, 15% inches; for lath and plaster, 21% inches.

Outlets—Two in each of four sides and four in bottom for ½ inch conduit. When ¾ inch conduit is used, box cannot be furnished with bottom outlets.

Center Nipple—Will pass ¾ inch gas pipe.

	Center 11 photo 11 in page 12 men gas pipe.		
	Fixture Stems—Cannot be used with this box.		
	Note—Box is carried in stock for ½ inch conduit only.	Mfrs.	W. E. List
List	Tions for a secretary and solution only.	List	Each
			Galv.
No.		per 100	Gaiv.
SA	Box for brick, 15% inches deep	\$50.00	\$1.00
	box for brick, 1% menes deep	00.00	1.24
TA	Box for plaster, 21/4 inches deep	62.00	
MC		20.00	.40
ND		20.00	.40
ND	attent of the market of the control	20.00	
	For enamel boxes, deduct 10%.		

# CONDUIT OUTLET BOXES AND COVERS





No. NA

# NO. MA OUTLET AND JUNCTION BOX

Dimensions—411 inches square, 15% inches deep. Outlets—Eight outlets in sides and five in bottom. Size outlets—For 1/2 inch or 3/4 inch conduit only.

Boxes are drilled for Fixture Stems.

List		Mfrs.	W. E. List
No.		List	Each
	Course Do-	per 100	Galv.
WIN	Square Box	\$40.00	\$0.80

# NO. NA DEEP OUTLET AND JUNCTION BOX

# For Lath and Plaster or Concrete

Dimensions—411 inches square, 21/4 inches deep.

Outlets-Eight in sides and five in bottom.

Size Outlets-For 1/2 inch, 3/4 inch or 1\_inch conduit only

Boxes are drilled for Fixture Stems.

Note-No bottom outlets are furnished in boxes for 1 inch conduit.

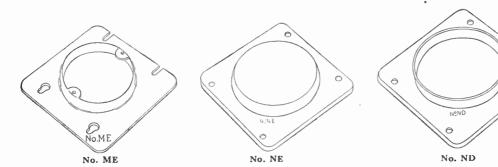
List No.		Mfrs. List	W. E. List Each
	Savana Dana Bandan Di	per 100	Galv.
IVA	Square Deep Box for Plaster	\$50.00	\$1.00



# COVERS FOR 411 INCH SQUARE BOXES

List		Mfrs. List	W. E. List Each
No.		23100	
		per 100	Galv.
MB	Closed Steel Cover	900 00	
MC	Open Steel Course	\$20.00	\$0.40
	Open Steel Cover.	20.00	.40
MD	Steel Cover, with 3/8 inch insulated bushing.	00.00	
_	The state of the s	22.00	. 44
For ens	meled boxes, deduct 10%		

# **OUTLET BOXES AND COVERS**



COVERS	FOR	411	INCH	SQUARE	BOXES
COVERS	1 010	716	TITCLE	DQUARTE	DOZELO

		Mirs.	W. L. List
List		List	Each
No.		per 100	Galv.
ME	Steel cover, with lips drilled and tapped	\$20.00	\$0.40
NE	Closed lapped cover, steel	20.00	. 40
ND	Open lapped cover, steel	20.00	.40





NO. UA BOX
For Push-Buttons

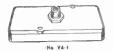
Dimensions—215 inches long, 1¾ inches wide, 1½ inches deep. Outlets—Two in bottom, one in each end and two in each side. Size Outlets—For ½ inch conduit only.

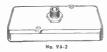
			Mirs.	
List			List W	/. E. List
No.		Finish	per 100	Each
UA	Box	Galv.	\$25.00	
UB	Brass cover for bell push-buttons		25.00	. 50

# NO. VA BOX For Exposed Conduit Work

Dimensions—3¾ inches long, 1¼ inches wide, 1¼ inches deep. Outlets—One in bottom, one in each end and three in each side. Size Outlets—For ½ and ¾ inch conduit only.

		Mfrs.	W. E. List
List		List	Each
No.		per 100	Galv.
VA	Box	\$25.00	\$0.50









PORCELAIN COVERS WITH NIPPLES
For 33 x 11/4 Inch Boxes

			Mfrs.	
List		Std.	List	W. E. List
No.	•	Pkg.	per 100	Each
VAI	Porcelain, ½ inch female nipple	200	\$40.00	\$0.80
VA2	Porcelain, 1/8 inch male nipple	200	40.00	.80
VA3	Porcelain, 3/8 inch female nipple	200	55.00	1,10
VA4	Porcelain, 3/8 inch male nipple	200	55.00	1.10
For ens	meled boxes, deduct 10%.			

# CONDUIT BOXES AND COVERS











METAL COVERS WITH NIPPLES

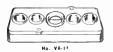
For 3\% x 1\% Inch Boxes

List No.		Std. Pkg.	Mfrs. List per 100	W. E. List Each Galv.
VA5	1/8 inch female nipple	200	\$16.00	\$0.32
VA6	1/8 inch male nipple	200	16.00	. 32
VA7	3/8 inch female nipple	200	20.00	. 40
VA8	3% inch male nipple	200	20.00	. 40
VA9	Metal cover blank	200	9.00	. 18









#### PORCELAIN COVERS

For 3\% x 1\% Inch Boxes

List No.		Std. Pkg.	List per 100	W. E. List Each
VA12	Porcelain, 1 hole	200	\$12.00	\$0.24
VA13	Porcelain, 2 hole	200	12.00	. 24
VA10	Porcelain, 3 hole	200	12.00	. 24
VA11	Porcelain, 5 hole	200	12.00	. 24



#### GANG BOXES

Outlets—Two outlets on two opposite sides for each switch.

Size Outlets—Boxes carried in stock for ½ inch and ¾ inch pipe.

Price list of boxes for push-button or rotary rectangular base switches and plug receptacles.

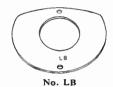
List		Mfrs. List	W. E. List Each
No.		per 100	Galv.
580719		\$90.00	\$1.80
580720	3 Standard 3 gang box	135.00	2.70
	4 Standard 4 gang box	180.00	3.60
580722	5 Standard 5 gang box	235.00	4.70
580723	6 Standard 6 gang box	455.00	9.10
580724	7 Standard 7 gang box	730.00	14.60
580725	8 Standard 8 gang box	790.00	15.80
580726	9 Standard 9 gang box	880.00	17.60
580727	10 Standard 10 gang box	960,00	19.20

The above prices are for gangs placed in one row.

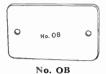
For enameled boxes, deduct 10%.

# CONDUIT OUTLET BOXES AND COVERS









### No. LA BRACKET OUTLET AND JUNCTION BOX

Dimension—315 inches diameter, 2 inches deep.

Outlets-Four in bottom, one in top side and two in flat side

Size Outlets-For 1/2 inch and 3/4 inch conduit only.

Boxes are drilled for fixture stems.

		Mfrs.	W. E. List
List		List	Each
No.		per 100	Galv.
$\mathbf{L}\mathbf{A}$	Bracket outlet box	\$25.00	\$0.50
LB	Steel open cover for bracket box	12.00	.24
LC	Steel closed cover for bracket box	12.00	.24

Note: No cover necessary with 4 inch canopy.

#### No. OA BOX

### For Flush Rotary Snap Switches and Plug Receptacles

Dimensions—2 16 inches wide, 4 inches long, 178 inches deep.

Outlets-One in each end, one in bottom, two on one side, one in opposite side.

Size Outlets-For 1/2 inch conduit only.

Note: These boxes designed for 2 inch partitions.

		Mfrs.	W. E. List
List		List	Each
No.		per 100	Galv.
OA	Box	\$25,00	\$0.50

For all Diamond H rectangular base rotary snap flush switches.

Hart and Hegeman rectangular base rotary flush snap switches, either 5 ampere or 10 ampere Nos 600, 601, 602, 603, 604, 605, 609 and 619.

Hubbell plug receptacle.

Hart and Hegeman shallow flush push-button switches Nos. 2081, 2082, 2083, 2084, flush plug receptacle and shallow momentary contact push-button switch.

		Mfrs	W. E. List
List		List	Each
No.		per 100	Galv.
OB	Blank steel cover	\$12.00	\$0.24
	enameled boxes deduct 10%.		

### GEM SECTIONAL SWITCH BOXES

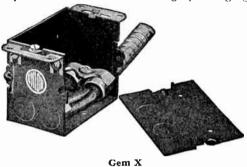
For Use with

#### NON-METALLIC FLEXIBLE CONDUIT

#### Takes all Makes of Push Button and Rectangular Base Switches and Receptacles

The extreme simplicity of construction of the "Gem" box must appeal to all users. The assembling can be done quickly by the use of no other tool than a screw-driver. It is impossible to put the box together in any way but the right way, as all sides are interchangeable.

All boxes are equipped with reversible and sliding ears, so as to be adapted to plastered or unplastered walls. When building up into gang boxes, remove one side of box, insert unit, tighten one









21/4 ins. deep 2½ ins. deep 2½ ins. deep Gem G Gem E Gem X  $2\frac{1}{2}$  ins. deep Gem B Gem A Gem Y

Gem S

Gem D

Gem F

Gem BD

 $2\frac{3}{4}$  ins. deep ins. dcep ins. deep 3½ ins. deep

ins. deep

ins. deep

½ or ¾ in. 5/8 in. ½ or ¾ in.

Types of Boxes 5/8 in. 5/8 in.

5/8 in. 5/8 in. 5/8 in.

K.O. K.O. K.O.

Square corners Square corners with clamps

K.O. Square corners

List Prices and Data Mfrs. List -W. E. List Price Each-Price Enamel Sherardized Single box complete.
Unit without sides. **\$**0.50 \$0.60 \$0.70 .48 .56Single box with clamps.... .60.84 Unit without sides with clamps.....

serew only, and all sections fit snugly together. Gem D is designed particularly for the rewiring of old buildings, the beveled corners permit insertion into the smallest practical opening in walls and make the fishing of the ends of flexible conduit into the box very

Gem E box having beveled corners, is designed particularly for the rewiring of old buildings, the beveled corners permitting the fishing of the ends of flexible con-

duit into the box very easy. Gem X box is designed particularly for use with flexible metallic conduit and armored cable.

Knockouts are  $\frac{11}{16}$  inch in diameter, being amply large enough to accommodate BX Nos. 10, 12 or 14 B. & S. twin conductors, and BX3 Nos. 12 and 14 B. & S. triple conductors, also  $\frac{6}{16}$  and  $\frac{3}{6}$  inch Greenfield flexible steel conduit when ends are protected by brass bushing caps.

Gem B, 234 inches deep, is designed for switch and receptacle easings in concealed conduit or armored receptacie casings in concealed conduit or armored cable work—takes ½ inch and ¾ inch conduit and may be used where a larger flexible tubing than ½ inch is desired. Can be used with Standard BX conductor by using Sprague box connectors No. 6119-6124 adapted to old as well as new work.

Gem Y Knock-outs are 11-inch in diameter, being amply large enough to accommodate BX Nos. 10, 12 and 14 B. & S. twin conductors, and BX 3 Nos. 12 and 14 B. & S. triple conductors; also  $\frac{5}{16}$  and  $\frac{3}{8}$  inch Greenfield flexible steel conduit when ends are protected by brass bushing caps. Box is provided with 2 holes in each end and 4 in back so that it can be used as a junction center as well as a switch box; they are 31/4 inches deep, which allows ample room in the back of switch to make and tape all joints without undue crowding.

BD Box is designed for switch and receptacle casings in concealed conduit or armored cable work in

ordinary partitions and walls.

Takes ½ inch and ¾ inch conduit and may be used where a larger flexible tubing than ½ inch is desired. Can be used with Standard BX conductors by using Sprague box connectors No. 6119-6124; adapted to old as well as new work.

K.O.

K.O.

K.O.

K.O.

K.O.

K.O.

clamps Square corners

Square corners

Bevel corners

Bevel corners

Square corners

Square corners

Square corners with

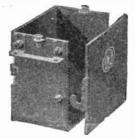
.70

.50.60

# "UNION" SECTIONAL SWITCH BOXES

Take All Makes of Switches and Receptacles For Old and New Work

"UNION" SECTIONAL BOXES FOR FLEXIBLE CONDUIT Outlet Holes, 5% Inch



Single Box. Showing One Side Removable by Loosen-Ing Screws at Hooks



Spacer



2-Gang Box made from a Single Box and Spacer

"Union" sectional switch boxes may be built up from the single unit by the use of spacer sections by loosening the two binding screws and slipping the spacers in position and tightening up the screws. No dividing walls between switch units. No binding straps or screws to be lost. No working part after being No open space between the different sections; a perfect gang switch box.



CCS

#### Dimensions

CCS single box—2 ins. deep, 3 ins. long, 2 ins.	wide.
CC single box $-2\frac{1}{2}$ ins. deep, 3 ins. long, 2 ins.	wide.
AB single box—2\(\frac{3}{4}\) ins. deep, 3 ins. long, 2 ins.	wide.
AA single box—3 ins. deep, 3 ins. long, 2 ins.	wide.
DD single box—2 ins. deep, 3 ins. long, 2 ins.	wide.
DE single box $-2\frac{1}{2}$ ins. deep, 3 ins. long, 2 ins.	wide.
DC single box $-2\frac{1}{2}$ ins. deep, 3 ins. long, 2 ins.	wide.
BE single box $-2\frac{3}{4}$ ins. deep, 3 ins. long, 2 ins.	wide.
AC single box $-3\frac{1}{4}$ ins. deep, 3 ins. long, 2 ins.	wide.
BB single box $-3\frac{1}{2}$ ins. deep, 3 ins. long, 2 ins.	wide.

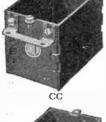
Note: Clamps for flexible conduit can be furnished with any of the above boxes or spacers when specified, but the A.C. and D.C. boxes are regularly carried in stock with elamps and are always furnished in this manner unless otherwise instructed.

Equipped with reversible and sliding ears so as to be adapted to plastered or unplastered walls.

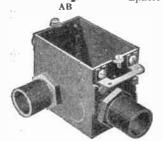
All single boxes furnished with one side removable (unless otherwise specified), obviating the necessity of carrying 2-gang boxes, already assembled, in stock.

When building up into gang boxes, simply loosen screws, remove side of box, insert spacers and tighten screws and all sections will fit solidly together.

All above boxes are finished in a heavy black insulating enamel, but can also be furnished sherardized, which is absolutely rustproof, at a slight advance in price. Prices



	Mfrs. List	W. E. I	ist Each-
	Price Each	Enameled	Sherardized
Single box —All types without clamps	\$0.50	\$0.60 ·	\$0.70
2-gang box—All types without clamps	.90	1.08	1.26
Spacer —All types without clamps	.40	.48	. 56
Single box —All types with clamps	.60	.72	.84
2-gang box—All types with clamps	1.10	1.32	1.54
Spacer —All types with clamps	. 50	.60	.70



BE Single



DD Single



DC Box

# SECTIONAL CONDUIT SWITCH BOXES

NOS. 155, 160 AND 170 FOR RIGID CONDUIT

For Push Button, Rotary Rectangular Base Switches and Plug Receptacles



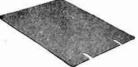
No. 155



No. 160



No. 160 3-Gang



2-Gang Plate Cover



No. 160 Spacer







No. 170 2-Gang



No. 170 Single



No. 170 Spacer

Box No. 155. Measures 4 inches long, 4 inches wide, 25% inches deep.

The only single switch box that has ample room for making splices, taps and junctions. Either of the small top cover plates can be removed by loosening screws, permitting access to wires without disturbing switch.

Two conduit openings in each end, two in each side.

Box No. 160. Measures 53/4 inches long, 4 inches wide, 25% inches dcep.

No. 160 Spacer. Measures  $1\frac{13}{16}$  inches wide,  $2\frac{5}{8}$  inches deep.

Enables you to meet the demand for any gang box by building up with spacers.

The hook eye construction permits of rapid assembling to any size gang desired, by loosening screws and inserting spacers.

Made for 1/2 inch and 3/4 inch conduit only, having six holes in each end section. The spacers have but one outlet in each end.

Covers. By equipping above boxes with flat steel covers you have an ideal junction box for single and double main line blocks meeting every requirement of the underwriters.

No. 180 covers will also fit Box No. 155, so as to be used with snap switches, receptacles and rosettes.

Box No. 170. Measures 4 inches long, 2 inches wide, 1% inches deep.

A sectional, combination loom and conduit, shallow switch box for thin partitions and outside wall work.

The end outlets for 1/2 inch conduit, the two outlets on either side for loom or 3/8 inch flexible conduit.

#### Prices

	Mfrs.				Mfrs.		
	List	W. E	. List—			—-W. Е.	T ink
List	Price	Eac		List	Price	Eac	11180
No.	Each	Enam.	Sher.	No.	Each		
155	\$0.34					Enam.	Sher.
		\$0.51	\$0.54	Single cover	\$0.10	\$0.15	\$0.16
160	.60	.90	.96	Double cover	.12	.18	.19
160 spacer		. 37		Triple cover	.15	.22	.24
170, withou	t ears			• • • • • • • • • • • • • • • • • • • •	.20		
170 2-gang	withou	toore		• • • • • • • • • • • • • • • • • • • •		.30	.34
170 Spacer	without	Cars		• • • • • • • • • • • • • •	.38	. 57	.65
170 A pacer,	without	cars		• • • • • • • • • • • • • •	. 18	.27	.30
170A, WITH	ears	• • • • • • •	• • • • • • •	• • • • • • • • • • • • • • •	.30	.46	.52
170A 2-gang	g, with e	ears		• • • • • • • • • • • • • • •	.54	.81	.92

Note: No. 170A box with ears not suitable for old work, because standard switch plates will not cover ears.

### FLOOR BOXES AND RECEPTACLES



No. 4000 With 10 Amp. 250 Volts Receptacles and Plugs



No. 4000B Blank Bronze Plate No Receptacle or Plug



No. 4000BN With Double-Outlet Nozzle With 10 Amp. 250 Volts Receptacle and Plugs

# Patterson Adjustable Floor Boxes

Adjustable Floor Boxes Nos. 4000, 4003, 4000B and 4000BN are made for cement and granolithic type floor work.

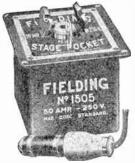
In these adjustable floor boxes the vertical up-and-down adjustment of 1 inch is ample for any variation of floor level and side or off level adjustment of 1/8 inch, makes possible the perfect flushing of plate with surface of floor. The box is universal, giving any combination of conduit entrances. Every possible connection to lighting circuits without additional machine work can be made as follows:

(a) By portable cord through rubber-bushed dome cap.
(b) By ½ inch brass tubing into dome cap when bushing is removed.
(c) By ½ inch conduit into flush disc when removable plug is taken out.

No. 4003 is furnished complete with a 10 ampere, 3 wire receptacle and plug of non-reversing polarity type—just the device required for installations where a telephone connection from floor outlet is wanted. These floor boxes can be set in half the time it takes for any other box on the market.

They save more than they cost and make a first-class job in every respect.

List		Receptacle and	Diam., Inches	Depth, Inches	Std.	Wt., Lbs.	List Price
No.		Plug Equipment	Bronze Plate	Over All	Pkg.	Std. Pkg.	$\mathbf{Each}$
4000		10 amp., 2 wire	$5\frac{3}{16}$	51% to 41%	25	244	\$18.00
4003		10 amp., 3 wire	$5_{16}^{13}$	518 to 418	25	270	21.00
400013	N	o receptacle or plug	$5\frac{3}{16}$	51% to 41%	25	230	16.00
4000BN		10 amp., 2 wire	$5\frac{3}{16}$	$5\frac{1}{8}$ to $4\frac{1}{8}$	25	240	18.00



No. 1505



No. 1500T

# Fielding Receptacles and Plugs

#### SECTIONAL MICA STAGE POCKETS

50 Amperes, 250 Volts

Flush Floor Type

List No. 1505 Stage pocket and plug complete. Two gang pocket with two plugs. 1505GR-2 Two gang pocket only, no plugs.	Size Plate	Depth	List Price
	Inches	Inches	Each
	9 x 9	81/4	\$60.00
	13 x 9	81/4	120.00
	13 x 9	81/4	60.00
1505P Plug only, with handle and lock- ing collar	9 x 9	$7\frac{1}{2}$ $8\frac{1}{4}$	30.00 30.00

Two gang only 4 inches wider than one gang.

#### SIDE WALL RECEPTACLES AND PLUGS

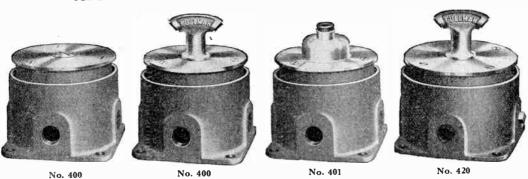
50 Amperes, 250 Volts

#### Wall Type

		Conduit				List
List		Enters	Dime	ensions. In	nches	Price
No.		From	Length	Width	Depth	Each
1500T	Receptacle complete.	Top	$6\frac{3}{4}$	$6\frac{3}{4}$	$5\frac{1}{2}$	\$50.00
1500B	Receptacle complete.		63/4	63/4	$5\frac{1}{2}$	50.00
1500TR	Receptacle only	Тор	$6\frac{3}{4}$	63/4	$5\frac{1}{2}$	25.00
1500BR	Receptacle only	Bottom	$6\frac{3}{4}$	$6\frac{3}{4}$	$5\frac{1}{2}$	25.00
1500P	Plug only, aluminum					
	handle		$9\frac{1}{2}$	$2\frac{1}{2}$		25.00

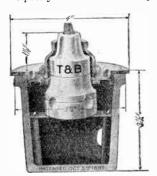
Prices for gang receptacles in proportion.

# ADJUSTABLE WATERTIGHT FLOOR BOXES



†List Price Fullman Adjustable Watertight Floor Boxes List Each No. 400 \$8,40 401 Complete outlet with 1/2-inch flush brass plug for No. 465 nozzle, or 1/2-inch pipe extension... 9.46 420 Complete outlet as above with 2-inch flush brass plug for No. 466 nozzle.

Two-section gang outlet, complete with individual cover plates with ½-inch flush brass plug 10.50421 10.50\*442 Three-section gang outlet, complete with three individual cover plates with 1/2-inch flush brass \*443 10.50 Same with four section gang outlet and four individual cover plates..... 10.50\*444 Same with five section gang outlet and five individual cover plates.
Brass nozzles for Nos. 400, 420, 442, 443, 444 and 445 floor outlet.
Brass nozzles for Nos. 401, 421, 442, 443, 444 and 445 floor outlet. \*445 465 2.10 466 Brass flange ring, including rubber gasket for Nos. 400 and 401 floor outlet.
Brass flange ring, including rubber gasket for Nos. 420 and 421 floor outlet.
Standard box for Nos. 400 and 401 outlet.
Standard box for Nos. 420 and 421 outlet. 1.57 413 2.10 440 4.76 402 5.46 422 9.24 Standard 2 gang box for Nos. 442, 443, 444 and 445 outlet..... 448 Add \$1.05 to list price for 2-inch flush plug. †Delivery F. O. B. Factory, Pittsburgh, Pa. \*Specify size of flush brass plug desired in cover plate.



No. 1100



No. 6562 Actual Size

# T. & B. Adjustable Watertight Floor Box

List	•	Std.	‡List Price
No.		Pkg.	Each
1100	Box complete, weight 3¾ lbs	25	\$7.90
1101	Back only		1.74
1102	Brass cover, flush plug and gasket		2.76
1104	Brass nozzle		2.38
1105	Receptacle strap and screw		1.42
1106	Brass cover, with 1/2-inch removable plug.		3.96
‡	Delivery F. O. B. Factory New York, N. Y.		

# Krantz "Acme" Adjustable Watertight Floor Boxes

Th	e cover of this box can be tilted 1/2-inch in any directi	on.
6562	Box complete, consisting of box body No. 6061, gasket	
	No. 6062, adjustable ring No. 6063, cover ring No.	
	6055, nezzle cover No. 6007 and center No. 7012.	<b>\$9.86</b>
6561	Box complete, consisting of box body No. 6061, gasket	
	No. 6062, adjustable ring No. 6065, gasket No. 6017,	
	cover No. 6012	9.64
6061	Galvanized east-iron box body	2.80
6062	Rubber gasket	.28
6063	Adjustable ring with inside fastening ring No. 6064.	1.40
6065	Adjustable cover ring with brass floor flange No. 6005	2.90
6007	Brass nozzle cover with gasket and receptacle bridge	
	support	3.12
6012	Brass cover plate, blank	1.80
6011	Brass cover plate with ½-inch plug	2.12
7002	Brass nozzle with insulating bushing	2.30
7011	Brass center flat	.70
7012	Brass center ½-inch plug	1.20
4	* Delivery: F. O. B. Factory, Brooklyn, N. Y.	,

For warehouse deliveries on adjustable watertight floor boxes, write nearest house.

Schedule O-Std. Pkg. Five of One Size

#### Large Quantities in Stock for Prompt Shipment

Boxes are formed up from a single piece of sheet steel electrically welded. There are no inserts to work loose. Finished in high-grade black enamel.



#### STOCK CUT-OUT BOXES

Boxes listed on this page are carried in stock, painted, stenciled and labeled ready for shipment.

Specifications cannot ehanged.

1. Made for surface mount-

ing only.
2. For flush mounting boxes add 50 per cent, to list prices of made-to-order boxes (see pages following).

3. Underwriters' label

every box.

4. Doors overlap boxes on all four sides and are hinged on right hand (long) side.
5. Furnished with four 5-16

inch holes one inch from each corner for fastening box in place.

6. Standard package five boxes of any one size.

#### MFRS. PRICE LIST OF STOCK CUT-OUT BOXES With 1/8 Inch Knockouts for 1/2 Inch Conduit Pipe

			List Price Each	I	ist Price Each	I	ist Price Each	List I	rice Each
Widt	h In. Length In.				4 In. Deep	List No.	5 In. Deep	List No.	3 In. Deep
4	6	30857	\$0.55	*	*	*	* '	*	*
4	8	30859	.60	30860	<b>\$0.</b> S0	*	*	*	*
Ā	10	*	ak.	30862	.80	*	*	*	*
6	6	30863	.65	30864	.75	*	*	*	*
6	8	30865	.70	30866	.80	*		*	*
6	10	30867	.80	30868	.90	30869	\$1.65	*	*
ß	12	*	*	30871	1.00	*	*	*	*
6	16	*	*	30873	1.55		*	*	*
e e	8	30874	.80	30875	.90	alt .			
8	10	30876	.85	30877	1.00	<b>3</b> E		*	
8	12	30878	.95	30879	1.10	*	*	*	*
0	14	30880	1.45	30881	1.60	*	*	*	*
0	16	*	*	30883	1.30	*	*	*	*
0	9	30884	1.30	30885	1.50	*	*	*	*
10	10	30886	1.00	30877	1.10	*	*	*	*
10	12	30887	1.10	30889	1.25	*	*	*	*
10	16	*	*	30891	1.45	*	*	30892	\$2,20
10	18		*	30893	1.55	*	*	*	*
12	12	*	*	30894	1.35	*	*	*	*
12	16		*	30895	1.60	*	*	*	*
12	18	*	*	30896	1.70	*	*	*	*
12	20	*	*	30897	2.25	*	*	*	*
12	$\frac{20}{24}$	*	*	30898	2.35	*	*	*	*
12	*Not carried in	stoek.	See price list						

Special Prices: 4½ x 9 x 3½ box hinged at top instead of right hand side..... \$0.60 30899 When ordered in lots of 50, or with 10 or more standard packages of stock boxes, use list price of . . . . . . . 55

NO. 16 U. S. GAUGE STEEL CUT-OUT BOXES With Combination Knock-outs-Carried in Stock

One row of 1/8 inch knockouts for 1/2 inch conduit pipe and one row of 11/16 inch knockouts for 1/4 inch circular loom are furnished in the following boxes, which are carried in stock. Dimensions Price Each List No.

6 inches wide, 8 inches long, 4 inches deep. ..... \$1.05 30900 8 inches wide, 10 inches long, 4 inches deep.
10 inches wide, 12 inches long, 4 inches deep.
10 inches wide, 16 inches long, 4 inches deep. 1.2530901 1.503090230903 1.70

If any deviation is made in the aforementioned specifications or if other sizes are required, the prices should be taken from the pages following listing made-to-order boxes.

NO. 14 U. S. GAUGE STEEL CUT-OUT BOXES

With Standard 1/8 Inch Knockouts for 1/2 Inch Conduit Pipe—Carried in Stock

List No.						ice Each
30904		wide, 30 inches long				
30905		wide, 24 inches long				
30906	18 inches	wide, 36 inches long	, 4 inches deep	<del></del>	 	6.30
30907	18 inches	wide, 42 inches long	, 4 inches deep		 	7.10
30908	18 inches	wide, 48 inches long	, 4 inches deep		 	7.75

Mfr. List Prices-Special Discounts on Application.

#### Made to Order Cut-out Boxes

Schedule "O"

Flush type cut-out boxes will be furnished when so ordered at ar addition of 50 per cent, to the list prices given, not including type L boxes. This price applies only on boxes having the door opening the same size as the box. Add 75 per cent, to list price for flush cut-out boxes with door opening smaller than the box.

The standard finish of flush cut-out boxes is a high-grade black enamel.

Add \$1.00 list per square foot area of trim and door for white enamel finish.

Cut-out boxes will be provided with steel barriers forming gutters around an open space in center of box for 100 per cent, additional to the list prices given, for surface type or flush type boxes.

Steel barriers will be furnished securely riveted to the back of the box, and arranged to allow a wide vein pocket or raceway around the center section of the box. Knock-outs for the accommodation of 1/2-inch steel or porcelain bushings will be provided in all barriers. All boxes are provided with standard %-inch knock-outs for 1/2-inch conduit pipe.

Note A .- When ordering cut-out boxes with steel barriers specify size of cabinet and width of gutter desired-rather than the dimensions of the space required for wiring devices. Prices are based on the size of cabinet and not on size of space for wiring devices.

Underwriters' requirements for cut-out boxes containing devices controlling more than four circuits:



Flush Type Box

#### Wire Compartments

Note B.—Cabinets and cut-out boxes, when used to enclose devices or apparatus connected within the cabinet or cut-out box to the wires of more than four circuits, not including the supply circuit or a continuation thereof, must have back wiring spaces or one or more side wiring spaces, side gutters or wiring compartments unless the wires leave the cabinet or cut-out box directly opposite their terminal connections.

#### Barriers

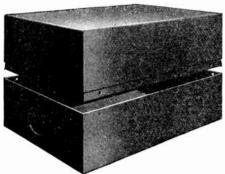
Cabinets or cut-out boxes having one or more side wiring spaces, side gutters or side wiring compartments must be furnished with covers, barriers or partitions extending around, or from the side or sides of all bases or groups of bases of the switches, cut-outs, circuit breakers or feeder and circuit branch panelboards within the cabinet or cut-out box and providing a close fit with the door, frame or side walls so as to enclose these spaces, gutters or compartments and the wires srowed within them. At sides where wires or cables are led from the cabinet or cut-out box at points directly opposite their terminal connections to devices of apparatus within the cabinet or cut-out box and other wires are not placed these apparatus parties. tions to devices or apparatus within the cabinet or cut-out box and other wires or cables are not placed, these covers, barriers or partitions may be omitted.

Porcolain bushings will be furnished for cut-out boxes at the following list prices per bushing: No. 1 Internal diameter & inches for No. 19 DDDC Salt 1

. 10.		1 110 (21 11401	mameter	33	11101103	101	٠٩ O.	1 -	DURG	- pana	- 11	ire										200 0	
1.6	٠)	4.1	mameter	1.3	- 11		1.1	e e	1.1	11	4.4			 	 	 	 	 	 	 	 	SU. 0	16
1.1	_			32				- 0														- 0	140
	3		• • •	70		. ,		- 3	1-6	Strand	n/l	Wil				 	 		 	 	 		0
1.1	.1	1.1	4.6	37	1.4	1.5	1.1	()()	1.4	Strand	CI	** 11	те.,	 	 	 	 		 	 	 	. ()	(9)
	-8			74				(11)															
**	-5	4.4	**	11/6		-4.50	UUU	(1)	ملطوما					 	 	 	 	 	 	 	 4 1	. 1	2
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# Extended Cover Pull Boxes

Extended cover pull boxes with cover fastened on with machine screws are easy to install and afford all the space required to make splices, taps or bends, without the inconvenience or working in a deep box. The box proper is made of sufficient depth to accommodate the conduit connected to the box. This provides an open space for pulling in heavy cables without drawing them over the edge of a deeper box. This feature saves time and labor, and eliminates abrasion of the insulation. When all connections have been made, the extended cover is put on and completely incloses all cables



Extended Cover Pull Box

List prices include any number of one size of knock-outs up to 3-inch conduit pipe. Add 10 cents list in each box for each change of knock-outs not larger than for 3-inch conduit. For larger holes add 25 eents list per hole.

Cover-3 to 6 inches deep No. 14 U.S. gauge steel

Box -3 to 6 " " " " "

or No. 12 U.S. gauge steel add 20%.

10 " 45%

Length Inches	Width Inches	List Price	Length Inches	Width Inches	List Price
12	12	\$6.70	18	24	\$13.10
12	15	7.80	21	21	13.10
12	18	8.75	21	24	14.30
15	15	8.75	21	27	17.20
15 18	18 18	9.90	21	24	16.00
18	21	10.75 11.95	$\frac{21}{24}$	27	18,85

Prices for sizes not listed will be quoted upon receipt of full details.

Mfrs. Lists. Special Discounts on Applications Radio History

Made-to-Order Cut-out Boxes Schedule "O" Price List No. 10 U. S. Gauge Steel Boxes

The Specifications and prices of special features given at the top of a previous page listing 16 Gauge Made-to-order Boxes, apply also to the Boxes listed below.

to the Boxes listed below.

The National Board of Fire Underwriters' code specifies No. 10 U. S. gauge steel for all boxes having any dimension over 48 inches and any surface over 1200 square inches.

nd any	surface	over 120	0 square in	ches.
Width	Length	4	6	9
Ins.	Ins.	Ins. Deep	Ins. Deep	Ins. Deep
10	11	\$4.50	<b>\$</b> 5.55	\$6.05
10	12	4.70	6.00	6.80
10	15	5.55	6.40	7.45
10	18	6.00	7.30	8.30
10	21	6.60	8.70	9.50
10	24	7.85	9.35	10.00
10	27	8.45	10.05	10.90
10	30	9.10	10.75	11.75
10	33	9.70	11.50	12.55
10	36	10.30	12.15	13.40
12	12	5.30	6.45	$\frac{7.20}{8.15}$
12	15	5.95	7.30	8.15
12 12	18	6.60	7.90	9.05
12	21	7.95	9.55	10.15
12	24	8.60	10.20	10.95
12	27	9.30	11.00	$\frac{12.10}{12.80}$
12	30	10.00	11.75	12.80
12	36	11.40	13.30	15.00
12	42	12.85	14.95	16.95
12	48	14.15	16.40	18.90
15	15	6.70	8.05	9.05
15	18	7.55	8.90	10.35
15	$\frac{21}{24}$	7.65	10.60	11.45
15	$\frac{24}{27}$	8.25	$\frac{11.50}{12.30}$	$\frac{12.55}{13.60}$
15	30	$\frac{10.65}{11.40}$	13.20	14.70
15 15	36	13.05	15.00	16.90
15	42	14.65	16.75	20.10
15	48	16.30	18.55	21.30
18	18	8.40	9.85	11.50
18	21	10.05	11.70	12.70
18	24	10.95	12.75	13.95
18	27	11.85	$12.75 \\ 13.75$	15.50
18	30	12.80	14.75	16,40
18	36	14.80	16.80	19.15
18	42	16.55	18.85	21.25
18	48	18.40	20.80	23.50
18	54	21.80	24.40	31.35
21	21	11.10	12.85	14.00
21	24	12.15	13.95	15.40
21	27	13.20	15.10	16.70
21	30	14.25	16.20	18.05
21	36	16.35	18.50	20.80
21	42	18.40	20.75	23.45
$\frac{21}{21}$	48	20.35	23.90	26.20
21	54	24.20	26.90	33.15
21	60	26.40	29.20	35.90
21	66	27.55	31,55 33,90	38.70
21	$\frac{72}{24}$	29.70	$\frac{35.30}{15.20}$	$\frac{41.50}{16.85}$
24	$\frac{24}{27}$	13.30		
24	30	$\frac{14.45}{15.65}$	$\frac{16.45}{17.80}$	$\frac{18.30}{19.75}$
$\frac{24}{24}$	30 36		$\frac{17.80}{20.20}$	$\frac{19.79}{22.70}$
$\frac{24}{24}$	42	$\frac{17.95}{20.30}$	$\frac{20.20}{22.75}$	25.50
24	48	$\frac{20.50}{22.55}$	$\frac{24.70}{24.20}$	$\frac{25.50}{28.55}$
$\frac{24}{24}$	54	$\frac{22.35}{26.15}$	29.30	35.30
$\frac{24}{24}$	60	29.50	31.90	38.30
24	66	31.90	34.55	41.30
24	72	34.20	37.10	44.30
2 I		J	40 in abox	1

#### Type L Cut-out Boxes

High grade installations call for high grade cut-out boxes with doors secured to a matt or trim which is secured to the front flanges of the cabinet. This construction insures perfect fitting doors on large cut-out boxes.

Prices below apply on cut-out boxes having trims and doors similar to that shown on page 8, except that the following prices apply only to boxes with single doors.

Width	Length ~			]	Depth, I	nches -		-	
Inches	Inches	4	6	9	12	15	18	22	24
18	54	\$27.45	\$30.45	\$40 45					
21	54	30.30	33.45	38.10	43.05	47.65	52.35	58.55	61.75
21	60	32 85	36 15	41 10	46 15	51.45	56.15	62.85	66.15
21	66	44 40	38 65	44 05	49 45	54.95	60.10	67.10	70.85
21	72	37.95	41.70	47.25	52.75	58.55	64.05	71.45	75.05
24	54	33.60	36 40	40.45	44.55	48.65	53.90	58.15	60.95
24	60	36.55	39 30	43.70	48.05	52.60	57.00	62.85	65.70
24	66	39.30	42.45	46.95	51.65	56.55	61.15	67.35	70.45
24	72	42.15	45.45	50.45	55.35	60.45	65.25	71.95	75.25

Surface type boxes will be furnished unless otherwise specified. Flush type boxes will be furnished when so ordered at the same prices.

	12				****
1	ns. Deep			50.000	
	\$8.30				22.70.70
	9.40			2027077	
	10.50			200000	12 (2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2
	11.60			200001	2000000
	12.75			227000	52.52.22
	13.75			2022	00 2 110 7
	14.85			470744	2011111
	17.05			Tours	
	19.30	15		2022	
	21.50	Ins. Deep		1919	
	10.55	\$11.80		10000	177.753
	11.75	13.20		2.53.53	0.000,000,000
	13.00	14.60		1.5.1.53	/E.51651
	14.20	15.95		*****	18.658.5
	15.45	17.30		7.707.53	1000000
	16.65	18,65		2000	20000
	19.10	21.30		•	
		24.00	18		
	21.40				
	24.00	26.70	Ins. Deep	* * * * *	
	12.95	14.60	\$16.95		
	14.45	15.65	18.10		
	15.75	17.60	19.70		
	17.10	19.05	21.25		
	18.50	20.55	22.85		
	21.10	23.50	26.05		
	23.80	26.45	39.25		
	26.50	29.35	32.45	22	
	34.75	39.15	42.50	Ins. Deep	
	15.85	17.65	19.75	\$22.20	
	17.35	19.30	21.45	24.10	
	18.80	20.85	23.20	26.95	
	20.30	22.45	24.95	27.80	
	23.20	25.60	28.35	31.60	
	26.20	28.90	31.80	35.40	
	29.05	32.05	35.25	39.15	
	37.50	41.45	45.50	45.98	
	40.50	44.65	48.90	54.90	
	43.50	47.80	52.40	58.68	24
	46.50	51.00	55.90	62.40	Ins. Deep
	18.90	21.00	23.30	26.00	\$27.40
	20.50	22.50	25.10	28.05	29.55
	22.10	24.50	26.95	30.05	31.65
	24,60	27.20	29.95	33.35	25.15
	28,40	31.30	33.70	38.05	39.95
	31.45	35.75	36.40	42.05	44.15
	39.00	42.30	46,00	50.80	53.15
	42.25	45.90	49.70	54.85	57.40
	45.50	49.30	53.40	58.85	61.55
	48.75	52.80	56.90	62.90	65.80
		with a subst			
M h	DEOVIDE	WITTER STEPSI	aman vallit	T 1 21 T 1 C 2 ( R 1 2 C 1 C 1 C 1	LITTEE WALV

Note.—Doors over 48 inches long will be provided with a substantial vault handle and three way catch. Doors less than 48 inches long will be provided with galvanized commode catch unless otherwise specified.

World Radio History

Made-to-order Cut-out Boxes

Schedule "O"

The specifications and prices for special features given at the top of a previous page listing 16 Gauge Made-to-order Boxes, apply also to the boxes listed below.

# Mfr. Price List of No. 12 U. S. Gauge Steel Boxes

Underwriters' \ No dimension to exceed 48 inches.

Requirements \ No one surface to exceed 1200 square inches.

Width	Lengtl						Inches				
Inches	Inches		5	6	8	9	12	15	18	22	24
10	10	\$3.25	\$3.60	\$4.00	\$4.55	\$4.80					
10	12	3.50	3.90	4.30	5.10	5.35		• • • •			
10	15	4.00	4.30	$\frac{4.75}{2.75}$	5.65	5.90					• • • • •
10 10	$\begin{array}{c} 18 \\ 20 \end{array}$	4.30	4.75	5.25	6.25	6.55					
10	$\frac{20}{24}$	$\frac{5.05}{5.65}$	5.55	6.10	$\frac{6.65}{7.55}$	$\frac{7.00}{2.00}$			• • • • •		
10	27	$\frac{5.65}{5.75}$	$\frac{6.20}{6.30}$	$\frac{6.45}{6.95}$	7.55	7.90					• • • • •
10	30	6.20	6.75	$\frac{6.85}{7.35}$	$\frac{8.15}{8.80}$	$8.55 \\ 9.25$					
10	33	6.60	7.10	$\frac{7.85}{7.85}$	9.45	$9.20 \\ 9.90$					• • • • •
10	36	$\frac{0.05}{7.05}$	7.65	8.30	10.10	10.55					• • • • •
12	12	3.80	4.20	4.65	5.45	$\frac{10.33}{5.70}$	\$6.50	· · • · ·			• • • • •
$\tilde{1}\tilde{2}$	$\tilde{1}\tilde{5}$	4.20	4:70	5.20	6.15	6.45	7.15		• • • • •		
$\tilde{12}$	18	4.75	5.20	5.70	6.85	7.15	8.15		• • • • •	• • • • •	
$1\overline{2}$	20	5.65	6.05	6.60	7.30	7.65	8.70			• • • • •	• • • • •
$1\overline{2}$	$\frac{23}{24}$	5.90	6.75	7.35	8.35	8.60	9.80				
12	$\overline{27}$	6.36	6.90	7.45	8.90	9.35	10.60				
$\overline{12}$	30	6.85	7.40	8.05	9.65	10.10	11.40				
12	33	7.05	7.95	8.60	10.30	10.80	12.25				• • • • •
12	36	7.80	8.45	9.15	11.00	11.50	13.10			• • • • •	
12	42	8.80	9.50	10.30	12.30	13.00	14.80				
12	48	9.75	10.50	11.35	13.90	14,65	16.35				• • • • •
15	15	4.85	5.30	5.80	6.90	7.25	8.20	\$9.20			
15	18	5.40	5,90	6.40	7.70	8.05	9.05	10.20			• • • • •
15	20	6.25	6.80	7.40	8.20	8.60	9.75	10.85			• • • • •
15	$\overline{24}$	6.95	7.60	8.25	9.25	9.70	10.95	12,20		• • • • •	• • • • •
15	27	7.25	7.85	8.65	10.05	10.50	11.80	13.30		• • • • •	• • • • •
15	30	7.80	8.45	9.10	10.85	11.30	12.70	14.30			
15	33	8.40	9.05	9.75	11.85	12.15	13.70	15.25			• • • • •
15	36	8.95	9.65	10.35	12.40	13,00	14.60	16.25			
15	42	10.10	10.85	11.65	14.00	14.60	16.40	18.25			
15	48	11.25	12.05	12.85	15.50	16.20	18.25	20.25			
18	18	6.00	6.55	7.10	8.55	8.90	10.09	11.25	\$12.00		• • • • •
18	20	6.45	7.00	7.55	9.10	9.55	10.75	11.95	12.80		
18	24	7.90	8.50	9.15	10.30	10.75	11.67	13.50	14.30		
18	27	8.15	8.80	9.40	11.15	11.70	13.10	14.50	15.40		
18	30	8.80	9.45	10.15	12.05	12.60	14.15	15.65	16.60		
18	33	9.85	9.95	10.85	12.90	13.50	15.15	16.75	17.65		
18	36	10.15	10.85	11.70	13.80	14.40	16.10	17.90	18.80		
18	42	11.40	12.15	13.05	15.55	16.20	18.20	20.00	21.05		
18	48	12.75	13.55	14.45	17.40	15.00	20.10	22.10	23.30		
21	21	8.00	8.60	9.25	10.35	10.80	12.20	13.50	14.15	\$16.10	
21	24	8.75	9.35	10.05	11.30	11.80	13.30	14.70	15.55	17.45	
21	27	9.10	10,00	10.40	12.45	12.80	14.35	15.85	16.75	18.75	
21	30	9.80	10.50	11.45	13.30	13.80	15.45	17.10	18.00	20.20	
21	33	10.55	11.50	11.95	14.30	14.80	16.55	18.25	19.20	21.30	
21	36	11.65	11.95	12.80	15.30	15.80	17.60	19.45	19.45	22.80	
21	42	12.75	13.65	13.05	17.20	17.80	18.53	21.75	22.90	25.55	
21	48	14.20	15.00	14.50	19.10	19.80	21.60	24.15	25.30	28.15	
24	24	9.15	9.80	10.55	11.40	12.90	14.45	16.00	16.80	18.90	\$19.90
24	27	10.00	10.85	11.36	13.40	13.90	15.60	16.80	18.20	20.30	21.30
24	30	10.80	11.50	12.25	14.50	15.05	16.85	18.45	19.50	21.70	22.90
24	33	11.80	12.35	13.10	15.55	16.20	18.00	19.80	20.80	23.10	24.30
24	36	12.45	13.50	14.10	.16.55	17.30	18.65	20.60	21.40	24.10	25.30
24	42	14.10	14.95	15.80	18.70	19.50	21.40	23.45	24.50	27.50	28.70
24	48	15.75	16.65	17.50	20.90	21.80	23.90	26.15	27.30	30.30	31.70

Made-to-order Cut-out Boxes-Schedule "O"

The specifications and prices for special features given at the top of the preceding page, apply to the boxes listed below.

# Price List of No. 14 U.S. Gauge Steel Boxes

3371 141	Y					Donth	Inghas				
Inches	Length Inches	3	4	5	6	Depth,	9	12	1.5	18	22
6	10	\$1.90	\$2.10	\$2.40	\$2.70						
ö	12	2.05	2.30	2.55	2.90						
6	14	2.20	2.45	2.75	3.10						
6	15	2.25	2.55	2.85	3.20						
6	16	2.35	2.65	2.95	3.30						
- 8	10	2.10	2.35	2.65	2.95						
8	12	2.30	2.55	2.85	3.20						
8	14	2.45	2.75	3.05	$\begin{array}{c} 3.95 \\ 3.55 \end{array}$						
	15	$\frac{2.55}{2.65}$	$\frac{2.85}{2.95}$	$\frac{3.20}{3.30}$	3.65	· · · · •					
8	16 18	$\frac{2.05}{2.85}$	3.15	$\frac{3.50}{3.50}$	3.90						
8	20	3.00	3.35	3.70	4.10						
8	$\frac{20}{22}$	3.20	3.55	3.90	4.30						
10	10	2.30	2.60	2.90	3.25	\$3.50	83.70				
10	12	2.50	2.80	3.15	3.50	3.95	4.20				
10	1.4	2.75	3.05	3.40	3.75	4.25	4.45				
10	15	2.85	3.15	3.50	3.90	4.45	4.65				
10	16	-2.95	3.30	3.65	4.05	4.60	4.85				
10	18	3.30	3.50	3.90	4.30	4.95	5.20				
10	20	3.70	4.10	4.50	4.95	5.30	5.60				
10	22	3.95	4.35	4.75	$\frac{5.20}{5.50}$	5.65	5.95				
10	$\frac{24}{12}$	$\frac{4.20}{2.80}$	$\frac{4.60}{3.10}$	5.00 3.40	$\frac{3.50}{3.50}$	$\frac{6.00}{4.25}$	6.35 $4.45$	\$5.15			
12 12	15	$\frac{2.50}{3.15}$	3.45	3.85	$\frac{3.30}{4.15}$	4.85	5.10	5.85			
12	18	3.55	3.85	4.25	4.65	5.40	5.70	6.55			
12	22	4.35	4.75	5.20	5.65	6.25	6.55	7.50			
12	24	4.60	5.05	5.50	6,00	6,60	6.96	7.95			
12	27	5.15	5.60	6.05	6.55	7.20	7.60	8.65			
12	30	5.55	6.00	6.50	7.00	7.80	-8.20	9.35	24		
15	15	3.60	3.95	4.35	4.75	5.50	5.80	6.60	87.45		
15	18	4.05	4.40	4.80	5.25	6.15	6.45	7.40	8.30		
15	22	5.00	5.40	5.85	6.35	7.05	7.40	8.40	9.55		
15	24	5.30	5.75	6.20	6.70	7.50	$\frac{7.85}{10.00}$	8.95	10.05		
15	27	5.90	6.35	6.80	7.50	8.15	8.55	9.25	10.90		
1.5	30	$\frac{6.35}{6.75}$	$\frac{6.80}{7.30}$	$\frac{7.30}{7.85}$	$\frac{7.85}{8.40}$	$8.85 \\ 9.55$	$\frac{9.25}{10.00}$	$\frac{10.50}{11.75}$	$\frac{11.80}{12.60}$		
15 15	33 36	$\frac{6.75}{7.25}$	$\frac{7.30}{7.75}$	8.80	8.90	10.20	10.70	12.05	13.45		
1.5	42	8.10	8.70	9.35	10.00	11.55	12.05	13.60	15.15		
15	48	0.10		0.00		12.90	13.45	15.20	16.90		
18	18	4.55	4.95	5.40	5.85	6.90	7.20	8.25	9.25	\$10.90	\$12.20
18	21	5.55	5.85	6.35	6.85	7.65	8.00	9.10	-10.15	-11.90	13.45
18	24	6.10	6.40	6.95	7.45	8.35	8.80	9.95	-11.10	12.90	14.45
18	27	6.45	7.10	7.60	8.15	9.15	10.00	10.80	12.05	13.90	15.50
18	30	7.10	7.65	8.15	8.75	9.90	10.30	11.60	12.95	14.90	16.65
18	33	7.65	8.40	8.60	9.35	10.65	11.10	12.55	13.90	15.90	17.75
18	36	8.15	9.70	9.35	9.95	11.40	11.90 13.45	$\frac{13.35}{15.10}$	$\frac{14.85}{16.70}$	$\frac{16.90}{18.90}$	$\frac{18.85}{21.00}$
18	42	9.20	9.90	10.55 $11.55$	$\frac{11.10}{12.35}$	$12.90 \\ 14.45$	15.00	16.80	18.60	20,90	$\frac{21.00}{23.20}$
18	$\frac{48}{21}$	$\begin{array}{c} 10.25 \\ 6.05 \end{array}$	10.90 -6.50	7.05	7.55	8.45	8.80	10.00	11.15	12.95	14.45
$\frac{21}{21}$	$\frac{21}{24}$	6.60	7.15	7.65	8.20	9.25	9.70	10.95	12.15	14.05	15.75
$\frac{21}{21}$	$\frac{27}{27}$	7.20	7.85	8.65	8.95	10.10	10.55	11.85	13, 15	15.10	16.85
$\tilde{2}\hat{1}$	30	7.90	8.45	9.05	9.60	10.95	11.40	12.80	14.20	16.20	18.00
$\frac{21}{21}$	33	8.50	9.05	9.15	10.25	11.30	12.25	13.75	15.20	17.25	19.20
21	36	9.10	9.70	10.30	12.00	12.60	13.15	14.65	16.40	18.30	20.35
21	42	10.25	10.90	11.55	13.10	14.25	14.90	15.55	-18.30	20.45	22.15
21	48	11.45	12.10	12.80	13.55	15.90	16.60	18.40	20.30	22.65	25.05
24	24	7.25	7.90	8.45	9.05	10.15	10.60	$\frac{11.95}{2}$	13.25	15.15	17.20
24	27	7.85	8.60	9.15	9.75	11.05	11.55	12.95	14.30	16.30	18.15
24	30	8.70	9.25	9.85	10.50	12.00	12.45	14.00	14.45	17.50	19.40
24	33	9.40	10.00	10.55	11.55	12.90	13.40	15.00	16.50	18.60	20.60
24	36	10.05	$\frac{10.65}{12.05}$	$\frac{11.25}{12.75}$	$\frac{11.90}{13.70}$	$13.80 \\ 15.65$	$\frac{14.35}{16.25}$	$\frac{15.55}{18.05}$	$\frac{17.20}{19.85}$	$\frac{19.35}{22.05}$	$\frac{21.45}{24.30}$
$\frac{24}{24}$	$\frac{42}{48}$	$\frac{11.65}{12.70}$	$\frac{12.05}{13.35}$	14.05	14.85	17.40	18.10	20.05	$\frac{13.55}{21.95}$	24.30	$\frac{24.30}{26.85}$
. 4	10	12.10	10.00	1 1.00	11.00	41.10	10.10	20.00	-1.00	21.00	٠٠٠٠) س
					World Dadie	History					

Knockouts. Unless otherwise ordered, boxes will be furnished with standard 1/8-inch knockouts for ½-inch conduit pipes. For knockouts other than standard, add 10 cents list per box for each change in size of knockout. Knockouts for loom will be furnished when ordered, without additional charge, provided all knockouts in the same box are of the same size.

Mounting. Made for surface mounting unless otherwise specified. For flush mounted boxes, add 50 per cent. to list price and specify "Flush Boxes" on the order.

For commode catch, add 40 cents list to prices of boxes less than 6 inches deep; boxes over 6 inches deep are regularly furnished with commode catch. For nickel-plated vault handle, add \$1.00 list. For Yale cylinder lever lock, add 70 cents list. For masterkeyed cylinder lever lock, add \$1.00 list. For master than 32 inches long require 2 hinges; No. 14 U. S. Gauge steel boxes over 32 inches long require 3 hinges; No. 12 and 10 U. S. Gauge steel boxes over 36 inches long require 3 hinges; all boxes over 54 inches long require 3 hinges; require 4 hinges.)

Doors. Unless otherwise ordered, all boxes will be furnished with hinged doors. Boxes ordered with covers fastened on with screws take the same list prices as surface type boxes. Unless otherwise ordered, box doors will be made with all four sides overlapping and hinged on right-hand side. Doors will be hinged

box doors will be made with all four sides overlapping and hinged on right-hand side. Doors will be hinged at top when so ordered, without additional charge. Add 60 cents each list for hasp and staple on door. Deduct 20 per cent. for boxes with doors omitted. For boxes with overhanging and sloping roof (or sloping bottom) add 50 per cent. to list price, unless Underwriters' code applies.

Galvanizing. For galvanized boxes, add 100 per cent. to list price.

Weatherproof Boxes. For galvanized weatherproof boxes, made according to Underwriters' code, add 200 per cent. to list price if made of 12 or 14 U. S. Gauge steel; add 150 per cent. if made of No. 10 U. S. Gauge steel, each box to bear Underwriters' label. Add 60 cents each for hasp and staple on doors.

Mfr's Price I ist of No. 16 II S. Cauge Steel Boxes.

#### Mfr's Price List of No. 16 U.S. Gauge Steel Boxes Underwriters' ( No one dimension to exceed 24 inches.

Nedex   Schedule "O"   Width Length   Schedule "O"   Nebes   Inches   Inches   Inches   Inches   Inches   Inches   Schedule "O"   Nebes   Inches   Inches   Schedule "O"   Schedule "O"   Nebes   Inches   Inches   Inches   Schedule "O"   Schedule "O"   Inches   In				one surfe				.00				
*nehes         3         4         5         6         8         9         10         12         14         15           4         4         4         81.05         81.20         \$1.35         \$1.55 <th< th=""><th>Width</th><th>Length</th><th>(110</th><th>one surra</th><th>CC TO CAC</th><th>cu out si</th><th></th><th></th><th></th><th></th><th>Schedu</th><th>le ''O''</th></th<>	Width	Length	(110	one surra	CC TO CAC	cu out si					Schedu	le ''O''
4       4       88.1.05       81.20       81.35       81.55			3	4	5	6				10	1.4	
4 6 1.15 1.30 1.45 1.65							_					15
4 8 1.25 1.40 1.60 1.80												
4 10 1.35 1.50 1.75 1.90												
6 6 8 1.45 1.45 1.60 1.80	_											
6 8 1.40 1.55 1.75 2.00	_											
6 9 1.45 1.60 1.85 2.10												
6 10 1.50 1.70 1.90 2.15												
6 12 1.60 1.80 2.05 2.30												
6 14 1.75 1.95 2.20 2.45												
6 15 1.80 2.05 2.25 2.50												
6         16         1.85         2.10         2.30         2.60            8         8         1.50         1.70         1.90         2.15         82.70         \$2.80												
8       8       1.50       1.70       1.90       2.15       82.70       \$2.80       2.90         8       10       1.70       1.90       2.10       2.35       3.10       3.19          8       12       1.80       2.05       2.25       2.50       3.25       3.35           8       14       1.95       2.15       2.40       2.70       3.55       3.64           8       15       2.00       2.25       2.50       2.75       3.65       3.77           8       16       2.10       2.35       2.60       2.85       3.80       3.95           8       18       2.25       2.50       2.75       3.05       4.10       4.21           8       18       2.25       2.50       2.75       3.05       4.10       4.21           8       22       2.60       2.90       3.20       3.55       3.25       3.55       3.50             10       10       1.85       2.205       2.25 <td>_</td> <td></td>	_											
8       9       1.60       1.80       2.00       2.25       2.80       2.90 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>												
8       10       1.70       1.90       2.10       2.35       3.10       3.19          8       12       1.80       2.05       2.25       2.50       3.25       3.35           8       14       1.95       2.15       2.40       2.770       3.55       3.64           8       15       2.00       2.25       2.50       2.75       3.65       3.77           8       16       2.10       2.35       2.60       2.85       3.80       3.95          8       18       2.25       2.50       2.75       3.05       4.10       4.21          8       20       2.45       2.70       3.00       3.55       4.65       4.80          10       10       1.85       2.05       2.25       2.55       3.85       4.35       4.50          10       12       2.00       2.25       2.45       2.75       3.66       3.75       3.95          10       14       2.15       2.40       2.55       2.95       3.85       4.00       4.20												
8       12       1.80       2.05       2.25       2.50       3.25       3.35          8       14       1.95       2.15       2.40       2.70       3.55       3.64          8       15       2.00       2.25       2.50       2.75       3.65       3.77           8       16       2.10       2.35       2.60       2.85       3.80       3.95           8       18       2.25       2.50       2.75       3.05       4.10       4.21           8       20       2.45       2.70       3.00       3.35       4.35       4.50            10       10       1.85       2.05       2.25       2.55       3.25       3.35       \$3.50           10       12       2.00       2.25       2.45       2.75       3.66       3.75       3.95          10       14       2.15       2.40       2.55       2.95       3.85       4.00       4.20          10       15       2.25       2.50       2.75       3.05		-										
8       14       1.95       2.15       2.40       2.76       3.55       3.64          8       15       2.00       2.25       2.50       2.75       3.65       3.77           8       16       2.10       2.35       2.60       2.85       3.80       3.95           8       18       2.25       2.50       2.75       3.05       4.10       4.21          8       20       2.45       2.70       3.00       3.35       4.35       4.50          8       22       2.60       2.90       3.20       3.55       4.65       4.80          10       10       1.85       2.05       2.25       2.55       3.25       3.35       \$3.50          10       12       2.00       2.25       2.45       2.75       3.66       3.75*       3.95          10       14       2.15       2.40       2.55       2.95       3.85       4.00       4.20          10       14       2.15       2.40       2.85       3.15       4.20       4.35       4.60 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>												
8       15       2.00       2.25       2.50       2.75       3.65       3.77          8       16       2.10       2.35       2.60       2.85       3.80       3.95           8       18       2.25       2.50       2.75       3.05       4.10       4.21           8       20       2.45       2.70       3.00       3.35       4.35       4.50            8       22       2.60       2.90       3.20       3.55       4.65       4.80             10       10       1.85       2.05       2.25       2.55       3.25       3.35       \$3.50            10       12       2.00       2.25       2.45       2.75       3.66       3.75       *3.95           10       14       2.15       2.40       2.55       2.95       3.85       4.00       4.20             10       18       2.50       2.75       3.05       3.35       4.50       4.65       5.0												
8       16       2.10       2.35       2.60       2.85       3.80       3.95          8       18       2.25       2.50       2.75       3.05       4.10       4.21           8       20       2.45       2.70       3.00       3.35       4.35       4.50             10       10       1.85       2.05       2.25       2.55       3.25       3.35       \$3.50             10       12       2.00       2.25       2.45       2.75       3.66       3.75       3.05												
8       18       2.25       2.50       2.75       3.05       4.10       4.21          8       20       2.45       2.70       3.00       3.35       4.35       4.50												
8       20       2.45       2.70       3.00       3.35       4.35       4.50 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>												
8       22       2.60       2.90       3.20       3.55       4.65       4.80 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>												
10       10       1.85       2.05       2.25       2.55       3.25       3.35       \$3.50          10       12       2.00       2.25       2.45       2.75       3.66       3.75       *3.95          10       14       2.15       2.40       2.55       2.95       3.85       4.00       4.20          10       15       2.25       2.50       2.75       3.05       4.05       4.15       4.35           10       16       2.35       2.60       2.85       3.15       4.20       4.35       4.60												
10       12       2.00       2.25       2.45       2.75       3.66       3.75       3.95         10       14       2.15       2.40       2.55       2.95       3.85       4.00       4.20         10       15       2.25       2.50       2.75       3.05       4.05       4.15       4.35         10       16       2.35       2.60       2.75       3.05       4.05       4.15       4.35         10       18       2.50       2.75       3.05       3.35       4.50       4.66          10       18       2.50       2.75       3.05       3.35       4.50       4.65       5.00         10       20       3.05       3.35       3.70       4.05       4.80       4.95       5.30         10       22       3.25       3.55       3.90       4.30       5.00       5.25       5.65         10       24       3.40       3.75       4.15       4.50       5.55       6.00         12       12       2.20       2.40       2.80       3.10       3.90       4.00       5.55       6.00         12       14       2.40       2.60												
10												
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$												
10									4.20			
10	-							4.15	4.35			
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$						4.05	4.80	4.95	5.30		• • • • •	• • • • •
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						4.30	5.00	5.25	5.65			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$							5.40	5.55	6.00			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					2.80	3.10	3.90	4.00	4.30			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						3.30	4.25	4.35	4.65			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		15		2.75		3.45	4.40	4.55	4.85			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		16		2.85	3.25	3.55	4.60	4.70				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			2.76	3.05	3.45	3.80	4.89	5.05				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12		3.40	3.70	4.05	4.30	5.26	5.50				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		22		3.90	4.30	4.70	5.60	5.75				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12	24	3.80	4.15	4.50	4.95	5.95					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15	16	2.95	3.20	3.65	4.00	5.15					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15	18	3.15	3.45	3.90	4.30						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15	20	3.85	4.20		4.95						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15	22	4.10	4.45								
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15	24	4.35	4.75								
18 20 4.30 4.35 4.70 5.10 6.60 6.75 7.20 7.80 8.40 8.75	18	18	3.55	3.85	4.40							
Mfr's. Lists Special Discounts on application.			4.30	4.35	4.70	5.10						
	Mfr's	. Lists S	pecial D	iscounts o	n applica	ation.				1.00	0.40	0.10

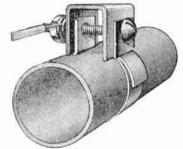
# Western Electric GROUND CLAMPS



For Standard Iron Pipe Double Screw



For Flexible Steel Conduit



No. V-2

# Ground Clamps FOR STANDARD IRON PIPE

	W. E. List	W. E. List	W. E. List	W. E. List		W. E. List	W. E. List	W. E. List	W. E. List			
	Each	Per 100	Each	Per 100		Each	Per 100	Each	Per 100			
	Single	Single	Double	Double		Single	Single	Double	Double			
	Screw	Screw	Screw	Screw		Screw	Screw	Screw	Screw			
Size 3/8		\$28.80	\$0.80	\$48.00	Size 11/2		\$57.60	\$1.36	\$81.60			
		28.80	.80	48.00	Size 2	1.20	72.50	1.60	96.00			
Size ½ Size ¾	.56	33.60	.88	52.80	Size 21/2		91.20	1.68	100.80			
Size 1	.64	38.40	1.04	62.40	Size 3	1.84	110.40	1.92	115.20			
Size 11/4		43.20	1.16	69.60	13126 0	1.01	110.10	-1.17.6				
FOR FLEXIBLE STEEL CONDUIT AND CONDUCTOR												
		FOR F			NDUIT A	AND CON	DUCTUR					
			W. E. List	W. E. List	1			W. E. List	W. E. List			
			Each	Per 100	1			Each	Per 100			
			Single	Single				Single	Single			
			Screw	Screw				Screw	Screw			
Size A	For No. 14	and 12 BX	2		Size C	¹≨ in. flexi	ble conduit.	\$0.64	<b>\$</b> 38.40			
	eonducto	)rs	. \$0.52	\$31.29	Size D	$3\frac{7}{4}$ in, flex	ible conduit,					
	For No. 14	BX3 and 3	8			No. 4, F	3X2	.76	45.60			
	flexible of	onduit	52	31.20	Size E	1 in. flexib	le conduit	.92	55.20			
Size B	For No. 10	) BX2 and	3									
		ors		31.20								
		2 BX3, No			l,							
		4 BXL		31.20								
100				te a sta idar	d naekago	X E C	standard.					
							proximately	100 lbs				
1110	. arrentege a	DOGL CHICHO (	. ooo claiii	be nowed for	ampinent	norgina mi		* (7 () 117/31				

Vogel Ground Clamp

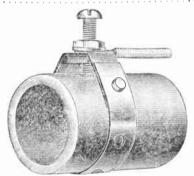


Vogel ground clamp.....

List

No. V-2

No. 0



No. A-1



W. E. List W. E. List

Per 100

\$13.00

Each

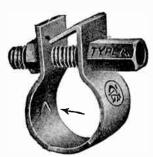
\$0.20

No. 3

Blackburn Adjustable Ground Clamps

List Std. Wt. per W. E. List W. E. No. Pkg. 1000 Each Per	List 100
	100
O Fits 3 and 1/2 in. ground rods 100 30 \$0.14 \$12	. 10
	.10
A=1 Fits 78, 72, 74, 1 and 174 in pipe	.75
2 Fits 1½, 2, 2½ and 3 in pipe	

Blackburn Nos. 3 and 4 Ground Clamps Std. Wt. per -W. E. List-List No. Per 100 Per 1000 100 Each Pkg. \$160.00 50 12 \$0.20 \$18.00 .24 22.00 190.00 50 16



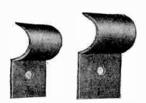
G. V. Type A



"Shawmut" Ground Clamp



New York Type A



Security Conduit Clamp



Cleat



Corner Cleat



Pipe Strap

# CLAMPS, CLEATS AND STRAPS Ground Clamps

G-V-TYPE A GROUND CLAMP

This Clamp is copper, tinned. For No. 4 wire and smaller. No iron enters into the construction of this clamp.

List No.	Size	Std. Pkg.	List Price Each	List No.	Size	Std. Pkg.	List Price Each
5014	BX	100	\$0.48	5112	1½"	50	\$0.92
5038	3/8"	100	.48	5002	2""	50	1.04
5012	1/2"	100	.48	5212	2½"	25	1.16
5034	3/4"	100	.56	5003	3 ""	25	1.28
5001	1 "	75	.68	5312	3½"	10	1.60
5114	1 1/4"	75	.80	5004	4 "	10	1.76

### SHAWMUT GROUND CLAMP

These Clamps are made for use on \\$\%\ inch to 3 inch pipe, and are so constructed as to give the maximum strength with a minimum amount of metal, thus reducing cost. The Clamps will hold No. 4 Ground Wire.

List		Std.	List Price	List		CLJ	I T ! A Date
No.	Q:				- C1	Std.	List Price
	Size	Pkg.	Each	No.	Size	Pkg.	Each
580881	3/8"	100	\$0.24	580886	11/2"	50	\$0.46
580882	1/2"	100	.24	580887	2'"	25	.52
580883	3/4"	100	.28	580888	21/2"	25	.58
580884	1 "	50	.34	580889	3 ""	15	.64
580885	11/4"	50	.40				

### NEW YORK GROUND CLAMP

These Ground Clamps are made in three types, A, B, and D. Type A clamps are for connecting telephone and telegraph ground wires to pipes or cables. Type B clamps are for making ground connections for electric light wires without the use of solder. Binding posts provide connections for No. 2 and No. 4 B. & S. wires. Type D for electric light and motor work.

			- J F	0.0001.0 1.6	4 1110	tol work.
List No. 580890 580891 580892 580893 580847	Type A A A B B	Size 1" pipe 2" pipe 3" pipe 1" pipe 2" pipe	List Price per 100 \$16.00 20.00 24.00 62.00 66.00	List No. Typ 580988 B 580989 B 580990 D 580991 D 580992 D	500 Size 3" pipe 4" pipe 1" pipe 2" pipe	List Price per 100 \$70.00 75.00 62.00 66.00 70.00
			11	580993 D	4" nine	75.00

### SECURITY CONDUIT CLAMP

This Clamp may be used for supporting conduit on brick or concrete walls, ceilings, iron beams, etc. It is stamped from ½ inch steel and is black enameled to prevent rust. These clamps are made in ½, ¾, and 1 inch size, and are packed in boxes containing 100 of a size.

			List Pric	e per 1000	
List No.	Size	Less than 100	100-500	500-1000	1000 and Over
580894	1/2"	\$30.00	\$24.00	\$20.00	\$18.00
580895	1/2" 3/4"	45.00	36.00	30.00	27.00
580896	1 "	75.00	60.00	50.00	45.00

### BRASS CLEATS

		Std.	List Price
List No.	Description	Pkg.	per 100
15118	For $\frac{3}{16}$ outside diameter wire	250	\$39.00
15100	For %" outside diameter wire	250	48.00
15103	For ½" outside diameter wire	250	60.00
15108	For 11 outside diameter wire	250	90.00
15102	Corner Cleat, for 3/2" outside diameter wire	250	45.00
15104	Corner Cleat, for 1/2" outside diameter wire	250	48 00
15116	Corner Cleat, for " outside diameter wire	250	75.00

### PIPE STRAPS

	Ar	rx.	List		Aprx.		List
List		tv. Std.			Qnty.		
No.	Size per	Lb. Pkg.		Size			per Lb.
290	1/4" Fipe Strap 3	2 - 1000	\$0.50 295	1 "Pipe Stray	n 16		
291	3/8" Pipe Strap 3	0 - 1000	.50 296	11/4" Pipe Strap	p 10	25	.50
	½" Pipe Strap 2		.50 297	2½" Pipe Stra	p 8	25	. 50
293	3/4" Pipe Strap 2	0 - 500	.50 298	2 "Pipe Strai	p 6	20	. 50
294	1 "Pipe Strap 1	8 100	.50  299	3½" Pipe Stra	p 5	20	.50

## LONG RADIUS CONDUIT FITTINGS

### Floor Outlets

An efficient substitute for the old style floor box or receptacle, with its necessarily large and objectionable floor plate, which has limited the distribution of floor outlets to the most necessary locations only.

With this fitting, future requirements may be anticipated by systematically studding the floor with these outlets, all radiating from one or more pull boxes, located in the side walls, from which any changes or additions can subsequently be made by the pulling of wires.

The complete outlet consists of a long radius conduit fitting, as listed below, and an adjustable top, with waterproof cap, as listed below, which can be raised or lowered to meet the final surfacing of floor.



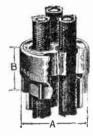




No. 1905



No. 1915



Cable Support

### Floor Outlets

Receptacles Nos. 61, 170-175 have been especially designed for use with these fittings with adjustable top and brass extension No. 1925.

Made of galvanized iron, tapped for conduit. Brass fittings on special order.

List	1	List
No	P	rice
1000	½ inch elbow\$0	.62
1900	½ inch eibow	78
1901	34 inch elbow.	00
1902	1 inch elbow	
1903	1 11/4 inch elbow	. 20
1904	1½ inch elbow. 1	.40
		.98
1905	79 IIICII DCC	.20
1906	% Inch 666	
1907		.48
1908	1½ inch tee	. 56
1000	174 mon voc	.12
1909	$1\frac{1}{2}$ inch tee	. 12

## Adjustable Tops

Cast brass, bottom threaded to fit long radius fittings listed above, top threaded to take extension or stand pipes and fitted with gasket and blind cap.

List	ipos ana noos mon Section and Land	List
No.		Price
1915	½ inch adjustable tops	\$1.26
1916	34 inch adjustable tops	1.54
1917	1 inch adjustable tops	1.98
1918	1½ inch adjustable tops.	2.40
1919	1½ inch adjustable tops	2.82
1925	Polished brass extension, 6 inches long; other lengths on special order. ½ inch pipe size.	1.26

# Cable Supports

These cable supports are used throughout the country in large notel and office buildings and lofts.

They consist of a galvanized iron collar screwed on the end of a riser in place of a bushing. Cable is then pulled and galvanized iron inserts are dropped around cables and rest on seating in collar. Split fiber bushings, which are threaded on the inside to grip cable and tapered on the outside to fit the taper of the iron inserts, are then placed around cables, which are now allowed to pull the grips into place by their own weight.

These cable supports are made for 1 inch, 1½ inch, 1½ inch, 2 inch, 2½ inch, 3 inch, 3½ inch and 4 inch conduit and can be furnished to take 1, 2, 3 or 4 cables in a conduit. Write us for further information and quotation.

Delivery F. O. B. New York City. For warehouse deliveries write nearest house.

### WIRE GRIP MOULDING AND FIBRE CLEATS



Moulding

### Wire Grip Moulding

		Softwood	Hard or Softwood	Hard or Softwood
Mfrs.		Painted White	Oak Stained	Unfinished
No.	-No. and Size-	per 100 feet	per 100 feet	per 100 feet
3	$\frac{1}{4}$ in, 2 wire	\$5.40	\$5.10	\$4.80
4	1/4 in. 3 wire	7.05	6.75	6.45
5	3/8 in. 2 wire	7.20	6.45	6.00
6	3/8 in. 3 wire	9.30	9.00	8.40
7	$\frac{1}{2}$ in. 2 wire	7.80	7.20	6.90
8	1∕2 in. 3 wire	10.20	9.90	9.60

Note: When ordering please state whether you want, 1st: unfinished, oak stain or painted white; 2d: size of groove; 3d: number of grooves; 4th: hardwood or softwood; 5th: inserted cap or wide cap style.

### Hard Fibre Cleats



Style A



Style No. 1



Style B



Style No. 2



Style C



Style No. 2A

These cleats are neat, durable, easy to install, good insulators, and on account of the finished appearance they make, are just the thing for office or residence installation.

They were originally designed for telephone wiring only, but are now being used extensively for bell wiring, annunciator systems, time clocks, telegraph outfits, etc. Type E is particularly adapted for fastening electric light wires to switchboards, motor frames, etc.

In ordering be sure to mention color preferred: red, gray or black; otherwise red will be furnished.

					*List Price
Style		Length	Width	Groove	per 1000
A	Single groove cleat	$\frac{3}{4}$ in.	$\frac{13}{32}$ in.	1/4 x 1/8 in.	\$18.00
В	Double groove cleat	3/4 in.	$\frac{1}{3}\frac{3}{2}$ in.	1/8 x 1/8 in.	18.00
$\mathbf{C}$	Corner cleat	11 in.	$\frac{13}{32}$ in.	1/4 x 1/8 in.	16.00
D	Three-wire cleat	11/8 in.	$\frac{13}{32}$ in	1/8 x 1/8 in.	36.00
$\mathbf{E}$	Large double cleat	15/8 in.	$\frac{9}{16}$ in.	1/4 x 1/4 in.	60.00
1	Single groove				8.00
2	Double groove				8.00
2A	Double groove				8.00

<sup>\*</sup>Delivery F. O. B. Factory, Wilmington, Del. For warehouse deliveries write nearest house.

### CONDULET BODIES WITH OBROUND OPENINGS

TYPE A

TYPE B

TYPE BE

Types A and B Condulet Bodies Take Obround Covers and Obround Conduletto Fittings Type BE Condulet Bodies Take Obround Covers Only



TYPE A CO	NDULE	T BOD	ES-Bla	ck Enam	el Finish	
Size in inches	1/2	3/4	1	11/4	11/2	2
Catalogue Number. Standard Package Ship. Wt. Std. Pkg List Price, each	200 130 lbs.	A 2 100 95 lbs. \$ .31	A3 50 80 lbs. \$ .43	A 4 20 60 lbs. \$ .62	A 5 10 40 lbs. \$ .80	A6 5 30 lbs. \$1.66
Size in inches	21/2	3	31/2	4	5	6
Catalogue Number. Standard Package Ship. Wt. Std. Pkg List. Price, each	5 50 lbs.	A8 5 55 lbs. \$5,45	A 9 5 65 lbs. \$10.40	A 10 5 70 lbs. \$11.70	A 012 5 90 lbs. \$20.00	A 014 5 100 lbs. \$30.00



### TYPE B CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1	11/4	11/2
Carrette Litters	B 1 200 140 lbs. 8 .29	B2 100 100 lbs. \$ .36	B3 50 80 lbs. \$ .50	B4 29 65 lbs. \$ .80	B5 10 40 lbs. \$1.04
Size in inches	2	21/2	3	31/2	4
Catalogue Number. Standard Package Ship. Wt. Std. Pkg List Price, each	5 30 lbs.	B7 5 50 lbs. \$5.35	B8 5 60 lbs. \$5.85	B9 5 65 lbs. \$11.35	B 10 5 70 lbs. \$12.70



### TYPE BE CONDULET BODIES-Black Enamel Finish

- 1							
	Size in inches	1/2	3/4	1	11/4	11/2	2
	Catalogue Number. Standard Package	BE1 200	BE2 100	BE3 50	BE4 20	BE5 10	BE6 5
	Ship. Wt. Std. Pkg.	390 lbs. \$ .40		190 lbs. \$ .85	120 lbs. \$1.30	100 lbs. \$2.00	801bs. \$3.50
	Size in inches		3	31/2	4	5	6
	Catalogue Number. Standard Package	BE7	BE8 5	BE9 5	BE10 5	BE012 5	BE914 5
	Ship. Wt. Std. Pkg List Price, each	160 lbs. \$9.35	160 lbs. \$10.15	225 lbs. \$21.30	225 lbs. \$25.30	430 lbs. \$70,00	4301bs. \$80.00

## CONDULET BODIES WITH OBROUND OPENINGS

Obround covers and Obround Condulctto fittings of same size are interchangeable on above Condulet bodies of corresponding size, except that type BE Condulet bodies take Obround Proper fastening screws are furnished with Obround covers and Obround Conduletto fittings,

and are so held in serew holes that they can not fall out.

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulct bodies of the same type and size may be assorted to

make up a standard package. No other assortment is allowed.

### CONDULET BODIES WITH OBROUND OPENINGS-continued

TYPE C

### TYPE CO

TYPE D

Take Obround Covers and Obround Conduletto Fittings

	TYPE C C	ONDULE	T BODIE	S-Black	Enamel Fi	nish
	Size in inches	1/2	3/4	1	11/4	11/2
-	Catalogue No Standard Package. Weight Std. Pkg List Price, each	200 165 lbs.	C2 100 120 lbs. \$ .41	C3 50 90 lbs. \$ .59	C4 20 75 lbs. \$ .94	C5 10 45 lbs. \$1.22
	Size in inches	2	21/2	3	31/2	4
	Catalogue No. Standard Package. Weight Std. Pkg. List Price, each	5 35 lbs.	C7 5 65 lbs. \$6.25	C8 5 70 lbs. \$7.40	C9 5 80 lbs. \$16.70	C10 5 90 lbs. \$18.30



### TYPE CO CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1	11/4	11/2
Catalogue No Standard Package. Weight Std. Pkg List Price, each	75 120 lbs.	CO22 50 100 lbs. \$ .65	CO33 25 60 lbs. \$ .75	CO44 15 50 lbs. \$1.25	CO55 10 50 lbs. \$1.60
Size in inches	2	21/2	3	31/2	4
Catalogue No Standard Package. Weight Std. Pkg List Price, each	5 45 lbs.	CO77 5 . 70 lbs. \$7.80	CO88 5 80 lbs. \$9.25	CO99 5 100 lbs. \$21.00	CO1010 5 120 lbs. \$23.00





		1	1	1	1
Size in inches	1/2	3/4	1	11/4	11/2
Catalogue No		D2	1)3	1)4	D5
Standard Package.		50	25	15	10
Weight Std. Pkg	60 lbs.	60 lbs.	40 lbs.	50 lbs.	45 lbs.
List Price, each	\$ .34	\$ .41	\$ .57	\$ .94	\$1.22
Size in inches	2	21/2	3	31/2	4
Catalogue No	D6	D7	D8	1)9	D10
Standard Package.	5	5	5	5	5
Weight Std. Pkg	35 lbs.	65 lbs.	70 lbs.	80 lbs.	90 lbs.
List Price, each	\$2.43	\$6.25	\$7.40	\$16.70	\$18.30

Obround covers and Obround Condulctto fittings of same size are interchangeable on above Condulet bodies of corresponding size.

Proper fastening screws are furnished with Obround covers and Obround Conduletto fittings, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type and with the same size cover openings may be assorted to make up a standard package. No other assortment is allowed.

CONDULET BODIES WITH OBROUND OPENINGS-Continued

TYPE E

TYPE F

TYPE FE

Type E Condulet Bodies Take Obround Covers and Obround Conduletto Fittings

Types F and FE Condulet Bodies Take Obround Covers Only

					,	,	
	TYPE E CO	NDULE:	r Bodi	ES-Bla	ck Enan	iel Finis	h
	Size in inches	1/2	3/4		1	11/4	11/2
- 18	Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	200	E2 100	E3 50 80 11 \$ .5		4 ) ) lbs.	E5 10 40 lbs. \$1.04
	Size in inches	2	21/2		3	31/2	4
	Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	5 35 lbs.	E7 5 55 lbs \$5.35	E8 5 60 ll \$5.8		9 ibs.	E10 5 70 lbs. \$12.70
	TYPE F CO	NDULET	BODI	ES-Blac	k Enam	el Finisl	1
	Size in inches	1/2	3/4			11/4	11/2
	Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	F1 100 150 lbs. \$ .50	F2 100 200 lb \$ .65	F3 50 175 \$1.0		1 5 lbs,	F5 10 65 lbs. \$2,52
r 9 1	Size in inches	2	21/2		3	31/2	4
	Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	F6 5 45 lbs. \$1.40	F7 5 115 lb \$11.70			9 55 lbs.	F10 5 315 lbs. \$31.60
	TYPE FE CO	NDULE'	r BODI	ES-Bla	ck Enan	nel Finis	h
	Size in inches	1/2	3/4	1	11/4	11/2	2
	Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	FE1 100 240 lbs. \$ .50	FE2 100 350 lbs. \$ .65	FE3 50 240 lbs. \$1.05	FE4 20 175 lbs. \$1.64	FE5 10 1301bs. \$2.52	FE6 5 100 lbs. \$1.40
1100	Size in inches	21/2	3 .	31/2	4	5	6
一种	Catalogue Number Standard Package Shipping Wt.Std. Pkg. List Price, each	5	FE8 5 200 lbs. \$12.70	FE9 5 320 lbs. \$26.60	FE10 5 320 lbs. \$31.60	FE012 5 600 lbs. \$90.00	FE014 5 600 lbs. \$100.00

Obround covers and Obround Conduletto fittings of same size are interchangeable on above Condulet bodies of corresponding size, except that types F and FE Condulet bodies take Obround covers only.

Proper fastening screws are furnished with Obround covers and Obround Conduletto fittings, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

### CONDULET BODIES WITH OBROUND OPENINGS—Continued

### TYPE LB TYPE LF TYPE LL TYPE LR

Take Obround Covers and Obround Conduletto Fittings



TYPE LB CONDU	JLET B	ODIES-	Black E	namel Fi	ni <b>sh</b>
Size in inches	1/2	3/4	1	11/4	11/2
Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	200 175 lbs.	LB22 100 120 lbs. \$ .45	LB33 50 90 lbs. \$ .65	LB44 20 75 lbs. \$1.04	LB55 10 45 lbs. \$1.37
Size in inches	2	21/2	3	31/2	4
Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	5 35 lbs.	LB77 5 60 lbs. \$6,55	LB88 5 70 lbs. \$7.70	LB99 5 80 lbs. \$17.10	LB1010 5 90 lbs. \$19.10



TYPE LF CONDU	JLET B	ODIES-	Black E	namel Fi	nish
Size in inches	1/2	3/4	1	11/4	11/2
Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	200	LF22 100 120 lbs. \$ .45	LF33 50 90 lbs. \$ .65	LF44 20 75 lbs. \$1.04	LF55 10 45 lbs. \$1.37
Size in inches	2	21/2	3	31/2	4
Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	5 35 lbs.	LF77 5 60 lbs. \$6.55	LF88 5 70 lbs. \$7.70	LF99 5 80 lbs. \$17.10	LF1010 5 90 lbs. \$19.10



TYPE LL CONDU	LET BO	DDIES	Black Er	amel Fir	nish
Size in inches	1/2	3/4	1	11/4	11/2
Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	200 175 lbs.	LL22 100 120 lbs. \$ .45	LL33 50 90 lbs. \$ .65	LL44 20 75 lbs. \$1.04	LL55 10 45 lbs. \$1.37
Size in inches	2	21/2	3	31/2	4
Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	5 35 lbs.	LL77 5 60 lbs. \$6.55	LL88 5 70 lbs. \$7.70	LL99 5 80 lbs. \$17.10	LL1010 5 90 lbs. \$19.10



TYPE LR CONDU	JLET B	ODIES	-Black E	namel Fir	n <b>ish</b>
Size in inches	1/2	3/4	1	11/4	11/2
Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	175 lbs.	LR22 100 120 lbs. \$ .45	LR33 50 90 lbs. \$ .65	LR44 20 75 lbs. \$1.04	LR55 10 45 lbs. \$1.37
Size in inches	2	21/2	3	31/2	4
Catalogue Number Standard Package Shipping Wt. Std. Pkg. List Price, each	LR66 5 35 lbs. 82.65	LR77 5 60 lbs. \$6.55	LR88 5 70 lbs. \$7.70	LR99 5 80 lbs. \$17.10	LR1010 5 90 lbs. \$19.10

Black enameled and galvanized Condulct bodies of the same type and size may be assorted to make up a standard package. Black enameled and galvanized types LB, LF, LL and LR. Condulct bodies of the same size may be assorted to make up a standard package. No other assortment is allowed.

# CONDULET BODIES WITH OBROUND OPENINGS-continued

#### TYPE LBB TYPE LFB TYPE LLB TYPE LRB

Take Obround Covers and Obround Conduletto Fittings

	TYPE LBB CO	ONDULE	T BODI	ES-Bla	ck Enam	el Finish
	Size in inches	. 1/2	3/4	1	11/4	11/2
	Catalogue No	. LBB11				
A STATE OF THE PARTY OF THE PAR	Standard Pkg	. 100	75	50	20	10
	Weight Std. Pkg. List Price, each	. 100 lbs.	95 lbs.	90 lbs. \$ .65	75 lbs.	45 lbs.
			-	-	\$1.04	\$1.37
	Size in inches		21/2	3	31/2	4
	Catalogue No Standard Pkg	. LBB66 . 5	LBB77	LBB88	LBB99 5	
	Weight Std. Pkg.	. 35 lbs.	60 lbs.	70 lbs.	80 lbs.	5 90 lbs.
	List Price, each	. 82.65	\$6.55	\$7.70	\$17.10	\$19.10
	TYPE LFB CO		L BODII	ES-Blac	k Ename	el Finish
	Size in inches	/ 64	3/4	1	11/4	11/2
ALCHEROMENT CONTROL	Catalogue No	LFB11	LFB22	LFB33	LFB44	
Service Services	Standard Pkg Weight Std. Pkg	100 100 lbs.	75 95 lbs.	50 90 lbs.	20 75 lbs.	10
GENERAL SECTION AND SECTION AN	List Price, each	\$ .40	\$ .45	\$ .65	\$1.04	45 lbs. \$1.37
	Size in inches	2	21/2	3	31/2	4
	Catalogue No Standard Pkg		LFB77	LFB88	LFB99	LFB1010
	Weight Std. Pkg	5 35 lbs.	5 60 lbs.	5 70 lbs.	5 80 lbs.	5 90 lbs.
	List Price, each	\$2.65	\$6.55	\$7.70	\$17.10	\$19.10
	TYPE LLB CO	NDULET	BODIE	ES—Blac	k Ename	el Finish
	Size in inches	1/2	3/4	1	11/4	11/2
^	Catalogue No	LLB11	LLB22	LLB33	LLB44	LLB55
The second second	Standard Pkg Weight Std. Pkg	100 100 lbs.	75 95 lbs.	50 90 lbs.	20 75 lbs.	10
F THE REAL PROPERTY.	List Price, each	\$ .40	\$ .45	\$ .65	\$1.04	45 lbs. \$1.37
	Size in inches	2	21/2	3	31/2	4
, and the second	Catalogue No	LLB66	LLB77		LLB99	LLB1010
	Standard Pkg	5	5	5	5	5
	Weight Std. Pkg List Price, each		60 lbs. \$6.55	70 lbs. \$7.70	80 lbs. \$17.10	90 lbs. \$19.10
		144.00	40.00	\$1.10	911.10	#13.10
	TYPE LRB COI	NDULET	BODIE	S-Black	Ename	l Finish
	Size in inches	1/2	3/4	1	11/4	11/2
	Catalogue No		LRB22	LRB33	LRB44	LRB55
S CONDINET CO	Standard Pkg Weight Std. Pkg	100 100 lbs.		50 90 lbs.	20 75 lbs.	10
	List Price, each	\$ .40		\$ .65	\$1.04	45 lbs. \$1.37

Catalogue No.... LRB66 Standard Pkg.... 5 Weight Std. Pkg... 35 lbs. List Price, each... \$2.65 Black enameled and galvanized Condulct bodies of the same type and size may be assorted to make up a standard package. Black enameled and galvanized types LBB, LFB, LLB and LRB Condulct bodies of the same size may be assorted to make up a standard package. No other assortment is allowed.

Size in inches.....

21/2

60 lbs.

86.55

LRB66 LRB77

3

LRB88

70 lbs.

\$7.70

 $3\frac{1}{2}$ 

 $80\,\mathrm{lbs}.$ 

5

4

90 lbs.

LRB99 LRB1010

\$17.10 | \$19.10

# CONDULET BODIES WITH OBROUND OPENINGS—Continued TYPE LBL TYPE LU TYPE U TYPE UB

Take Obround Covers and Obround Conduletto Fittings



TYPE LBL CONDULET BODIES  Black Enamel Finish					
Size in inches	1/2	3/4	1		
Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	60 lbs.	LBL222 35 55 lbs. \$ .80	LBL333 25 55 lbs. \$ .95		



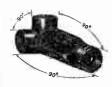


### TYPE LU CONDULET BODIES

Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	50	LU222	LU333
Standard Package		35	25
Ship. Wt. Std. Pkg		65 lbs.	60 lbs.
List Price, each		\$ .80	\$ .95

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IYPE U	CONDU	TEI DOD	ILS-Blac	k Enamer	пизи
Size in inches	1/2	3/4	1	11/4	11/2
Cat. No Std. Pkg Wt. Std. Pkg. List Price, ea.	100 100 lbs.	U22 50 80 lbs. \$ .57	U33 40 80 lbs. \$ .85	U44 20 75 lbs. \$1.19	U55 10 45 lhs. \$1.52
Size in inches	2	21/2	3	31/2	4
Cat. No Std. Pkg Wt. Std. Pkg . List Price, ea .	5 40 lbs.	U77 5 70 lbs. \$7.10	U88 5 75 lbs. \$8.10	U99 5 90 lbs. \$18.60	U1010 5 100 lbs. \$20.60



Size in inches	1/2	3/4	1	1 11/4	11/2
Cat. No Std. Pkg Wt. Std. Pkg . List Price, ea .	100 lbs.	UB22 50 80 lbs. \$ .57	UB33 40 80 lbs. \$ .85	UB44 20 175 lbs. \$1.19	UB55 10 45 lbs. 81.52
Size in inches	2	21/2	3	31/2	4
Cat. No Std. Pkg Wt. Std. Pkg. List Price, ea.	5 40 lbs.	UB77 5 70 lbs. \$7.10	UB88 5 75 lbs. \$8.10	UB99 5 90 lbs. \$18.60	UB1010 5 100 lbs. \$20.60

Obround covers and Obround Conduletto fittings of same size are interchangeable on above Condulet bodies of corresponding size.

Proper fastening screws are furnished with Obround covers and Obround Conduletto fittings, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

### CONDULET BODIES WITH OBROUND OPENINGS—continued

### TYPE T

Takes Obround Covers and Obround Conduletto Fittings

			TYPE T CONDULET BODIES—Black Enamel Finish					inish
		Siz	e in inche	s	1/2 1/2	1/2 1/2	1/2 1/2	3/43/4
	ا هند		it. No		T111* 100	T121* 100	T131 100	T212*
		W W	d. Pkg t. Std. Pk	ζ	120 lbs.	120 lbs.	90 lbs.	75 lbs.
1.		-	st Price, e		\$ .48	\$ .56	\$ .63	\$ .57
Size in inches	3/4 <del>3</del> /4	3/4 - 3/4	3/43/4	$\frac{3}{4} \frac{3}{1} \frac{3}{4}$	1—1/2	1-1	1 1	11/4
Cat. No	T222*	T232	$\frac{174}{T242}$	$\frac{172}{T252}$	T313	T323	T333*	T343
Std. Pkg	75	75	75	75	50	50	50	50
	85 lbs. \$ .57	95 lbs. \$ .65	100 lbs. 4 \$ .77	120 lbs. \$ .90	95 lbs. \$ .80	100 lbs. \$ .80	105 lbs. \$ .80	115 lbs. \$ .97
List Tiree, ea.	0 .01	<del></del>						
Size in inches	$\frac{1-1}{1^{1}/2}$	1 1	11/4 1/2	11/4 T1/4	1 1/4 1 1/4	11/4 11/4	$1\frac{1}{4}\frac{1}{1}\frac{1}{2}$	$1\frac{1}{4} + \frac{1}{2}\frac{1}{4}$
Cat. No	T353*	T363 *	T414	T 424	T 434	T444	T 454	T464
	50 125 lbs.	50 135 lbs.	20 70 lbs.	20 75 lbs.	20 80 lbs.	20 85 lbs.	20 90 lbs.	20 95 lbs.
	\$1.15	\$1.45	\$1.22	\$1.22	\$1.22	\$1.22	\$1.50	\$1.96
Size in inches			11/2 11/2				2—2	2—2
	1/2	3/4	1 77.55	11/4	11/2	2	1/2	3/4
	T515 10	T 525	T 535 10	T 545 10	T 555 10	T565 10	T616 5	T 626 5
	45 lbs.	45 lbs.	50 lbs.	50 lbs.	50 lbs.	95 lbs.	95 lbs.	100 lbs.
List Price, ea.	\$1.69	\$1.69	\$1.69	\$1.69	\$1.69	\$2.52	\$2.55	\$2.55
Size in inches	22	22	22	2-1-2	$2\frac{1}{2}\frac{1}{1}\frac{2\frac{1}{2}}{1}$	21/2 7 21/2	$2\frac{1}{2}\frac{2\frac{1}{2}}{2\frac{1}{2}}$	33
Cat. No	T636	T646	T656	T666	T757	T767	T777	T868
	5	5	5	5	5	5	5	5
Wt. Std. Pkg. List Price, ea.	105 lbs. 82.55	115 lbs. 82.55	125 lbs. \$2.55	135 lbs. \$2.55	95 lbs. \$7,45	100 lbs. 87.45	105 lbs. 87.45	115 lbs. \$8.15
Size in inches	$3{2^{1/2}}3$	3-1-3	$3\frac{1}{2}\frac{3\frac{1}{2}}{1\frac{1}{2}}$	31/2 31/2	$3\frac{1}{2}\frac{3\frac{1}{2}}{3\frac{1}{2}}3\frac{1}{2}$	4-1-4	4-1-4	44
Cat. No	T878	T888	T979	T989	T999	T108	$\frac{372}{\text{T}109}$	T1010
Std. Pkg	5	5	5	5	5	5	5	5
Wt. Std. Pkg.		135 lbs.	45 lbs.	45 lbs.	50 lbs.	50 lbs.	50 lbs.	55 lbs.
List Price, ea.	\$8.19	\$8.15	\$22,60	\$22.60	\$22.60	\$24.60	\$24.60	\$24.60

The size of cover required for type T Condulet body is the same size as the conduit hubs at the ends of the cover opening.

Obround covers and Obround Conduletto fittings of same size are interchangeable on above Condulet bodies of corresponding size.

Proper fastening screws are furnished with Obround covers and Obround Conduletto fittings, and are so held in screw holes that they can not fall out.

Black enameled and galvanized Condulet bodies of the same type and with the same size cover openings may be assorted to make a standard package. No other assortment is allowed.

\*1/2, 3/4 and 1-inch types T, TB and X Condulet bodies are regularly furnished with larger wiring chamber than other Obround Condulet bodies of corresponding size. These Condulet bodies will be furnished with wiring chamber of the same size as other Obround Condulet bodies, if specifically ordered, using regular catalogue numbers and specifying Smaller Wiring Chamber.

# CCNDULET BODIES WITH OBROUND OPENINGS—continued TYPE TB TYPE TL TYPE TR

Take Obround Covers and Obround Conduletto Fittings



TYPE TB CONDULET BODIES—Black Enamel Finish						
Size in inches	1/2	3/4	1	11/4	11/2	
Catalogue No Standard Package. Ship. Wt. Std. Pkg. List Price, each	200 175 lbs.	TB222* 100 120 lbs. \$ .57	TB333* 50 90 lbs. \$ .80	TB444 20 75 lbs. \$1.22	TB555 10 45 lbs. \$1.69	
Size in inches	2	21/2	3	31/2	4	
Catalogue No Standard Package. Ship. Wt. Std. Pkg. List Price, each	5 35 lbs.	TB777 5 60 lbs. \$7.45	TB888 5 70 lbs. \$8.15	TB999 5 80 lbs. \$22.60	TB1010 5 90 lbs. \$24.60	

# The second secon

#### TYPE TL CONDULET BODIES-Black Enamel Finish Size in inches ... 1/2 3/4 1/2 1 **TL222** TL111 TL121 TL212 TL131 Catalogue No.... Standard Package. 100 100 100 50 50 Ship, Wt. Std. Pkg. 95 lbs. 100 lbs. 105 lbs. 115 lbs. 125 lbs. List Price, each . . \$ .48 \$.56\$ .63 \$ .57 \$ .57 Size in inches ... 3/4 1/2 Catalogue No..... TL313 TL323 TL333 **TL444**

40

100 lbs.

\$ .80

20

75 lbs.

\$1.22

40

100 lbs.

\$ .80



TYPE	TR	CONDULET	BODIES-Black	Enamel	Finish

100 lbs.

\$ .80

40

1112 111 0	O.ID CLL	I DODIE	DIMOR	Diametric 11	midi
Size in inches	1/2 1/2	1/2 1/2	1/2-1/2	3/43/4	3/43/4
Catalogue No Standard Package. Ship. Wt. Std. Pkg.	TR111 100	TR121 100 100 lbs.	TR131 100 105 lbs.	TR212 50 115 lbs.	TR222 50 125 lbs.
List Price, each		\$ .56	\$ .63	\$ .57	\$ .57
Size in inches	1	1/2	3/4	1	$1\frac{1}{4}\frac{1}{1}\frac{1}{4}$
Catalogue No Standard Package. Ship. Wt. Std. Pkg. List Price, each	50 135 lbs.	TR313 40 100 lbs. \$ .80	TR323 40 100 lbs. \$ .80	TR333 40 100 lbs. \$ .80	TR444 20 75 lbs. \$1.22

The size of cover required for a type TL or TR Condulet body is the same size as the conduit hubs at the ends of the cover opening.

Standard Package, 50

Ship, Wt. Std. Pkg. 135 lbs. List Price, each . . \$ .65

Obround covers and Obround Conduletto fittings of same size are interchangeable on above Condulet bodies of corresponding size.

Proper fastening screws are furnished with Obround covers and Obround Conduletto fittings, and are so held in screw holes that they can not fall out.

Assortments: Black enameled and galvanized Condulet bodies of the same type and with the same size cover openings may be assorted to make up a standard package. Black enameled and galvanized types TL and TR Condulet bodies with the same size cover openings may be assorted to make up a standard package. No other assortment is allowed.

be assorted to make up a standard package. No other assortment is allowed.

\*12, 34 and 1-inch types T, TB and X Condulet bodies are regularly furnished with larger wiring chamber than other Obround Condulet bodies of corresponding size. These Condulet bodies will be furnished with wiring chamber of the same size as other Obround Condulet bodies, if specifically ordered, using regular catalogue numbers and specifying Smaller Wiring Chamber.

### CONDULET BODIES WITH OBROUND OPENINGS-Continued TYPE X

Takes Obround Covers and Obround Conduletto Fittings

	TY	PE X CO	ONDULET	BODIES	-Black E	namel Fini	lsh
	Size in in	nches	• • • • • • • • • • • • • • • • • • • •	1/2 1/2	3/4-1-1/2 1/2	3/4 + 3/4 1/2	3/4 3/4 3/4 3/4
	Standard Shipping	Standard Package Shipping Weight Std. Pkg		X1111* 75 95 lbs. \$ .60	X2111 50 65 lbs. \$ .77	X2112* 50 70 lbs. \$ .77	X2222* 50 85 lbs. \$ .77
Size in inches	1 + 3/4	1 + 3/ <sub>4</sub> 1 - 3/ <sub>4</sub>	1/2 1-1-1 1/2	3/ <sub>4</sub> 1-1 1 3/ <sub>4</sub> 1	1 1 1	11/4 1	3/ <sub>4</sub> 1 <sup>1</sup> / <sub>4</sub> -  3/ <sub>4</sub>
Catalogue Number Standard Package Weight Std. Pkg List Price, cach	X3112 35 50 lbs. \$1.05	X3222 35 45 lbs. \$1.05	X3113 35 50 lbs. \$1.05	X3223 35 60 lbs. \$1.05	X3333* 35 75 lbs. \$1.05	X4113 20 55 lbs. \$1.24	X4222 20 60 lbs. \$1.24
Size in inches	$1\frac{1}{4}\frac{\frac{3}{4}}{\frac{1}{3/4}}1$	11/4-1-1	11/4 11/4	3/ <sub>4</sub> 1 <sup>1</sup> / <sub>4</sub> 1 <sup>1</sup> / <sub>4</sub> 3/ <sub>4</sub>	$ \begin{array}{c} 1\frac{1}{4} \\ 1\frac{1}{4} & 1\frac{1}{4} \\ 1\frac{1}{4} & 1\frac{1}{4} \end{array} $	1½ 1½- -1¼ 1½	3/4
Catalogue Number Standard Package Weight Std. Pkg List Price, each	X 4223 20 65 lbs. \$1.24	X4333 20 70 lbs. \$1.24	X4114 20 75 lbs. \$1.24	X4224 20 80 lbs. \$1.24	X4444 20 85 lbs. \$1.24	X5114 10 40 lbs. \$1.78	X5224 10 45 lbs. \$1.78
Size in inches	3/4	i	11/2-1-11/4	11/2-1-11/2	$ \begin{array}{c c} \hline 1^{1/2} \\ 1^{1/2} & 1^{1/2} \\ 1^{1/2} & 1^{1/2} \end{array} $	2 1½ 1½ 1½	$2\frac{3/4}{11/2}$
Catalogue Number Standard Package Weight Std. Pkg List Price, each	10 50 lbs.	X5333 10 50 lbs. \$1.78	X5334 10 55 lbs. \$1.78	X5335 10 55 lbs. \$1.78	X5555 10 60 lbs. \$1.78	X6115 5 35 lbs. \$2.85	X6225 5 35 lbs. \$2.85
Size in inches 2 1 11/2	2 1 2	2 2 2	$2\frac{1}{2\frac{1}{2}}$ $1\frac{1}{2}$	$ \begin{array}{c c}  & 11/2 \\  & 21/2 + 11/2 \\  & 11/2 \end{array} $	$ \begin{array}{c c}  & 1\frac{1}{2} \\  & 2\frac{1}{2} + 2\frac{1}{2} \end{array} $	$ \begin{array}{c c} 2^{1/2} \\ 2^{1/2} & 2^{1/2} \\ 2^{1/2} & 2^{1/2} \end{array} $	$ \begin{array}{c c}  & 1\frac{1}{2} \\  & 3 + 2 \\  & 1\frac{1}{2} \end{array} $
Cat. No X6335 Std. Pkg 5 Wt. Std. Pkg. 40 lbs. List Price, ea. \$2.85	X6336 5 40 lbs. \$2.85	X6666 5 45 lbs. \$2.85	X7335 5 70 lbs. \$8.95	X7555 5 75 lbs. \$8.95	X7557 5 75 lbs. \$8.95	X7777 5 75 lbs. \$8.95	X8556 5 80 lbs. \$9.95
Size in inches $3 + \frac{2}{2} \frac{21}{2}$	3 3 3	31/2 - 21/2	$ \begin{array}{c c} 2^{1/2} \\ 3^{1/2} & 3 \\ 2^{1/2} \end{array} $	$ \begin{array}{c c} 3^{1/2} \\ 3^{1/2} & 3^{1/2} \\ 3^{1/2} & 3^{1/2} \end{array} $	2 <sup>1</sup> / <sub>2</sub> 4-3 2 <sup>1</sup> / <sub>2</sub>	3 4 31/2	4-4-4
Cat. No X8667 Std. Pkg 5 Wt. Std. Pkg. 85 lbs. List Price, ca. \$9.95	X8888 5 90 lbs. \$9.95	X9667 5 95 lbs. \$25.00	X9778 5 100 lbs. \$25.00	X9999 5 105 lbs. \$25.00	X1078 5 105 lbs. \$27.00	X 1089 5 110 lbs. \$27.00	X1010 5 115 lbs. · \$27.00

The size of cover required for type X Condulct body is the same size as the largest conduit hub. Obround covers and Obround Conduletto fittings of same size are interchangeable on above Condulet bodies of corresponding size.

Black enameled and galvanized type X Condulet bodies with the same size cover openings may be assorted to make up a standard package. No other assortment is allowed.

\*12, 34 and 1-inch types T, TB and X Condulet bodies are regularly furnished with larger wiring chamber than other Obround Condulet bodies of corresponding size. These Condulet bodies will be furnished with wiring chamber of the same size as other Obround Condulet bodies, if specifically ordered, using regular catalogue numbers and specifying "Smaller Wiring Chamber."

# TYPES DF, LFM, LFN, TM AND TMD CONDULET BODIES WITH OBROUND OPENINGS

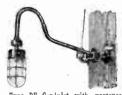
Condulets for Gooseneck Brackets and Similar Installations
Types DF and TM Condulet Bodies Take Obround Covers only
Types LFM, LFN and TMD Condulet Bodies Take Obround Covers and Obround Conduletto
Fittings



### TYPE DF CONDULET BODIES

Black Enamel Finish

Size in inches.	1/2	3/4	1
Cat. No.	DF1	DF2	DF3
Std. Pkg.	35	35	35
Wt. Std. Pkg.	100 lbs.	120 lbs.	160 lbs.
List, each	\$1.45	\$1.30	\$1.55



Type DF Condulet with gooseneck bracket and type VA Condulet.



### TYPE LFM CONDULET BODIES

Black Enamel Finish

Size in inches.	1/2	3/4	1
Cat. No Std. Pkg Wt. Std. Pkg List, each	35 90 lbs.	LFM22 35 100 lbs. \$1.30	LEM33 35 110 lbs. \$1.55



Type LFM Condulet with gooseneck bracket and type WV Condulet.



### TYPE LFN CONDULET BODIES

Black Enamel Finish

Size in inches.	1/2	3/4	1
Cat. No Std. Pkg Wt. Std. Pkg List, each	35 90 lbs.	I.FN22 35 100 lbs. \$1.30	LFN33 35 110 lbs. \$1.55



Type LFN Condulet with lighting fixture.



# TYPE TM CONDULET BODIES

Black Enamel Finish

Size in inches.	1/2	3/4	1
Cat. No	100 lbs.	TM222	TM333
Std. Pkg		35	35
Wt. Std. Pkg		110 lbs.	125 lbs.
List, each		\$1.45	\$1.70



Type TM Condulet with gooseneck bracket and type WV Condulet.



### TYPE TMD CONDULET BODIES

Black Enamel Finish

Size in inches.	1/2	3/4	1
Cat. No Std. Pkg Wt. Pkg	35	TMD222 35 115 lbs.	TMD333 35 130 lbs.
List, each.	\$1.55	\$1.70	\$1.95



Type TMD Condulet with gooseneck bracket and type WV Condulet.

### OBROUND COVERS

For Types A, B, BE, C, CO, D, DF, E, F, FE, LB, LBA, LBB, LBL, LBV, LF, LFB, LFM, LL, LLB, LR, LRB, LU, T, TB, TJD, TL, TM, TR, U, UB and X Condulet Bodies

### Furnished with Fastening Screws

















Composition, 6-Wire Hole

Composition, 7-Wire Hole

Composition, 8-Wire Hole

Composition, 9-Wire Hole

COMPOSITION

COMPOSITION COVERS WITH WIRE HOLES*												
Size of Cov		1/2	3/4	1	11/4	11/2	2	21/2	3	31/2	4	5 or 6
Std. Pkg. A	ssorted.	200	100	50	20	10	5	5	5	5	5	5
1-wire	Cat. No.	CF11	CF21	CF31	CF41	CF51	CF61	CF71	CF81	€F91	CF1001	(F1401
Standard†	List, ea.	\$ .20	\$ .30	\$ .50	\$1.00	\$1.10	\$1.20			\$2.50	\$2.50	\$4.00
1-wire	Cat. No.	CF118	CF218	CF318	CF418	CF518	CFG18	CF718	CF818	CF918	CF10018	Not
Special†	List, ea.	\$ .20	\$ .30	\$ .50	\$1.00	\$1.10	\$1.20	\$1.60	\$1.60		\$2.50	made
2-wire	Cat. No.				(F42	(F52	CF62	CF72	CF82	(F92	CF1002	CF1402
	List, ea.						\$1.20	\$1.60	\$1.60	\$2.50	\$2.50	\$4.00
3-wire	Cat. No.		(F23	CF33	CF43	CF53	CF63	CF73	CF83	CF93	CF1003	CF1403
	List, ea.	\$ .20	\$ .30	8.50	\$1.00	\$1.10	\$1.20	\$1.60	\$1.60	\$2.50	\$2.50	\$4.00
4-wire	Cat. No.	CF1400	(F2400	CF3400	CF4400	(F5400	(F6400	CF7400	CF8400	(F9400	CF10400	
	List, ea.	\$ .20	\$ .30	\$ .50	\$1.00	\$1.10	\$1.20	\$1.60	\$1.60	\$2.50	\$2.50	\$4.00
5-wire	Cat. No.	Not	CF2500	CF3500	CF4500	CF5500	(F6500	CF7500	CF8500	CF9500	CF10500	
	List, ea.	made	\$ .50	00. ¢	\$1.00	\$1.10	\$1.20	\$1.60	\$1.60	\$2.50	\$2.50	\$4.00
6-wire	Cat. No.	Not	CF2600	CL3000	CF4600	CF5600	CF6600	CF7600	CF8600	CF9600	(F10600	
	List, ea.		\$ .50	5 .00	\$1.00	\$1.10	\$1.20	\$1.60	\$1.60	\$2.50	\$2.50	\$4.00
7-wire	Cat. No.		Not	CF3700	CF4700	CF5700	(F6700	CF7700	CF8700	CF9700	€F10700	
	List, ea,	made	made	9 .00	\$1.00	\$1.10	81.20	\$1.60	\$1.60	\$2.50	\$2.50	\$4.00
8-wire	Cat. No.		Not	CF3800	CF4800	(F5800	CF6800	CF7800	CF8800	CF9800	(F10800	
	List, ea.	made	made	0G. ©	\$1.00	\$1.10	\$1.20	\$1.60	\$1.60	\$2.50	\$2.50	\$4.00
9-wire	Cat. No.		Not	CF3900	CF4900	(F5900	(F6900	CF7900	CF8900	CF9900	(F10900	
	List, ea.	made	made	5 .00	\$1.00	\$1.10	81.20	81.60	\$1.60	\$2.50	\$2.50	\$4.00
Blank	Cat. No.	00110	CF200	UT300	CF400	CF500	0F600	CF700	CF800	CF900	(F1000	CF14000
337 = 1 1 . 2 . (14 . 1	List, ea.	⊕ .20 40.11	06. ¢	00.0	51.00	\$1.10	81.20	81.60	<b>\$1.60</b>	\$2.50	\$2.50	\$4.00
Weight Std	rkg	40 lbs.	30 lbs.	20 lbs.	20 lbs.	18 lbs.	12 lbs.	18 lbs.	25 lbs.	30 lbs.	40 lbs.	50 lbs.





### OBROUND PORCELAIN COVERS WITH 1-WIRE HOLE AND 1/8 MALE NIPPLE

0	Size of Cover	r	1/2	3/4	1
10		Catalogue No		291	391
I consider the	Cord and	Standard Pkg	200	100	50
	Fixture Pull	Weight Std. Pkg	55 lbs.	40 lbs.	30 lbs
	Switches	List Price, each	\$ .35	\$ .40	\$ .50

†Standard and special 1-wire hole covers differ only in diameter of wire hole. Standard 1-wire hole covers will always be furnished, unless order specifically calls for special 1-wire hole

Obround covers are interchangeable on corresponding sizes of Condulet bodies with Obround openings. 2½ and 3-inch Obround covers are interchangeable. 3½ and 4-inch Obround covers are interchangeable.

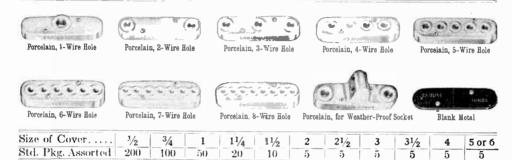
Above composition ()bround covers of the same size may be assorted to make up a standard package, regardless of style of cover.

Standard package discount is allowed on covers when an order is for a standard package of Condulet bodies and an equal number of covers for those bodies; but on an order for covers alone, standard package discount is allowed, only, on the specified standard package quantity of covers.

### **OBROUND COVERS**

For Types A, B, BE, C, CO, D, DF, E, F, FE, LB, LBA, LBB, LBL, LBV, LF, LFB, LFM, LL, LLB, LR, LRB, LU, T, TB, TJD, TL, TM, TR, U, UB AND X Condulet Bodies

### Furnished with Fastening Screws



### PORCELAIN COVERS WITH WIRE HOLES\*

1-wire	Cat. No.		21	31	41	16	61	71	81	91	101	1401
Standard †	List, ea	\$ .10	\$ .15	\$ .25	\$ .36	\$ .48	\$ .60	\$ .80	\$ .80	\$ .90	\$ .90	\$2.00
1-wire	Cat. No.	118	218	318	418	518	$\overline{61S}$	718	818	918	1018	Not
Special†	List, ea	\$ .10	\$ .15	\$ .25	\$ .36	\$ .48	\$ .60	\$ .80	\$ .80	\$ .90	\$ .90	made
2-wire	Cat. No.	12	22	32	42	52	62	72	82	92	102	1402
_ ,,,,,	List, ea	\$ .10	\$ .15	\$ .25	\$ .36	\$ .48	\$ .60	\$ .80	\$ .80	\$ .90	\$ .90	\$2.00
3-wire	Cat. No.	13	23	33	43	53	63	73	83	93	103	1403
O-WIIC	List, ea	\$ .10	\$ .15	\$ .25	\$ .36	\$ .48	\$ .60	\$ .80	\$ .80	\$ .90	\$ .90	\$2.00
4-wire	Cat. No.	1400	2400	3400	4400	5100	6400	7400	8400	9400	10400	14400
- WIIC	List, ea	\$ .10	\$ .15	\$ .25	\$ .36	\$ .48	\$ .60	\$ .80	\$ .80	\$ .90	\$ .90	\$2.00
5-wire	Cat. No.	Not	2500	3500	4500	5500	6500	7500	8500	9500	10500	14500
- WIIC	List, ea	made	\$ .15	\$ .25	\$ .36	\$ .48	\$ .60	\$ .80	\$ .80	\$ .90	\$ .90	\$2.00
6-wire	Cat. No.	Not	2600	3600	4600	5600	6600	7600	8600	9600	10600	14600
- WIIC	List, ea	made	\$ .15	\$ .25	\$ .36	\$ .48	\$ .60	\$ .80	\$ .80	\$ .90	\$ .90	\$2.00
7-wire	Cat. No.	Not	Not	3700	4700	5700	6700	7700	8700	9700	10700	14700
	List, ea	made	made	\$ .25	\$ .36	\$ .48	8 .60	\$ .80	\$ .80	\$ .90	\$ .90	\$2.00
8-wire	Cat. No.	Not	Not	3800	4800	5300	6800	7800	8800	9800	10800	14800
- 11110	List, ea	made	made	\$ .25	\$ .36	\$ .48	\$ .60	\$ .80	\$ .80	\$ .90	\$ .90	\$2.00
9-wire	Cat. No.	Not	Not	3900	4900	5900	6900	7900	8900	9900	10900	14900
3-WIIC	List, ea	made	made	\$ .25	\$ .36	\$ .48	8 .60	\$ .80	\$ .80	\$ .90	\$ .90	\$2.00
For	Cat. No.	14	24	34	†Standa	rd and s	pecial 1-v	wire hole	covers d	iffer only	in dian	neter of
W. P.	List, ea		\$ .25	\$ .40	wire h		a bolo se	overs will	almar-	ha fumm!-	العبد المما	
Socket	mist, cd	₽ .10	⊕ .20	9 .40	specifi	cally call	ls for spe	eial 1-wi	re hole c	overs.	uca, unie	ess order
Weight S	td. Pkg	50 lbs.	35 lbs.	25 lbs.	25 lbs.	20 lbs.	15 lbs.	20 lbs.	20 lbs.	30 lbs.	30 lbs.	40 lbs
Weight Std. Pkg   50 lbs.   35 lbs.   25 lbs.   25 lbs.   20 lbs.   15 lbs.   20 lbs.   20 lbs.   30 lbs.   30 lbs.   40 lbs.												

### BLANK METAL COVERS-Black Enamel Finish

Sheet   Cat. No. List, ea	100 \$ .08	200 \$ .11	300 \$ .23	400 \$ .32	500 \$ .45	600 \$ .56	700 \$ .75	800 \$ .75	900 \$ .80	1000 \$ .80	14000 \$1.25
Weight Std. Pkg	30 lbs.	15 lbs.	10 lbs.	$10  \mathrm{lbs}$ .	10 lbs.	5 lbs.	10 lbs.	10 lbs.	15lbs.	15 lbs.	20 lbs.
Cast Iron (Flange) Cat. No. List, ea											
Weight Std. Pkg	901bs.	<b>6</b> 0 lbs.	$35  \mathrm{lbs}$ .	$\overline{25\mathrm{lbs.}}$	15 lbs.	10lbs.	10 lbs.	15 lbs.	20 lbs.	25 lbs.	30 lbs.

l'orc-lain, 3/8 Female Nipple

### OBROUND COVERS-Continued

firm and the same of the same	Size of	Cover	1/2	3/4	1	11/4	11/2	
Special Q	Std.Pkg	Assorted	200	100	50	20	10	
	N	METAL COVER	s WITH	H NIPPLES-Black Enamel Finish				
Ketal, 1/8 Male Nipple	1/8 Male	Catalogue No. List, each	15 \$ .20	25 \$ .25	35 \$ .35	45 \$ .46	55 \$ .58	
	1/8 Female	Catalogue No. List, each	16 \$ .20	26 \$ .25	36 \$ .35	46 \$ .46	56 \$ .58	
Metal, 1/8 Female Nipple	1/4 Male	Catalogue No. List, each	113 \$ .23	213 \$ .28	313 \$ .38	413 \$ .49	513 \$ .61	
Silvar O	1/4 Female	Catalogue No. List, each	114 \$ .23	214 \$ .28	314 \$ .38	<b>414 \$</b> .49	514 \$ .61	
Metal, 36 Male Nipple	3/8 Male	Catalogue No. List, each	17 \$ .25	27 \$ .30	37 \$ .40	47 \$ .51	57 \$ .63_	
Zoma, 78 more supplied	3/8 Female	Catalogue No. List, each	18 \$ .25	28 \$ .30	38 \$ .40	48 \$. <b>51</b>	58 \$ .63	
	1/2 Male	Catalogue No. List, each	Not made	215 \$ .35	315 \$ .45	415 \$ .56	515 \$ .68	
Metal, 3% Female Nipple	1/2 Female	Catalogue No. List, each	Not made	216 \$ .35	316 \$ .45	416 \$ .56	516 \$ .68	
	Ship. W	Teight Std. Pkg.	40 lbs.	25 lbs.	20 lbs.	10 lbs.	10 lbs.	
COA.		PORCEL	LAIN COVERS WITH NIPPLES					
CROSSIS HOOD ON	1/8 Male	Catalogue No. List, each	19 \$ .25	29 \$ .30	39 \$ .43	49 \$ .58	59 \$ .72	
Percelain, 1/8 Male Nipple	1/8 Female	Catalogue No. List, each	110 \$ .25	210 \$ .30	310 \$ .43	410 \$ .58	510 \$ .72	
AND MINISTER AND A	1/4 Male	Catalogue No. List, each	119 \$ .30	219 \$ .35	319 \$ .48	419 \$ .63	519 \$ .77	
Porcelain, 1/8 Female Nipple	1/4 Female	Catalogue No. List, each	120 \$ .30	220 \$ .35	320 \$ .48	420 \$ .63	520 \$ .77	
	3/8 Male	Catalogue No. List, each	111 \$ .35	211 \$ .41	311 \$ .53	·111 \$ .68	511 \$ .82	
Porrelain, 3/8 Male Nipple	3/8 Female	Catalogue No. List, each	112 \$ .35	212 \$ .41_	312 \$ .53	412 \$ .68	512 \$ .82	
	1/2 Male	Catalogue No. List, each	121 \$ .40	221 \$ .46	32 <b>1</b> \$ .58	421 \$ .73	521 \$ .87	
Service and	1/2 Female	Catalogue No. List, each	122 \$ .40	222 \$ .46	322 \$ .58	422 \$ .73	522 \$ .87	

Obround covers are interchangeable on corresponding sizes of Condulet bodies with Obround openings. 2½ and 3-inch Obround covers are interchangeable. 3½ and 4-inch Obround covers are interchangeable.

40 lbs.

30 lbs.

30 lbs.

Ship. Weight Std. Pkg. C0 lbs.

Proper fastening screws are furnished with covers, and are so held in screw holes that they

can not fall out.

Finishes: Black enamel is the standard finish for metal covers, and will be furnished unless another finish is specified on the order. Galvanized finish will be furnished, if specifically ordered, at same price as black enamel finish. For special plated finishes, brass and bronze covers with plain and special finishes, aluminum covers with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled, galvanized and porcelain Obround covers of the same size may be assorted to make up a standard package, regardless of style of cover. No other assortment is allowed. Standard package discount is allowed on covers when an order is for a standard package of Condulet bodies and an equal number of covers for those bodies; but on an order for covers alone, standard package discount is allowed, only, on the specified standard package quantity of covers.

### CONDULET BODIES-FS SERIES, SHALLOW TYPE-Continued

## TYPES FS, FSA, FSC, FSL AND FSR

For Single Push Button, Double Push Button or Flush Rotary Switches (Shallow); Flush Plug Receptacles (Shallow), and Porcelain or Metal Covers

Over-all Dimensions of Body, Exclusive of Hubs: Length, 4 9-32 Inches; Width, 2 3-4 Inches; Depth, 1 7-8 Inches. Furnished with Fastening Screws for Fittings

### TYPE FS CONDULET BODIES-Black Enamel Finish



Size in inches	1/2	3/4	1
Catalogue Number	75 165 lbs.	FS2 50 120 lbs. \$ .75	FS3 25 65 lbs. \$ .85

### TYPE FSA CONDULET BODIES-Black Enamel Finish



Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	50 140 lbs.	FSA2 30 75 lbs. \$ .75	FSA3 20 60 lbs. \$ .85

#### TYPE FSC CONDULET BODIES-Black Enamel Finish



Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	75 175 lbs.	FSC22 50 150 lbs. \$ .90	FSC33 25 90 lbs. \$1.10

### TYPE FSL CONDULET BODIES-Black Enamel Finish



Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	50 130 lbs.	FSL22 30 80 lbs. \$ .90	FSL33 20 60 lbs. \$1.10

### TYPE FSR CONDULET BODIES-Black Enamel Finish



Size in inches	1/2	3/4	1
Catalogue Number	50	FSR22 30 80 lbs. \$ .90	FSR33 20 60 lbs. \$1.10

CONDULET BODIES-FS SERIES, SHALLOW TYPE-Continued

### TYPES FSLA, FSS, FSCC, FSCA AND FSCT

For Single Push Button, Double Push Button or Flush Rotary Switches (Shallow); Flush Plug Receptacles (Shallow), and Porcelain or Metal Covers

Over-all Dimensions of Body, Exclusive of Hubs: Length, 49-32 Inches; Width, 23-4 Inches; Depth, 17-8 Inches. Furnished with Fastening Screws for Fittings

### TYPE FSLA CONDULET BODIES-Black Enamel Finish

Park In

Size in inches	1/2	3/4	1
Catalogue Number	50 130 lbs.	FSLA22 30 80 lbs. \$ .90	FSLA33 20 60 lbs. \$1.10

### TYPE FSS CONDULET BODIES-Black Enamel Finish



Size in inches	1/2	3/4	1
Catalogue Number	50 130 lbs.	FSS22 30 80 lbs. \$ .90	FSS33 20 60 lbs. \$1.10

#### TYPE FSCC CONDULET BODIES-Black Enamel Finish



Size in inches	1½ in. main 1½ inch branches	<sup>3</sup> ₄ in. main <sup>1</sup> ₂ inch branches	1/2 inch
Catalogue Number Standard Package Ship, Weight Std. Pkg List Price, each	50 140 lbs.	FSCC211 30 90 lbs. \$1.20	FSCC311 20 70 lbs. 1.45

### TYPE FSCA CONDULET BODIES-Black Enamel Finish



Size in inches	1/2	3/4	1
Catalogue Number	50 140 lbs.	30 90 lbs.	FSCA333 20 70 lbs. \$1,45

### TYPE FSCT CONDULET BODIES-Black Enamel Finish



Size in inches	1/2	3/4	1
Catalogue Number Standard Package Ship. Weight Std. Pkg List Price, each	50 140 lbs.	FSCT222 30 90 lbs. \$1.25	FSCT333 20 70 lbs. \$1.45

### CONDULET BODIES-FS SERIES, SHALLOW TYPE-Continued

### TYPES FST AND FSX

For Single Push Button, Double Push Button or Flush Rotary Switches (Shallow); Flush Plug Receptacles (Shallow), and Porcelain or Metal Covers

Over-all Dimensions of Body, Exclusive of Hubs: Length, 4 9-32 Inches; Width, 2 3-4 Inches;
Depth, 17-8 Inches. Furnished with Fastening Screws for Fittings

#### TYPE FST CONDULET BODIES-Black Enamel Finish



	Size in inches	1/2	3/4	1
١	Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	50 140 lbs.	FST222 30 90 lbs. \$1.25	FST333 20 70 lbs. \$1,45

### TYPE FSX CONDULET BODIES-Black Enamel Finish



Size in inches	1/2	3/4	1
Catalogue Number Standard Package. Shipping Weight Std. Pkg List Price, each.	50 160 lbs.	FSX2222 30 100 lbs. \$1.50	FSX3333 20 75 lbs. \$1.70

Switches and receptacles suitable for the FS series of Condulet bodies are as follows:

Single Push Button Switches: PERKINS—2457, 2458, 2459, 2460, 2461, 2462, 2491, 2492, 2493, 2494.

Double Push Button Switches: ARROW E-6500, 6501, 6502, 6503. DIAMOND H-050, 060, 070, 080. G. E. CO.—68247, 68248, 68249, 68250. HART & HEGEMAN-2081, 2082, 2083, 2084. CUTTER-"S-F." MA-CHEN & MAYER-2000, 2001, 2002, 2003. KNOWLES-2971, 2972, 2973, 2974. PERKINS-2201, 2202, 2203, 2204. CUTLER-HAMMER CO.—7201, 7202, 7203.

Double Push Button Lock Switches: ARROW E-6501, 6505, 6506, 6507. DIAMOND H-055, 065, 075, 085. G. E. CO.—GE688, GE689, GE690, GE691. HART & HEGEMAN-2081, 2082, 2083, 2084. MACHEN & MAYER-2004, 2005, 2006, 2007, 2008. KNOWLES-12971, 12972, 12973, 12974. PERKINS-2295, 2296, 2297. 2298.

Double Push Button, Removable Mechanism, Switches: G. E. CO.—GE731, GE732, GE733. PERKINS—2519, 2520, 2521, 2522, 2523, 2524.

Double Push Button, Removable Mechanism, Lock Switches: G. E. CO.—GE684, GE685, GE686. PERKINS—2519, 2520, 2521, 2525, 2526, 2527.

Flush Rotary Switches: ARROW E—6250, 6251, 6252, 6253, 6254, 6255, 6256, 6257. DIAMOND H—0105, 0110. 0120, 0130, 0140, 0150, 0160. G. E. CO.—60468, 60469, 60470, 60473, 60475, 60476, 60477, 60478, 60479, 60480, HART & HEGEMAN—600, 601, 602, 603, 604, 2263. PERKINS—2205, 2206, 2207, 2208, 2209, 2210, 2224, 2325.

Fiush Plug Receptacles: ARROW E-1064. MACHEN & MAYER-2042, 4355. PERKINS-281, 1363, 1708. HUBBELL-5547, 5552, 5579. TRUMBULL-1005, 1008. G. E. CO.-36817.

Removable Fiush Wall Receptacles: G. E. CO.—GE692. PERKINS—2520, 2528.

Double Door Flush Receptacle: G. E. CO.-GE287.

Proper fastening screws are furnished with covers, and are so held in screw holes that they can not fall out

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condule bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and east bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and 'galvanized Condulct bodies of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

# CONDULET BODIES—TWO-GANG FS SERIES—SHALLOW TYPE TWO-GANG TYPES FS, FSC AND FSD

For Single Push Button, Double Push Button or Flush Rotary Switches (Shallow), and Blank Metal Covers

Over-all Dimensions of Body, Exclusive of Hubs: Length, 45-8 Inches; Width, 49-32 Inches; Depth, 17-8 Inches. Furnished with Fastening Screws for Fittings



Two-Gang Type FS with Cover for Single Push Button Switches



Two-Gang Type FSD with Blank Metal Cover



Two-Gang Type FS with Cover for Flush Rotary Switches (Broken-away View, Showing Switches Mounted)



Two-Gang Type FS with Cower for Flush Rotary Switches



Two-Garg Type FSC with Cover for Dockle Push Button Switches



### TWO-GANG TYPE FS CONDULET BODIES-Black Enamel Finish

Size in inches	½ in. main	¾ in. main	1 in. main
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	50 140 lbs.	FS22 25 90 lbs. \$1.30	FS32 15 50 lbs. \$1.40



### TWO-GANG TYPE FSC CONDULET BODIES-Black Enamel Finish

Size in inches	$\frac{1}{2}$ in. mains	34 in. mains	1 in. mains
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	50 150 lbs.	FSC222 25 100 lbs. \$1.40	FSC332 15 60 lbs. \$1.55



### TWO-GANG TYPE FSD CONDULET BODIES-Black Enamel Finish

J					
	Size in inches	½ in. main ½ in. branches	34 in. main	1 in. main	
	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	FSD1112 50 160 lbs.	FSD2112 25 110 lbs.	FSD3112 15 70 lbs. \$1.65	

# CONDULET BODIES—THREE-GANG FS SERIES—SHALLOW TYPE THREE-GANG TYPES FS, FSC AND FSD

For Single Push Button, Double Push Button or Flush Rotary Switches (Shallow); Bryant Heater Control Combination 398 (less Plate), and Blank Metal Covers

Over-all Dimensions of Body, Exclusive of Hubs: Length, 61-2 Inches; Width, 49-32 Inches;
Depth, 17-8 Inches. Furnished with Fastening Screws for Fittings



Three-Gang Type FS with Crouse-Hinds Cover for Bryant Heater Control Combination 398



Three-Gang Type FSC with Cover for Flush Rotary Switches



Three-Gang Type FS with Cover for Single Push Button Switches (Broken-away View, Showing Switches Mounted)



Three-Gang Type FS with Cover for Single Push Button Switches



Three-Gang Type FSD with Cover for Double Push Button Switches



# THREE-GANG TYPE FS CONDULET BODIES Black Enamel Finish

Size in inches	in. main	a in. main	1 in. main
Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	Not Practical	1'S23 20 110 lbs. \$1.80	FS33 10 60 lbs. \$1.95



# THREE-GANG TYPE FSC CONDULET BODIES Black Enamel Finish

Size in inches	½ in. mains	in. mains	1 in. mains
Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	Not Practical	FSC223 20 115 lbs. \$1.90	FSC333 10 65 lbs. \$2.05

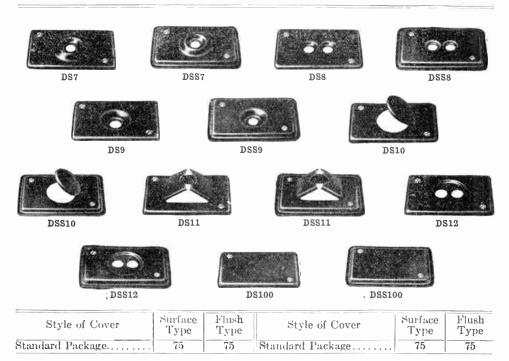


# THREE-GANG TYPE FSD CONDULET BODIES Black Enamel Finish

Size in inches	½ in. main ½ in. branches	3 in. main 1 in. branches	1 in main in branches
Catalogue Number Standard Package. Ship. Wt. Std. Pkg List Price, each	35 190 lbs.	FSD21113 10 120 lbs. \$2.15	FSD31113 10 65 lbs. \$2.30

#### COVERS

# For FD and FS Series of Condulet Bodies Furnished with Fastening Screws



# COVERS FOR SWITCHES AND PLUG RECEPTACLES, AND BLANK METAL COVERS Black Enamel Finish

For Single Push Button Switch	Cat. No List, ea		DSS7 \$ .10	For Rectangular Plug Receptacle	Cat. No List, ea		DSS11 \$ .80
For Double Push Button Switch	Cat. No List, ea		DSS8 \$ .10	For Hubbell Polarity Plug Receptacle 5552	Cat. No List, ea		DSS12 \$ .20
For Flush Rotary Switch	Cat. No List, ea		DSS9 \$ ,10	Blank Metal	Cat. No List, ea		DSS100 \$ .10
For Round Plug Receptacle	Cat. No List, ea		DSS10 \$ .60	Cast Iron	Cat. No List, ea		DSS100g \$ .25
Shipping Weigh	t Std. Pkg.	30 lbs.	35 lbs.	Shipping Weigh	t Std. Pkg.	35 lbs.	40 lbs.

Proper fastening screws are furnished with covers, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for metal covers, and will be furnished unless another finish is specified on the order. Galvanized finish will be furnished, if specifically ordered, at the same price as black enamel finish. For special plated finishes, brass and bronze covers with plain and special finishes, see Manufacturer's Page No. 182.

White enamel finish will be furnished on metal covers, if specifically ordered, at 50% increase over list price of black enamel finish.

All black enameled, galvanized and porcelain covers, listed on this and the following page, may be assorted to make up a standard package.

### **COVERS**

### FOR FD AND FS SERIES OF CONDULET BODIES

Furnished with Fastening Screws

	CO	VERS FO	R FLUSH	PLUG RI	ECEPTACI	LES			
Black Enameled	Surface Type	Flush Type	Style of Cover						Black
	75	75	Standard	l Package	75	75	Enameled		
	For Hubbell "Duplex" Flush Plug Receptacle 6257			For Hubbell Flush Plug Peceptacle 5547, 5802 or 6051*					
	DS13 30 lbs. \$ .30	DSS13 35 lbs. \$ .30	Ship. Wt	ie Number . Std. Pkg. ricε, each .	DS21 30 lbs. \$ .25	DSS21 35 lbs. \$ .25			
		For Hubbell Flush Plug Receptacle 5566							
		e Number Std. Pkg.	DS22 30 lbs. \$ .40	DSS22 35 lbs. \$ .40			and FS series r's Pages Nos.		

### GANG COVERS

### FOR TWO-GANG FS SERIES OF CONDULET BODIES

Furnished with Fastening Screws

	COVERS F	OR FLUS	H SWITC	HES AND	PLUG R	ECEPTAC	LES
Black Enameled	Surface Type	Flush Type	Style o	f Cover	Surface Type	Flush Type	Black Enameled
manicien	C3.	50	Standard	l Package	50	50	Enameled
		ound Flush Receptacles		For Rec	tangular Fl Receptacles	ush Plug	
	\$102 \$1.20	\$\$102 \$1,20		e Number icc, each .	\$112 \$1.60	SS112 \$1.60	
	For Hu	bbell Polari eceptacle 55	ty Plug 52	For H	Iubbell "Du eceptacle 62	plex''	
	\$122 \$ .50	\$S122 \$ .50		e Number ce, each .	S132 \$ .60	SS132 \$ .60	
	For H Receptac	For Hubbell Flush Plug Receptacle 5547, 5802 or 6051*			ubbell Flus eceptacle 55		
	\$212 \$ .50	\$S212 \$ .50		e Number ce, cach .	\$222 \$ .80	SS222 \$ .80	
	For Sing Round Fl	For Single Push Switch and Round Flush Plug Receptacles			gle Push Sw ar Flush Pl		
	\$7102 \$ .80	\$\$7102 \$ .80		e Number ce, each .	\$7112 \$1.20	SS7112 \$1.20	6
	For Sing Hubbell Po	le Push Swi plarity Rece	itch and ptacle 5552	For Single Push Switch and Hubbell "Duplex" Recept, 6257		itch and ecept. 6257	
	\$7122 \$ .50	SS7122 \$ .50	Catalogue . List Pri		\$7132 \$ .50	\$\$7132 \$ .50	
		le Push Swi capt.5547.58		For Sing Hubbell	le Push Swi Plug Recept	itch and acle 5566	
	\$7212 \$ .50	SS7212 \$ .50	Catalogue . List Pric	Number ce, each .	\$7222 \$.50	SS7222 \$ .50	

<sup>\*</sup>Or Bryant "Spartan" receptacle No. 120. For important information, see notes on next page.

# GANG COVERS—Continued FOR TWO-GANG FS SERIES OF CONDULET BODIES

Furnished with Fastening Screws

Black Enameled	Surface Type	Flush Type	Style o	f Cover	Surface Type	Flush Type	Black Enameled	
Enameled	50	50	Standard	Paekage	50	50	Enamelec	
[00]		or Double Push Switch and Round Flush Plug Receptacle		For Double tangular l	For Double Push Switch and Rectangular Flush Plug Receptacle			
	\$8102 \$ .80	\$S\$102 \$ .80			SS112 £1.20	SS8112 \$1.20	<u>े</u>	
$\boxed{ \begin{picture}(20,0) \put(0,0){\line(0,0){100}} \put(0,0){\line(0,0){$	For Double bell Pola	Push Switc	h and Hub- acle 5552	For Double bell "Du	Push Switc plex'' Recep	h and Hub- tacle 6257	[.0]	
	\$3122 \$ .50	SSS122 \$ .50		e Number ce, each .	SS132 \$ .50	\$SS\$132 \$ .50	i v	
60	For Doubl Receptac	e Switch ar le 5547, 580	nd Hubbell 2 or 6051*	For Doubl	le Switch an Receptacle	d Hubbell 5566		
	SS212 \$ .50	ESS212 \$ .50		e Number ce, each .	\$8222 \$.50	SS222 3 .50		
<b>Ø</b>		ry Switch a Plug Rece		For Rotary Flush	Switchand I 1 Plug Rece	Rectangular ptacle		
	S9102 \$ .80	SS9102 \$ .80		e Number ice, each .	\$9112 \$1.20	SS9112 \$1.20	(a) (d)	
		y Switch ar ty Receptac		For Rotar	y Switch arex'' Recepta	rd Hubbell cle 6257		
	£9122 \$ .50	SS9122 \$ .50		e Number	\$9132 \$ .50	SS9132 \$ .50		
	For Rotary Switch and Hubbell Receptacle 5547, 5802 or 6051*  For Rotary Switch and Fubbell Plug Receptacle 5566							
	\$9212 \$ .50	SS9212 \$ .50		e Number iee, each .	\$9222 \$ .50	\$S9222 \$ .50	(0)	
	For Hubbe	11 Receptaci 5347, 5862 (	les 6257 and or 6051*	For Hubbe	ll"Duple"" 5257 and 550	Receptacle:		
	\$ .50	SS13212 \$ .50	Catalogu . I.ist Pri	e Number iee, each .	\$10002 \$.50	\$310222 \$.50	0	
	For Hubbe	ll Pecentac 5547, 5802 (	les 5566 and or 6051*		d Flug Poer ulur Plug li			
	\$21222 \$ .50	SC21222 \$ .50		e Number ice, each .	S10112 £1.75	SS10112 £1.75		
	For Hubbe	ll Polarity F of 5547, 580	Recept. 5552 2 or 6051*	For Hubbe	ell Polarity F ubball Rece	Rocent. 5552 pt. 5566		
	S12212 S .50	S .50		e Number	£12222 \$ .50	SS12222 \$ .50	100	

<sup>\*</sup>Or Bryant "Spartan" receptacle No. 120.

Finishes: Black enamel is the standard finish for metal covers, and will be furnished unless another finish is specified on the order. Galvanized finish will be furnished, if specifically ordered, at the same price as black enamel finish.

White enamel finish will be furnished on metal covers, if specifically ordered, at 50% increase over list price of black enamel finish.

All black enameled and galvanized covers for Condulet bodies of the FD and FS series may be assorted to make up a standard package, also all black enameled and galvanized covers for two-gang FS series of Condulet bodies.

### GANG COVERS

### For Two and Three-gang Types FS, FSC and FSD Condulet Bodies

Furnished with Fastening Screws



**S82** 





COVERS FOR TWO-GANG CONDULET BODIES-Black Enamel Finish

Style of Cover Standard Package		Surface Type	Flush Type Style of Co		lover	Surface Type	Flush Type
		50	50	Standard Package		50	50
For Single Push Button Switches	Cat. No List, ca		SS72 8 . 20	For Flush Rotary Switches	Cat. No List, ea		SS92 \$ .20
For Double Push Button Switches	Cat. No List, ea		\$\$82 \$ .20	Blank Metal	Cat. No List, ea	S1002 \$ .20	SS1002 8 .20
Shipping Weight Std. Pkg. 30 lbs.		30 lbs.	35 lbs.	Shipping Weigh	t Std. Pkg.	30 lbs.	35 lbs.



S93





**SS83** 



COVERS FOR THREE-GANG CONDULET BODIES-Black Enamel Finish

Style of Cover		Surface Type	Flush Type			Surface Type	Flush Type
Standard Package		35	35	Standard Package		35	35
For Single Push Button Switches	Cat. No List, ea		SS73 \$ .40	Crouse-Hinds Cover for Bryant Heater Control	Cat. No.	S7113	SS7113
For Double Push Button Switches	Cat. No List, ea	S83 \$ .40	SSC3 \$ .40	Combination 398 less Eryant Plate	List, ea	\$1.45	\$1.45
For Flush Rotary Switches	Cat. No List ea		SS03 \$ .40	Blank Metal	Cat. No List, ea	\$1003 \$ .40	\$S1003 \$ .40
Shipping Weight Std. Pkg. CO lbs.		CO lbs.	C5 lbs.	Chipping Weight Std. Pkg.		40 lbs.	45 lbs.

Proper fastening screws are furnished with covers, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for metal covers, and will be furnished unless another finish is specified on the order. Galvanized finish will be furnished, if specifically ordered, at same price as black enamel finish. For special plated finishes, brass and bronze covers with plain and special finishes, see Manufacturer's Page No. 182.

White enamel finish will be furnished on metal covers, if specifically ordered, at 50% increase over list price of black enamel finish.

All black enameled and galvanized covers for Two Gang ES series Conduct bodies, may be

All black enameled and galvanized covers for Two-Gang FS series Condulet bodies may be assorted to make up a standard package.

All black enameled and galvanized covers for Three-Gang FS series Condulet bodies may be assorted to make up a standard package.

#### CONDULETS

### TYPE FF-SERVICE ENTRANCE-Continued

Fused and Weatherproof-For 250 Volt Cartridge or 125 Volt Plug Fuse Cut-outs Furnished with Universal Cut-out Fastening Plate, Porcelain Bushings and all necessary Bolts and Screws, but without Cut-out

For 30 Ampere, 250 Volt Cartridge or 125 Volt Plug Fuse, N. E. C. Main Line Cut-outs-Cut-outs not Furnished

Control of the second	Style of Cut-out	Size in inches	1/2	3/4	1
	2-wire or 3-wire	Catalogue Number Standard Package Weight Std. Pkg. List Price, each	20 200 lbs.	FF23022 20 230 lbs. \$4.00	FF33022 10 140 lbs. \$4.10
S11 - 11 - 12	Style of Cut-out	Size in inches	3/4	1	11/4
Padlock is not included in list prices	4-wire	Catalogue Number Standard Package Weight Std. Pkg. List Price, each	20 280 Ibs.	FF33042 10 180 lbs. \$4.90	FF43042 10 195 lbs. \$5.10

### For 60 Ampere, 250 Volt, N. E. C. Main Line Cut-outs-Cut-outs not Furnished

Style of Cut-out		11/4	Size in inches	Style of Cut-out	1	11/4	
z-wire	10	10	Cat. No Std. Pkg .Wt. Std. Pkg. List, each	4-wire	FF.6042 10 195 lbs. \$6.85	FF46042 10 210 lbs. \$7.00	

#### For 100 Ampere, 250 Volt, N. E. C. Main Line Cut-outs-Cut-outs not Furnished

Style of Cut-out		11/2	2	Size in inches	Style of Cut-out	11/4	11/2	2
2-wire or 3-wire	10 250 lbg	FF510022 5 145 lbs. \$10.30	5	Cat. No Std. Pkg .Wt. Std. Pkg. List, each	4 ****	FF410042 10 300 lbs. \$12.10	FF510042 5 175 lbs. \$12.30	FF610042 5 170 lbs. \$12.50

The universal cut-out fastening plates, furnished with the Condulets, take the following cut-outs:

30 Ampere, 250 Volt, Cartridge and 125 Volt, Plug Fuse Cut-outs

2-Wire: BRYANT—(Cartridge) 1917, (Plug) 62965. D. & W.—(Cartridge) 91102. G. E. CO.—(Cartridge) 34367.

(Plug) 62965. NOARK—(Cartridge) 3327. PAISTE—(Cartridge) 72965. (Plug) 2965. SHAWMUT—(Cartridge) 2010.

3-Wire: BRYANT—(Cartridge) 29653, (Plug) 2965. WEBER—(Plug) 62965. UNION—(Cartridge) 2010.

3-Wire: BRYANT—(Cartridge) 1924, (Plug) 62165. D. & W.—(Cartridge) 91103. G. E. CO.—(Cartridge) 34372, (Plug) 62165. NOARK—(Cartridge) 3328. PAISTE—(Cartridge) 71256, (Plug) 2165. SHAWMUT—(Cartridge) 2079. TRUMBULL—(Cartridge) 21653, (Plug) 2165. WEBER—(Plug) 62165. UNION—(Cartridge) 2012.

4-Wire: Mount two 2-wire cut-outs side by side.

Mount two 2-wire cut-outs side by side.

### 60 Ampere, 250 Volt, Cut-outs

2-Wire: BRYANT—(Cartridge) 1918. D. & W.—(Cartridge) 91108. G. E. CO.—(Cartridge) 34376. NOARK—(Cartridge) 3329. PAISTE—(Cartridge) 82965. SHAWMUT—(Cartridge) 2078. TRUMBULL—(Cartridge) 29656. UNION—(Cartridge) 2011.

3-Wire: BRYANT—(Cartridge) 1925. D. & W.—(Cartridge) 91109. G. E. CO.—(Cartridge) 34377. NOARK—(Cartridge) 3330. PAISTE—(Cartridge) 82165. SHAWMUT—(Cartridge) 2080. TRUMBULL—(Cartridge) 2013.

4-Wire: Mount two 2-wire cut-outs side by side.

#### 100 Ampere, 250 Volt, Cut-outs

2-Wire: BRYANT—(Cartridge) 271. D. & W.—(Cartridge) 91119. G. E. CO.—(Cartridge) 36801. NOARK—(Cartridge) 3331. SHAWMUT—(Cartridge) 2101. UNION—(Cartridge) 2711.

3-Wire: BRYANT—(Cartridge) 272. D. & W.—(Cartridge) 91120. G. E. CO.—(Cartridge) 36800. NOARK—(Cartridge) 3332. SHAWMUT—(Cartridge) 2102. UNION—(Cartridge) 2015. (Cartridge) 3332. SHAWMUT—(Cartridge) 4-Wire: Mount two 2-wire cut-outs side by side.

Padlock is not included in prices for Condulets.

### CONDULETS-FOR CONTROL OF HEATING DEVICES

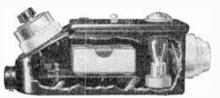
### TYPE FH

### TYPE FHF

Furnished with Crouse-Hinds Receptacle C337G, Adjustable Bar for Round Base Switch or Plug Receptacle and all necessary Fastening Screws Furnished with Pilot Lamp Receptacle, Universal Cut-out Fastening Plate, Adapting Rings and Adjustable Bars for Switch and Attachment Plug Receptacle, Jewel in Cover and all necessary Bolts and Screws



Type FH
Showing Snap Switch, Flush Plug Receptacle,
Cover DSt0. Crouse-Hinds Recentacle C337G
with Guard and Incandescent
Lamp Mounted



Type FHF
Showing Snap Switch, Cut-out, Incandescent Lamp
and Attachment Plug Receptacle Mounted
(Broken-away View)

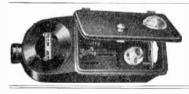
## TYPE FH CONDULET BCDIES—Black Enamel Finish

F



	Size in inches	1/2	3/4	1
orm	Catalogue Number	FIII110	FH210	F11310
10	Standard Package	15	15	10
	Ship. Wt. Std. Pkg.	95 lbs.	100 lbs.	75 lbs.
	List Price, each	82.00	\$2.60	\$2.70
	Size in inches	1/2	3/4	1
Zorm.				
form			FH220	F11320
form 20	Standard Package	15	15	10
	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	15 120 lbs.		

### TYPE FHF CONDULET BODIES-Black Enamel Finish



Size in inches	1/2	3/4
Catalogue Number	15	FHF220 15 130 lbs. \$4.75

The adjustable bars and adapting rings furnished with each Condulet permit the proper mounting of any switch or Form 5 or Form 10 (or in case of type FHF Condulet, any Form 20) attachment plug receptacle enumerated on Manufacturer's Page Nos. 62 and 63.

The universal cut-out fastening plate, furnished with each type FHF Condulet, takes any of the following 2-wire, 30 ampere, 250 volt cartridge, or 2-wire, 30 ampere, 125 volt, plug fuse cut-outs:

BRYANT—(Cartridge) 1917, (Plug) 62965. D. & W.—(Cartridge) 91102. G. E. CO.—(Cartridge) 34367, (Plug) 62965. NOARK—(Cartridge) 3327. PAISTE—(Cartridge) 72965, (Plug) 2965. SHAWMUT—(Cartridge) 2077. TRUMBULL—(Cartridge) 2063, (Plug) 2965. WEBER—(Plug) 62965. UNION—(Cartridge) 2010.

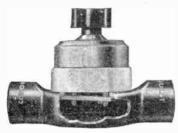
Type PHF Condulets are designed to take style H (bulb S9) lamp.

Type FH Condulet bodies take covers DS7, DS8, DS9, DS10, DS11 and DS12,

# CONDULET BODIES—G AND H SERIES—Continued TYPES G AND GA

Take Round Covers; 5, 10 or 20 Ampere Round Base Switches, or Round Base Fittings

Furnished with Adjustable Bar and all necessary Fastening Screws



Type G
Showing Snap Switch Mounted
(Broken-away View Illustrating use of Adjustable Bar
in Fastening Fitting or Cover to a Condulet Body
of the G and H Series)

Condulct bodies of the G and H series are so designed that covers, switches or fittings are fastened to them by means of an adjustable bar and two screws. The adjustable bar permits switch or fitting to be mounted in any desired position.

A gasket may be used between cover or fitting and Condulet body.

Gaskets are not furnished with Condulet bodies, and if desired must be ordered separately.

Form 5, Form 10 and Form 20 are designations to indicate sizes of Condulct bodies which take fittings correspondingly classified on two of the following pages.



Type G



Type GA

Ci.	TYF	E G BOD	DIES	Black Enamel	Size	TYP	E GA BOI	DIES
Size	Form 5	Form 10	Form 20	Finish	Size	Form 5	Form 10	Form 20
½- inch	G151 100 110 lbs. \$ .55	G1101 75 90 lbs. \$ .65	G1201 50 75 lbs. 8 .90	.Catalogue Number. .Standard Package .Ship. Wt. Std. Pkg List Price, each	1/2- inch	GA151 100 120 lbs. \$ .75	GA1101 75 100 lbs. \$ .85	GA1201 50 80 lbs. \$1.10
3/4- inch	(1252 50 75 lbs. \$ .65	G2102 25 55 lbs. \$ .80	G2202 25 60 lbs. \$ .95	.Catalogue Number. .Standard Package. .Sh.p. Wt. Std. Pkg. List Price, each.	3/4- inch	GA252 50 80 lbs. \$ .85	GA2102 25 60 lbs. \$1.00	GA2202 25 65 lbs. \$1.20
1- inch	G353 25 60 lbs. \$ .90	G3103 25 65 lbs. \$1.00	G3203 25 70 lbs. \$1.20	Catalogue NumberStandard PackageShip. Wt. Std. PkgList Price, each	1- inch	GA353 25 65 lbs. \$1.10	GA3103 25 70 lbs. \$1.20	GA3203 25 75 lbs. \$1.50

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type, size and form may be assorted to make up a standard package. No other assortment is allowed.

### CONDULET BODIES-G AND H SERIES-Continued TYPES GL, GLA, GT AND GTA

Take Round Covers; 5, 10 or 20 Ampere Round Base Switches, or Round Base Fittings

Furnished with Adjustable Bar and all necessary Fastening Screws



Type GL



Ę	Name and Address of the Owner, when the Owner, which the Owner,	
3	(100)	
	Type GLA	

					II			
Size	TYP	E GL BO	DIES	Black Enamel	Size	TYPE GLA BODIES		
DIZE	Form 5	Form 10	Form 20	Finish	Dize	Form 5	Form 10	Form 20
1/2- inch	GL151 100 110 lbs. \$ .60	GL1101 75 100 lbs. \$ .70	GL1201 50 80 lbs. \$ :95	Catalogue No Standard Package. .Weight Std. Pkg. List Price, each		GLA151 100 130 lbs. \$ .75	GLA 1101 75 110 lbs. \$ .85	GLA 1201 50 90 lbs. \$1.10
3/4- inch	(1L252 50 75 lbs. \$ .70	GL2102 25 55 lbs. \$ .85	GL2202 25 60 lbs. \$1.05	Catalogue No Standard Package. .Weight Std. Pkg. List Price, each	3/4- inch	GLA252 50 95 lbs. \$ .85	GLA 2102 25 60 lbs. \$1.00	GLA 2202 25 65 lbs. \$1.20
1- inch	GL353 25 60 lbs. \$ .95	GL3103 25 65 lbs. \$1.05	GL3203 25 75 lbs. \$1.35	Catalogue No Standard Package. Weight Std. Pkg. List Price, each	1- inch	(1LA353 25 60 lbs. \$1.10	GLA 3103 25 65 lbs. \$1.20	GLA 3203 25 60 lbs. \$1.50





Size	TYPE GT BODIES			Blac's Enamel Finish	Size	TYPE GTA BODIES Form 5   Form 10   Form 20			
	Form 5	Form 10	Form 20	2 2445044		Form 5	1		
1/2- inch	GT151 100 110 lbs	GT1101 75 100 lbs.	GT1201 50 80 lbs.	Catalogue No Standard Package. Weight Std. Pkg.	1/2- inch	GTA151 100 160 lbs.	GTA1101 75 120 lbs.	GTA1201 50 100 lbs.	
AHCH	\$ .75	\$ .85	\$1.10	List Price, each	2.1.011	\$ .90	\$1.00	\$1.25	
3/4- inch	GT252 50 75 lbs. \$ .85	GT2102 25 55 lbs. \$1.00	G1 2202 25 60 lbs. \$1.20	Catalogue No Standard Package. .Weight Std. Pkg. List Price, each	3/4- inch	GTA252 50 100 lbs. \$1.00	GTA2102 25 60 lbs. \$1.15	GTA2202 25 65 lbs. \$1.40	
1- inch	CT353 25 60 lbs. \$1.10	GT3103 25 65 lbs. \$1.20	GT3203 25 75 lbs. \$1.50	Catalogue No Standard Package. . Weight Std. Pkg. List Price, each	1- inch	GTA353 25 60 lbs. \$1.35	GTA3103 25 65 lbs. \$1.45	GTA3203 25 75 lbs. \$1.80	

Form 5, Form 10 and Form 20 are designations to indicate sizes of Condulet bodies which take fittings correspondingly classified on Manufacturer's Page Nos. 62 and 63.

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type, size and form may be assorted to make up a standard package. No other assortment is allowed.

### CONDULET BODIES-G AND H SERIES-Continued

### TYPES GX, GXA, H AND HA

Take Round Covers; 5, 10 or 20-Ampere Round Base Switches, or Round Base Fittings

Furnished with Adjustable Bar and all necessary Fastening Screws



Type GX



Type GXA

Size	TYP	E GX BO	DIES	Black Enamel	Size	TYPE GXA BODIES		
	Form 5	Form 10	Form 20	Finish	1,126	Form 5	Form 10	Form 20
1/2- inch	GX151 100 130 lbs. \$ .90	GX1101 75 120 lbs. \$1.00	GX1201 50 100 lbs. \$1.25	Catalogue No Standard Pkg Ship. Wt. Std. Pkg. List Price, each	1/2- inch	GXA151 100 180 lbs. \$1.05	GXA1101 75 150 lbs. \$1.15	GXA1201 50 110 lbs. \$1.40
3/4- inch	GX252 50 85 lbs. \$1.00	GX2102 25 70 lbs. \$1.15	GX2202 25 80 lbs. \$1.40	Catalogue No Standard Pkg Ship. Wt. Std. Pkg. List Price, each	3/4- inch	GXA252 50 110 lbs. \$1.15	25 75 lbs.	GXA2202 25 80 lbs. \$1.60
1- inch	GX353 25 70 lbs. 81.35	GX3103 25 80 lbs. \$1.45	GX3203 25 95 lbs. \$1.80	Catalogue No Standard Pkg Ship. Wt. Std. Pkg. List Price, each	1-	GXA353 25 75 lbs. \$1.55	25 80 lbs.	GXA3203 25 85 lbs. \$2.00



Туре Н



Туре НА

Size	TYP	E H BOD	DIES	Black Enamel	Size	TYPE HA BODIES		
	Form 5	Form 10	Form 20	Finish	K11ZC	Form 5	Form 10	Form 20
1/2- inch	1115 100 100 lbs. \$ .45	H110 75 85 lbs. \$ .55	11120 50 80 lbs. \$ .80	Catalogue No Standard Pkg Ship. Wt. Std. Pkg. List Price, each	1/2~ inch	11A15 100 110 lbs. \$ .50	HA110 75 95 lbs. \$ .60	HA120 50 95 lbs. \$ .85
3/4- inch	1125 50 70 lbs. \$ .55	11210 25 50 lbs. \$ .70	11220 25 60 lbs. \$ .85	Catalogue No Standard Pkg Ship. Wt. Std. Pkg. List Price, each	3/4- inch	11A25 50 80 lbs. \$ .60	HA210 25 60 lbs. \$ .75	HA220 25 65 lbs. \$ .90
1- inch	1135 25 50 lbs. \$ .80	11310 25 60 lbs. \$ .90	11320 25 70 lbs. \$1.10	Catalogue No Standard Pkg Ship. Wt. Std. Pkg. List Price, each	1- inch	HA35 25 60 lbs. \$ .85	HA310 25 65 lbs. \$ .95	HA320 25 75 lbs. \$1.20

Form 5, Form 10 and Form 20 are designations to indicate sizes of Condulet bodies which take fittings correspondingly classified on Manufacturer's Page Nos. 62 and 63.

Finishes: Black enamel is the standard finish for Conduct bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Conduct bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, east brass and east bronze Conduct bodies with plain and special finishes, aluminum Conduct bodies with plain and black enamel finish, see Manufacturer's Page No. 182

with plain and black enamel finish, see Manufacturer's Page No. 182. Black enameled and galvanized Condulet bodies of the same type, size and form may be assorted

to make up a standard package. No other assortment is allowed.

### CONDULET BODIES-G AND H SERIES-Continued

### TYPES HH, HHC, HLA AND GXB

Take Con. d Covers; 5, 10 or 20 Ampere Round Base Switches, or Round Base Fittings— Except Type GXB which is made in Form 10 Only

Furnished with Adjustable Bar and All Necessary Fastening Screws



Type HH



Type HHC

Size	TIPE HH BODIES			Black Enamel	Size	TYPE HHC BODIES		
	Form 5	Form 5 Form 10 Form 20		Finish	1 TAC	Form 5	Form 10	Form 20
1/2- inch	HHH1£1 100 130 lbs \$ .55	HH1101 75 110 lbs. \$ .65	50	Catalogue No Standard Pkg Ship. Wt Std. Pkg. List Price, each		HHC151 100 160 lbs. \$ .75	HHC110t 75 140 lbs. \$ .85	HHC1201 50 110 lbs. \$1.10
3/4- inch	H11252 50 95 lbs. \$ .65	H112102 25 65 lbs. \$ .80	25 75 lbs.	Catalogue No Standard Pkg Ship. Wt. Std. Pkg. List Price, each	inch	HHC252 50 100 lbs. \$ .85	11HC2102 25 70 lbs. \$1.00	HHC2202 25 85 lbs. \$1.20
1- inch	HH353 25 65 lbs. \$ .90	HH3103 25 70 lbs. 81.00	H i i 3203 25 75 lbs. \$1,20	Catalogue No Standard Pkg Ship. Wt. Std. Pkg. List Price. each	1- inch	HHC353 25 75 lbs. 81.10	HHC3103 25 80 lbs. \$1.20	H11C3203 25 90 lbs. \$1.50



Гуре HLA



Type GX

Size	TYPE HLA BODIES			Black Enamel	TYPE GXB BODIES				
	Form 5	Form 10	Form 20	Finish	Size	Form 10	Size	Form 10	
1/2- inch	HLA151 100 130 lbs. \$ .60	75 110 lbs. \$ .70	50 100 lbs. \$ .95	Standard Pkg Ship. Wt. Std. Pkg. List Price, each	TT	75	Back Hub 3/4-inch SideHubs 1/2-inch	75	
3/4- inch	11LA252 50 95 lbs. \$ .70	HLA 2102 25 65 lbs. \$ .85	25	Catalogue No Standard Pkg Ship. Wt. Std. Pkg. List Price, each	E C		H	- A	
1- inch	HLA353 25 65 lbs. \$ .95	HLA 3103 25 70 lbs. \$1.05	25 75 lbs.	Catalogue No Standard Pkg Ship. Wt. Std. Pkg. . List Price, each	Combi	nation of type G	XB and type K Co	ondulets,	

Form 5, Form 10 and Form 20 are designations to indicate sizes of Condulet bodies which take fittings correspondingly classified on Manufacturer's Page Nos. 62 and 63.

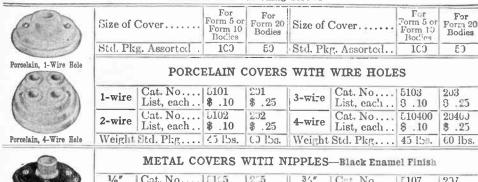
Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type, size and form may be

assorted to make up a standard package. No other assortment is allowed.

### COVERS

#### For G and H Series of Condulet Bodies Furnished with Fastening Scrows





Metal, Male Nipple



	Cat. No		200		CEL NO		237
Male	List, each	3 .20	3 .35	Male	List, each	8 .25	\$ .40
	Cat. No			3/3"	Cat. No	€103	208
Female	List, each	\$ .20	\$ .35		List, each		\$ .40
1/4"	Cat. No	L1013	2.013	1/2"	Cat. No	51015	2015
Male	List, each	\$ .23	8 .38	Male	List, each	\$ .30	\$ .45
	Cat. No			1/2"	Cat. No	51013	2013
Female	List, each	\$ .23	\$ .38		List, each		\$ .45
Weight	Std. Pkg	E.) 15s.	£5 lbs.	Weight	Std. Pkg	25 lbs.	30 lbs.
Male Male Formale	Cat. No List, each Cat. No List, each	\$ .23 \$ .23 \$ .23	2J13 8 .38 2J14 8 .38	Male 1/2" Female	Cat. No List, each Cat. No List, each	51015 \$ .30 51013 \$ .30	2015 \$ .45 2013 \$ .45





Porcelain, Female Nipple

### PORCELAIN COVERS WITH NIPPLES

Weight	Std. Pkg	CO lbs.	Uj lbs.	Weight	Std. Pkg	60 lbs.	55 lbs.
Female	List, each	\$ .30	\$ .48	Female	List, each	\$ .40	\$ .58
1/4"	Cat. No	51020	2020 -	1/2"	Cat. No	51022	2022
Male	List, each	\$ .30	\$ .49	I.iale	List, each	\$ .40	\$ .58
	Cat. No		2019	1/2"	Cat. No	51021	2021
	List, each		\$ .43	Female	List, each	\$ .35	\$ .53
	Cat. No		2010	3/8"	Cat. No	51012	2012
	List, each		\$ .43	Male	List, each	\$ .35	\$ .53
	Cat. No		200		Cat. No		2011

## BLANK METAL COVERS—Black Enamel Finish



Blank Metal

For	Steel Steel	Cast Iron	Style of Cover	For	Sheet Steel	Cast Iron
Form 5 or Form 10 Bodies	51000 100 20 lbs. \$ .08	51000g 100 20 lbs. \$ .16	Catalogue Number Standard Package	Form 20	2000 50 20 lbs. \$ .23	2000g 50 20 lbs. \$ .30

The same covers fit both Form 5 and Form 10 Condulct bodies, and these covers are interchangeable on any Form 5 or Form 10 Condulct body of the G and II series.

Covers for Form 20 Condulet bodies are interchangeable on any Form 20 Condulet body of the G and II series.

Proper fastening screws are furnished with covers, and are so held in screw holes that they can not fall out.

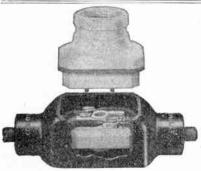
Finishes: Black enamel is the standard finish for metal covers, and will be furnished unless another finish is specified on the order. Galvanized finish will be furnished, if specifically ordered, at same price as black enamel finish. For special plated finishes, brass and bronze covers with plain and special finishes, aluminum covers with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled, galvanized and porcelain covers of the same size may be assorted to make up a standard package, regardless of style of cover. No other assortment of covers only

Standard package discount is allowed on covers when an order is for a standard package of Condulet bodies and an equal number of covers for those bodies.

# CONDULET BODIES—J AND K SERIES—Continued TYPES J, JA AND JB

Take Norbitt Conduletto Fittings and Blank Metal Cover



Type J
Showing Norbitt Condulctto Receptacle with Shade Holder Groove
Mounted (Broken-away and Exploded View)

Condulet bodies of the J and K series are so designed that the bases of Norbitt Conduletto fittings or blank metal covers fasten to them by means of a single screw.

The cap of the Norbitt Conduletto Hubbell plug receptacle is secured to its base by a single center screw.

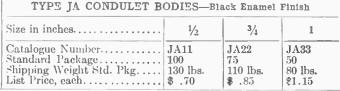
The cap of a Norbitt Conduletto receptacle or rosette is secured to its base by two screws, which also complete the electrical connection.

A gasket is furnished with each Norbitt Conductto fitting and blank metal cover, and makes the installation weatherproof.

# TYPE J CONDULET BODIES—Black Enamel Finish Size in inches. ½ 3/4 1 Catalogue Number. J11 J22 J33 Standard Package 200 100 50



# Standard Package 200 100 50 Shipping Weight Std. Pkg. 240 lbs. 150 lbs. 80 lbs. List Price, each \$ .6) \$ .75 \$1.05





### TYPE JB CONDULET BODIES-Black Enamel Finish

3	Size in inches	1/2	3/4	1
18	Jatalogue Number	100	JB22 75 120 lbs. \$ .85	JB33 50 90 lbs. \$1,15

Norbitt Conduletto fittings and the blank metal cover are made in one size only, and are interchangeable on all Condulet bodies of the J and K series.

Proper fastening screws are furnished with Norbitt Conduletto fittings and blank metal cover, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

### CONDULET BODIES-J AND K SERIES-Continued

# TYPES JL, JT, JU, JX AND K

Take Norbitt Conduletto Fittings and Blank Metal Cover



TYPE JL CONDULET BODIES—Black Enamel Finish									
Size in inches	1/2	3/4	1						
Catalogue Number	100 140 lbs.	JL22 75 120 lbs. \$ .95	J1.33 50 90 lbs. \$1.05						



TYPE JT CONDULET BODIES—Black Enamel Finish			
Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg.	100	JT222 75 130 lbs.	JT333 50 100 lbs.
List Price, each		\$1.05	\$1 15



# TYPE JU CONDULET BODICS—Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	100 160 lbs.	JU22 75 140 lbs. \$ .85	JU33 50 110 lbs. \$1.15



## TYPE JX CONDULET BODIES—Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 180 lbs.	75	JX3533 50 120 lbs. \$1.30



TYPE K	CONDULET	BODIES-B	lack Ename	Finish
		1	0.4	

Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 100 lbs.	K2 75 85 lbs. \$ .65	K3 50 70 lbs. \$ .95

Norbitt Condulctto fittings and the blank metal cover are made in one size only, and are interchangeable on all Condulct bodies of the J and K series.

Proper fastening screws are furnished with Norbitt Conduletto fittings and blank metal cover, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enumeled and galvanized Condulct bodies of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

## CONDULET BODIES-J AND K SERIES-Continued TYPES KA, KB, KC AND KD

Take Norbitt Conduletto Fittings and Blank Metal Cover



TYPE KA CONDULET	BODIES-	-Black Enar	nel Finish
Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100	KA2 75 90 lbs. \$ .75	KA3 50 75 lbs. \$1.05



TYPE KB CONDULET	BODIES-	Black Ename	el Finish
Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 110 lbs.	KB2 75 90 lbs. \$ .75	KB3 50 75 lbs. \$1.05



### TYPE KC CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	100 160 lbs.	KC2 75 125 lbs. \$ .75	KC3 50 100 lbs. \$1.05



### TYPE KD CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 160 lbs.	KD2 75 125 lbs. \$ .75	KD3 50 100 lbs. \$1.05



#### BLANK METAL COVER-Cast Iron For 1-2, 3-4 and 1-inch Condulet Bodies of the J and K Series

Catalogue Number	J100	This blank metal		
Standard Package	200 90 lbs.	cover is furnished with gasket and fas-		
List Price, each	\$ .30	tening screw.		

Norbitt Conduletto fittings and the blank metal cover are made in one size only, and are interchangeable on all Condulct bodies of the J and K series.

Proper fastening screws are furnished with Norbitt Conduletto fittings and blank metal cover,

and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for Condulet bodies and blank metal cover, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies and all galvanized finish on blank metal cover will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies and blank metal cover with plain and special finishes, aluminum Conduct branches are considered to the cover with plain and special finishes, aluminum Conduct branches are considered to the cover with plain and special finishes, aluminum Conduct branches are considered to the cover with plain and special finishes, aluminum Conduct branches are considered to the cover with plain and special finishes, aluminum Conduct branches are considered to the cover with plain and special finishes. dulet bodies and blank metal cover with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type and size may be assorted to make up a standard package. No other assortment of Condulct bodies is allowed. Black enameled and galvanized blank metal covers may be assorted to make up a standard

package. No other assortment of covers is allowed.

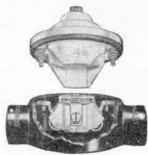
Standard package discount is allowed on covers when an order is for a standard package of Condulet bodies and an equal number of covers for those bodies; but on an order for covere alone standard package discount is allowed, only, on the specified standard package quantity of covers.

# CONDULET BODIES WITH ELLIPTICAL OPENINGS—RJ AND RK SERIES—Continued TYPES RJ AND RJA

Take Elliptical Conduletto Fittings and Elliptical Covers



Type RJ Showing Elliptical Conduletto Receptacle (Broken-away and Exploded View)



Type RJ Showing Elliptical Conduletto Resette (Broken-away and Exploded View)

Condulet bodies with elliptical openings are so designed that elliptical Conduletto fittings and elliptical covers fasten to them by means of two screws which are always accessible. These two screws secure both cap and base of an elliptical Conduletto fitting to the Condulet body.

two screws secure both cap and base of an elliptical Conduletto fitting to the Condulet body.

Ample space is provided in the Condulet body for the unobstructed passage of extra wires.

A gasket is furnished with each elliptical Conduletto fitting, and makes the installation weatherproof. Gaskets are not furnished with elliptical covers, and if desired must be ordered separately.

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1 2 m

TYPE RJ CONDULET BODIES-Black Enamel Finish			
Size in inches	1/2	3/4	1
Catalogue Number	200 240 lbs.	RJ22 100 130 lbs. \$ .60	RJ33 50 80 lbs. \$ .90



TYPE RJA CONDULET BODIES—Black Enamel Finish			
Size in inches	1/2	3/4	1
Catalogue Number	100 140 lbs.	RJA22 75 110 lbs. \$ .70	RJA33 50 85 lbs. \$1.00

Elliptical Conduletto fittings and elliptical covers are made in one size only, and are interchangeable on Condulet bodies of the RJ and RK series.

Proper fastening screws are furnished with elliptical Conduletto fittings and elliptical Condulet covers, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and east bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

CONDULET BODIES WITH ELLIPTICAL OPENINGS-RI AND RK SERIES-Continued

# TYPES RJB, RJD, RJF, RJK AND RJL

Take Elliptical Conduletto Fittings and Elliptical Covers

TYPE RJB CONDULET	BODIES-	-Black Enam	el Finish
Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	100 150 lbs.	RJB22 75 120 lbs. \$ .80	RJB33 50 90 lbs. \$ .90
TYPE RJD CONDULET	BODIES-	-Black Enam	el Finish
Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	100 160 lbs.	RJE22 75 130 lbs. \$ .70	RJD33 50 95 lbs. \$1,00
TYPE RJF COMDULET	DODIES-	-Black Enam	el Finish
Size in inches	1/2.	3/4	1



#### inish 1 RJF33 Catalogue Number..... RJF11 RJF22 Standard Package..... 75 50 Shipping Weight Std. Pkg... 170 lbs. 140 lbs. 100 lbs. \$ .70 \$ .80 \$ .90



TYPE RJK COLIDULAT	BODIES—Black Enamel Finish		
Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	100 160 lbs.	RJK22 75 130 lbs. \$ .80	RJK33 50 95 lbs. \$ .90



TYPE RJL CONDULTT	BODIES-	Black Enan	nel Finish
Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	RJL11 100 150 lbs. \$ .70	RJL22 75 120 lbs. \$ .80	RJL33 50 90 lbs. \$ .90

Elliptical Conduletto fittings and elliptical covers are made in one size only, and are interchangeable on Condulet bodies of the RJ and RK series.

Proper fastening screws are furnished with elliptical Conduletto fittings and elliptical Condulet covers, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifics galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

CONDULET BODIES WITH ELLIPTICAL OPENINGS-RJ AND RK SERIES-Continued

# TYPES RJR, RJT, RJU, RJX AND RK

Take Elliptical Conduletto Fittings and Elliptical Covers



TYPE RJR CONDULET	BODIES-	-Black Enam	el Finish
Size in inches		3/4 EJR22	1 RJR33
Standard Package Shipping Weight Std. Pkg List Price, each	100 150 lbs.	75 120 lbs. \$ .80	50 90 lbs. \$ .50



TYPE RJT CONDULET BCDIES—Black Enamel F			
Size in inches	1/2	3/4	1
Catalogue Number	RJT111	RJT222	RJT333
Standard Package	100	75	50
Shipping Weight Std. Pkg	160 lbs.	130 lbs.	95 lbs.
List Price, each	\$ .80	\$ .90	\$1.00



TYPE	RJU	CONDULET	BODIES-Black	Enamel :	Finish

	Size in inches	1/2	3/4	1
I	Catalogue Number	100 135 lbs.	75 100 lbs.	RJU33 50 80 lbs. \$ .95



# TYPE RJX CONDULET BODIES—Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 160 lbs.	RJX2222 75 130 lbs. \$1.00	RJX3333 50 95 lbs. \$1.10



#### TYPE RK CONDULET BODIES-Black Enamél Finish

Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100		RK3 50 80 lbs. \$ .80

Elliptical Condulcto fittings and elliptical covers are made in one size only, and are interchangeable on Condulct bodies of the RJ and RK series.

Proper fastening screws are furnished with elliptical Conduletto fittings and elliptical Condulet covers, and are so held in screw holes that they can not fall out.

Finishes: Black enumel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulet bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulet bodies with plain and special finishes, aluminum Condulet bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

# CONDULET BODIES WITH ELLIPTICAL OPENINGS-RJ AND RK SERIES-Continued TYPES RKA, RKB, RKC, RKD AND RKK

Take Elliptical Conduletto Fittings and Elliptical Covers



TYPE_RKA CONDULET BODIES—Black Enamel Finish				
Size in inches	1/2	3/4	1	
Catalogue Number	100 135 lbs.	RKA2 75 100 lbs. \$ .60	RKA3 50 80 lbs. \$ .90	



# TYPE RKB CONDULET BODIES—Black Enamel Finish

		1	
Size in inches	1/2	3/4	1
Catalogue Number	RKB1	RKB2	RKB3
Standard Package	100	75	50
Shipping Weight Std. Pkg.	135 lbs.	100 lbs.	80 lbs.
List Price, each	\$ .50	\$ .60	\$ .90



# TYPE RKC CONDULET BODIES—Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 170 lbs.	RKC2 75 140 lbs. \$ .60	RKC3 50 100 lbs. \$ .90



#### TYPE RKD CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	100 170 lbs.	RKD2 75 140 lbs. \$ .60	RKD3 50 100 lbs. \$ .90



#### TYPE RKK CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	RKK1	RKK2	RKK3
Standard Package	100	75	50
I Shipping Weight Std. Pkg.	160 lbs.	130 lbs.	100 lbs.
List Price, each	\$ .50	\$ .60	\$ .90

Elliptical Conduletto fittings and elliptical covers are made in one size only, and are interchangeable on Condulet bodies of the RJ and RK series.

Proper fastening screws are furnished with elliptical Conduletto fittings and elliptical Condulet

covers, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for Condulct bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulct bodies will be furnished, at same price as all black channel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulct bodies with plain and special finishes, aluminum Condulct bodies with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulct bodies of the same type and size may be assorted to

make up a standard package. No other assortment is allowed.

#### ELLIPTICAL COVERS

For Condulet Bodies with Elliptical Openings-Types RJ and RK Series Furnished with Fastening Screws









Standard Package Assorted...... 200

Standard Package Assorted.....

#### PORCELAIN WIRE HOLE AND BLANK METAL COVERS

1-wire	Catalogue Number List Price, each	RK01 \$ .10	Sheet Steel	Catalogue Number List Price, each	RK00
2-wire	Catalogue Number List Price, each	RK02 \$ .10	Cast	Catalogue Number	
3-wire	List Price, each	\$ .10	Iron (Flange)	List Price, each	\$ .16
Shipping V	Veight Std. Pkg	60 lbs.	Shipping V	Veight Std. Pkg	40 lbs.

# METAL COVERS WITH NIPPLES-Black Enamel Finish

78 Wate	Catalogue Number List Price, each	\$ .20	78 1416	Catalogue Number List Price, each	\$ .25
1/8" Female	Catalogue Number List Price, each	RK06 \$ .20	3/8" Female	Catalogue Number List Price, each	RK08 \$ .25
74 Intale	Catalogue Number List Price, each	RK013 \$ .23	½" Lale	Catalogue Number List Price, each	RK015 \$ .30
1/4" Female	Catalogue Number List Price, cach	RK014 \$ .23	½" Female	Catalogue Number List Price, each	RK016 \$ .30
Shipping W	eight Std. Pkg	50 lbs.		Veight Std. Pkg	

#### PORCELAIN COVERS WITH NIPPLES

-/8 IVIAIE	Catalogue Number List Price, each	\$ .25	78 1.1410	Catalogue Number List Price, each	\$ .35
1/8" Female	Catalogue Number List Price, each	RK010 \$ .25	3/8" Female	Catalogue Number List Price, each	RKC12 \$ .35
-/4 IVI ale	Catalogue Number List Price, each	\$ .30	/2 1210	Catalogue Number List Price, each	\$ .40
1/4" Female	Catalogue Number List Price, each	RK020 \$ .30	½" Female	Catalogue Number List Price, each	RK022 \$ .40
Shipping W	eight Std. Pkg	90 lbs.		Veight Std. Pkg	

Elliptical covers are made in one size only, and are interchangeable on all elliptical Condulet bodies—RJ and RK series.

Proper fastening screws are furnished with covers, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for metal covers, and will be furnished unless another finish is specified on the order. Galvanized finish, when specifically ordered, will be furnished at same price as black enamel finish. For special plated finishes, brass and bronze covers with plain and special finishes, aluminum covers with plain and black enamel finishes, see Manufacturer's Page No. 182.

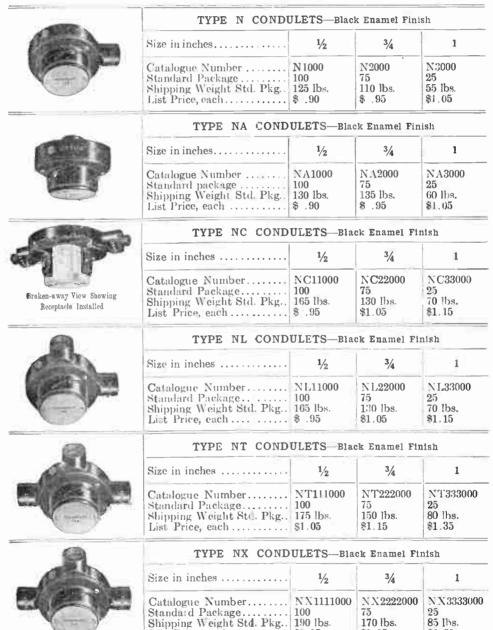
Black enameled, galvanized and porcelain elliptical covers may be assorted to make up a standard package. No other assortment is allowed.

Standard package discount is allowed on covers when an order is for a standard package of Condulet bodies and an equal number of covers for those bodies; but on an order for covers alone, standard package discount is allowed, only, on the specified standard package quantity of covers.

# TYPES N, NA, NC, NL, NT AND NX CONDULETS

For Stucco Work, Using Flush Pocket Receptacles—Crouse-Hinds, C9514; Bryant, 4033, 9514; G. E. Co., 9514; Paiste, 9514; P. & S., 9514, and Hubbell Flush Plug Receptacle, 5506

Furnished Complete with Telescopic Cover (12-inch Telescope), Temporary Cap and all Necessary Fastening Screws, but without Receptacle



Prices for Condulets of the N series do not include receptacle.

List Price, each ..... \$1.15

\$1.25

\$1.50

# TYPES PG, PGB, PGC, PGCA, PGL, PGT AND PGG CONDULETS

Take General Electric 2 H. P., 250-Volt, 3-Phase, Snap Switch 151394 with Protective Cover for Textile Mill Installations

Furnished with All Necessary Fastening Screws



Showing Switch Installed Prices do not Include Switch

# TYPE PG CONDULETS-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	PG1	PG2	PG3
Standard Package	35	25	10
Shipping Weight Std. Pkg	85 lbs.	70 lbs.	50 lbs
List Price, each	81.10	\$1.25	\$1 40



# TYPE PGB CONDULETS-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	PGB11 35 95 lbs	PGB22 25 90 lbs. \$1,40	PGB33 10 50 lbs.



# TYPE PGC CONDULETS-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	PGC11	PGC22	PGC33
Standard Package	35	25	10
Shipping Weight Std. Pkg.	95 lbs	90 lbs.	50 lbs.
List Price, each	\$1.25	\$1.40	\$1.55



# TYPE PGCA CONDULETS-Black Enamel Finish

ĺ	Size in inches	1/2	3/4	1
J	Catalogue Number	PGCA111	PGCA222	PGCA333
ı	Standard Package	35	25	10
١	Shipping Weight Std. Pkg	125 lbs	115 lbs.	60 lbs.
	List Price, each	\$1.45	\$1.60	\$1.75



# TYPE PGL CONDULETS-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number Standard Package	PGL11	PGL22 25	PGL33
Shipping Weight Std. Pkg	95 lbs.	90 lbs.	50 lbs.
List Price, cach	\$1.25	\$1.40	\$1.55



# TYPE PGT CONDULETS-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	PGT111	PGT222	PGT333
Standard Package	35	25	10
Shipping Weight Std. Pkg. List Price, each	125 lbs.	115 lbs.	60 lbs.
List Price, each	\$1.45	\$1.60	\$1.75



# TYPE PGG CONDULETS-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	PGG11	PGG22	PGG33
Standard Package	35	25	10
Shipping Weight Std. Pkg	95 lbs.	90 lbs.	50 lbs.
List Price, each	\$1 25	\$1.40	\$1.55

Above prices do not include switches.

# TYPES PM, PMA, PMC, PML, PMT AND PMX CONDULETS

# TAKE 3 TO 4-INCH CANOPIES

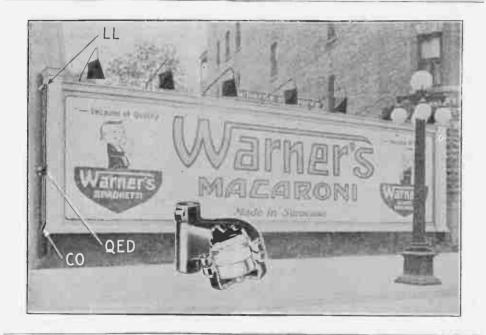
For Electroliers and Combination Gas and Electric Fixtures, also Abolite G403

	TYPE I	PM CON	DULETS	Black Ena	mel Finish		
1	Size in inches	1/2	3/4	1	11/4	11/2	
	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	35 80 ths.	PM2 25 65 lbs. \$1.05	l'M3 10 45 lbs. \$1.20	PM4 10 50 lbs. \$1.35	PM5 10 55 lbs. \$1.50	
20-2	TYPE	РМА СО	NDULETS	Black E	namel Fini	slı	
COMP IN	Size in inches	1 2	3/4	1	11/4	11/2	
	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	PMA1 35 80 lbs. \$ . 00	PMA2 25 65 lbs. \$1.05	PMA3 10 45 lbs. \$1.20	PMA4 10 50 lbs. 81.35	PMA5 10 55 lbs. \$1.50	
	TYPE	PMC CO	NDULETS	-Black E	namel Fini	sh	
<b>♦</b>	Size in inches	1/2	3/4	1	11/4	11/2	
	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	35 90 lbs.	PMC22 25 85 lbs. \$1.20	PMC33 10 45 lbs. \$1.35	PMC44 10 50 lbs. \$1.50	PMC55 10 55 lbs. \$1.65	
2000	TYPE PML CONDULETS—Black Enamel Finish						
18 PM	Size in inches	1/2	3/4	1	11/4	11/2	
	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	35 90 lbs.	PML22 25 85 lbs. \$1.20	PML33 10 45 lbs. \$1.35	PML44 10 50 lbs. \$1.50	PML55 10 55 lbs. \$1.65	
	TYPE	PMT CO	NDULETS	-Black E	namel Fini	sh	
	Size in inches	1/2	3/4	1	11/4	11/2	
	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	35 120 lbs.	PMT222 25 110 lbs. \$1.40	PMT333 10 55 lbs. \$1.55	PMT444 10 60 lbs. \$1.70	PMT55 10 65 lbs. \$1.85	
	TYPE	PMX CO	NDULETS	-Black Er	namel Fini	sh	
	Size in inches	1/2	3/4	1	11/4	11/2	
	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each		PMX2222 25 120 lbs. \$1.55	PMX3333 10 60 bs. \$1.70	PMX4444 10 65 lbs. \$1.85	l'M\5555 10 70 lbs. \$2.00	

Grounding clamp, for use with combination gas and electric fixtures, is not included in prices for Condulets of the PM series, but will be furnished, if specifically ordered.

# CONDULETS—QE SERIES—Continued TYPES QEE AND QEF

Weather-proof Condulets for Standard Lock Snap Switches
Furnished with Adjustable Bar and Fastening Screws, but without Switches



# TYPE OEE CONDULETS-Black Enamel Finish

	Size in inches	1/2	3/4	1
Form 10	Catalogue No Standard Pkg. Wt. Std. Pkg List Price, each	QEE1108 35 145 lbs. \$1.85	QEE2108 25 115 lbs. \$1.95	QEE3108 15 80 lbs. \$2.05
Form 20	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEE1208 35 225 lbs. \$2.65	QEE2208 25 170 lbs. 82.75	QEE3208 15 110 lbs. 2.85



#### TYPE OEF CONDULETS-Black Enamel Finish

	-11- Q-1 OO1/202215 Black Blashel Hillish					
	Size in inches .	1/2	3/4	1		
Form 10	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEF1108 35 165 lbs. \$2.05	QEF2108 25 125 lbs. \$2.15	QLF3108 15 90 lbs. \$2.25		
Form 20	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEF1208 35 260 lbs. \$2.85	QEF2208 25 195 lbs. \$2.95	QEF3208 15 125 lbs. \$3.05		

Black enameled and galvanized Condulets of the same type and size can be assorted to make up a standard package. No other assortment is allowed.

# CONDULETS-QE SERIES-Continued

# TYPES QED, QEK, QEP AND QEJ

Weather-proof Condulets for Standard Lock Snap Switches

Furnished with Adjustable Bar and Fastening Screws, but without Switches



	TYPE QED CONDULETS—Black Enamel Finish						
	Size in inches .	1/2	3/4	1			
Form 10	Catalogue No Standard Pkg Wt. Std. Pkg List Price, cach	QED1108 35 190 lbs. \$2.25	QED2108 25 140 lbs. \$2.35	QED3108 15 95 lbs. \$2.45			
Form 20	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QED1208 35 260 lbs. \$3.15	QED2208 25 195 lbs. \$3.25	QED3208 15 125 lbs. \$3.35			

	Size in inches .	1/2	3/4	1
Form 10	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEK1108 35 145 lbs. \$1.95	QEK2108 25 115 lbs. \$2.05	QEK3108 15 80 lbs. \$2.15
Form 20	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEK1208 35 235 lbs. \$2.75	QEK2208 25 180 lbs. \$2.85	QEK3208 15 115 lbs. \$2.95

TYPE QEP CONDULETS—Black Enamel Finish

TYPE QEK CONDULETS—Black Enamel Finish



	Size in inches .	1/2	3/4	1
Form 10	Catalogue No., Standard Pkg., Wt. Std. Pkg., List Price, each	QEP1108 35 145 lbs. \$1.95	QEP2108 25 115 lbs. \$2.05	QEP3108 15 80 lbs. \$2.15
Form 20	Catalogue No., Standard Pkg., Wt. Std. Pkg., List Price, each	QEP1208 35 235 lbs. \$2.75	QEP2208 25 \$80 lbs. \$2.85	QEP3208 15 115 lbs. \$2.95



	TYPE QEJ CONDULETS—Black Enamel Finish						
	Size in inches .	1/2	3/4	1			
Form 10	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEJ1108 35 175 lbs. \$2.15	QEJ2108 25 135 lbs. \$2.25	QEJ3108 15 85 lbs. \$2.35			
Form 20	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEJ1208 35 255 lbs. \$3.00	QEJ2208 25 190 lbs. \$3.10	QEJ3208 15 120 lbs. \$3.20			

Black enameled and galvanized Condulets of the same type and size can be assorted to make up a standard package. No other assortment is allowed.

# CONDULETS-QE SERIES

# TYPES QEE AND QEF

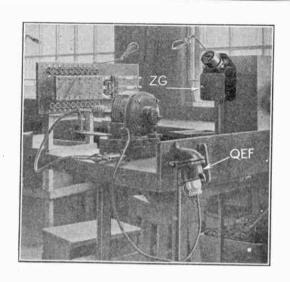
Plug Receptacle Condulets with Door

Furnished Complete with 30-Ampere, 250-Volt. 2-Pole Receptacle RQH302 or 3-Pole Receptacle RQH303

The Above Receptacles Take 2-Pole Plug RQ302 or 3-Pole Plug RQ303. Respectively



Type QEE with Plug Inserted



	TYPE QEE CONDULETS—Black Enamel Finish 30-Ampere, 250-Volt					
		Size in inches .	1/2	3/4	1	
	2-Pole	Catalogue No. Standard Pkg Wt. Std. Pkg List Price, each	QEE11086 25 115 lbs. \$3.80	( EE21066 25 125 lbs. \$3.90	QZE31066 25 135 lbs. \$4.00	
	3-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEE12066 25 160 lbs. \$5.50	© EE22006 25 165 lbs. \$5.60	QEE32066 25 175 lbs. \$5.70	
	TYPE QEF CONDULETS—Black Enamel Finish 30-Ampere, 250-Volt					
AND THE PARTY OF T		Size in inches .	1/2	3/4	1	
	2-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEF11066 25 125 lbs. \$4.00	QEF21066 25 135 lbs. \$4.10	QEF31066 25 145 lbs. \$4.20	
	3-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEF12066 25 170 lbs. \$5.75	QEF22066 25 180 lbs. \$5.85	QEF32066 25 190 lbs. \$5.95	

# CONDULETS-QE SERIES-Continued

# TYPES QED, QEK, QEP AND QEJ

Plug Receptacle Condulets with Door

Furnished Complete with 30-Ampere, 250-Volt. 2-Fole Receptacle RQH302 or 3-Pole Receptacle RQH303

The Above Receptacles Take 2-Pole Plug RQ302 or 3-Pole Plug RQ303, Respectively

		TYPE QED CON 30-	VDULETS—B Ampere, 250-		inish	
		Size in inches	1/2	3/4	1	
	2-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QED11066 25 145 lbs. 84.20	QED21066 25 155 lbs. \$4.30	QED31066 25 165 lbs. \$4.40	
	3-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QED12066 25 200 lbs. \$6.10	QED22066 25 210 lbs. \$6.20	QED32066 25 220 lbs. \$6.30	
		TYPE QEK COI	NDULETS—E Ampere, 250-		'inish	
		Size in inches .	1/2	3/4	1	
	2-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEK11066 25 120 lbs. \$3.90	QEK21066 25 125 lbs. \$4.00	OTK3 C66 25 135 lbs. \$1.1	
	3-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEK12066 25 175 lbs. \$5.60	QEK22066 25 185 lbs. \$5.70	QEK32066 25 195 lbs. \$5.80	
	TYPE QEP CONDULETS—Black Enamel Finish 30-Ampere, 250-Volt					
		Size in inches .	1/2	3/4	1	
	2-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEP11066 25 120 lbs. \$3.90	QEP21066 25 125 lbs. \$4.00	QEP31066 25 135 lbs. \$4.10	
	3-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEP12066 25 175 lbs. \$5.60	QEP22066 25 185 lbs. \$5.70	QEP32066 25 195 lbs. \$5.80	
		TYPE QEJ CON	DULETS—BI Ampere, 250-		nish	
		Size in inches .	1/2	3/4	1	
5	2-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEJ11066 25 135 lbs. \$4.10	QEJ21066 25 145 lbs. \$1.20	CEJ31066 25 155 lbs. \$4.30	
	3-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEJ12066 25 200 lbs. \$5.90	QEJ22066 25 210 lbs. \$6.00	QEJ32066 25 220 lbs. \$6.10	

# CONDULETS—QE SERIES TYPES QEE, QEF AND QED

Plug Receptacle Condulets without Door

Furnished Complete with 30-Ampere, 250-Volt, 2-Pole Receptacle RQH302 or 3-Pole Receptacle RQH303

The Above Receptacles Take 2-Pole Plug RQ302 or 3-Pole Plug RQ303. Respectively



Condulcts of the QE series with RQH Receptacles consist of two parts—body and receptacle housing.

These Condulets are weather-proof and exceptionally easy to wire because the circuit wires are drawn out of the body and connection with receptacle is made in the open. After this is done, the wires are pushed back in the body and the receptacle housing is fastened to the body by four heavy screws. This operation also clamps receptacle securely in place. Furthermore, the receptacle is protected from damage as it sets back in the housing.

		TYPE QEE CON 30-	NDULETS—E Ampere, 250-	lack Enamel I Volt	inish
		Size in inches .	1/2	3/4	1
	2-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEE1106 25 115 lbs. \$3.80	QEE2106 25 125 lbs. \$3.90	QEE3106 25 135 lbs. \$4.00
	3-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEE1206 25 160 lbs. \$5.50	QEE2206 25 165 lbs. \$5.60	QEE3206 25 175 lbs. \$5.70
		TYPE QEF CON 30-	IDULETS—B Ampere, 250-		inish
		Size in inches .	1/2	3/4	1
· L	2-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEF1106 25 125 lbs. \$4.00	QEF2106 25 135 lbs. \$4.10	QEF3106 52 145 lbs. \$4.20
	3-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QEF1206 25 170 lbs. \$5.75	QEF2206 25 180 lbs. \$5.85	QEF3206 25 190 lbs. \$5.95
-0		TYPE QED CON 30-	NDULETS—B Ampere, 250-	lack Enamel F Volt	inish
		Size in inches .	1/2	3/4	1
	2-Pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, each	QED1106 25 145 lbs. \$4.20	QED2106 25 155 lbs. \$4.30	QED3106 25 165 lbs. \$4.40
	3-Pole	Catalogue No.: Standard Pkg.: Wt. Std. Pkg.: List Price, each	QED1206 25 200 lbs. \$6.10	QED2206 25 210 lbs. \$6.20	QED3206 25 220 lbs. \$6.30

# CONDULETS—QE SERIES—Continued

# TYPES QEK, QEP AND QEJ

Plug Receptacle Condulets without Door

Furnished Complete with 30-Ampers, 250-Volt. 2-Pole Receptacle RQH302 or 3-Pole Receptacle RQH303



	TYPE QEK CON	NDULETS—1 Ampere, 250-	Black Enamel I Volt	Pinish
	Size in inches .	1/2	3/4	1
2-Pole	Catalogue No	QEK1106	QEK2106	QEK3106
	Standard Pkg	25	25	25
	Wt. Std. Pkg .	120 lbs.	125 lbs.	135 lbs.
	List Price, each	\$3.90	\$4.00	\$4.10
3-Pole	Catalogue No	QEK1206	QEK2206	QEK3206
	Standard Pkg	25	25	25
	Wt. Std. Pkg	175 lbs.	185 lbs.	195 lbs.
	List Price, each	\$5.60	\$5.70	\$5.80

# TYPE QEP CONDULETS—Black Enamel Finish 30-Ampere, 250-Volt



	Size in inches .	1/2	3/4	1
2-Pole	Catalogue No	QEP1106	QEP2106	QEP3106
	Standard Pkg	25	25	25
	Wt. Std. Pkg	120 lbs.	125 lbs.	135 lbs.
	List Price, each	\$3.90	\$4.00	\$4.10
3-Pole	Catalogue No.,	QEP1206	QEP2206	QEP3206
	Standard Pkg.,	25	25	25
	Wt. Std. Pkg.,	175 lbs.	185 lbs.	195 lbs.
	List Price, each	\$5.60	\$5.70	\$5.80

# TYPE QEJ CONDULETS—Black Enamel Finish 30-Ampere, 250-Volt



	Size in inches	1/2	3/4	1
2-Po	Catalogue No	QEJ1106	QEJ2106	QEJ3106
	Standard Pkg	25	25	25
	Wt. Std. Pkg	135 lbs.	145 lbs.	155 lbs.
	List Price, each	\$4.10	\$4.20	\$4.30
3-Po	Catalogue No	QEJ1206	QEJ2206	QEJ3206
	Standard Pkg	25	25 /	25
	Wt. Std. Pkg	200 lbs.	210 lbs.	220 lbs.
	List Price, each	\$5.90	\$6.00	\$6.10

# TYPE RQ PLUGS—30 Ampere Capacity For Types RQH, RQK and RYQ Receptacles—Aluminum Handles



2-1	Pole 3-	Pole
RQ302 25 60 lbs. \$3.50	Catalogue Number Standard Package Weight Std. Pkg. List Price, each	RQ303 25 70 lbs. \$5.00



# TYPE RQH RECEPTACLES—30 Ampere Capacity For Condulets of the QE Series



Z-P(	oie 3-	Pole
RQH302	Catalogue Number	RQH303
25	Standard Package	25
30 lbs.	Weight Std. Pkg.	30 lbs
\$2.00	List Price, each	\$3.00



# CONDULETS-BH SERIES

# TYPES BHE AND BHF

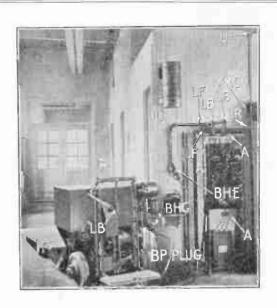
Plug Receptacle Condulets-Swivel Mounting

Furnished Complete with 50-Ampere, 125-Volt, 2-Pole Receptale BR50 and Spring Door

The Above Receptacle Takes 2-Pole Plug BP50



Type BHE with BP50 Plug Inserted





#### TYPE BHE CONDULETS-Black Enamel Finish

Size in inches	3/4	1	11/2
Cat. No	BHE2506	BHE3506	BHE5506
	10	10	10
	175 lbs.	180 lbs.	185 lbs.
	\$13.10	\$13.25	\$13.55



#### TYPE BHF CONDULETS-Black Enamel Finish

Size in inches	3/4	1	11/2
Cat. No.	BHF2506	BHF3506	BHF5506
Std. Pkg	10	10	10
Wt. Std. Pkg.	185 lbs.	190 lbs.	195 lbs.
List, each	\$13.25	\$13.40	\$13.70

# CONDULETS-BH SERIES-Continued

# TYPES BHD, BHK, BHP AND BHJ

Plug Receptacle Condulets-Swivel Mounting

Furnished Complete with 50-Ampere, 125-Volt, 2-Pole Receptacle BR50 and Spring Door

The Above Receptacle Takes 2-Pole Plug BP50



# TYPE BHD CONDULETS-Black Enamel Finish

Size in inches	3/4	1	11/2
Cat. No Std. Pkg Wt. Std. Pkg List, each	BHD2506	BHD3506	BHD5506
	10 ·	10	10
	195 lbs.	200 lbs.	205 lbs.
	\$13.55	\$13.70	\$14.00



# TYPE BHK CONDULETS—Black Enamel Finish

Size in inches	3/4	1	11/2
Cat. No.	BHK2506	BHK3506	BHK5506
Std. Pkg	10	10	10
Wt. Std. Pkg	180 lbs.	185 lbs.	190 lbs.
List, each	\$13.25	\$13.40	\$13.70



# TYPE BHP CONDULETS—Black Enamel Finish

Size in inches .	3/4	1	11/2
Cat. No.	BHP2506	BHP3506	BHP5506
Std. Pkg.	10	10	10
Wt. Std. Pkg.	180 lbs.	185 lbs.	190 lbs.
List, each	\$13.25	\$13.40	\$13.70



# TYPE BHJ CONDULETS-Black Enamel Finish

Size in inches .	3/4	1	11/2
Cat. No. Std. Pkg. Wt. Std. Pkg. List, each	BHJ2506	BHJ3506	B1IJ5506
	10	10	10
	200 lbs.	205 lbs.	210 lbs.
	\$13.55	\$13.70	\$14.00

#### CONDULETS

# TYPE BHG

Plug Receptacle Condulets-Iron or Aluminum

Furnished Complete with 50-Ampere, 125-Volt, 2-Pole Receptacle BR50 and Spring Door

The Above Receptacle Takes Plug BP50



Type BHG

Type BHG Condulet is primarily designed to provide battery charging connection on electric vehicles, and is usually secured to the underside of the vehicle.

The interior is protected from dust, grease and moisture by a door that is provided with an adjustable, concealed spring, which prevents the door from jarring open or rattling.

Any 50-ampere plug conforming to the American Electric Vehicle Association standard can be used with a type BHG Condulet.

TYPE BHG CONDULETS				
Material	Iron	Aluminum		
Catalogue Number Standard Package	BHG506 10 125 lbs. \$11.50	BHG00506 10 90 lbs. \$17.00		

#### TYPE BHS

Plug Receptacle and Housing—For Switchboard Mounting
Furnished Complete with 50-Ampere, 125-Volt, 2-Pole Receptacle BR50

The Above Receptacle Takes Plug BP50

Type BHS plug receptacle and housing is designed for use on switchboards. It projects only  $\frac{3}{4}$ -inch from the face of the switchboard, and is easily installed. All that is necessary is to drill  $\frac{2}{4}$  inches hole through the panel, also a small dowel hole, insert the receptacle and tighten the fastening nut on the rear. All live metal parts are enclosed.



Plug Receptacle and Housing Type BHS—Mounted

# TYPE BHS PLUG RECEPTACLE AND HOUSING Polished Copper Finish



Complete as illustrated at left of listing and described in heading

Catalogue Number	BHS50
Standard Package	10
Shipping Weight Standard Package	60 lbs.
List Price, each	\$12.75

# TYPE BP PLUG For Round Receptacle BR50

25 lbs. \$7.75 TYPE BR RECEPTACLE
For BH, QE107 and QE1076 Series, Type BHG
Condulets and Type BHS Pluz Receptacle
and Housing



50-2	ampe 	re, 125-Volt,_2-Pole-	1	Cound
BP50		Catalogue Number Standard Package		BR5

Catalogue Number	BR50
Standard Package	10
Weight Std. Pkg.	15 lbs.
List Price, each	\$6.00



# TYPES SE, SEC, SEL, SET AND SEX CONDULET BODIES

Take Key, Keyless or Pull Receptacles; Rosettes; Pull Switch Rosettes, or Pull Switches Enumerated Below



TYPE SE CONDULET BODIES-Black Enamel Finish				
Size in inches	1/2	3/4	1	
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	75 155 lbs.	SE2 50 115 lbs. \$ .90	SE3 25 70 lbs. \$1 10	



With Receptacle Mounted Prices do not include Receptacle	

# TYPE SEC CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	75 165 lbs.	SEC22 50 125 lbs. \$1.05	SEC33 25 75 lbs. \$1.25



#### TYPE SEL CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	SEL11	SEL22 50	SEL33
Standard Package	165 lbs.	125 lbs.	75 lbs.
List Price, each	\$ .95	\$1.05	\$1.25



### TYPE SET CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	75 180 lbs.	SET222 50 140 lbs.	SET333 25 80 lbs. \$1 35



# TYPE SEX CONDULET BODIES-Black Enamel Finish

EX1111	70	SEX3333 25
00 lbs.	155 lbs.	90 lbs. \$1.45
	5	50 00 lbs.   155 lbs.

Condulet bodies listed above take the following:

Receptacles, Key: ARROW E-4045, 7513, 7513W, 7536, 7536W, 8044, 8044W, 8080, 8080W. BRYANT-4045 4513, 4536, 7513, 7536, all BL and BN bases. G. E. CO.-GE052, GE278, GE281, GE418, GE483, GE495. HUBBELL-3070, 3156, 3316, 3752. PAISTE-5473, 5476, 5569, 5571. P. & S.-7, 46, 814.

Receptacles, Keyless: ARROW E-40, 41, 85, 109, 4046, 7514, 7537, 8045, 8081, 62357, 103704. BRYANT-4031, 4046, 7514, 7537, 62357, all BL and BN bases. G. E. CO.-GE055, GE096, GE155, GE279, GE484, GE496, 62357. HUBBELL-3071, 3754. PAISTE-5474, 5477, 5570, 5572. P. & S.-1, 4, 40, 41, 85, 109, 62357, 103704,

Receptacles, Pull: ARROW E-4047, 4515, 4537, 8522, 8537. BRYANT-4047, 4515, 4537, all BL and BN bases. G. E. CO.-GE280, 88964. HUBBELL-3069, 3083, 3750, 3841. PAISTE-5475, 5478, 5587, 5588, P. & S.-128.

Rosettes: ARROW E-368, 369, 457, 525, 8074, 8075. BRYANT-368, 369, 457, all BL and BN bases. P. & S.-113, 199, 723, 1172, 1174.

Rosettes, Pull Switch: ARROW E-176, 179, 8605, 8608. BRYANT-Ali BL and BN bases. HUBBELL-5906, 5926, 5996, 6007, P. & S.--700.

Switches, Pull: ARROW E-174, 175, 177, 178, 8603, 8604, 8606, 8607. BRYANT-All BL and BN bases.

#### CONDULET BODIES-S SERIES

# TYPES S, SA AND SC

For Pony Receptacles, Clamp Receptacles and Rosettes, and Hubbell Polarity Plug Receptacle 5757

Furnished with Fastening Straps for Fittings and all necessary Screws



Type SC Showing Pony Receptacle Mounted (Broken-away View)



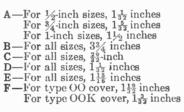
Dimensional Drawing for S Series of Condulets



Showing Crouse-Hinds Clamp Receptacle, without Shade Holder Groove, Mounted (Broken-away View)



Type SX Showing Crouse-Hinds Clamp Cord Rosette Mounted





Type SL Showing Hubbell Polarity Plug Receptacle 5757 Mounted



TYPE S CONDULET BODIES—Black Enamel Finish				
Size in inches	1/2	3/4	1	
Catalogue Number Standard Package. Shipping Weight Std. Pkg. List Price, each	100 130 lbs.	S2 75 110 lbs. \$ .75	S3 25 50 lbs. \$ .90	



### TYPE SA CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	100	SA2 75 110 lbs. \$ .75	SA3 25 50 lbs. \$ .90



#### TYPE SC CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100	135 lbs.	SC33 25 65 lbs. \$1.05

Fittings for use with Condulets of the S series are not included in above list prices, but are enumerated on following page.

#### CONDULET BODIES-S SERIES-Continued

# TYPES SL, ST AND SX

For Pony Receptacles, Clamp Receptacles and Rosettes, and Hubbell Polarity Plug Receptacle 5757

Furnished with Fastening Straps for Fittings and all necessary Screws



TYPE SL CONDULET BODIES—Black Enamel Finish				
Size in inches	1/2	3/4	1	
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	SL11 100 160 lbs. \$ .80	SL22 75 135 lbs. \$ .85	SL33 25 65 lbs. \$1.05	



TYPE SI CONDUCEI BODIES—Black Enamel Fin'sh				
Size in inches	1/2	3/4	1	
Catalogue Number Standard Package Shipping Weight Std. Fkg. List Price, each	100	ST222 75 149 lbs. \$1.00	ST333 25 70 lbs. \$1.20	



# TYPE SX CONDULET BODIES-Black Enamel Finish

Size in inches	1/2	3/4	1
Catalogue Number	100	SX2222	SX3333
Standard Package		75	25
Shipping Weight Std. Pkg.		180 lbs.	80 lbs.
List Price, each		\$1.10	\$1.35

COVERS FOR TYPES S, SA, SC, SL, ST AND SX CONDULET BODIES-Black Enamel Finish. For 1-2, 3-4 and 1-inch Condulet Bodies



	For Rec	eptacles settes	For H Plug		Style	Blank	Metal
	Sheet Steel	Cast Iron	Sheet Steel	Cast Iron	of Cover	Sheet Steel	Cast Iron
,	00	00g 100	00k 100	00kg 100	Catalogue No	00b 100	00bg 100
	50 lbs.	50 lbs.			.Weight Std. Pkg.		
	\$ .12	\$ .35	\$ .12		List Price, each		



Fittings for use with Condulets of the S series are not included in above list prices, but are as follows:

10110W8:
Pony Receptacles: ARROW E-28795, 50715. BRYANT-28795, 50715. G. E. CO.—11221, 28795, 50715. PAISTE-28795, 50715. P. & S.—61870. Clamp Receptacles and Rosettes: CONDULETTO (Crouse-Hinds)—C337G, C337, C442, C448, C449, ARROW E-8100, 59108. BRYANT-59108, 61988. FEDERAL—303, 304, 305. G. E. CO.—105001. PAISTE—5139, 61988. P. & S.—61877, 61988, 102703.
Polarity Plug Receptacle: HUBBELL—5757.

Types 00 and 00g covers have openings  $1\frac{1}{3}\frac{1}{2}$  inches in diameter. Types 00k and 00kg covers have openings  $1\frac{23}{32}$  inches in diameter.

Proper fastening screws are furnished with covers, and are so held in screw holes that they can not fall out.

Black enameled and galvanized Condulet bodies of the same type and size may be assorted to make up a standard package. Black enameled and galvanized covers of all three styles may be assorted to make up a standard package. No other assortments are allowed. Standard package discount is allowed on covers when an order is for a standard package of

Condulet bodies and an equal number of covers for those bodies; but on an order for covers alone, standard package discount is allowed, only, on the specified standard package quantity for those covers.

# CONDULETS-V SERIES

# TYPES V, VA AND VC-Iron

Vapor, Gas and Dust-Proof—Take any Regular Mazda Lamp up to and Including 40-Watt, or any Lamp with Dimensions not Exceeding 23/4x51/4 Inches

Furnished with Crouse-Hinds Receptacle CCV337, Sealing Plate, Gaskets and all necessary Fastening Screws, and with or without Globe and Guard

Type V

(Padlock not included in list prices)

For marine work and in breweries, refineries, flour mills or wherever there is dampness, gas or fine dust, Condulets of the V series meet every requirement.

These Condulets remain vapor, gas and dust-proof even though globes be broken or removed for lamp renewals.

Crouse-Hinds receptacle CCV337 is the only receptacle that can be mounted in these Condulets.

# TYPE V CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Weight Std. Pkg List Price, each	35 230 lbs.	V289 25 180 lbs. \$4.55	V389 10 100 lbs. \$4.60
Complete, except Globe and Guard	Catalogue Number Standard Package Weight Std. Pkg List Price, cach	35 125 lbs.	V2 25 100 lbs. \$1.95	V3 10 50 lbs. \$2.00

#### TYPE VA CONDULETS-IRON-Black Enamel Finish



	Size in inches  Catalogue Number		3/ <sub>4</sub> VA289	1 VA389
Complete	Standard Package	35 230 lbs,	25 180 lbs. \$4.55	10 100 lbs. \$4.60
Complete, except Globe and Guard	Catalogue Number	35 125 lbs.	VA2 25 100 lbs. \$1.95	VA3 10 50 lbs. \$2.00

# TYPE VC CONDULETS-IRON-Black Enamel Finish



	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Weight Std. Pkg List Price, each	VC1189 35 250 lbs. \$4.60	VC2289 25 190 lbs. \$4.70	VC3389 10 110 lbs. \$4.80
Complete, except Globe and Guard	Catalogue Number Standard Package Weight Std. Pkg List Price, each	135 lbs.	VC22 25 110 lbs. \$2.10	VC33 10 60 lbs. \$2.20

For finishes, assortments and other important information, see note on the following page.

### CONDULETS-V SERIES-Continued

# TYPES VL, VT AND VX-Iron

Vapor, Gas and Dust-Proof—Take any Regular Mazda Lamp up to and Including 40-Watt, or any Lamp with Dimensions not Exceeding 23/4 x 51/4 Inches Furnished with Crouse-Hinds Receptacle CCV337, Sealing Plate, Gaskets and All Necessary Fastening Screws, and with or without Globe and Guard



# TYPE VL CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Weight Std. Pkg List Price, each	35 250 lbs.	VL2289 25 190 lbs. \$4.70	VL3389 10 110 lbs. \$4.80
Complete, except Globe and Guard	Catalogue Number Standard Package Weight Std. Pkg List Price, each	35 135 lbs.	VL22 25 110 lbs. \$2.10	VL33 10 60 lbs. \$2.20



# TYPE VT CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Weight Std. Pkg List Price, each	35 255 lbs.	VT22289 25 195 lbs. \$4.85	VT33389 10 115 lbs. \$5.05
Complete, except Globe and Guard	Catalogue Number Standard Package Weight Std. Pkg List Price, each	35 140 lbs.	VT222 25 120 lbs. \$2.25	VT333 10 70 lbs. \$2.45



# TYPE VX CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Weight Std. Pkg List Price, each	35 265 lbs.	V X222289 25 200 lbs. \$5.05	VX333389 10 120 lbs. \$5.20
Complete, except Globe and Guard	Catalogue Number Standard Package Weight Std. Pkg. List Price, each	35 150 lbs.	VX2222 25 130 lbs. \$2.45	VX3333 10 80 lbs. \$2.60

Clear globes are regularly furnished on orders for complete Condulets.

Colored globes will be furnished with Condulets of the V series, if specifically ordered, at the following increases over list prices for complete Condulets: opal, \$.30; green, blue or orange, \$.90; ruby, \$1.55.

Globes and guards for Condulets of the V series are made in one size only.

Padlock is not included in prices for Condulets of the V series, but will be furnished, if specifically ordered.

Finishes: Black enamel is the 'standard finish for Condulets, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulets will be furnished, at same price as for all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and east bronze Condulets with plain and special finishes, aluminum Condulets with plain and black enamel finish, see Manufacturer's Page No. 182.

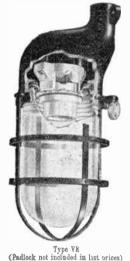
Black enameled and galvanized Condulets of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

### CONDULETS-V SERIES-Continued

# TYPES VE, VF AND VD-Iron

Vapor, Gas and Dust-Proof—Take any Regular Mazda Lamp up to and Including 40-Watt, or any Lamp with Dimensions not Exceeding 23/4 x 51/4 Inches

Furnished with Crouse-Hinds Receptacle CCV337, Sealing Plate, Gaskets and all necessary Fastening Screws, and with or without Globe and Guard



For marine work and in breweries, refineries, flour mills or wherever there is dampness, gas or fine dust, Condulets of the V series meet every requirement.

These Condulets remain vapor, gas and dust-proof even though globes be broken or removed for lamp renewals.

Crouse-Hinds receptacle CCV337 is the only receptacle that can be mounted in these Condulets.

TYPE VE CONDULETS-IRON-Black Enamel Finish	TYPE	VE	CONDULETS-	-IRON-Black Fram	al Finish
--	------	----	------------	------------------	-----------

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Weight Std. Pkg List Price, each	250 lbs.	VE289 25 190 lbs. \$4.85	VE389 10 100 lbs. \$4.95
Complete, except Globe and Guard	Catalogue Number Standard Package Weight Std. Pkg List Price, each	135 lbs.	VE2 25 110 lbs. \$2.25	VE3 10 50 lbs. \$2.35



#### TYPE VF CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package	35 260 lbs.	VF289 25 200 lbs. \$5.00	VF389 10 105 lbs. \$5.10
Complete, except Globe and Guard	Catalogue Number Standard Package Weight Std. Pkg List Price, each	145 lbs.	VF2 25 120 lbs. \$2.40	VF3 10 55 lbs. \$2.50



# TYPE VD CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Weight Std. Pkg List Price, each	35 275 lbs.	VD2289 25 210 lbs. \$5.25	VD3389 10 110 lbs. \$5.35
Complete, except Globe and Guard	Catalogue Number Standard Package Weight Std. Pkg List Price, each	35 160 lbs.	VD22 25 130 lbs. \$2.65	VD33 10 60 lbs. \$2.75

For finishes, assortments and other important information, see note on following page.

#### CONDULETS-V SERIES-Continued

# TYPES VK, VP AND VJ—Iron

Vapor, Gas and Dust-Proof—Take any Regular Mazda Lamp up to and Including 40-Watt, or any Lamp with Dimensions not Exceeding 23/4 x 51/4 Inches

Furnished with Crouse-Hinds Receptacle CCV337, Sealing Plate, Gaskets and All Necessary
Fastening Screws, and with or without Globe and Guard

Q.	TYP	E VK CONDULETS-IRO	V-Black I	Enamel Fin	ish
		Size in inches	1/2	3/4	1
	Complete	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	V K189 35 260 lbs. \$4.90	VK289 25 200 lbs. \$5.00	V K389 10 195 lbs. \$5.10
	Complete, except Globe and Guard	Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	35	VK2 25 120 lbs. \$2.40	V K3 10 55 lbs. \$2.50
	TYP	E VP CONDULETS-IRO	N-Black 1	Enamel Fin	ish
		Size in inches	1/2	3/4	1
	Complete	Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	VP189 35 260 lbs. \$4.90	VP289 25 200 lbs. \$5.00	VP389 10 105 lbs. \$5.10
	Complete, except Globe and Guard	Catalogue Number	VP1 35 1!5 lbs. \$2.30	VP2 25 120 lbs. \$2.40	VP3 10 55 lbs. \$2.50
	TYF	PE VJ CONDULETS-IRON	V-Black E	namel Fin	ish
		Size in inches	1/2	3/4	1
	Complete	Catalogue Number	VJ1189 35 280 lbs. \$5.15	VJ2289 25 210 lbs. \$5,25	VJ3389 10 110 lbs. \$5.35
	Complete, except Globe and Guard	Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	35	VJ22 25 130 lbs. \$2.65	VJ33 10 60 lbs. \$2.75

Clear globes are regularly furnished on orders for complete Condulets.

Colored globes will be furnished with Condulets of the V series, if specifically ordered, at the following increases over list prices for complete Condulets: opal, \$.30; green, blue or orange, \$.90; ruby, \$1.55.

Globes and guards for Condulets of the V series are made in one size only.

Finishes: Black enamel is the standard finish for Condulets, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulets will be furnished, at same price as for all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and east bronze Condulets with plain and special finishes, aluminum Condulets with plain and black enamel finish, see Manufacturer's Page No. 182.

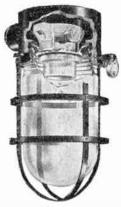
Black enameled and galvanized Condulets of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

#### CONDULETS-VH SERIES

# TYPES VH, VHA AND VHC-Iron

Vapor, Gas and Dust-Proof—Take any Regular Mazda Lamp up to and Including 100-Watt, or any Lamp with Dimensions not Exceeding 33/4 x 73/4 Inches

Furnished with Crouse-Hinds Receptacle CCV337, Sealing Plate, Gaskets and All Necessary
Fastening Screws, and with or without Globe and Guard



Type VH

(Padlock not included in list prices)

For marine work and in breweries, refineries, flour mills or wherever there is dampness, gas or fine dust, Condulets of the VH series neet every requirement.

These condulets remain vapor, gas and dust-proof even though globes be broken or removed for lamp renewals.

Crouse-Hinds receptacle CCV337 is the only receptacle that can be mounted in these Condulets.

# TYPE VH CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Ship. Wt. Std. Pkg.	VH189 35 285 lbs. \$5.40	V11289 25 220 lbs. \$5.45	V H389 10 120 lbs. \$5.50
except	Catalogue Number Standard Package. Ship. Wt. Std. Pkg. List Price, each	VH1 35 135 lbs. \$2.35	VH 25 110 lbs. \$2.40	VH3 10 60 lbs. \$2.45



# TYPE VHA CONDULETS-IRON-Black Enamel Finish

Complete	Size in inches  Catalogue Number Standard Package. Ship. Wt. Std. Pkg.		3/ <sub>4</sub> V11A289 25 220 lbs.	VHA389 10 120 lbs.
Complete, except Globe and Guard	Standard Package.	\$5.40 VIIA1 35 135 lbs. \$2.35	\$5.45 VIIA2 25 110 lbs. \$2.40	\$5.50 VIIA3 10 60 lbs. \$2.45



#### TYPE VHC CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number	VHC1189	V1IC2289	VIIC3389
	Standard Package.	35	25	10
	Ship. Wt. Std. Pkg.	295 lbs.	230 lbs.	125 lbs.
	List Price, each	\$5.50	\$5.60	\$5.65
Complete,	Standard Package.	V HC11	VHC22	VHC33
except		35	25	10
Globe and		145 lbs.	120 lbs.	65 lbs.
Guard		\$2.45	\$2.55	\$2.60

For finishes, assortments and other important information, see note on following page.

CONDULETS-VH SERIES-Continued

# TYPES VHL, VHT AND VHX-Iron

Vapor, Gas and Dust-Proof-Take any Regular Mazda Lamp up to and Including 100-Watt, or any Lamp with Dimensions not Exceeding 33/4 x 73/4 Inches

Furnished with Crouse-Hinds Receptacle CCV337. Sealing Plate, Gaskets and all Necessary Fastening Screws, and with or without Globe and Guard



# TYPE VHL CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	35 295 lbs.	VHL2289 25 220 lbs. \$5,60	VHL3389 10 120 lbs. \$5.65
Complete, except Globe and Guard	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	140 lbs.	VHL22 25 110 lbs. \$2.55	VHL33 10 60 lbs. \$2.60



# TYPE VHT CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	35 305 lbs.	VHT22289 25 230 lbs. \$5.75	VHT33389 10 125 lbs. \$5.85
Complete, except Globe and Guard	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	35 150 lbs.	VHT222 25 120 lbs. \$2.70	VHT333 10 65 lbs. \$2.80



# TYPE VHX CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	35 310 lbs.	V11X222289 25 240 lbs. \$5.90	VHX3333399 10 130 lbs. \$6.05
Complete, except Globe and Guard	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	35 160 lbs.	VHX2222 25 130 lbs. \$2.85	VHX3333 10 70 lbs. \$3.00

Clear globes are regularly furnished on orders for complete Condulets.

Colored globes will be furnished with Condulets of the VH series, if specifically ordered, at the following increases over list prices for complete Condulets: opal, \$.90; green, blue or

orange, \$1.55; ruby, \$2.10.
Globes and guards for Condulets of the VH series are made in one size only.
Padlock is not included in prices for Condulets of the VH series, but will be furnished, if

specifically ordered:

Finishes: Black enamel is the standard finish for Condulets, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulets will be furnished, at same price as for all black enamel finish, when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulets with plain and special finishes, aluminum Condulets with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulets of the same type and size may be assorted to make

up a standard package. No other assortment is allowed.

#### CONDULETS-VH SERIES-Continued

# TYPES VHE, VHF AND VHD—Iron

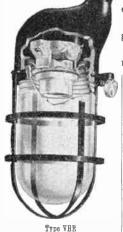
Vapor, Gas and Dust-Proof—Take any Regular Mazda Lamp up to and Including 100-Watt, or any Lamp with Dimensions not Exceeding 33/4 x 73/4 Inches

Furnished with Crouse-Hinds Receptacle CCV337, Sealing Plate, Gaskets and all Necessary Fastening Screws, and with or without Globe and Guard

For marine work and in breweries, refineries, flour mills or wherever there is dampness, gas or fine dust, Condulets of the VH series meet every requirement.

These Condulets remain vapor, gas and dust-proof even though globes be broken or removed for lamp renewals.

Crouse-Hinds receptacle CCV337 is the only receptacle that can be mounted in these Condulets.



Type VHE
(Padlock not included in list prices)

# TYPE VHE CONDULETS-IRON-Black Enamel Finish

		Size in inches	1/2	3/4	1
	Complete	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	35 335 lbs.	VHE289 25 260 lbs. \$5.60	VHE389 10 130 lbs. \$5.70
)	Complete, except Globe and Guard	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	35 185 lbs.	VHE2 25 150 lbs. \$2.55	VIIE3 10 70 lbs. \$2.65



# TYPE VHF CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	35 335 lbs.	VIIF289 25 260 lbs. \$5.85	VHF389 10 130 lbs. \$5.95
Complete, except Globe and Guard	Catalogue Number	35 185 lbs.	VIIF2 25 150 lbs. \$2.80	VHF3 10 70 lbs. \$2.90



# TYPE VHD CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	35   350 lbs.	VHD2289 25 270 lbs. \$6.00	VIID3389 10 149 lbs. \$6.10
Complete, except Globe and Guard	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	200 lbs.	VHD22 25 160 lbs. \$2.95	VIID33 10 80 lbs. \$3.05

For finishes, assortments and other important information, see note on the following page.

### CONDULETS-VH SERIES-Continued

# TYPES VHK, VHP AND VHI—Iron

Vapor, Gas and Dust-Proof-Take any Regular Mazda Lamp up to and Including 100-Watt, or any Lamp with Dimensions not Exceeding 33/4 x 73/4 Inches

Furnished with Crouse-Hinds Receptacle CCV337, Sealing Plate, Gaskets and All Necessary Fastening Screws, and with or without Globe and Guard



#### TYPE VHK CONDULETS-IRON-Black Enamel Finish 3/4 Size in inches..... 1/2 1 VHK189 VHK289 VHK589 Catalogue Number . . . Complete Standard Package .... 35 25 10 370 lbs. 290 lbs. 150 lbs. Ship. Wt. Std. Pkg.... List Price, each..... \$5.75 \$5.85 \$5.95 Complete, Catalogue Number ... VHK1VHK2VIIK3Standard Package .... 25 except 10 35 Ship. Wt. Std. Pkg.... Globe and 220 lbs. 180 lbs. 90 lbs. Guard List Price, each..... \$2,90 \$2.70 \$2.80



# TYPE VHP CONDULETS-IRON-Black Enamel Finish

	Size in inches	1/2	3/4	1
Complete	Catalogue Number	VHP189	VHP289	VHP389
	Standard Package	35	25	10
	Ship. Wt. Std. Pkg	370 lbs.	290 lbs.	150 lbs.
	List Price, each	\$5.75	\$5.85	\$5.95
Complete,	Catalogue Number	VIIP1	VHP2	VIII'3
except	Standard Package	35	25	10
Globe and	Ship. Wt. Std. Pkg	220 lbs.	180 lbs.	90 lbs.
Guard	List Price, each	\$2.70	\$2.80	\$2.90



# TYPE VHJ CONDULETS-IRON-Black Enamel Finish

Complete	Size in inches  Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	1/2 VHJ1189 35 3.5 lbs. \$5.90	3/4 VHJ2289 25 295 lbs. \$6.00	VHJ3389 10 155 lbs. \$6.10
Complete,	Catalogue Number	VIIJ11	VHJ22	VIIJ33
except	Standard Package	35	25	10
Globe and	Ship. Wt. Std. Pkg	225 lbs.	185 lbs.	95 lbs.
Guard	List Price, each	\$2.85	\$2.95	\$3.05

Clear globes are regularly furnished on orders for complete Condulets.

Colored globes will be furnished with Condulets of the VII series, if specifically ordered, at the following increases over list prices for complete Condulets: opal, \$.90; green, blue or orange. \$1.55; ruby, \$2.10.

Globes and guards for Condulets of the VH series are made in one size only. Padlock is not included in prices for Condulets of the VII series but will be furnished, if

specifically ordered.

Finishes: Black enamel is the standard finish for Condulets, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulets will be furnished, at same price as for all black enamel finish when the order specifies galvanized finish. For special plated finishes, cast brass and cast bronze Condulets with plain and special finishes, aluminum Condulets with plain and black enamel finish, see Manufa tu er's Page No. 182.

Black enameled and galvanized Condulets of the same type and size may be assorted to make

up a standard package. No other assortment is allowed.

# TYPES GV, GVA, GVL AND GVLA WEATHER-PROOF CONDULETS

Furnished with Receptasle C337, Receptacle and Guard Holder RMP2 and Guard HV94\* Take any Incandescent Lamp not Exceeding  $2_{18} \times 3_{2}$  Inches Not Designed to Take Glass Sealing-Globe



Condulets of the GV and HV series are weather-proof and semivapor-proof lamp fittings, and can be used to advantage wherever conditions are not so severe as to require an outer scaling globe. They are thoroughly gasketed and are in every way suitable for such places as laundries, kitchens, interior installations on boats and in subways.

The guard effectually protects the lamp from breakage and, when padlocked on, also prevents he unauthorized removal or theft of lamp.

TYPE	GV	CONDULETS	S-Complete
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# TYPE GVA CONDULETS—Complete



Size		Black Enameled	Size	
inch	GV1204 35 140 lbs. \$3.00	.Catalogue No .Std. Package. .Wt. Std. Pkg .List, each	½- inch	GVA1204 35 145 lbs. \$3.20
3/4- inch	GV2204 25 115 lbs. \$3.05	.Catalogue No .Std. Paekage . .Wt. Std. Pkg List, each	3/4- inch	GVA2204 25 120 lbs. \$3.30
1- inch	GV3204 10 55 lbs. \$3.30	Catalogue No. Std. Package. Wt. Std. Pkg List, each	1- inch	GVA3204 10 60 lbs. \$3.60



TYPE GVL CONDULETS - Complete

# TYPE GVLA CONDULETS

Complete



Size		Black Enameled	Size	
½- inch	GVL1204 35 140 lbs. \$3.05	Catalogue No Std. Package Wt. Std. Pkg List, each	1½- inch	GVLA1204 35 145 lbs. \$3.20
¾- inch	GVL2204 25 115 lbs. \$3.15	Catalogue No Std. Package. Wt. Std. Pkg List, each	'34- inch	GVL A2204 25 120 lbs. \$3.30
l- inch	GVL3204 10 55 lbs. \$3.45	Catalogue No Std. Package Wt. Std. Pkg List, each	1- inch	GVLA3204 10 60 lbs. \$3.60



<sup>&</sup>quot;See footnote on opposite page.

# TYPES GVT, GVTA, GVX, GVXA, HV AND HVA WEATHER-PROOF CONDULETS

Furnished with Receptacle C337. Receptacle and Guard Holder RMP2 and Guard HV94\* Take any Incandescent Lamp not Exceeding  $2\sqrt{3}$  x  $3\frac{3}{4}$  Inches Not Designed to Take Glass Sealing-Globe

TYPE GVT COI	TOTT I	TTC Com				CA CONDIII	LETS — Complete
TYPE GVI COI	Size	515—00m	Black E		Size	A COMPO	727 Company
	1/2- inch	GVT1204 35 145 lbs. \$3.20	.Catalog .Std. P .Wt. Std List,	ackage. d. Pkg	½- inch	GVTA1204 35 150 lbs. \$3.35	
	3/4- inch	GVT2204 25 120 lbs. \$3.30	.Catalog .Std. P .Wt. St List,	ackage. d. Pkg.	3/4- inch	GVTA2204 25 125 lbs. \$3.50	33
	1- inch	GVT3204 10 60 lbs. \$3.60		ackage. d. Pkg.	1- inch	GVTA3204 10 65 lbs. \$3.90	$\Psi$
TYPE GVX CO	NDUL	ETS—Com	plete	TYP	E GV	KA CONDU	LETS — Complete
	Size		Black E	nameled	Size		
	½- inch	GVX1204 35 150 lbs. \$3.35	.Std. P .Wt. St	gue No., Package d. Pkg., each,	1/2- inch	GVXA1204 35 155 lbs. \$3.50	
	3/4- inch	GVX2204 25 125 lbs. \$3.50	Std. F Wt. St	gue No Package. d. Pkg each	3/4- inch	GVXA2204 25 130 lbs. \$3.70	3
	1- inch	GVX3204 10 65 lbs. \$3.90	.Std. F .Wt. St	gue No Package. d. Pkg each	1- inch	GVXA3204 10 70 lbs. \$4.10	$\Psi$
TYPE HV CON	DULI	ETS-Com	olete	TYF	E HV	A CONDUI	ETS—Complete
	Size		Black E	nameled	Size		
	½- inch	HV1204 35 135 lbs. \$2.90	Std. F . Wt. St	gue No Package. d. Pkg each	½- inch	HVA1204 35. 135 lbs. \$2.95	
	3/4- inch	HV2204 25 110 lbs. \$2.95	.Std. I .Wt. St	gue No Package. d. Pkg each	3/4- inch	IIVA2204 25 110 lbs. \$3.00	#
	1- inch	HV3204 10 50 lbs. \$3.20	Std. I Wt. St	gue No Package d. Pkg each	1- inch	HVA3204 10 50 lbs. \$3.30	

<sup>\*</sup>If specified on order, Guard HV96, instead of Guard HV94, will be furnished with Condulets of the GV and HV series, at an advance of \$0.10 in list prices. Guard HV96 takes any incandescent lamp not exceeding 27/16 x 51/4 inches.

# TYPES HHV, HHVC AND HVLA WEATHER-PROOF CONDULETS

Furnished with Receptacle C337, Receptacle and Guard Holder RMP2 and Guard HV94\*

Take any Incandescent Lamp not Exceeding 2,75 x 23 Inches

Not Designed to Take Glass Sealing-Globe

TYPE HHV CONDULETS—Complete				TYI	е н	HVC CONDU	JLETS—Complete
	Size	=	Black Eng	ameled	Size		
	½- inch	HHV1204 35 140 lbs. \$3.00	.Catalogu .Std. Pa .Wt. Std. List, ea	ckage. Pkg.	½- inch	I7HVC1204 35 145 lbs. \$3.20	
	3/4- inch	HHV2204 25 115 lbs. \$3.05	.Catalogu .Std. Pa .Wt. Std. List, e	ckage. Pkg.	3/4- inch	11HVC2204 25 120 lbs. 83.30	
<b>D</b>	1- inch	IIHV3204 10 55 lbs. \$3.30	.Catalogu .Std. Pa .Wt. Std.	ckage: Pkg.	1- inch	IIHVC3204 10 60 lbs. \$3.00	4

Black Enamel

#### TYPE HVLA CONDULETS-Complete

Size

### RECEP. AND GUARD HOLDER RMP2

TMP2 35 30 lbs. \$ .30



Size		Finish
½- inch	11VLA1204 35 140 lbs. \$3.05	.Catalogue No .Std. Package . .Wt. Std. Pkg List, each
³¼- inch	IIVLA2204 25 115 lbs. \$3.15	. Catalogue No Std. Package Wt. Std. Pkg List, each
1- inch	IIVLA3204 10 55 lbs. £3.45	. Catalogue No Std. Package Wt. Std. Pkg List. each

For Weather-Proof Condulets of GV and HV Scries, listed on pages 26, 27 and 28 Furnished with Gasket and Screws



This holder can be mounted on any Form 20 Condulet body of the G and II series, provided holes for four No. 8-32 screws are drilled and tapped in the rim of the Condulet body. When Condulet body is so used, the adjustable bar furnished with it is not needed.



#### TYPE HV GUARDS

For Above Receptacle and Guard Holder
Black Finish

	Disch I IIII	
HV94 35 30 lbs. \$1.40	Catalogue No Std. Package. Wt. Std. Pkg List, each	35 35 lbs.



\*If specified on order, Guard HV96, instead of Guard HV94, will be furnished with Condulcts of the GV and HV series, at an advance of \$0.10 in list price. Guard HV96 takes any incandescent lamp not exceeding 27/16 x 51/4 inches.

Finishes: Black enamel is the standard finish for Condulets, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulets will be furnished, at same price as all llack enamel finish, when the order specifies galvanized finish. For special plated finishes, cast bross and cast bronze Condulets with plain and special finishes, aluminum Condulets with plain and black enamel finish see Manufacturer's Page No. 182.

Black enameled and galvanized Condulets of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

# MIDGET GUARD EQUIPMENT

For Forms 5 and 10 Condulet Bodies of G and H Series
Furnished Complete with Guard HGV95. Receptacle and Guard Holder RMP3.
Keyless Receptacle PE55 and all necessary Screws\*
Takes any Incandescent Lamp not Exceeding 23 x 33 Inches
Not Designed to Take Glass Sealing-Globe



Midget Guard Equipment Maunted on Type H Condulet Body and with Key Receptacle and Lump Installed (Broken-away View)

This equipment adapts Forms 5 and 10 Condulet bodies of the G and H series for use wherever a small, guarded electric light is required, such as on boats, in theatre dressing rooms, stairways, etc.

The equipment is designed to be attached to the adjustable bar furnished with the Condulet body.

Either key or keyless receptacles can be used.



Midget Guard Equipment Mounted on Type H Condulet Body and with Keyless Receptacle and Lamp Installed

# MIDGET GUARD EQUIPMENT—Black Finish

Complete with Guar Receptacle and Guar RMP3, Keyless Recept	rd Holder	Guard Only	Receptacle and Guard	Receptacle Only
and all necessary Screw	vs.	HGV95	Holder RMP3	PE55
Standard Package Ship. Wt. Std. Pkg List Price, each	40 80 lbs. \$2.10†	40 30 lbs. \$1.40	40 50 lhs. \$ .30	200 95 lbs. \$ .40

\*Other receptacles than P£55 which can be used with receptacle and guard holder RMP3, are as follows: Key Receptacles: ARROW E—8025, 8025W, 66609, 66609W. BRYANT—4481, 66609. G. E. CO.—GE043, GE324, GE414, GE419, GE417, GE487. HUBBELL—3049, 3147, 3307, 3732. PAISTE—5437, 5545. P. & S.—132, 617, 618, 811, 61387, 66609.

Keyless Receptacles: ARROW E—8026, 66610. BRYANT—66610. G. E. CO.—GE044, GE325, GE472, GE488. HUBBELL—3050, 3733. PAISTE—5438, 5546. P. & S.—146, 451, 60387, 88259.

# REFLECTORS—TYPE SH

For Guards V9. V90. VH9 and VH90-Furnished with necessary Fastening Screws

It is sometimes desirable to shut off the light from one side of a lump mounted in a Condulet

of the V or VII series, and type SII reflectors are designed for this purpose.

Two angle pieces on the face of the reflector hook over one of the guard rings.

Tightening a screw in each angle piece holds the reflector in place.



Type V With Reflector SH4 Mounted

# TYPE SH REFLECTORS—Steel Outer Surface Black, Inner Surface Aluminumized

For	Catalogue Number	SH4
V9 and	Standard Package	35
V90	Ship. Wt. Std. Pkg	40 lbs.
Guards	List Price, each	\$1.70
For	Catalogue Number	SH5
VH9 and	Standard Package	35
VH90	Ship. Wt. Std. Pkg	50 lbs.
Guards	List Price, each	\$2.75

# TYPE VS HAND LAMPS

Vapor, Gas and Dust-proof Portable Hand Lamp Takes any Lamp with Dimensions not Exceeding 2½x5¼ Inches\* Furnished with Crouse-Hinds Receptacle C9514, Clear Globe, Guard and Gaskets

Type VS hand lamps are exceptionally well suited for use in garages, refineries, flour mills, for marine work, or wherever there is inflammable vapor, fine dust or moisture in the air.

Globes listed below can also be used on the V series of Condulets, and when so used take any lamp with dimensions not exceeding  $2\frac{1}{2}$ x4½ inches. These dimensions permit the use of any lamp having a bulb that is no larger than an S14 or G18½.

The globes listed below are smaller than those listed on other pages and when used on Condulets of the V series require a correspondingly smaller guard than that listed on another page.

This smaller guard is listed below.



Guards VS095 and VS950, listed below for use with type VS hand lamps, have a hook and are provided with a locking cam, which is held closed by a knurled screw. Guards V950 and V95, listed below for use with Condulets of the V series, have no hook and are provided with a locking cam, which is arranged to take a padlock.

# TYPE VS HAND LAMP-Aluminum

Finish	
Catalogue Number Standard Package	VS100895 35
Shipping Weight Std. Pkg. List Price, each	IIIba Iba

#### TYPE VS HAND LAMP-Brass

Finish	
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	VS10895 35 265 lbs

#### GLOBES-5 Inches in Overall Length

For Type VS Hand Lamps and Condulets of the V Series



Color	Clear	Opal	Green	Blue	Orange	Ruby
Catalogue No. Standard Pkg. Wt. Std. Pkg. List Price, each	35 40 lbs.	V415 35 49 lbs. \$1.10	V425 35 40 lbs. \$1.70	V435 35 40 lbs. \$1.70	V445 35 40 lbs. \$1.70	V455 35 40 lbs \$2.35

# GUARDS—Brass For Globes Listed on this Page

For Type VS Hand Lamps

For Condulets of the V Series\*\*



Galvan- ized	Marine	Finish	Marine	Black		
VS095	VS950	Catalogue No	V950	V95		
35	35	Standard Pkg	35	35		
40 lbs.	40 lbs.	Wt. Std. Pkg	40 lbs.	40 lbs.		
\$2.00	\$2.00	List Price, each	\$1.80	\$1.80		

\*These dimensions permit the use of any lamp having a bulb that is no larger than an S19 or G18 $rac{1}{2}$ . If specified on order, leather gaskets will be furnished with type VS hand lamp, instead of rubber gaskets, without extra charge.

# TYPES W, WC, WL, WT AND WX CONDULET BODIES FOR PLUG RECEPTACLES—HUBBELL, 5624; GENERAL ELECTRIC CO., 102700

-	
a.	
16	2 10
GA.	150
-4	

Broken-away View, showing Receptacle and Cover installed Prices do not include Receptacle or Cover

TYPE W CONDULET BODIES—Black Enamel Finish								
Size in inches	1/2	3/4	1					
Catalogue Number	100	W2 75 99 lbs. \$ .60	W3 25 45 lbs. \$ .70					



TYPE WC CONDULET B	ODIES—E	lack Enamel	Finish
Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 140 lbs.	WC22 75 110 lbs. \$ .65	WC33 25 55 lbs. \$ .80



١	TYPE WL CONDULET B	ODIES—B1	ack Enamel I	Finish
١	Size in inches	1/2	3/1	1
-	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 140 lbs.	W1.22 75 119 lbs. \$ .65	WL53 25 55 lbs. \$ .80



TYPE WT CONDULET BODIES—Black Enamel Finish								
Size in inches	1/2	3/4	1					
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 150 lbs.	WT222 75 120 lbs. \$ .80	WT333 25 60 lbs. \$1.00					



TYPE WX CONDULET BODIES—Black Enamel Finish							
Size in inches	1/2	3/4	1				
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 160 lbs.	WX2222 75 150 lbs. \$ .90	WX0333 25 75 lbs. \$1.15				

For Types W, WC, WL, WT and WX Condulet Bodies—Black Enamel Finish
For 1-2, 3-4 and 1-Inch Condulet Bodies



For Atta	ich. Plug		Blank Metal			
Sheet Cast Steel Iron		Style of Cover	Sheet Steel	Cast Iron		
0 100 30 lbs. \$ .10	0g 100 30 lbs. \$ .20	Catalogue Number Standard Package Weight Std. Pkg List Price, each	100 35 lbs.	0bg 100 35 lbs.		



Proper fastening screws are furnished with covers, and are so held in screw holes that they can not fall out.

Finishes: Black enamel is the standard finish for both Condulct bodies and metal covers, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulct bodies and all galvanized finish on covers will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. For special plated finishes on Condulct bodies and covers, cast brass and cast bronze Condulct bodies and brass and bronze covers with plain and special finishes, aluminum Condulct bodies and covers with plain and black enamel finish, see Manufacturer's Page No. 182.

Black enameled and galvanized Condulet bodies of the same type and size may be assorted to make up a standard package. No other assortment of Condulet bodies is allowed.

Black enameled and galvanized covers of both styles for Condulet bodies of the W series may be assorted to make up a standard package.

# TYPES WD, WDC, WDL, WDT AND WDX CONDULET **BODIES**

For Clamp Receptacles



TYPE WD CONDULET BO	DIES—Blac	k Enamel F	inish
Size in inches	1/2	3/4	1
Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	75 90 lbs.	WD2 50 75 lbs. \$ .70	WD3 25 50 lbs. \$ .80



e in	inches	3		 								1/2
talc	gue Ni	unb	er									WDC

	Size in inches	1/2	3/4	1
i	Catalogue Number Standard Package Shipping Weight Std. Pl:g. List Price, each	75 105 lbs.		WDC33 25 60 lbs. \$ .90
	TYPE WILL CONDUCET BO	DIES—Blac	ek Enamel F	inish

TYPE WDC CONDULET BODIES—Dlack Enamel Finish

#### 3/4-1/2 1/2 WDL21 WDL11 WDL22 Catalogue Number ..... 50 50 Shipping Weight Std. Pl:g ..... 105 lbs. 90 lbs. 90 lbs. \$ .75 \$ .75



TIPE WDI COMDULE	I PODIES—BIR	ck Enamei F	inisii
Size in inches	1/2	3/1-1/2-3/1*	3/4
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	75 120 lbs.		WDT222 50 105 lbs. \$ .90



	TYPE WDX CONDULTT BODIES—Elack Inamel Finish								
	Size in inches	1/2	3/4	1					
ı	Catalogue Number	75	50	WDX3333 25 75 lbs. \$1.25					

# COVERS-For Condulet Bodies of the WD Series-Black Enamel Finish Furnished with Fastening Screws

	Style of		111/6" Openingt		1½" Opening‡		Black Metal	
-	Cover	Sheet Steel	Cast Iron	Sheet Steel	Cast Iron	Sheet Steel	Cast Iron	
	Catalogue No	WD054	WD0054	WD048	WD0048		WD000	
	Standard Pkg	75	75	75	75	75	75	
	Wt. Std. Pkg.	25 lbs.	40 lbs.	25 lbs.	40 lbs.	25 lbs.	45 lbs.	
	List, each	\$ .15	\$ .30	\$ .15	\$30	\$ .15	\$ .30	

Prices for Condulet bodies do not include receptacles or covers.

\*Center hub is the smallest one.

Proper fastening screws are furnished with covers, and are so held in screw holes that they can not fall out.

Condulet bodies listed above take the following:

†Cover with 111-inch opening: ARROW E-86, 440. BRYANT-4014, 4057. FEDERAL-303, 304, 305. P. & S.

†Cover with 1½-inch opening: ARROW E-427, 439, 61577, 61578, 61877, 61988. BRYANT-4035, 4036, 61988, G. E. CO.—GE001, GE060, GE079, GE118, GE153, GE217, GE209, GE271. PAISTE-47566, 59439, 61988, P. & S.-427, 436, 437, 439, 61577, 61578, 61877, 61988, 102703, 102704.

#### CONDULETS-Y SERIES-Continued

### TYPE Y

For Cartridge or Plug Fuse Cut-outs

Furnished with Universal Cut-out Fastening Plate and All Necessary Bolts and Screws

#### TYPE Y CONDULETS-DEAD END-Black Enamel Finish

#### For 30 Ampere, 250 Volt, N. E. C. Main Line Cut-outs-Cut-outs not Furnished

		Style o Cut-ou		nches	1/2	3/4	1
E	<u> </u>	2-wire	Standar Weight	Catalogue Number Standard Package Weight Std. Pkg List Price, each		Y 2302 15 120 lbs. \$1,55	Y 3302 10 90 lbs. \$1.65
CONDUCET		Style o	Size in inches		11/4	11/2	2
	♦	2-wire	Standard Weight	ie Number l Package Std. Pkg ce, each	10 100 lbs.	Y5302 5 60 lbs. \$1.95	Y 6302 5 75 lbs. \$2.15
Style of Cut-out	Size in inches		1/2	3/4	1	11/4	11/2
3-wire	Standard Package 15		l0 lbs.	Y2303 15 150 lbs. \$2.05	Y3303 10 100 lbs. \$2.15	Y4303 10 110 lbs. \$2.30	Y5303 5 65 lbs. \$2.45

#### For 60 Ampere, 250 Volt, N. E. C. Main Line Cut-outs-Cut-outs not Furnished

Style of Cut-out	Size in inches	3/4	1	11/4	11/2	2
2-wire	Catalogue Number Standard Package Weight Std. Pkg List Price, each	15 170 lbs.	Y3602 10 120 lbs. \$2.55	Y 4602 10 130 lbs. \$2.75	Y 5602 5 75 lbs. \$2.90	Y6602 5 80 lbs. \$3.00
Style of Cut-out	Size in inches	3/4	1	11/4	11/2	2
3-wire	Catalogue Number Standard Package Weight Std. Pkg List Price, each	Y2603 15 220 lbs. \$3.15	Y3603 10 150 lbs. \$3.25	Y 4603 10 160 lbs. \$3.55	Y 5603 5 90 lbs. \$3.70	Y6603 5 95 lbs. \$3.85

The universal cut-out fastening plates, furnished with the above Condulets, take the following cut-outs:

#### 30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuse Cut-outs

2-Wire: BRYANT—(Cartridge) 1917, (Plug) 62965. D. & W.—(Cartridge) 91102. G. E. CO.—(Cartridge) 34367, (Plug) 62965. NOARK—(Cartridge) 3327. PAISTE—(Cartridge) 72965, (Plug) 2965. SHAWMUT—(Cartridge) 2077. TRUMBULL—(Cartridge) 29653, (Plug) 2965. WEBER—(Plug) 62965. UNION—(Cartridge)

2010. ire: BRYANTire: BRYANT—(Cartridge) 1924, (Plug) 62165. D. & W.—(Cartridge) 91103. G. E. CO.—(Cartridge) 34372, (Plug) 62165. NOARK—(Cartridge) 3328. PAISTE—(Cartridge) 72165, (Plug) 2165. SHAWMUT—(Cartridge) 2079. TRUMBULL—(Cartridge) 21653, (Plug) 2165. WEBER—(Plug) 62165. UNION—(Cartridge) 2012.

#### 60 Ampere, 250 Volt, Cut-outs

2-Wire: BRYANT—(Cartridge) 1918. D. & W.—(Cartridge) 91108. G. E. CO.—(Cartridge) 34376. NOARK— (Cartridge) 3329. PAISTE—(Cartridge) 82965. SHAWMUT—(Cartridge) 2078. TRUMBULL—(Cartridge) 29656. UNION—(Cartridge) 2011.

3-Wire: BRYANT—(Cartridge) 1925. D. & W.—(Cartridge) 91109. G. E. CO.—(Cartridge) 34377. NOARK— (Cartridge) 3330. PAISTE—(Cartridge) 82165. SHAWMUT—(Cartridge) 2080. TRUMBULL—(Cartridge) 21656. UNION—(Cartridge) 2013.

Black enameled and galvanized Condulets of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

1-wire

#### CONDULETS-Y SERIES-Continued

# TYPES Y AND YC

For Cartridge or Plug Fuse Cut-outs

Furnished with Universal Cut-out Fastening Plate and all Necessary Bolts and Screws

#### TYPE Y CONDULETS-DEAD END-Black Enamel Finish-Continued

Style of Cut-out	Size in inches	1	11/4	11/2	2	21/2
2-wire	Catalogue Number Standard Package Weight Std. Pkg. List Price, each	10 220 lbs.	Y41002 10 230 lbs. \$5.50	Y51002 5 120 lbs. \$5.65	Y61002 5 130 lbs. \$5.75	Y71002 5 140 lbs. \$5.85
Style of Cut-out	Size in inches	1	11/4	11/2	2	21/2
3-wire	Catalogue Number Standard Package	10 230 lbs.	Y41003 10 240 lbs. \$6.25	Y51003 5 140 lbs. \$6.35	Y61003 5 150 lbs. \$6.45	Y71003 5 160 lbs. \$6.55
For	30 or 60 Ampere, 600 Volt,	N. E. C. M	ain Line Cu	t-outs-Cut-	outs not Fur	nished
Style of Cut-out	Size in inches	1/2	3/4	1	11/4	11/2

\$3.35 List Price, each . . . . . . . . \$3.15 \$3.25 The universal cut-out fastening plates, furnished with the above Condulets, take the following

Y26016

185 lbs.

15

Y36016

125 lbs.

10

Y46016

130 lbs.

\$3.45

10

Y56016

70 lbs.

\$3.55

Y16016

175 lbs.

Catalogue Number .....

Weight Std. Pkg.....

Standard Package ...... 15

100 Ampere, 250 Volt, Cut-outs

2-Wire: BRYANT—(Cartridge) 271. D. & W.—(Cartridge) 91119. G. E. CO.—(Cartridge) 36801. NOARK—(Cartridge) 3331. SHAWMUT—(Cartridge) 2101. UNION—(Cartridge) 2014.
3-Wire: BRYANT—(Cartridge) 272. D. & W.—(Cartridge) 91120. G. E. CO.—(Cartridge) 36800. NOARK—(Cartridge) 3332. SHAWMUT—(Cartridge) 2102. UNION—(Cartridge) 2015.

30 and 60 Ampere, 600 Volt, Cut-outs

1-Wire, 30 Ampere: BRYANT—(Cartridge) 1937. D. & W.—(Cartridge) 28076. G. E. CO.—(Cartridge) 34991. NOARK—(Cartridge) 5600. SHAWMUT—(Cartridge) 20735. UNION—(Cartridge) 4003. 1-Wire, 60 Ampere: BRYANT—(Cartridge) 1938. D. & W.—(Cartridge) 28077. G. E. CO.—(Cartridge) 35101 NOARK—(Cartridge) 5601. SHAWMUT—(Cartridge) 20745. UNION—(Cartridge) 4004.

#### TYPE YC CONDULETS-THROUGH FEED-Black Enamel Finish

#### For 30 Ampere, 250 Volt, N. E. C. Main Line Cut-outs-Cut-outs not Furnished

	Style of Cut-out	Size in inches	1/21/2	3/43/4	11
	2-wire	Catalogue Number Standard Package Weight Std. Pkg List Price, each	15 120 lbs.	YC22302 15 130 lbs. \$1.80	YC33302 10 100 lbs. \$1.90
CONDULET )	Style of Cut-out	Size in inches	11/411/4	11/2-11/2	22
	2-wire	Catalogue Number Standard Package Weight Std. Pkg List Price, each	10 110 lbs.	YC55302 5 65 lbs. \$2.20	YC66302 5 70 lbs. \$2.40

The universal cut-out fastening plates furnished with the above Condulets, take the following cut-outs:

#### CONDULETS-Y SERIES-Continued

#### TYPE YC—Continued

For Cartridge or Plug Fuse Cut-outs

Furnished with Universal Cut-out Fastening Plate and All Necessary Bolts and Screws

TYPE	YC	CONDULETS-THROUGH	FEED-	Black	Enamel	Finish-Continued
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For 30 Ampere, 250 Volt, N. E. C. Main Line Cut-outs—Cut-outs not Furnished										
Style of Cut-out	Size in inches	1/21/2	3/43/4	11	11/411/4	11/211/2				
3-wire	Catalogue No Standard Package. Weight Std. Pkg List Price, each	15 140 lbs.	Y C22303 15 145 lbs. \$2.25	YC33303 10 120 lbs. \$2.35	YC44303 10 130 lbs. \$2.60	YC55303 5 70 lbs. \$2.70				

#### For 60 Ampere, 250 Volt, N. E. C. Main Line Cut-outs-Cut-outs not Furnished

Style of Cut-out	Size in inches	3/43/4	11	11/411/4	11/2-11/2	22
2-wire	Catalogue No Standard Package. Weight Std. Pkg List Price, each	15 210 lbs.	YC33602 10 145 lbs. \$2.75	YC14602 10 150 lbs. \$2.85	YC55602 5 85 lbs. \$3.15	YC66602 5 90 lbs. \$3.25
Style of Cut-out	Size in inches	3/43/4	11	11/411/4	11/2-11/2	22
3-wire	Catalogue No Standard Package. Weight Std. Pkg List Price, each	15 260 lbs.	YC33603 10 170 lbs. \$3.50	YC44603 10 180 lbs. \$3.60	YC55603 5 100 lbs. 83.95	YC66603 5 105 lbs. \$4.10

#### For 100 Ampere, 250 Volt, N. E. C. Main Line Cut-outs-Cut-outs not Furnished

Style of Cut-out	Size in inches	11	11/411/4	11/211/2	2 ——— 2	21/2-21/2
2-wire	Catalogue No Standard Package. Weight Std. Pkg List Price, each	10 270 lbs	YC441002 10 280 lbs. \$5.80	YC551002 5 140 lbs. 85.90	YC661002 5 150 lbs. \$6.10	Y C771002 5 160 lbs. \$6.20
Style of Cut-out	Size in inches	11	11/411/4	11/211/2	2 ——— 2	21/2
3-wire	Catalogue No Standard Package. Weight Std. Pkg List Price, each	10 280 lbs.	YC441003 10 290 lbs. \$6.59	YC551003 5 145 lbs. 86.65	Y C661003 5 150 lbs. 86.75	YC771003 5 160 lbs. \$6.90

#### For 30 or 60 Ampere, 600 Volt, N. E. C. Main Line Cut-outs-Cut-outs not Furnished

Style of Cut-out	Size in inches	1/21/2	3/43/4	11	11/411/4	11/2-11/2
1-wire	Catalogue No Standard Package. Weight Std. Pkg List Price, each	15 180 lbs.	YC226016 15 190 lbs. 3,45	YC336016 10 130 lbs. \$3.60	YC446016 10 140 lbs. \$3.60	YC556016 5 80 lbs. \$3.90

The universal cut-out fastening plates, furnished with the above Condulets, take the following

30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuse Cut-outs

3-Wire: BRYANT—(Cartridge) 1.024, (Plug) 62165. D. & W.—(Cartridge) 91103. G. E. CO.—(Cartridge) 34372, (Plug) 62165. NOARK—(Cartridge) 3328. PAISTE—(Cartridge) 72165, (Plug) 2165. SHAWMUT—(Cartridge) 2079. TRUMBULL—(Cartridge) 21653, (Plug) 2165. WEBER—(Plug) 62165. UNION— (Cartridge) 2012.

60 Ampere, 250 Volt, Cut-outs

60 Ampere, 250 Voit, Cut-outs

2-Wire: BRYANT—(Cartridge) 1918. D. & W.—(Cartridge) 91108. G. E. CO.—(Cartridge) 34376. NOARK—
(Cartridge) 3329. PAISTE—(Cartridge) 82965. SHAWMUT—(Cartridge) 2078. TRUMBULL—(Cartridge) 29656. UNION—(Cartridge) 2911.

3-Wire: BRYANT—(Cartridge) 1925. D. & W.—(Cartridge) 91109. G. E. CO.—(Cartridge) 34377. NOARK—
(Cartridge) 3330. PAISTE—(Cartridge) 82165. SHAWMUT—(Cartridge) 2080. TRUMBULL—(Cartridge) 21656. UNION—(Cartridge) 2013.

2-Wire, 100 Ampere and 3-Wire, 100 Ampere, 250 Volt, Cut-outs { See enumeration of cut-outs under type Y 1-Wire, 30 Ampere and 1-Wire, 60 Ampere, 600 Volt, Cut-outs { Condulets on preceding page.

#### TYPE YL

For Cartridge or Plug Fuse Cut-outs

Furnished with Universal Cut-out Fastening Plate and All Necessary Bolts and Screws

#### TYPE YL CONDULETS-THROUGH FEED-Black Enamel Finish

For 30 Amnere, 250 Volt. N. E. C. Main Line or Single Branch Cut-outs-Cut-outs not Furnished

Style of Cut-out	Size in inches  Catalogue Number Standard Package Weight Std. Pkg List Price, each	YL11302 15 140 lbs.	3/4 YL22302 15 150 lbs. \$1.85	1 YL33302 10 100 lbs. \$1.95
Style of Cut-out	Size in inches  Catalogue Number	/2	3/4 	1 YL33303
3-wire	Standard Package Weight Std. Pkg List Price, each	15 170 lbs.	15 175 lbs. \$2.75	10 120 lbs. \$2.85

For 60 Ampere. 250 Volt. N. E. C. Main Line or Single Branch Cut-outs-Cut-outs not Furnished

Style of Cut-out	3/4 13/4	11	Size in inches	Style of Cut-out	3/4	11
2-wire	YL22602 15 200 lbs. \$2.60	YL33602 10 140 lbs. \$2.70	Catalogue NumberStandard Package Weight Std. Pkg List Price, each	3-wire	Y L22603 15 260 lbs. \$4.20	YL33603 10 190 lbs. \$4.30

The universal cut-out fastening plates, furnished with the above Condulets, take the following cut-outs:

30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuse Main Line Cut-outs

2-Wire: BRYANT—(Cartridge) 1917, (Plug) 62965. D. & W.—(Cartridge) 91102. G. E. CO.—(Cartridge) 34367, (Plug) 62965. NOARK—(Cartridge) 3327. PAISTE—(Cartridge) 72965, (Plug) 2965. SHAWMUT—(Cartridge) 2077. TRUMBULL—(Cartridge) 29653, (Plug) 2965. WEBER—(Plug) 62965. UNION— -(Cartridge) 20 Carfeidge) 2010.

—(Cartridge) 2010.

3-Wire: BRYANT—(Cartridge) 1924, (Plug) 62165. D. & W.—(Cartridge) 91103. G. E. CO.—(Cartridge) 34373, (Plug) 62165. NOARK—(Cartridge) 3328. PAISTE—(Cartridge) .72165, (Plug) 2165. SHAWMUT—(Cartridge) 2079. TRUMBULL—(Cartridge) 21653, (Plug) 2165. WEBER—(Plug) 62165. UNION—

30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuse Single Branch Cut-outs

2 to 2-Wire: BRYANT—(Cartridge) 1919, (Plug) 61935. D. & W.—(Cartridge) 91104. G. E. CO.—(Cartridge) 34368, (Plug) 61935. NOARK—(Cartridge) 3345. PAISTE—(Cartridge) 71935, (Plug) 1935. SHAWMUT—(Cartridge) 2081. TRUMBULL—(Cartridge) 19353, (Plug) 1935. WEBER—(Plug) 61935. UNION—(Cartridge) 2081.

——(Cartridge) 2020. TROMBULL—(Cartridge) 8042. D. & W.—(Cartridge) 91105. G. E. CO.—(Cartridge) 34373. (Plug) 8042. NOARK—(Cartridge) 3346. PAISTE—(Cartridge) 78042, (Plug) 8042. SHAWMUT—(Cartridge) 2083. TRUMBULL—(Cartridge) 80423, (Plug) 8042. WEBER—(Plug) 8042. UNION—(Cartridge) 8042. tridge) 2022.

60 Ampere, 250 Volt, Main Line Cut-outs 2-Wire: BRYANT—(Cartridge) 1918. D. & W.—(Cartridge) 91108. G. E. CO.—(Cartridge) 34376. NOARK—(Cartridge) 3329. PAISTE—(Cartridge) 82965. SHAWMUT—(Cartridge) 2078. TRUMBULL—(Cartridge) 2J553. UNION—(Cartridge) 2011.

3-Wire: BRYANT—(Cartridge) 1925. D. & W.—(Cartridge) 91109. G. E. CO.—(Cartridge) 34377. NOARK—(Cartridge) 3330. PAISTE—(Cartridge) 82165. SHAWMUT—(Cartridge) 2080. TRUMBULL—(Cartridge) 21656. UNION—(Cartridge) 2013.

60 Ampere, 250 Volt, Single Branch Cut-outs

2 to 2-Wire: BRYANT—(Cartridge) 1920. D. & W.—(Cartridge) 91110. G. E. CO.—(Cartridge) 34378. NO-ARK—(Cartridge) 3347. PAISTE—(Cartridge) 81935. SHAWMUT—(Cartridge) 2082. TRUMBULL—(Cartridge) 19356. UNION—(Cartridge) 2021.

3 to 3-Wire: BRYANT—(Cartridge) 1927. D. & W.—(Cartridge) 91111. G. E. CO.—(Cartridge) 34379. NO-ARK—(Cartridge) 3318. PAISTE—(Cartridge) 88042. SHAWMUT—(Cartridge) 2084. TRUMBULL—(Cartridge) 80426. UNION—(Cartridge) 2023.

Black enameled and galvanized Condulets of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

#### TYPE YS

For Cartridge or Plug Fuse Cut-outs
Furnished with Universal Cut-out Fastening Plate and All Necessary Bolts and Screws

#### TYPE YS CONDULETS-THROUGH FEED-Black Enamel Finish

For 30 Ampere, 250 Volt, N. E. C. Single Branch Cut-outs-Cut-outs not Furnished

						outs not rurn	
	Style of Cut-out	Siz	e in inches	•••••••	½ in. mains	3/4 1/2 3/4 3/4 in. mains 1/2 in. branch	
The specime S		2 to 2-wire	Sta Shi	talogue Numl ndard Packa pping Weigh t Price, each.	15 150 lbs.	YS212302 15 150 lbs. \$2.10	
		Style of Cut-out	Size	e in inches	3/4 3/4 3/4 in. mains 3/4 in. branch	1/2 1 in. mains 1/2 in. branch	
		2 to 2-wire	Sta Shi	talogue Numl ndard Packa pping Weigh t Price, each.	ge t Std. Pkg	160 lbs.	YS313302 10 100 lbs. \$2.15
Style of Cut-out	Size in inches	1 in. ma 1 in. bra	ins nch	11/4 in. mains	11/4 in. mains	1½ 1½ 1½ in. mains ½ in. branch	1½ 3/4- 1½ in. mains 3/4 in. branch
2 to 2-wire	Catalogue No Standard Package Weight Std. Pkg List Price, each	10 100 lbs.	2	YS414302 10 105 lbs. \$2.60	YS424302 10 110 lbs. \$2.70	YS515302 5 70 lbs. \$2.85	YS525302 5 75 lbs. \$2.90
Style of Cut-out	Size in inches	1/2 in. ms 1/2 in. bra	ins	1/2 3/4 3/4 in. mains 1/2 in. branch	3/4 3/4 3/4 in. mains 3/4 in. branch	1/2 1 in. mains 1/2 in. branch	1 in. mains 1 in. branch
3 to 3-wire	Catalogue No Standard Package Weight Std. Pkg. List Price, each	15 210 lbs.	3	YS212303 15 220 lbs. \$2.90	YS222303 15 230 lbs. \$2.90	YS313303 10 130 lbs. \$3,00	YS333303 10 135 lbs. \$3.15
Style of Cut-out	Size in inches	1½ in. m.	11/4 ains	3/4 11/4 11/4 in. mains 3/4 in. branch	1½ 1½ 1½ 1½ in. mains ½ in. branch	1½ in. mains	1
3 to 3-wire	Catalogue No Standard Package Weight Std. Pkg List Price, each	130 lbs.	3	YS424303 10 140 lbs. \$3.45	YS515303 5 85 lbs. \$3.55	YS525303 5 90 lbs. \$3.65	YS535303 5 95 lbs. \$3.75

The universal cut-out fastening plates, furnished for above Condulets take 30 ampere cut-outs enumerated on following page.

#### TYPE YD

For Cartridge or Plug Fuse Cut-outs

Furnished with Universal Cut-out Fastening Plate and All Necessary Bolts and Screws

#### TYPE YD CONDULETS-DEAD END-Black Enamel Finish

For 30 Ampere, 250 Volt, N. E. C. Double Branch Cut-outs-Cut-outs not Furnished

				Style of Cut-out	Sia	ze in inches.	1/2 1/2 1/2 1/2 main 1/2 branches	1/2 1/2 3/4 3/4 main ½" branches
				2 to 2- wire or 3 to 2- wire	Sta	talogue No. andard Pkg. t. Std. Pkg. st Price, ea.	15 150 lbs.	YD121302 15 160 lbs. \$2.95
	e \articles	/ .		Style of Cut-out	Siz	se in inches.	3/4 — 3/4 3/4 inain 3/4 branches	1/2 1/2 1" main 1" branches
				2 to 2- wire or 3 to 2- wire	Sta	talogue No. andard Pkg. t. Std. Pkg. st Price, ea.	YD222302 15 160 lbs. \$3.00	YD131302 10 110 lbs. \$3.00
Style of Cut-out	Size in inches.	3/4 3/4 1" main 3" branches	Traniii 7 L	1 1 2 11118	711	1/2 11/2 11/2 11/2 main 1/2" branches	La main	z main
2 to 2- wire or 3 to 2- wire	Catalogue No. Standard Pkg. Wt. Std. Pkg. List Price, ea.	YD232302 10 160 lbs. \$3.10	YD141302 10 170 lbs. \$3.40	YD2423 10 175 lbs. \$3.50		YD151302 5 85 lbs. \$3.55	YD353302 5 90 lbs. \$3.70	YD262302 5 95 lbs. \$3.75
Style of Cut-out	Size in inches.	1/2 1/2 3/4 3" main ½" branches	3/4 3/4 3/4 main 3" branches	1/2 1 1 1" mai	-1/2 in ches	3/4 3/4 1 1" main 3" branches	1/2 1/4 11/4 main 1/2 branches	3/4 3/4 11/4 11/4 main 3/4 branches
3 to 3-wire	Catalogue No. Standard Pkg. Wt. Std. Pkg. List Price, ea.		YD222303 15 280 lbs. \$4.25	YD1313 10 210 lbs. \$4.25		YD232303 10 220 lbs. \$4.35	YD141303 10 230 lbs. \$4.70	YD242303 10 235 lbs. \$4.75
Style of Cut-out	Size in inches.	1 11/4 11/4 main 1" branches	1/2 11/2 11/2 1½" main ½" branches	1 11/2 1½" ma 1" brance	-1 in	3/4 3/4 2 2" main 3" branches	1—1 2 2" main 1" branches	11/4 11/4 2 2" main 11"branch's
3 to 3-wire	Catalogue No. Standard Pkg. Wt. Std. Pkg. List Price, ea.	10 235 lbs.	YD151303 5 120 lbs. \$4.80	YD3533 5 130 lbs. \$4.85		YD262303 5 135 lbs. \$1.90	YD363303 5 140 lbs. \$5.00	YD464303 5 145 lbs. \$5.10

The universal cut-out fastening plates, furnished for above Condulets take 30 ampere cut-outs enumerated on the following page.

#### TYPE YX

For Cartridge or Plug Fuse Cut-outs

Furnished with Universal Cut-out Fastening Plate and All Necessary Bolts and Screws

#### TYPE YX CONDULETS-THROUGH FEED-Black Enamel Finish

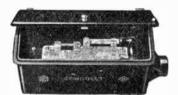
For 30 Amperes, 250 Volt, N. E. C. Double Branch Cut-outs-Cut-outs not Furnished

				Style of Cut-out	Siz	e in inches	1/2 1/2 1/2 1/2 1/2 mains 1/2 mains	1/2 - 1/2 3/4 3/4 mains ½" branches
	*		2	2 to -wire or 3 to 2-wire	Sta	talogue No. andard Pkg. t. Std. Pkg. st Price, ea.	15 170 lbs.	YX2112302 15 180 lbs. \$3.15
		<i>(</i> • • • • • • • • • • • • • • • • • • •		Style of Cut-out	Siz	e in inches	3/4 3/4 3/4 3/4 3/4 mains 3" bronches	1/2 1/2 1" mains ½" branches
				3 to 2-wire	Sta Wt Lis	talogue No. indard Pkg. Std. Pkg. it Price, ea.	YX2222302 15 170 lbs. \$3.30	YX3113302 10 120 lbs. \$3.30
Style of Cut-out	Size in inches	3/4 1 3/4 1 1" mains	1½ 1½ 1½ 1½ 1¼ 1¼ 1¼" mains	11/4 11/4 11/4 11/4 mai	-3/4	$\frac{1\frac{1}{2}}{1\frac{1}{2}}$ $\frac{1\frac{1}{2}}{1\frac{1}{2}}$ mains $\frac{1}{2}$ branches	1 1/2 1 1/2 1 1/2 1 1/2 mains	3/4 3/4 2" mains
2 to 2-wire or 3 to 2-wire	Catalogue No. Standard Pkg. Wt. Std. Pkg. List Price, ea.	YX3223302 10 160 lbs.			302			
Style of Cut-out	Size in inches	3" mains	3" mains	1" mai	ns	3/4 - 3/4 1 1" mains 3" branches	1½" mains	1½" mains
3 to 3-wire	Catalogue No. Standard Pkg. Wt. Std. Pkg. List Price, ca.	YX2112303 15 290 lbs.			303			
Style of Cut-out	Size in inches	11" mains	11 mains	11 mai	ins	3/4 1 3/4 2 2" mains	2" mains	2" mains
3 to 3-wire	Catalogue No. Standard Pkg. Wt. Std. Pkg. List Price, ea.	YX5115303 5 130 lbs.	Forancies	1 brane	nes 303	4 branches	I" branches	1¼"branch's

#### CONDULETS-YK SERIES

#### TYPE YK

For Knife Switches Arranged for Cartridge or Plug Fuses Furnished with Universal Fastening Plate and All Necessary Bolts and Screws



Type YK with Type YKK Switches Installed



Type YKC with Knife Switch, arranged for Plug Fuses, Installed

#### TYPE YK CONDULETS-DEAD END-Black Enamel Finish

For Knife Switches arranged for N. E. C. 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug Fuses

			Size in inches		1/2	3/4	1	
		2-pole Catalogue Num Standard Packa Ship. Weight, St List Price, each		age td. Pkg	ge 10 d. Pkg. 120 lbs.		Y K3302 10 130 lbs. \$3.15	
		Style of Switch	Size	in inches .		11/4	11/2	2
		2-pole	Catalogue Number Standard Package Ship. Weight, Std. Pkg List Price, each			140 lbs.	YK5302 10 145 lbs. \$3.45	YK6302 10 100 lbs. \$3.60
Style of Switch	Size in inches			1/2	3/4	1	11/4	11/2
3-pole	Standard Package Shipping Weight,	dogue Number dard Package ping Weight, Std. Pkg Price, each			Y K2303 10 <sup>-</sup> 135 lbs. £3.£5	Y K3503 10 140 lbs. \$4.00	YK4303 10 150 lbs. \$4:15	YK5303 10 155 lbs. \$4.30

#### For Knife Switches arranged for 60 Ampere, 250 Volt, N. E. C. Fuses

Style of Switch	Size in inches	3/4	1	11/4	11/2	2 6
2-pole	Catalogue Number	10 170 lbs.	Y K3602 10 175 lbs. \$4.60	YK4602 10 180 lbs. \$4.75	YK5602 10 190 lbs. \$5.05	Y K6602 10 200 lbs. \$5.25
Style of Switch	Size in inches	3/4	1	11/4	11/2	2
3-pole	Catalogue Number	10 230 lbs.	Y K3603 10 235 lbs. \$6.10	YK4603 10 240 lbs. \$6.45	Y K5603 10 250 lbs. \$6.65	YK6603 10 260 lbs. \$6.95

Switches are not included in above list prices, but the universal fastening plates, furnished with above Condulets, take Crouse-Hinds type YKK knife switches or the knife switches of other manufacturers, enumerated on following page.

#### TYPE YKC

For Knife Switches Arranged for Cartridge or Plug Fuses
Furnished with Universal Fastening Plate and All Necessary Bolts and Screws

#### TYPE YKC CONDULETS-THROUGH FEED-Black Enamel Finish

For Knife Switches arranged for N. E. C. 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt. Plug Fuses

		Style of Switch	Size	in inches	1/2	3/4	1
		2-pole	Catalogue No Standard Pkg Weight Std. Pkg. List Price, each.		10 125 lbs.	YKC22302 10 130 lbs. 03.05	Y KC33302 10 135 lbs. \$3.25
		Style of Switch			11/4	11/2	2
		2-pole	Catalogue No Standard Pkg Weight Std. Pkg. List Price, each.		10 140 lbs.	YKC55302 10 150 lbs. \$3.60	YKC66302 10 160 lbs. £3.80
Style of Switch	Size in inches	1/2		3/4	1	11/4	11/2
3-pole	Catalogue No Standard Pkg Weight Std. Pkg List Price, each	10 140 lbs.	303	YKC22303 10 145 lbs. \$\text{C4.00}\$	YKC33303 10 150 lbs. \$\text{\$04.15}\$	YKC44303 10 160 lbs. \$4.30	YKC55303 10 170 lbs. \$4.60

#### For Knife Switches arranged for 60 Ampere, 250 Volt, N. E. C. Fuses

Style of Switch	Size in inches	3/4	1	11/4	11/2	2	
2-pole	List Price, each		YKC33602 10 190 lbs. \$4.70	YKC44602 10 200 lbs. \$4.90	YKC55602 10 210 lbs. \$5.15	YKC66602 10 220 lbs. \$5.45	
Style of Switch	Size in inches	3/4	1	11/4	11/2	2	
3-pole	Catalogue No Standard Pkg Weight Std. Pkg List Price, each	10 230 lbs.	YKC33603 10 240 lbs. \$6.25	YXC44603 10 250 lbs. \$6.60	YKC55603 10 300 lbs. \$6.85	YKC66603 10 310 lbs. \$7.15	

Switches are not included in above list prices, but the universal fastening plates, furnished with Condulets of the YK series, take Crouse-Hinds type YKK knife switches or the knife switches of other manufacturers, as follows:

Switches Arranged for 30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuses 2-Pole: CROUSE-HINDS—(Cartridge) YKK302. BRYANT—(Plug) 1695, 1981. CONN. ELEC.—(Plug) 01502. D. & W.—(Plug) 25028. G. E. CO.—(Plug) 42869. PAISTE—(Plug) 4014, 4016. TRUMBULL—(Cartridge) 704, 724, (Plug) 701, 721.

3-Pole: CROUSE-HINDS—(Cartridge) YKK303. BRYANT—(Plug) 1986. PAISTE—(Cartridge) 4033, (Plug) 4025, 4029. TRUMBULL—(Cartridge) 725, (Plug) 723.

Switches Arranged for 60 Ampere, 250 Volt, Cartridge Fuses

2-Pole: CROUSE-HINDS—(Cartridge) YKK602. PAISTE—(Cartridge) 5151. 3-Pole: CROUSE-HINDS—(Cartridge) YKK603. PAISTE—(Cartridge) 5153.

Crouse-Hinds type YKK knife switches arranged for cartridge fuses are listed on Manufacturer's Page No. 135.

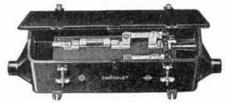
Black enameled and galvanized Condulets of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

## CONDULETS-YKW SERIES TYPE YKW

Water-tight-For Knife Switches Arranged for Cartridge or Plug Fuses
Furnished with Universal Fastening Plate, Gasket and All Necessary Bolts and Screws



Type YKW with Type YKK Switch Installed



Type YEWC with Type B Switch, Arranged for Cartridge Puses, Installed

#### TYPE YKW CONDULETS-DEAD END-Black Enamel Finish

For Knife Switches Arranged for N.E.C.30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug Fuses

		Style of Switch	Size in incl	1es	1/2	3/4	1
		2-pole	Standard I Weight Sto	Number Package l. Pkg each	YKW1302 10 180 lbs. \$6.60	YKW2302 10 185 lbs. \$6.70	YKW3302 10 190 lbs. \$6.80
100		Style of Switch	Size in incl	nes	11/4	11/2	2
			Catalogue Number Standard Package Weight Std. Pkg List Price, each		10 195 lbs.	Y KW5302 10 200 lbs. \$7.00	YKW6302 10 210 lbs. \$7.10
Style of Switch	Size in inches		1/2	3/4	1	11/4	11/2
3-pole	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each		YKW1303 10 240 lbs. \$8.50	Y KW2303 10 245 lbs. \$8.60	Y KW3303 10 250 lbs. \$8.70	YKW4303 10 260 lbs. \$8.80	YKW5303 10 265 lbs. \$8.90

#### For Knife Switches Arranged for 60 Ampere, 250 Volt, N. E. C. Fuses

Style of Switch	Size in inches	3/4	1	11/4	11/2	2
2-pole	Catalogue Number	YKW2602	YKW3602	YKW4602	YKW5602	YKW6602
	Standard Package	10	10	10	10	10
	Shipping Weight Std. Pkg.	270 lbs.	275 lbs.	280 lbs.	290 lbs.	300 lbs.
	List Price, each	\$8.80	\$8.90	\$9.00	\$9.10	\$9.20
Style of Switch	Size in inches	3/4	1	11/4	11/2	2
3-pole	Catalogue Number	YKW2603	YKW3603	Y KW4603	YKW5603	YKW6603
	Standard Package	10	10	10	10	10
	Shipping Weight Std. Pkg.	300 lbs.	305 lbs.	310 lbs.	315 lbs.	320 lbs.
	List Price, each	\$9.40	\$9.50	\$9.60	\$9.70	\$9.80

Switches are not included in above list prices, but the universal fastening plates, furnished with above Condulets, take Crouse-Hinds type YKK knife switches or the knife switches of other manufacturers, enumerated on following page.

## CONDULETS YKW SERIES—Continued TYPE YKW—Continued

Water-tight—for Knife Switches Arranged for Cartridge Fuses
Condulets Listed Below are not arranged for Universal Fastening Plates, but are furnished with
All Necessary Screws to Fasten Switches direct to Condulets

#### TYPE YKW CONDULETS-DEAD END-Black Enamel Finish

#### For Knife Switches arranged for 100 Ampere, 250 Volt, N. E. C. Fuses

Style of Switch	Size in inches	1	11/4	11/2	2
2-pole	Catalogue Number Standard Paekage Shipping Weight Std. Pkg. List Price, each	5 250 lbs.	Y KW41002 5 255 lbs. \$16.80	YKW51002 5 260 lbs. \$17.00	Y KW 61002 5 270 lbs. \$17.20
Style of Switch	Size in inches	11/4	11/2	2	21/2
3-pole	Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	YKW41003 5 340 lbs. \$20.60	YKW51003 5 345 lbs. \$20.80	YKW61003 5 350 lbs. \$21.00	Y KW71003 5 355 lbs. \$21.20

#### For Knife Switches arranged for 200 Ampere, 250 Volt, N. E. C. Fuses

Style of Switch	Size in inehes	11/2	2	21/2	3
2-pole	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	YKW52002 5 360 lbs.	Y K W 62002 5 365 lbs. \$21.40	YKW72002 5 375 lbs. \$21.80	YKW82002 5 380 lbs. \$25.20
Style of Switch	Size in inches	11/2	2	21/2	3
3-pole	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each.	YKW52003 5 500 lbs. \$30.80	YKW62003 5 510 lbs. \$31.20	Y K W 72003 5 520 lbs. 831.60	YKW82003 5 530 lbs. 832.00

The universal fastening plates, furnished with Condulets listed on the preceding page, take Crouse-Hinds type YKK knife switches or knife switches of other manufacturers, as follows:

Switches Arranged for 30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuses

2-Pole: CROUSE-HINDS—(Cartridge) YKK302. BRYANT—(Plug) 1695, 1981. CONN. ELEC.—(Plug) 01502. D. & W.—(Plug) 25028. G. E. CO.—(Plug) 42869. PAISTE—(Plug) 4014, 4016. TRUMBULL—(Cartridge) 704, 724, (Plug) 701, 721.

3-Pole: CROUSE-HINDS (Cartridge) YKK303. BRYANT—(Plug) 1986. PAISTE—(Cartridge) 4033, (Plug) 4025, 4029. TRUMBULL—(Cartridge) 725, (Plug) 723.

Switches Arranged for 60 Ampere, 250 Volt, Cartridge Fuses

2-Pole: CROUSE-HINDS—(Cartridge) YKK602. PAISTE—(Cartridge) 5151.
3-Pole: CROUSE-HINDS—(Cartridge) YKK603. PAISTE—(Cartridge) 5153.

Switches are not included in list prices on this page, but Condulets listed on this page take 100 or 200 ampere, Crouse-Hinds type B knife switches with high clips or knife switches of other manufacturers, as follows:

Switches Arranged for 100 Ampere, 250 Volt, Cartridge Fuses

2-Pole: CROUSE-HINDS (Cartridge) 31364—Specify high clips. OTHER MANUFACTURERS—(Cartridge)

3-Pole: CROUSE-HINDS—(Cartridge) 31484—Specify high clips. OTHER MANUFACTURERS—(Cartridge)

Switches Arranged for 200 Ampere, 250 Volt. Cartridge Fuses

2-Pole: CROUSE-HINDS—(Cartridge) 31366—Specify high clips. OTHER MANUFACTURERS—(Cartridge)

3-Pole: CROUSE-HINDS-(Cartridge) 31486-Specify high clips. OTHER MANUFACTURERS-(Cartridge)

#### TYPE YKWC

Water-tight—For Knife Switches Arranged for Cartridge or Plug Fuses
Furnished with Universal Fastening Plate, Gasket and All Necessary Bolts and Screws

#### TYPE YKWC CONDULETS-THROUGH FEED-Black Enamel Finish

For Knife Switches arranged for N. E. C. 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug Fuses

-		Style of Switch	Size	e in inches	1/2	3/4	1
	2-pole	Star	alogue No ndard Pkg ight Std. Pkg. t Price, each.	10 190 lbs.	10 195 lbs.	YKWC33302 10 200 lbs. \$6.95	
		Style of Switch	Size	e in inches	11/4	11/2	2
		2-pole	Star	alogue No ndard Pkg ight Std. Pkg. Price, each.	10 205 lbs.	Y KWC55302 10 210 lbs. \$7.15	YKWC66302 10 215 lbs. \$7.25
Style of Switch	Size in inches	1/2		3/4	1	11/4	11/2
3-pole	Catalogue Number. Standard Package Weight Std. Pkg List Price, each	10 240 lbs.		10 245 lbs.	10 250 lbs.	YKWC44303 10 255 lbs. \$8.90	YKWC55303 10 260 lbs. \$9.00

#### For Knife Switches arranged for 60 Ampere, 250 Volt, N. E. C. Fuses

Style of Switch	Size in inches	3/4	1	11/4	11/2	2
2-pole	Catalogue Number. Standard Package Weight Std. Pkg List Price, each	10 260 lbs.	10 265 lbs.	10 270 lbs.	10 275 lbs.	YKWC66602 10 280 lbs. \$9.40
Style of Switch	Size in inches	3/4	1	11/4	11/2	2
3-pole	Catalogue Number. Standard Package Weight Std. Pkg List Price, each	10 285 lbs.	10 290 lbs.	10 295 lbs.	10 300 lbs.	YKWC66603 10 305 lbs. \$10.00

Switches are not included in above list prices, but the universal fastening plates, furnished with above Condulets, take Crouse-Hinds type YKK knife switches or knife switches of other manufacturers, as follows:

Switches Arranged for 30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuses
2-Pole: CROUSE-HINDS—(Cartridge) YKK302. BRYANT—(Plug) 1695, 1981. CONN. ELEC.—(Plug) 01502D. & W.—(Plug) 25028. G. E. CO.—(Plug) 42869. PAISTE—(Plug) 4014, 4016. TRUMBULL—(Cartridge) 704, 724, (Plug) 701, 721.

3-Pole: CROUSE-HINDS—(Cartridge) YKK303. BRYANT—(Plug) 1986. PAISTE—(Cartridge) 4033, (Plug) 4025, 4029. TRUMBULL—(Cartridge) 725, (Plug) 723.

Switches Arranged for 60 Ampere, 250 Volt, Cartridge Fuses

2-Pole: CROUSE-HINDS—(Cartridge) YKK602. PAISTE—(Cartridge) 5151. 3-Pole: CROUSE-HINDS—(Cartridge) YKK603. PAISTE—(Cartridge) 5153.

Padlock is not included in above list prices.

Black enameled and galvanized Condulets of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

## CONDULETS—YKW SERIES—Continued TYPE YKWC—Continued

Water-tight—For Knife Switches Arranged for Cartridge Fuses Condulets Listed Below are not arranged for Universal Fastening Plates, but are furnished with Gasket and All Necessary Screws to Fasten Switches direct to Condulets

#### TYPE YKWC CONDULETS-THROUGH FEED-Black Enamel Finish

	For Knife Switch	es arranged for	100 Ampere, 250	Volt, N. E. C. Fus	ies
Style of Switch	Size in inches	1	11/4	11/2	2
2-pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, ea	5 260 lbs.	YKWC441002 5 265 lbs. \$17.40	YKWC551002 5 270 lbs. \$17.80	YKWC661002 5 285 lbs. \$18.20
Style of Switch	Size in inches	11/4	11/2	2	21/2
3-pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, ea	5 340 lbs.	YKWC551003 5 345 lbs. \$21.00	YKWC661003 5 360 lbs. \$22.30	YKWC771003 5 375 lbs. \$22.70
	For Knife Switch	es arranged for	200 Ampere, 250	Volt, N. E. C. Fu	ses
Style of Switch	Size in inches	11/2	2	21/2	3
2-pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, ea	5 375 lbs.	YKWC662002 5 395 lbs. \$25.50	YKWC772002 5 395 lbs. \$26.00	YKWC882002 5 410 lbs. \$26.50
Style of Switch	Size in inches	11/2	2	21/2	3
3-pole	Catalogue No Standard Pkg Wt. Std. Pkg List Price, ea	5 490 lbs.	YKWC662003 5 500 lbs. \$33.00	YKWC772003 5 510 lbs. \$33.50	YKWC882003 5 520 lbs. \$34.00

Switches are not included in list prices, but Condulets listed on this page take Crouse-Hinds type
B knife switches with high clips enumerated below, or other switches that
conform with dimensions specified below

## KNIFE SWITCHES FOR CONDULETS OF THE YK AND YKW SERIES Arranged for N. E. C. Cartridge Fuses-250 Volts







Type B Switch

Dimensional Drawing

	Crouse-Hinds Type YKK Knife Switches							Switches of Other Manufacturers			
	30 Amp.	60 Amp			30 Amp.		Style	2-P	01e	3-P	ole
2-	YKK302 10	YKK602	Cat. No. Std. Pkg.	3-	YKK303 10	YKK603 10	Capacity	100 Amp.	200 Amp.	100 Amp.	200 £mp.
pole	\$2.25	\$3.50	Price, ea.		\$3.75	\$5.25	A (Fixed)	71"	85" 101"	7½" 9½"	85"
	Cı	rouse-Hin	ds Type B Kr	ife Sv	vitches		B (Max.) C (Fixed)	9¼" 5¼"	5¾"	83,"	10½" 9¾"
	100Amp.	200Amp.	Capacity		100Amp	200Amp.	D (Max.) E (Max.)	$10\frac{6}{8}$ "	7" 117"		11" 117"
2- pole	31364*	31366*	Cat. No. List Price, ea	3- pol	a 31484*	31486*	F (Max.†) G (Max.‡)	5 "	$6\frac{1}{4}''$ $6\frac{3}{4}''$	4¾" 5¼"	$6\frac{1}{4}''$ $6\frac{3}{4}''$

<sup>\*</sup>Specify high clips when ordering.

†From bottom of slate base to highest point of clip. ‡From bottom of slate base to highest point of handle. Any switch with dimensions not exceeding those specified "maximum" and with dimensions the same as those specified "fixed," in above schedule, will fit Condulets of corresponding classification in the YKW series.

#### TYPES ZGC AND ZGU CONDULETS

FOR CARTRIDGE OR PLUG FUSE CUT-OUTS AND GENERAL ELECTRIC 2 H. P. 250-VOLT, THREE-PHASE, SNAP SWITCH 151394 WITH PROTECTIVE COVER FOR TEXTILE MILL INSTALLATIONS

Furnished with Universal Cut-out Fastening Plate and All Necessary Bolts and Screws



Type ZGC Condulet
Showing Snap Switch and Cartridge Fuse
Cut-out Installed



Type ZGU Condulet
Showing Snap Switches and Cartridge Fuse
Cut-out Installed

#### TYPE ZGC CONDULETS-THROUGH FEED-Black Enamel Finish

For 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug Fuse N. E. C. Main Line Cut-outs and G. E. Switch 151394—Cut-out and Switch not Furnished



Style of Cut-out	Size in inches	1/21/2	3/43/4	11
3-wire	Cat. No Std. Pkg Wt. Std. Pkg. List Price, ea.	15 155 lbs.	ZGC22303 15 160 lbs. \$3.70	ZGC33303 10 110 lbs- \$3.80

The universal cut-out fastening plates, furnished with the Condulets, take the following cut-outs:

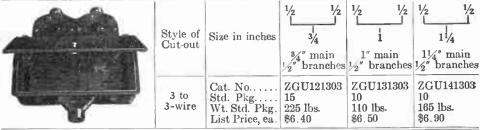
30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Piug Fuse Cut-outs:

No. 10 American State of the Control of

3-Wire: BRYANT (Cartridge) 1924, (Plug) 62165. D. & W.—(Cartridge) 91103. G. E. CO.—(Cartridge) 34372, (Plug) 62165. NOARK—(Cartridge) 3328. PAISTE—(Cartridge) 72165, (Plug) 2165. SHAWMUT—(Cartridge) 2079. TRUMBULL—(Cartridge) 21653, (Plug) 2165. WEBER—(Plug) 62165. UNION—(Cartridge) 2012.

#### TYPE ZGU CONDULETS—Black Enamel Finish

For 30 Ampere, 250 Volt. Cartridge or 30 Ampere, 125 Volt. Plug Fuse N. E. C. Double Branch Cut-outs and G. E. Switch 151394—Cut-out and Switches not Furnished



The universal cut-out fastening plates, furnished with the Condulets, take the following cut-outs:

3 to 3-Wire: BRYANT—(Cartridge) 1928, (Plug) 62135. D. & W.—(Cartridge) 91100. G. E. CO.—(Cartridge) 34374, (Plug) 62135. NOARK—(Cartridge) 3353. PAISTE—(Cartridge) 72135, (Plug) 2135. SHAWMUT—(Cartridge) 20835. TRUMBULL—(Cartridge) 21353, (Plug) 2135. WEBER—(Plug) 62135. UNION—(Cartridge) 1029.

Types ZGC and ZGU Condulets have been referred to in previous literature as Types ZCG and ZUG, respectively.

#### CONDULETS-Z SERIES

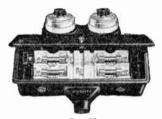
#### TYPES Z, ZC, ZL, ZR, ZS, ZU, ZD, AND ZX

For Cartridge or Plug Fuse Cut-outs and Snap or Pull Switches

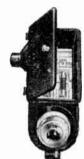
Furmished with Universal Cut-out Fastening Plate, Adjustable Bar and Adapting Rings for Switches and All Necessary Bolts and Screws



Type ZL With Snap Switch and Plug Fuse Cut-out Installed



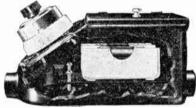
Type ZU With Snap Switches and Cartridge Fuse Cut-out Installed



Type ZR With Snap Switch and Cartridge Fuse Cut-put Installed



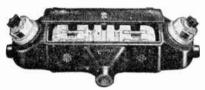
Type ZS
With Snaµ Switch and Plug Fuse
Cut-out Installed



Type ZC With Snap Switch and Cartridge Fuse Cut-out Installed (Broken-away View, Showing Cut-out)



Type Z
With Snap Switch and Cartridge Fuse
Cut-gut Installed



Type ZD With Snep Switches and Cartridge Fuse Cut-out Installed



Type ZX
With Snap Switches and Plug Fuse Cut-out Installed

#### TYPE Z CONDULETS-DEAD END-Black Enamel Finish

For 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug Fuse N. E. C. Main Line Cut-outs and 5, 10 or 20 Ampere Switches—Cut-outs and Switches not Furnished

	Style of Cut-out	Size in inches	1/2	3/4	1
	2-wire	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	15 120 lbs.	Z2302 15 125 lbs. \$2.65	Z3302 10 85 lbs. \$2.75
	Style of Cut-out	Size in inches	1/2	3/4	1
	3-wire	Catalogue Number Standard Package Ship. Wt. Std. Pkg List Price, each	15 145 lbs.	Z2303 15 150 lbs. \$3.10	Z3303 10 105 lbs. \$3.20

#### TYPE Z-Continued-AND TYPE ZC

For Cartridge or Plug Fuse Cut-outs and Snap or Pull Switches
Furnished with Universal Cut-out Fastening Plate, Adjustable Bar and Adapting Rings
for Switches and All Necessary Bolts and Screws

#### TYPE Z CONDULETS-DEAD END-Black Enamel Finish-Continued

For 30 Ampere, 600 Volt, N. E. C. Main Line Cut-outs and 5, 10 or 20 Ampere Switches-Cut-outs and Switches not Furnished

	Style of Cut-out	1/2	3/4	1	Size in inches	Style of Cut-out	1
-	1-wire	Z13016 15 210 lbs. \$4.30	Z23016 15 220 lbs. \$4.40	10 150 lbs.	Catalogue No Standard Pkg Weight Std. Pkg List Price, each	3-wire	Z33036 10 205 lbs. \$5.90

#### TYPE ZC CONDULETS-THROUGH FEED-Black Enamel Finish

For 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug Fuse N.E.C. Main Line Cut-outs and 5, 10 or 20 Ampere Switches—Cut-outs and Switches not Furnished

		Style of Cut-out	Siz	e in inches		1/21/2	3/43/4	11
		2-wire	Catalogue Number Standard Package Weight Std. Pkg. List Price, each			15 125 lbs.	ZC22302 15 130 lbs. \$2.90	ZC33302 10 90 lbs. \$3.00
		Style of Cut-out	Siz	e in inches	• • • • • • • • • • • • • • • • • • • •	11/411/4	11/2-11/2	22
		2-wire	Catalogue Number Standard Package Weight Std. Pkg List Price, each			10 95 lbs.	ZC55302 5 55 lbs. \$3.20	ZC66302 5 60 lbs. \$3.30
Style of Cut-out	Size in inches.	1/2	-1/2	3/43/4	11	11/411/4	11/211/2	22
3-wire	Catalogue No. Standard Pkg. Weight Std. Pk List Price, each	ZC1130 15 g. 145 lbs.	)3	ZC22303 15 150 lbs. \$3.35	ZC33303 10 105 lbs. \$3.45	ZC44303 10 110 lbs. \$3.55	ZC55303 5 60 lbs. \$3,65	ZC66303 5 65 lbs. \$3.75

For 30 Ampere, 600 Volt, N. E. C. Main Line Cut-outs and 5, 10 or 20 Ampere Switches-Cut-outs and Switches not Furnished

Style of Cut-out	1/21/2	3/43/4	11	Size, inches.	Style of Cut-out	1/21/2	3/43/4	11
	ZC113016 15 230 lbs. \$4.60			Cat. No Std. Pkg Wt.Std.Pkg. List, each	3-wire	ZC113036 15 290 lbs. \$6.80	ZC223036 15 295 lbs. \$6.90	ZC333036 10 210 lbs. \$7.00

The adjustable bar, furnished with each Condulet listed on this and the preceding page. permits the proper mounting of any snap or pull switch

Adapting rings, furnished with the Condulets, are required in mounting 5 or 10 ampere switches. No adapting ring is required in mounting a 20 ampere switch.

The universal cut-out fastening plates, furnished with the Condulets listed on this and the preceding page, take the following cut-outs:

30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuse Cut-outs

30 Ampère, 250 volt, Cartridge and 30 Ampère, 125 volt, Plug Fuse Cut-outs

2-Wire: BRYANT—(Cartridge) 1917, (Plug) 62965. D. & W.—(Cartridge) 91102. G. E. CO.—(Cartridge) 34367, (Plug) 62965. NOARK—(Cartridge) 3327. PAISTE—(Cartridge) 72965, (Plug) 2965. SHAWMUT—(Cartridge) 2077. TRUMBULL—(Cartridge) 29653, (Plug) 2965. WEBER—(Plug) 62965. UNION—

(Cartridge) 2010.

3-Wire: BRYANT—(Cartridge) 1924, (Plug) 62165. D. & W.—(Cartridge) 91103. G. E. CO.—(Cartridge) 34372, (Plug) 62165. NOARK—(Cartridge) 3328. PAISTE—(Cartridge) 72165, (Plug) 2165. SHAWMUT—(Cartridge) 2079. TRUMBULL—(Cartridge) 21653, (Plug) 2165. WEBER—(Plug) 62165. UNION—(Cartridge) 2012.

30 Ampere, 600 Volt, Cartridge Fuse Cut-outs

ye) 1937. D. & W.—(Cartridge) 28076. G. E. CO.—(Cartridge) 34991. NOARK—

1-Wire: BRYANT—(Cartridge) 1937. D. & W.—(Cartridge) 28076. G. E. CO.—(Cartridge) 34991. NOARK—(Cartridge) 5600. SHAWMUT—(Cartridge) 20735. UNION—(Cartridge) 4003.
3-Wire: Mount three 1-wire cut-outs, side by side.

## CONDULETS—Z SERIES—Continued TYPES ZL AND ZR

For Cartridge or Plug Fuse Cut-outs and Snap or Pull Switches Furnished with Universal Cut-out Fastening Plate, Adjustable Bar and Adapting Ring for Switches and All Necessary Bolts and Screws

#### TYPE ZL CONDULETS-THROUGH FEED-Black Enamel Finish

For 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug Fuse N. E. C. Main Line or Single Branch Cut-outs and 5, 10 or 20 Ampere Switches—Cut-outs and Switches not Furnished

A	Style of Cut-out	Size in inches	1/2	3/4 L3/4	1
	2-wire	Catalogue Number Standard Package Weight Std. Pkg List Price, each	ZL11302 15 150 lbs. \$3,15	ZL22302 15 155 lbs. \$3.25	ZL33302 10 110 lbs. \$3.35
	Style of Cut-out	Size in inches	1/2	3/43/4	1
4:Decar	3-wire	Catalogue Number Standard Package Weight Std. Pkg List Price, each	ZL11303 15 170 lbs. \$3.65	ZL22303 15 175 lbs. \$3.75	ZL33303 10 125 lbs. \$3.85

#### TYPE ZR CONDULETS-THROUGH FEED-Black Enamel Finish

For 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug Fuse N. E. C. Main Line or Single Branch Cut-outs and 5, 10 or 20 Ampere Switches—Cut-outs and Switches not Furnished

	Style of Cut-out	Size in inches	1/2	3/4	11
	2-wire	Catalogue Number Standard Package Weight Std. Pkg List Price, each	15 150 lbs.	ZR22302 15 155 lbs. \$3.25	ZR33302 10 110 lbs. \$3.35
	Style of Cut-out	Size in inches	1/2	3/4	11
	3-wire	Catalogue Number Standard Package Weight Std. Pkg List Price, each	15 170 lbs.	ZR22303 15 175 lbs. \$3.75	ZR33303 10 125 lbs. \$3.85

The adjustable bar, furnished with each Condulet, permits the mounting of any snap or pull switch

Adapting rings, furnished with the Condulets, are required in mounting 5 or 10 ampere switches. No adapting ring is required in mounting a 20 ampere switch.

The universal cut-out fastening plates, furnished with the above Condulets, take the following cut-outs:

30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuse Main Line Cut-outs

2-Wire: BRYANT—(Cartridge) 1917, (Plug) 62965. D. & W.—(Cartridge) 91102. G. E. CO.—(Cartridge) 34367, (Plug) 62965. NOARK—(Cartridge) 3327. PAISTE—(Cartridge) 72965, (Plug) 2965. SHAWMUT—(Cartridge) 2077. TRUMBULL—(Cartridge) 29653, (Plug) 2965. WEBER—(Plug) 62965. UNION—(Cartridge) 2010.

3-Wire: BRYANT—(Cartridge) 1924, (Plug) 62165. D. & W.—(Cartridge) 91103. G. E. CO.—(Cartridge) 34372, (Plug) 62165. NOARK—(Cartridge) 3328. PAISTE—(Cartridge) 72165, (Plug) 2165. SHAWMUT—(Cartridge) 2079. TRUMBULL—(Cartridge) 21653, (Plug) 2165. WEBER—(Plug) 62165. UNION—(Cartridge) 2012.

30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuse Single Branch Cut-outs

2 to 2-Wires ERYANT—(Cartridge) 1919, (Plug) 61935. D. & W.—(Cartridge) 91104. G. E. CO.—(Cartridge) 33368, tPlug) 61935. NOARK—(Cartridge) 3345. PAISTE—(Cartridge) 71935, (Plug) 1935. SHAWMUT—(Cartridge) 2081. TRUMBULL—(Cartridge) 19353, (Plug) 1935. WEBER—(Plug) 61935. UNION—(Cartridge) 2020.

3 to 3-Wire: BRYANT—(Cartridge) 1926, (Plug) 8042. D. & W.—(Cartridge) 91105. G. E. CO.—(Cartridge) 33473, (Plug) 8042. NOARK—(Cartridge) 3346. PAISTE—(Cartridge) 78042, (Plug) 8042. SHAWMUT—+ Cartridge) 2083. TRUMBULL—(Cartridge) 80423, (Plug) 8042. WEBER—(Plug) 8042. UNION—(Cartridge) 2022.

Black enameled and galvanized Condulets of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

## CONDULETS-Z SERIES-Continued TYPE ZS

For Cartridge or Plug Fuse Cut-outs and Snap or Pull Switches
Furnished with Universal Cut-out Fastening Plate, Adjustable Bar and Adapting Ring for Switches
and All Necessary Bolts and Screws

#### TYPE ZS CONDULETS-THROUGH FEED-Black Enamel Finish

For 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug Fuse N. E. C. Single Pranch Cut-outs and 5, 10 or 20 Ampere Switches—Cut-outs and Switches not Furnished

				, out to and b	WINDINGS HOUI	итпізпец	
-0		Style of Cut-out	Size in inc	hes	1/2 1/2 1/2 1/2 in. mains 1/2 in. branch ZS111302	3/4 1/2 3/4 3/4 in. mains ½ in. branch ZS212302	3/4 3/4 3/4 in. mains 3/4 in. branch ZS222302
	T.	2 to 2-wire	Standard I Weight Ste	Package l. Pkg cach	15	15 165 lbs. \$3,45	15 170 lbs. \$3.50
Style of Cut-out		1/2 1 1 in mains	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1½————————————————————————————————————	3/4 11/4	1½	3/4
		½ in. branch	1 in. branch	$\frac{1}{2}$ in. branch	in branch	13 m. mams  12 in. branch	3 in. branch
2 to	Catalogue No Standard Pkg	ZS313302 10	ZS333302 10	ZS414302 10	ZS424302 10	ZS515302 5	ZS525302 5
2-wire	Weight Std. Pkg. List Price, each.		125 lbs. \$3.60	130 lbs. \$3.65	135 lbs. \$3.75	75 lbs. \$3.85	80 lbs. \$3.95
Style of Cut-out	Size in inches	1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	1/2 - 3/4 3/4 in mains 1/2 in branch		1/2——1 1 in. mains ½ in. branch		
3 to 3-wire	Catalogue No Standard Pkg Weight Std. Pkg. List Price, each	ZS111303 15 180 lbs.	ZS212303 15 185 lbs. \$3.75	ZS222303 15 190 lbs. \$3.80	ZS313303 10 135 lbs. \$3.85	ZS323303 10 140 lbs. \$3.90	ZS333303 10 145 lbs. \$4.00
Style of Cut-out	Size in inches	$ \begin{array}{c c} 1^{1}/4 \\ 1/2 & 1^{1}/4 \\ 1^{1}/4 \text{ in. mains} \\ \frac{1}{2} \text{ in. branch} \end{array} $	3/4 11/4 11/4 in. mains 3/4 in. branch	$1\frac{1}{2}$ $1\frac{1}{2}$ $1\frac{1}{2}$ $1\frac{1}{2}$ in. mains $\frac{1}{2}$ in. branch	$3/4$ $11/2$ $11/2$ $11/2$ $1\frac{1}{2}$ in. mains $\frac{3}{4}$ in. branch	3/4———2 2 in. mains	2 11/4———————————————————————————————————
3 to 3-wire	Catalogue No Standard Pkg Weight Std. Pkg. List Price, each	ZS414303 10 150 lbs.	ZS424303 10 155 lbs. \$4.10	ZS515303 5 80 lbs. \$4.25	ZS525303 5 80 lbs. \$4.35	ZS626303 5 85 lbs. \$4.45	ZS646303 5 90 lbs. \$4.65

The adjustable bar, furnished with each Condulet, permits the mounting of any snap or pull switch

Adapting rings, furnished with the Condulets, are required in mounting 5 or 10 ampere switches. No adapting ring is required in mounting a 20 ampere switch.

The universal cut-out fastening plates, furnished with the above Condulets, take the following cut-outs:

30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuse Cut-outs

2 to 2-Wire: BRYANT—(Cartridge) 1919, (Plug) 61935. D. & W.—(Cartridge) 91104. G. E. CO.—(Cartridge) 34368, (Plug) 61935. NOARK—(Cartridge) 3345. PAISTE—(Cartridge) 71935, (Plug) 1935. SHAWMUT—(Cartridge) 2081. TRUMBULL—(Cartridge) 19353, (Plug) 1935. WEBER—(Plug) 61935. UNION—(Cartridge) 2020.

(Cartridge) 2021. TRUMBULL—(Cartridge) 1000., (Cartridge) 91105. G. E. CO.—(Cartridge) 3 to 3-Wire: BRYANT—(Cartridge) 1926, (Plug) 8042. D. & W.—(Cartridge) 91105. G. E. CO.—(Cartridge) 34373, (Plug) 8042. NOARK—(Cartridge) 3346. PAISTE—(Cartridge) 78042, (Plug) 8042. SHAWMUT—(Cartridge) 2083. TRUMBULL—(Cartridge) 80423, (Plug) 8042. WEBER—(Plug) 8042. UNION—(Cartridge) 2022.

Black enameled and galvanized Condulets of the same type and size may be assorted to make up a standard package. No other assortment is allowed.

#### TYPE ZU\*

For Cartridge or Plug Fuse Cut-outs and Snap or Pull Switches Furnished with Universal Cut-out Fastening Plate, Adjustable Bars and Adapting Rings for Switches and All Necessary Bolts and Screws

#### TYPE ZU CONDULETS-Black Enamel Finish

For 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug N. E. C. Double Branch Cut-outs and 5, 10 or 20 Ampere Switches—Cut-outs and Switches not Furnished

<del></del>		Style of Cut-out	Size in inche	es	1/2 1/2 in. main	$\frac{1}{2}$ $\frac{3}{4}$ $\frac{3}{4}$ in. main $\frac{1}{2}$ in. branches
		2 to 2-wire or 3 to 2-wire	Standard Pa Shipping We	umber	ZU111302 15 200 lbs. \$4.70	ZU121302 15 205 lbs. \$4.80
	The state of the s	Style of Cut-out	Size in inche	s	3/4 3/4 in. main	1 in. main in branches
	¥,	2 to 2-wire or 3 to 2-wire	Standard Pa	umber ckage ight Std. Pkg. ach	ZU222302 15 210 lbs. \$4.90	ZU131302 10 105 lbs. \$5.00
Style of Cut-out	Size in inches	1 1 in. main	1 <sup>1</sup> / <sub>4</sub> 1 <sup>1</sup> / <sub>4</sub> in. main	1 1/4 1 in. main 3 in. branches	11/4 11/4 in. main	$1\frac{1}{2}$ $1\frac{1}{2}$ $1\frac{1}{2}$ in. main $\frac{1}{2}$ in. branches
2 to 2-wire or 3 to 2-wire	Catalogue No Standard Package Weight Std. Pkg List Price, each	10	ZU141302 10 110 lbs. \$5.20	ZU242302 10 115 lbs. \$5.30	ZU343302 10 120 lbs. \$5,40	ZU151302 5 90 lbs. \$5,50
Style of Cut-out	Size in inches	1/2 1½ in. main ¾ in. branches	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 in. main in branches	2 2 in. main	1 1 2 2 2 in. main 1 in.branches
2 to 2-wire or 3 to 2-wire	Catalogue No Standard Package Weight Std. Pkg List Price, each	5 125 lbs.	ZU353302 5 130 lbs. \$5.70	ZU161302 5 130 lbs. \$5.80	ZU <del>262302</del> 5 135 lbs. \$5.90	ZU363302 5 140 lbs. \$6.00

<sup>\*</sup>These Condulets can be furnished with covers hinged on side opposite switches, and then have the letter E inserted after U in catalogue number, as ZUE111302.

The adjustable bars, furnished with each Condulet, permit the proper mounting of any snap or pull switch

Adapting rings, furnished with the Condulets, are required in mounting 5 or 10 ampere switches.

No adapting ring is required in mounting a 20 ampere switch.

The universal cut-out fastening plates, furnished with the above Condulets, take the following cut-outs:

30 Ampere, 250 Volt, Cartridge and 30 Ampere, 125 Volt, Plug Fuse Cut-outs

2 to 2-Wire: BRYANT—(Cartridge) 1922, (Plug) 62587. D. & W.—(Cartridge) 91106. G. E. CO.—(Cartridge) 34369, (Plug) 62587. NOARK—(Cartridge) 3349. PAISTE—(Cartridge) 72587, (Plug) 2587. SHAWMUT—(Cartridge) 2085. TRUMBULL—(Cartridge) 25873, (Plug) 2587. WEBER—(Plug) 62587. UNION—(Cartridge) 2025.

3 to 2-Wire: BRYANT—(Cartridge) 1923, (Plug) 62199. D. & W.—(Cartridge) 91121. G. E. CO.—(Cartridge) 34370, (Plug) 62199. NO RK—(Cartridge) 3351. PAISTE—(Cartridge) 72199, (Plug) 2199. SHAWMUT (Cartridge) 2087. TRUMBULL—(Cartridge) 21993, (Plug) 2199. WEBER—(Plug) 62199. UNION—(Cartridge) 2027.

#### TYPE ZX

For Cartridge or Plug Fuse Cut-outs and Snap or Pull Switches
Furnished with Universal Cut-out Fastening Plate, Adjustable Bars and Adapting Rings for Switches
and All Necessary Bolts and Screws

#### TYPE ZX CONDULETS-THROUGH FEED-Black Enamel Finish

For 30 Ampere, 250 Volt, Cartridge or 30 Ampere, 125 Volt, Plug Fuse N. E. C. Double Branch Cut-outs and 5, 10 or 20 Ampere Switches—Cut-outs and Switches not Furnished

	and 5, 10 01 20 At	mpere bwitter	100 040 0				
			Style of Cut-out	Size		1/2 $1/2$ $1/2$ $1/2$ $1/2$ $1/2$ $1/2$ $1/2$ in. mains $1/2$ in.branches	3 in. mains
	4	na.	2 to 2-wire or 3 to 2-wire	Stan Wt.	dard Pkg Std. Pkg Price, each.	ZX1111302 15 225 lbs. 85.10	ZX2112302 15 230 lbs. \$5.20
			Style of Cut-out	Size	in inches	3/4 3/4 3/4 3/4 in. mains	
			2 to 2-wire or 3 to 2-wire	Wt. List	dard Pkg Std. Pkg Price, each.	ZX2222302 15 235 lbs. \$5.30	½ in. branches ZX3113302 10 160 lbs. 85.40
Style of Cut-out	Size in inches	1 in mains	-141 in m	uums l	1 in, mains	$1\frac{1}{2}$ $1\frac{1}{2}$ $1\frac{1}{2}$ $1\frac{1}{2}$ in. mains $\frac{1}{2}$ in.branches	3 in.branches
2 to 2-wire or 3 to 2-wire	Catalogue No Standard Package Weight Std. Pkg List Price, each	Z X3223302 10 160 lbs. \$5,45	ZX4114 10 165 lbs. \$5.55	1302	ZX4224302 10 165 lbs. \$5,60	ZX5115302 5 100 lbs. \$5.75	ZX5225302 5 100 lbs. \$5.85
Style of Cut-out	Size in inches	ปิเท ทางเทติ	i I ≥ in. In	ams	1 in. mains in.branches	in.branches	1 <sup>1</sup> / <sub>4</sub> in. mains <sup>1</sup> / <sub>2</sub> in.branches
3 to 3-wire	Catalogue No Standard Package Weight Std. Pkg List Price, each	15 230 lbs.	15 235 lbs		ZX3113303 10 180 lbs. \$6.30	ZX3223303 10 180 lbs. \$6.35	ZX4114303 10 190 lbs. \$6.45
Style of Cut-out	Size in inches	3/4 3/4 11/4 11 in main	e i la in. n	กภาทร	in.branches	in.branches	11" branches
3 to 3-wire	Catalogue No Standard Package Weight Std. Pkg List Price, each	ZX4224303 10 190 lbs. \$6.50	ZX511 5 105 lbs \$6,65	5303	ZX5225303 5 105 lbs. \$6.75	ZX6226303 5 120 lbs. \$6.85	ZX6446303 5 120 lbs. \$7.00

The adjustable bars, furnished with each Condulet, permit the mounting of any snap or pull switch Adapting rings, furnished with the Condulets, are required in mounting 5 or 10 ampere switches. No adapting ring is required in mounting a 20 ampere switch.

The universal cut-out fastening plates, furnished with the above Condulets, take cut-outs enumerated on preceding page.

#### CONDULET BODIES TYPES UGC AND UGX

Inside Dimensions: 67/8 x 67/8 x 3 Inches



Type UGC Condulet Body with Blank Cover CX00 Attached

Types UGC and UGX Condulets, being extra heavy, are particularly suited for use in railroad yards, manholes, subways, around coast defense fortifications and wherever a rugged water-tight Condulct is desired.

They can be used in combination with the yard charging Condulets, illustrated and listed on the two preceding pages, either for surface or underground conduit installations.

The cover is firmly held in place by brass cap screws, and a heavy gasket of high grade rubber securely seals the opening. The use of brass cap screws and a high grade rubber gasket makes it easy to take off and replace the cover.

#### TYPE UGC CONDULET BODIES-For Two Conduits

Size in inches	1	11/4	11/2	2
Catalogue Number Standard Package Weight Std. Pkg List Price, each	5 110 lbs.	UGC44 5 115 lbs. \$6.00	UGC55 5 120 lbs. \$6.40	UGC66 5 125 lbs. \$6.80



#### TYPE UGX CONDULET BODIES-For Four Conduits

Size in inches	1	11/4	11/2	2
Catalogue Number Standard Package Weight Std. Pkg List Price, each	5 115 lbs.	UGX4444 5 120 lbs. \$6.20	UGX5555 5 125 lbs. \$6.60	UGX6666 5 130 lbs. \$7.00

BLANK CAST COVER

EXTENSION COVER-For Two-Inch Conduit Stem

#### FOR TYPES UGC AND UGX CONDULET BODIES



Furnished with Gasket and Fastening Screws .Catalogue Number. CX6 CX00ñ

. Standard Package. 5 .Ship. Wt. Std. Pkg. 50 lbs. ..List Price, each... \$4.00



DOUBLE RECEPTACLE HOUSING
For use with Types UGC and UGX Condulet Bodies
Complete with Two 100 Ampere Rectangular
Receptacles BR100. Spring Doors, Gasket
and Fastening Screws. See note below.\*

45 lbs. \$3.25

#### EXTENSION PLATE For Two-Inch Conduit Stem For Receptacle Housing CHXS100



CHXS100 140 lbs. \$29.00

CX116 .....Cat. No..... ....Std. Pkg..... Ship, Wt. Std. Pkg. 65 lbs. ..List Price, each.. \$3.00



\*Receptacle housing listed above is regularly furnished with two rectangular receptacles BR100, requiring the use of rectangular plugs BPF100 or BPB100, but if specifically ordered, two round receptacles BRA100, requiring the use of round plugs BPFA100 or M. C. B. standard plugs, will be furnished, at an advance of \$5.50 in the list price. Spring doors are regularly furnished on receptacle housings, but if specifically ordered, removable doors will be furnished. nished at the same price.

Finishes: Black enamel is the standard finish for Condulet bodies, and will be furnished unless another finish is specified on the order. Galvanized finish on exterior and black enamel finish on interior of Condulct bodies will be furnished, at same price as all black enamel finish, when the order specifies galvanized finish. Black enameled and galvanized Condulet bodies of the same type and size may be assorted to make up a standard package.

#### TYPE YO CONDULETS

For 2 or 3-pole Plug Receptacles and 2 or 3-wire Cartridge or Plug Fuse Cut-outs

Furnished Complete with Crouse-Hinds Plug Receptacle and Crouse-Hinds Cut-out, but without Plug or Fuses



Type YQ (Broken-away View)
Showing Cut-out PE538 and Receptacle RYQ303 Mounted, also
Plug RQ303 and Padlock

These Condulets provide a housing for a combination of plug receptacle and cut-out.

They are particularly suited for use in shops having portable tools, also in garages, laundries, railroad yards, etc. They are weather-proof and, therefore, can be installed either indoors or outdoors.

Two types of N. E. C. cut-outs are furnished—eartridge and plug. The cartridge type can be used on circuits up to 30 amperes, 250 volts, and the plug

Showing Cut-out PES38 and Recoptacle RYQ303 Mounted, also type on eircuits up to 30 amperes, 125 volts.

Plug RQ303 and Padlock
Plug and Padlock are not included in List Prices for Condulets
The door over the cut-out is provided with a spring eatch and can be locked with a padlock if desired. The door covering the plug opening is rabbetted and is kept closed by a plunger spring, when the plug is not in the plug opening is rabbetted and is kept closed by a plunger spring, when the plug is not in place, thus preventing the entrance of dust, moisture and insects.

#### TYPE YQ CONDULETS—Black Enamel Finish

Co	omplete with	Crouse-Hinds Plug Receptacle and 30 Amp., 250 Volt N.E.C. Cartridge Fuse Cut-out, but without Fuses			Crouse-Hinds Plug Receptacle and 30 Amp., 125 Volt N. E. C. Plug Fuse Cut-out, but without Fuses		
Style of Cut-out	Size in inches	1/2	3/4	1	1/2	3/4	1
2-wire	Catalogue No Std. Pkg Wt. Std. Pkg List Price, each.	10 260 lbs.	YQ2302E 10 265 lbs. \$16.00	YQ3302E 10 270 lbs. \$16.15	YQ1302P 10 275 lbs. \$15.85	YQ2302P 10 280 lbs. \$16.00	YQ3302P 10 290 lbs. \$16.15
3-wire	Catalogue No Std. Pkg Wt. Std. Pkg List Price, each .	10 300 lbs.	YQ2303E 10 305 lbs. \$19.00	YQ3303E 10 310 lbs. \$19.25	YQ1303P 10 315 lbs. \$18.75	YQ2303P 10 320 lbs. \$19.00	YQ3303P 10 325 lbs. \$19.25



#### N. E. C. CUT-OUTS FOR TYPE YQ CONDULETS

For 30 Ampere, 250 Volt Cartridge Fuses			For 30 A	mpere, 1 lug Fuses	25 Volt
2-wire	3-wire	Style of C	Cut-out∴	2-wire	3-wire
PE52E 10 25 lbs. \$2.85	10	Standard Weight	e No Package Std. Pkg. e, each	10 30 lbs.	PE53P 10 35 lbs. \$3.85





#### TYPE RYQ PLUG RECEPTACLES—30 Amp. Capacity

For Type YQ Condulets				
2-pole	250 Volts	3-pole		
RYQ302 10 20 lbs. \$2.50	Catalogue No Standard Package Weight Std. Pkg List Price, each	RYQ303 10 25 lbs. \$3.50		





#### TYPE RQ PLUGS-30 Ampere Capacity

For Types RQH, RQK and RYQ Receptacles

	2-р	ole	3-1	ole
	RQ302	Catalogue	Number	RQ303
	25	Standard	Package	25
ı	60 lbs.	Weight St	d. Pkg	70 lbs.
	\$3.50	List Price.	each	\$5.00



#### GUARDS, GLOBES, SEALING PLATES AND REFLECTOR HOLDERS

#### **GUARDS**



Size	For V Se Equipme	eries and nt VGDE1	For VH Series and Equipment VGDE2		
Finish	Black	Marine	Black	Marine	
Cat. No Std. Pkg Wt. Std. Pkg. List Price, ea.	35 40 lbs.	V90 35 40 lbs. \$1.80	VH9 35 60 lbs. \$2.25	VH90 35 60 lbs. \$2.25	

#### **GLOBES**

Color.... | Clear | Opal | Green | Blue | Orange | Ruby

#### For V Series of Condulets and Equipment VGDE1



Cat. No	V8			V43	V44	V45
Std. Pk	g. 35 g. 50 lbs.	35	35	35	35	35
Wt. Pk	g. 50 lbs. \$ .80	90 lbs.	30 lbs.	50 lbs.	\$1.70	90 lbs.
List, Ca.	Ψ	W1.10	\$L.10	ψx.10	Ø1.10	Water CHO

#### For VH Series of Condulets and Equipment VGDE2

Cat.No	VH8	VII41	VH42	VH43	VH44	VH45
Std. Pkg. Wt. Pkg.	35	35	35	25	35	35
Wt. Pkg.	60 lbs.	60 lbs.	60 lbs.	60 lbs.	60 lbs.	60 lbs
List, ea	\$ .80	\$1.70	\$2.35	\$2.35	\$2.35	\$2.90

## SEALING PLATES—Brass



For V and VH Series of Condulets						
Size	For V Series	For VH Series				
Catalogue Number	V51	V I I 51				
Std. Pkg., not Ass'd.		35				
Ship, Wt. Std. Pkg	30 lbs.	40 lbs.				
List Price, each	\$ .30	\$ .50				

#### REFLECTOR HOLDERS

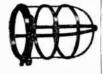
#### Take Reflectors Enumerated Below



Size	For V Se Equipmen		For VH Series and Equipment VGDE2		
Finish	Black	Marine	Black	Marine	
Cat. No	V61	V610		VH610	
Std. Pkg			35	35	
Wt. Std. Pkg.	30 lbs.	30 lbs.	35 lbs.	35 lbs.	
List Price, ea.	\$1.40	\$1.40	\$1.65	\$1.65	

## COMBINATION REFLECTOR HOLDERS WITH GUARDS





Size	For V Se Equipme	eries and nt VGDE1	For VH Series an Equipment VGDE		
Finish	Black	Marine	Black	Marine	
Cat. No	V71	V710 ·	VH71	VH710	
Std. Pkg	35	35	35	35	
Wt. Std. Pkg.	50 lbs.	50 lbs.	70 lbs.	70 lbs.	
List Price, ea.	€2.00	€2.00	\$2.50	\$2.50	

Type V Conduiet

Type V Condulet Complete with Globe, Guard Receptacle and Sealing Plate (Broken-away View)



Reflector Holder Showing Reflector Mounted List prices do not include and we do not furnish Reflectors



Reflector Holder with Guard Showing Reflector Mounted List prices do not include and we do not furnish Reflectors

Above holders take the following reflectors which are not included in list prices.

Holders Vol., Volo, V71 and V710 take HOLOPHANE—626, 627 and OVERBAUGH & AYERS—769, 771. Holders VH61, VH610, VH71 and VH710 take HOLOPHANE—628, 629 and OVERBAUGH & AYERS—770, 772.

Finishes: Galvanized finish will be furnished at the same price as black finish, when order specifies galvanized finish.

Black, marine and galvanized guards of the same size may be assorted to make up a standard package. The same assortment applies to reflector holders and reflector holders with guards.

#### GASKETS

#### GASKETS FOR OBROUND COVERS AND OBROUND CONDULETTO FITTINGS

For use between Condulet Bodies and Covers or Fittings

Size in inches Catalogue Nu Standard Pack List Price, eac	mber	Gask 1 200	3/ <sub>4</sub> Gask 2 100 \$ .10	1 Gask 3 50 \$ .15	11/4 Gask 4 25 \$ .20	1½ Gask 5 25 \$ .20
Size in inches	2	21/2	3	31/2	4	5 and 6
Catalogue Number Standard Package List Price, each	25	Gask 7 25 8 .40	Gask 8 25 \$ .40	Gask 9 25 \$ .50	Gask 10 25 \$ .60	Gask 86 25 \$ .70

#### GASKETS FOR OBROUND CONDULETTO FITTINGS For use between Cap and Base

GASKET FOR FD AND FS CONDULET BODIES



Size in inches	1/2	3/4	1	
Cat. No	Gask 31	Gask 32	Gask 33	Gask 91
Std. Pkg	250	100	50 \$ .15	30 \$ .25
List Price, ea	\$ .10	\$ .10	\$ .15	8 .25

#### GASKETS FOR TYPE F CONDULET COUPLINGS

Size in inches Catalogue Nu Standard Pack List Price, eac	mber age		Gask 11 100	Gask 12 100 \$ .05	1 Gask 13 50 \$ .08	Gask 14 25 \$ .10
Size in inches	11/2	2	21/2	3	31/2	4
Catalogue Number	Gask 15	Gask 16	Gask 17	Gask 18	Gask 19	Gask 20
Standard Package		25	25	25	25	25
List Price, each		\$ .15	\$ .20	\$ .20	\$ .40	\$ .50

#### GASKETS FOR G AND H SERIES OF CONDULET BODIES

GASKETS FOR NORBITT CONDULETTO **FITTINGS** For use between Bodies of the J and K Series

For use between Bodies and Covers or Fittings

and Fittings



For Form 5 and Form 10 Bodies	For Form 20 Bodies	Gask 23 is also for use with Blank Cover J100	
Gask 21	Gask 22	Catalogue Number   Gask 23	
100	75	Standard Package   200	
\$ .10	\$ .15	List Price, each   \$ .10	



#### GASKETS FOR RJ AND RK SERIES OF CONDULET BODIES

GASKETS FOR ELLIPTICAL CONDULETTO **FITTINGS** 

For use between Bodies and Metal Covers

For use between RJ and RK Series of Condulet Bodies and Fittings or Porcelain Covers



Gask 35	Catalogue Number
	Standard Package
\$ .15	List Price, each

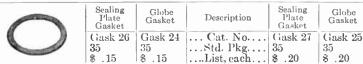
gue Number	Gask 34
rd Package	200
Price, cach	\$ .15



#### GASKETS FOR V SERIES OF CONDULETS GASKETS FOR VH SERIES OF CONDULETS

Globe

Gasket





#### OBROUND CONDULETTO FITTINGS

For Types A, B, C, CO, D, E, LB, LBA, LBB, LBL, LBV, LF, LFB, LFM, LL, LLB, LR, LRB, LU, T, TB, TL, TR, U, UB and X Condulet Bodies

Furnished with Gasket between Base and Cap, and all necessary Fastening Screws

	The state of the s	coossary ra	securing pere	wa
RECEPTACIES WITH SHADE HOLDER GROOVE			VE	
	Size of Condulet Body	1/2	3/4	1
	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	200 120 lbs.	JR2G 100 80 lbs. \$ .35	JR3G 50 55 lbs. \$ .40
	RECEPTACLES WITHOUT SH	ADE HOI	DER GRO	OOVE
	Size of Condulet Body	1/2	3/4	1
	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	200 120 lbs.	JR2 100 80 lbs. \$ .30	JR3 50 55 lbs. \$ .35
	CORD ROS	ETTES		
18.00	Size of Condulet Body	1/2	3/4	1
	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	120 lbs.	JC2 100 80 lbs. \$ .25	JC3 50 60 lbs. \$ .30
	FIXTURE ROSETTES WITH 1/8 MALE NIPPLE			
	Size of Condulet Body	1/2	3/4	1
	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	80 lbs.	JF29 100 90 lbs. \$ .35	JF39 50 60 lbs. \$ .40
	FIXTURE ROSETTES WITH 1/8 FEMALE NIPPLE			
(20° )	Size of Condulet Body	1/2	3/4	1
	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	80 lbs.	JF2 100 90 lbs. \$ .35	JF3 50 60 lbs. \$ .40
	HUBBELL ATTACHMENT PLUG	RECEPTAC	CLES—10	AMPERE
Car al	Size of Condulet Body	1/2	3/4	1
	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	JR15 100 70 lbs. \$ .40	JR25 100 80 lbs. \$ .45	JR35 50 55 lbs. \$ .50
	HUBBELL POLARITY PLUG RE		ES20 AI	MPERE
	Size of Condulet Body	1/2	3/4	1
	Catalogue Number Standard Package Shipping Weight Std. Pkg.	JR12 100 70 lbs.	JR22 100 80 lbs.	JR32 50 55 lbs.

Obround Conduletto fittings are made in sizes for ½, ¾ and 1-inch Obround Condulet bodies.

Proper fastening screws are furnished with Obround Conduletto fittings, and are so held in screw holes that they can not fall out.

#### NORBITT CONDULETTO FITTINGS

For Condulet Bodies of the J and K Series Furnished with Gasket and Fastening Screw

2 15	RECEPTACLE WITH SHADE HOLDER GROOT	VE	
	Complete Fitting		
	Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	CC227G 200 130 lbs. \$ .45	
	RECEPTACL" WITHOUT SHADE HOLDER GRO	OOVE	
	Complete Fitting		
	Catalogue Numbe Standard Package Shipping Weight Std. Pkg List Price, each	CC227 200 130 lbs. \$ .40	
	CORD ROSETTE		
10	Complete Fitting		
	Catalogue Number Standard Package Shipping Weight Std. Pkg List Price, each	CC332 200 140 lbs. \$ .30	
	FIXTURE ROSETTE WITH 1/8 MALE NIPPI	Æ	
183	Complete Fitting		
	Catalogu Number Standard Package Shipping Weight Std. Pkg List Price, each	80 lbs.	
	FIXTURE ROSETTE WITH 1/8 FEMALE NIPP	LE	
	Complete Fitting		
	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	80 lbs.	
	HUBBELL ATTACHMENT PLUG RECEPTACLE—10	AMPERI	
(33)	Complete Fitting		
	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	70 lbs.	
	HUBBELL POLARITY PLUG RECEPTACLE-20 AMPERE		
Complete Fitting			
	Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	100 70 lbs.	

Norbitt Conduletto fittings are made in one size only and are interchangeable on Condulet bodies of the J and K series.

Proper fastening screw is furnished with each Norbitt Conduletto fitting, and is so held in screw

hole that it can not fall out.

#### ELLIPTICAL CONDULETTO FITTINGS

For Condulet Bodies of the RJ and RK Series Furnished with Gasket and Fastening Screws



#### RECEPTACLE WITH SHADE HOLDER GROOVE

# Complete Fitting Catalogue Number RK527G Standard Package 200 Shipping Weight Std. Pkg 100 lbs. List Price, each \$ .45



## RECEPTACLE WITHOUT SHADE HOLDER GROOVE

Complete Fitting	
Catalogue Number	RK527
Standard Package Shipping Weight Std. Pkg.	100 lbs.



#### CORD ROSETTE

Complete Fitting	
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	200 110 lbs



#### FIXTURE ROSETTE WITH 1/8 MALE NIPPLE

Complete Fitting
Catalogue Number RK539 Standard Package 100
Shipping Weight Std. Pkg. 70 lbs. List Price, each \$ .35
List Price, each   \$ .35



#### FIXTURE ROSETTE WITH 1/8 FEMALE NIPPLE

## Complete Fitting Catalogue Number RK538 Standard Package 100 Shipping Weight Std. Pkg. 70 lbs. List Price, each \$ .35



#### HUBBELL ATTACHMENT PLUG RECEPTACLE-10 AMPERE

Complete Fitting	
Catalogue Number Standard Package Shipping Weight Std. Pkg. List Price, each	RK5 100 80 lbs. \$ .50



#### HUBBELL POLARITY PLUG RECEPTACLE-20 AMPERE

Complete Fitting		
Catalogue Number	RK20	
Standard Package	100	
Standard Package Shipping Weight Std. Pkg. List Price, each	80 lbs.	

Elliptical Conduletto fittings are made in one size only and are interchangeable on all Condulet bodies of the RJ and RK series.

Proper fastening screws are furnished with Elliptical Conduletto fittings, and are so held in screw holes that they can not fall out.

#### NORBITT CONDULETTO CLAMP FITTINGS

For Condulets of the S Series

Norbitt Conduletto Clamp Receptacle C337 is used with the following: Equipments VGDE1 and VGDE2; Crouse-Hinds Reflector and Receptacle Holder SRH2, and Receptacle Mounting Plate RMF1. Furnished with Gasket



Norbitt Conduletto Clamp Receptacle With Shade Holder Groove (Exploded View)

Norbitt Condulctto Clamp fittings eliminate soldered and taped joints, and have the additional advantage of enclosed contacts.

These fittings are made in two parts—base and cap. Circuit wires connect direct to the base, and two screws through the cap complete the electrical connection and clamp fitting in position.

Norbitt Conduletto Clamp fittings have a base common to all. This construction permits the substitution of one style of cap for another, without disconnecting circuit wires.



Norbitt Conduletto Clamp Cord Rosette (Exploded View)



# Description Fitting Complete Catalogue Number C337G Standard Package 200 Shipping Weight Std. Pkg 110 lbs. List Price, each \$ .45



## RECEPTACLE WITHOUT SHADE HOLDER GROOVE

Description	Fitting Complete
Catalogue Number	C337
Standard Package	200
Shipping Weight Std. Pkg	110 lbg
List Price, each	\$ 40



#### CORD ROSETTE

	Description	Fitting Complete
	Catalogue Number	C442
	Standard Package	200
	Shipping Weight Std. Pkg	100 lbs.
١	List Price, each	\$ 30



#### FIXTURE ROSETTE WITH 1/8 MALE NIPPLE

Description	Fitting Complete
Catalogue Number Standard Package	100
Shipping Weight Std. Pkg List Price, each	65 lbs.



#### FIXTURE ROSETTE WITH 1/8 FEMALE NIPPLE

Description	Fitting Complete
Catalogue Number	C448
Standard Package	100
Shipping Weight Std. Pkg	65 lbg
List Price, each	\$ .35

## "PAISTE" STANDARD OBLONG PIPE TAPLETS

SCHEDULE "T"

				TYPI	E A		340 -	W E
A PIPE TO TAPLET TYPE A	No. 4112 4122 4132 4142 4152 4262 4272 4282 4292 4302	Symbol A1 A2 A3 A4 A5 A6 A7 A8 A9 A10	Size. Pipe Inches 1½ 34 11¼ 11½ 2 2½ 3 3 ½ 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Carton 10 5 5 1 1 1 1 1 1	Std. Pkg. 200 100 50 20 10 5 5 5 5	Wt., Lbs. Std. Pkg. 130 90 75 47 40 26 60 75 90 105	Mfrs. List Each \$0.24 .36 .43 .73 .80 1.78 4.95 5.45 10.40 11.70	W. E. List Each \$0.43 .65 .77 1.31 1.44 3.20 8.91 9.81 18.72 21.06
Type B	4113 4123 4133 4143 4153 4263 4273 4283 4193 4303	B1 B2 B3 B4 B5 B6 B7 B8 B9 B10	1/2 3/4 1 1/4 1 1/2 2 1/2 3 3/2 4	10 5 5 1 1 1 1 1 1	200 100 50 20 10 5 5 5 5 5 5	141 85 73 37 40 28 70 75 87 98	\$0.29 .41 .50 .91 1.04 2.26 5.35 5.85 11.35 12.70	\$0.52 .74 .90 1.64 1.87 4.07 9.63 10.53 20.43 22.86
Type C	4110 4120 4130 4140 4150 4260 4270 4280 4290 4300	C1 C2 C3 C4 C5 C6 C7 C8 C9 C10	1/2 3/4 11/4 11/2 2 21/2 3 31/2 4	TY 10 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	YPE C 200 100 50 20 10 55 55 55 55	155 100 80 50 35 27 70 80 97	\$0.36 .46 .59 1.05 1.22 2.55 6.25 7.40 16.70 18.30	\$0.65 .83 1.06 1.89 2.20 4.59 11.25 13.32 30.06 32,94
Type D	3912 3922 3932 3942 3952	D1 D2 D3 D4 D5	$\frac{12}{34}$ $\frac{11}{14}$ $\frac{11}{12}$	10 5 5 1 1	75 50 25 15 10	107 58 88 50 33	\$0.34 .46 .57 1.05 1.22	\$0.61 .83 1.03 1.89 2.20
Type E	4111 4121 4131 4141 4151 4261 4271 4281 42 1 4301	E1 E2 E3 E4 E5 E6 E7 E8 E9 E10	1/2 3/4 1/4 1/2 2 2/6 3 3/2	T 10 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	200 100 50 20 10 5 5 5 5 5 5	145 80 74 37 30 26 60 70 85 89	\$0.29 .40 .50 .91 1.04 2.26 5.35 5.85 11.35	\$0.52 .72 .90 1.64 1.87 4.07 9.63 10.53 20.43 22.86
Type LB	3910 3920 3930 3940 3950 3960	LB1 LB2 LB3 LB4 LB5 LB6	$\frac{1}{3}\frac{2}{4}$ 1 1 1 1 1 2 2	10 5 5 1 1 1	200 100 50 20 10 50 20	148 100 87 55 40 26	\$0.40 .50 .65 1.15 1.37 2.77	\$0.72 .90 1.17 2.07 2.47 4.99
Type LBL	3919 3929 3939	LBL1 LBL2 LBL3	1 34	 	50 35 25	45 33 22	\$0.65 .85 .95	\$1.17 1.53 1.71
D WALET	3911 3921 3931 3941 3951 3961	LF1 LF2 LF3 LF4 LF5 LF6	$1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 2$	10 5 5 1 1	200 100 50 20 10 50 20	190 135 108 60 50 35	\$0.40 .50 .65 1.15 1.37 2.77	\$0.72 .90 1.17 2.07 2.47 4.99
Type LF  Type LL	4119 4129 4139 4149 4159 4269 4279 4289 4299 4309	LL1 LL2 LL3 LL4 LL5 LE6 LL7 LL8 LL9 LL10	11/4 11/4 11/2 21/2 33/4	TY 10 5 5 1 1 1 1 1 1 1	200 100 50 20 10 5 5 5 5 5 5 5 5 5	170 117 95 40 32 28 70 90 98 110	\$0.40 .50 .65 1.15 1.37 2.77 6.55 7.70 17.10	\$0.72 .90 1.17 2.07 2.47 4.99 11.79 13.86 30.78 34.38

## "PAISTE" STANDARD OBLONG PIPE TAPLETS

SCHEDULE "T"

				TYF	E LR			
Type LR	List No. 4118 4128 4138 4148 4158 4268 4278 4288	Symbol LR1 LR2 LR3 LR4 LR5 LR6 LR7 LR7	Size Pipe Inches    1/2   3/4   1   1   1/4   1   1/2   2   1/2   3   3/4   1   1/2   2   1/2   3/4   1/2   1/2   1/2   1/2   3/4   1/2	Carton 10 5 5 1 1 1 1	Std. Pkg. 200 100 50 20 10 5 5 5	Wt., Lbs. Std. Pkg. 170 117 95 40 32 28 70 90	Mfrs. List Each \$0.40 .50 .65 1.15 1.37 2.77 6.55 7.70	W. E. List Each \$0.72 90 1.17 2.07 2.47 4.99 11.79 13.86
TB PIPE TO	4298 4308	LR9 LR10	3½ 4	1 1	5 5	98 110	$\frac{17.10}{19.10}$	30.78 34.38
TAPLET				TYP	Е ТВ			
Туре ТВ	3914 3924 3934	TB1 TB2 TB3	$1^{\frac{1}{2}}$ $1^{\frac{3}{4}}$	10 5 5	200 100 50	200 110 87	\$0.48 .62 .80	\$0.86 1.12 1.44
	4114	<i>m</i> •			PE T			
Type T	41'4 4124 4134 4144 4154 4264 4274 4284 4294 4304 4170 4171 172 173	T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 ½" mains ½" mains 1   " mains 1 " mains	1/2 8/4 11/4 11/2 2 21/2 3 31/2 4 3/2" 18/4"	10 5 5 1 1 1 1 1 1 1 branch branch branch	100 75 50 20 10 5 5 5 5 5 100 75 50	100 98 90 50 45 30 95 110 113 128 155 95 86	\$0.48 .62 .80 1.33 1.69 2.67 7.45 8.15 22.60 24.60 .56 .62 .80	\$0.86 1.12 1.44 ** 2.39 3.04 4.81 13.41 14.67 40.68 44.28 1.01 1.12 1.44
	173	1 mains	1/2"	branch	50	90	.80	1.44
Type X	4116	X1	1/2	10	PE X 75	108	\$0.60	\$1.08
	4126 4136 4146 4156 4190 4191 4192 4193	X2 X3 X4 X5 %" mains 1 " mains 1 " mains	1/2 3/4 1 1/4 1 1/2 1/2 1/2 3/4 3/4 3/4 3/4 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	5 5 1 1 " branch " branch " branch	50 35 20 10 50 35 35	95 125 95 60 85 100 105	. 82 1.05 1.35 1.78 . 82 1.05 1.05	1.48 1.89 2.43 3.20 1.48 1.89 1.89
	4194	1¼" mains	sion, ½″i	oranches " exten-	35	110	1.05	1.89
STAPLET W.C.			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ranches	20 BOWS W	60 ITH COVER	1.35	2.43
Easy Pull Type	$\frac{4238}{4239}$	SE1 SE2	1 34		100 100	140 140	\$0.60 .70	\$1.08 1.26
	4230 4231 4232 4233 4234 4235 4236 4237	SE3 SE4 SE5 SE6 SE7 SE8 SE9 SE10	1 1 1 1 1 1 1 1 1 1 2 2 2 1 2 2 1 2 3 3 1 2 2 4 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 2 1 1 1 1 1	50 24 20 10 4 4	120 93 65 99 85 85	.90 1.35 1.80 3.00 6.00 7.00 17.00	1.62 2.43 3.24 5.40 10.80 12.60 30.60
Switch Holder	1201		Z ZITCU U		4 EOD DIE	78 PE TAPLETS	19.00	34.20
	5263	For 5	Amp.	20	200	70	<b>\$</b> 0.20	\$0.36
	5264 5268	" 10 " 20	44	20 20	200 100	72 40	$^{.20}_{.28}$	.36 .50
OMHA W				PE F OUT	LET HO	ODS		
Type F with Cover	4180 4181 4182 4183 4184 4185 4186 4187 4188 4189	F1 F2 F3 F4 F5 F6 F7 F8 F9 F10	1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 1 1 2 3 3 1 1 2 4	5. 5 1 1 1 1 1	100 100 50 20 10 5 5 5 5 5	127 140 110 71 75 37 76 72 85	\$0.50 .70 1.05 1.75 2.52 4.52 11.70 12.70 26.60 31.60	\$0.90 1.26 1.89 3.15 4.54 8.14 21.06 22.86 47.88 56.88
A) TRPLET	Used o	n Type A to r				FITTINGS	o cinor - f .	
Type FH on A	5267 5298 5225 5226 5227	1/2 and 1 and 1/2 and 2/2 and 3/2 and	11/2	5 1 1 1 1 1	100 20 5 5 5	115 60	\$0.34 .62 1.72 6.75 16.20	\$0.61 1.12 3.10 12.15 29.16

#### "PAISTE" ROUND OPENING PIPE TAPLETS

SCHEDULE "T"

				-Dimension	All Typ	oes		
Level Location	Form 5 Form 10 Form 20	100	a' 25/8'' 3*4''	b' 178'' 218'' 278''		c' <sup>28</sup> / <sub>33</sub> " to 1 11'' to 15'8" to 1	1#" 1#" 2¾"	1 ½ ′ 1 ½ ′ 1 ½ ″ 1 ½ ″
Type GA	List No. 4310 4244 4320 4330 4340 4382 4383 4384	Type No. G151 G252 G1101 G2102 G3103 G1201 G2202 G3203	Form 5 5 10 10 20 20 20	Size Pipe Inches  1/2 3/4 1 1/2 3/4 1	Std. Pkg. 100 50 75 25 50 25 25 25	Pkg. Wt. Lbs. 100 73 125 107 45	Mfrs. List Each \$0.55 .65 .65 .80 1.00 .90 .95	W. E. List Each \$0.99 1.17 1.17 1.44 1.80 1.62 1.71 2.16
Type GL	4313 4246 4323 4333 3973 4385 4386 4387	GA151 GA252 GA1101 GA2102 GA3103 GA1201 GA2202 GA3203	5 10 10 10 20 20 20	TYPE	100 50 75 25 25 50 25 25	107 80 102 35 	\$0.75 .85 .85 1.00 1.20 1.10 1.20	\$1.35 1.53 1.53 1.80 2.16 1.98 2.16 2.70
	4318 4247 4328 4338 3978 4388 4389 4390	GL151 GL252 GL1101 GL2102 GL3103 GL1201 GL2202 GL3203	5 10 10 10 10 20 20 20	TYP!  1/2 3/4 1/2 3/4 1 1 1/2 3/4 1	100 50 75 25 25 50 25 25	85 70 136 31 	\$0.60 .70 .70 .85 1.05 .95 1.05 1.35	\$1.08 1.26 1.26 1.53 1.89 1.71 1.89 2.43
Type GT	4314 4248 4324 4334 4344 4391 4392 4393	GT151 GT252 GT1101 GT2102 GT3103 GF1201 GT2202 GT3203	5 10 10 10 20 20 20	TYPI	100 50 75 25 25 50 25 25	117 85 145 91 48	\$0.75 .85 .85 1.00 1.20 1.10 1.20	\$1.35 1.53 1.53 1.80 2.16 1.98 2.16 2.70
Type GX	3983 3984 3979 3980 3981 4394 4395 4396	GX151 GX252 GX1101 GX2102 GX3103 GX1201 GX2202 GX3203	5 10 10 10 20 20 20	TYPF	100 50 75 25 25 50 25 25	148	\$0.90 1.00 1.00 1.15 1.45 1.25 1.40	\$1.62 1.80 1.80 2.07 2.61 2.25 2.52 3.24
PIPE TAPLETS Type 11	4311 4245 4321 4331 4341 4210 4211 4212	H15 H25 H110 H210 H310 H120 H220 H320	5 10 10 10 20 20 20	1/2 3/4 1/2 3/4 1 1 1/2 3/4	100 50 75 25 25 50 25 25 25	100 54 110 85 35	\$0.45 .55 .55 .70 .90 .80 .85	\$0.81 .99 .99 1.26 1.62 1.44 1.53
Type IIA	4312 4249 4322 4332 3972 4213 4214 4221	HA15 HA25 HA110 HA210 HA310 HA120 HA220 HA320	5 10 10 10 20 20 20	TYPI	100 50 75 25 25 50 25 25	79 48 61 25 	\$0.50 .60 .60 .75 .95 .85 .90	\$0.90 1.08 1.08 1.35 1.71 1.53 1.62 2.16
Type 1111	3913 4277 3923 3933 3943 4295 4296 4297	HH151 HH252 HH1101 HH2102 HH3103 HH1201 HH2202 HH3203	5 10 10 10 20 20 20	1/2 3/4 1/2 1/2 3/4 1	E HH 100 50 75 25 25 50 25 25	98 85 150 39  95 52 55	\$0.55 .65 .80 1.00 .90 .95	\$0.99 1.17 1.17 1.44 1.80 1.62 1.71
Type HLA	4319 4267 4329 4339 3982 4222 4223 4224	HLA151 HLA252 HLA1101 HLA2102 HLA3103 HLA1201 HLA2202 HLA3203	5 5 10 10 10 20 20 20	TYPE  1/2  3/4  1/4  1/2  3/4  1	100 50 75 25 25 50 25 25	76 95 30 	\$0.60 .70 .70 .85 1.05 1.05 1.35	\$1.08 1.26 1.26 1.53 1.89 1.71 1.89 2.43

5

\$0.90

## COVER FOR STANDARD OBLONG PIPE TAPLETS



#### COVERS FOR ROUND OPENING PIPE **TAPLETS**

50

\$0.27

10

\$0.72

\$0.36

200

\$0.18

Pkg.

List Price

No. 610 Rubber Gasket

	PORCELAIN COVERS			
List	FOR FORM 5 AND 10 PIPE TAPLETS		*Std.	W. E. List
No. 1601	Description		Pkg.	Price
1602	With one ½ inch hole		100	\$0.18
1602			100	. 18
1604			100	.18
1001	with full /2 men noice		100	. 18
1005	PORCELAIN COVERS WITH NIPPLES			
1605 1606	With 1/8 inch male nipple		100	\$0.45
1607			100	.45
1608			100	. 54
1609			100	. 54
1610			100	, 63
1611	With % inch female nipple		100	.63
1612	Wit 1/2 inch male nipple. With 1/2 inch female nipple.		100	.72
		• • • • • • • • • • •	100	.72
List	METAL COVERS, RUBBER GASKETS			W.E.
No.	Description	For	*Std.	List
651	Receptacle Cover and Strap	Form	Pkg.	Price
671	Switch Ring 3	10	100	\$0.18
691	Switch Ring 3	10	100	.09
632	Rubber Gasket	20	50	. 36
652	Nubber Gasket	.5	100	. 18
653	Nubber Gasket	10	100	.18
1600	Distir metal cover	20	75	. 27
1622		5 and 10	100 50	. 14
1613		5 and 10	100	.41
1614		5 and 10	100	-36
1615		5 and 10	100	.36
1616		5 and 10	100	.41
1617		5 and 10	100	.45
1618		5 and 10	100	.45
1619		5 and 10	100	.54
1620	With ½ inch female nipple.	5 and 10	100	.54

<sup>\*</sup>Black enamel and galvanized Pipe Taplets of the same size may be assorted to make Standard Package. Covers of the same size may be assorted to make up standard package. If a standard package of Pipe Taplets is ordered and an equal number of covers for them, standard package discount is allowed on covers also

#### WEATHERPROOF COPPER WIRES





No. 4 Solid Weatherproof

No. 2 Stranded Weatherproof

These wires have three closely woven braids of cotton, all thoroughly saturated with a black weather-proof compound, which shows no signs of softening under ordinary temperature. The outer braid is smoothly polished. Stranded wires, including larger sizes of feeder cable, are braided with standard cotton yarn. The style of stranding shown in table below is a regular product of the factory but the conductor can be specially stranded of a greater or less number of wires if desired. Concentric strands are used entirely as that gives the smallest diameter conductor for the carrying capacity.

Triple Braid—Solid Conductor

		APPROXIM Li		Approx.		PUT UP FOR	SHIPMENT			
	Size Diam ov		Diameter over	Re	Reels		ontaining 200 Lbs.	Coils Approx.		
List No.	B. & S. Gauge	Per 1000 Ft.	l'er Mile	Insulation Inches	Approx. Length Ft.	Approx. WeightLbs.	Coils	Weight	Weight Lbs.	
LASCING.	Gauge	100010.	241110	Inches	mengen i e.	III OIGHUADO.	Coms	W Cigino	2100	
660000	0000	767	4050	25	2640	2025				
660001	000	630	3320	47	2640	1660				
660002	00	502	2650	39	2640	1325				
660003	0	407	2150	9	2640	1075				
660004	1	316	1670	1/2	800	250			125	
660005	$^2$	260	1370	1 5 3 2	1000	260			130	
660006	3	200	1050	27	1250	250		1	125	
660007	4	164	865	25 64	1600	260			130	
660008	5	134	710	$\frac{11}{32}$	2000	270			135	
660009	6	112	590	5 16	2500	280			140	
660010	8	75	395	17	2700	200			100	
660011	10	53	280	1/4	3300	170	8	25	85	
660012	12	35	185	7 3 2			8	25		
660013	14	25	130	23 46 76 914 916 \22 522 114 534 112 56 714 \47 73 3 6 73 \26 73 12 52 114 534 113 56 714 \47 73 3 6 73 \26 73 12 6 73			8	25		
660014	16	14	75	32			12	17		
660015	18	11	58	1/8			12	17		

Triple Braid—Stranded Conductor

		APPROXIMATE WEIGHT		Approx.	CONCENTR	CONCENTRIC STRANDS		Put up for Shipment		
List No.	Capacity Circular Mils	Per 1000 Ft.	Per Mile	over Insulation Inches	Number of Wires	Diameter each in Inches	Diameter Reels Inches	Reels Approx. Length Feet	Approx. Weight Pounds	
660016 660017 660018 660019	2000000 1750000 1500000 1250000	7000 6200 5400 4500	37000 32750 28500 23800	2½ 2 1½ 1¾ 1¾	91 91 91 91	.148 .139 .128 .117	48 48 48 48	400 400 500 600	2800 2500 2700 2700	
660020 660021 660022 660023 660024	1000000 900000 800000 700000 600000	3675 3330 3000 2650 2235	19400 17600 15800 14000 11800	1239/4 9/65/21/4	61 61 61 61 61	.128 .121 .114 .107 .099	45 45 45 45 45	660 720 800 900 1000	2425 2400 2400 2385 2235	
660025 660026 660027 660028	500000 500000 450000 400000 350000	1900 1725 1550 1345	10000 10000 9100 8200 7100	$ \begin{array}{c} 1 & 64 \\ 1 & 1/4 \\ 1 & 3 \\ 1 & 64 \\ 1 & 64 \end{array} $	37 37 37 37 27	.116 .110 .104 .114	48 45 45 42	1320 1320 1320 1320 1500	2560 2560 2280 2020 2010	
660029 660030 660031	300000 300000 250000 0000 0000	1175 985 800 653	6200 5200 4220 3450	1 3529525 556541	27 19 19 19	.114 .105 .115 .105 .118	42 42 42 45 45	1500 1500 2000 2640 2640	1760 1970 2110	
660032 '660033 660034 660035	00 0 1	522 424 328	2760 2240 1735	जान प्रकार कोल कोल नांच नांच नांच नांच नांच नांच नांच नांच	12 12 7 7 7	.105 ,123 ,109	36 36 28	2640 2640 800	1725 1380 1120 260	
660036 660037 660038 660039	2 3 4 5	270 206 170 140	1425 1090 900 740	32 7 16 32 7 16 32 11 32 9 32	7 7 7 7	.098 .086 .077 .068	28 28 28 28	1000 1200 1500 2000	270 250 255 280	
$660040 \\ 660041$	6 8	115 78	610 410	33	7	.061	28 28	2500 2500	285 195	



No. 10 Solid Single Braid Wire

#### Solid Copper Conductors

These rubber-covered wires are made according to the specifications of the National Board of Fire Underwriters, and each coil is tested and stamped by the Wire Inspection Bureau before leaving the factory. The conductors are thoroughly tinned and are covered with two thicknesses of high-grade rubber compound, which is thoroughly vulcanized. The wires are braided with a standard cotton yarn, the braids being thoroughly saturated with a pure wax compound having a high melting point, and are smoothly and evenly finished. The smooth, hard finish given these wires enables them to be handled readily and makes them especially desirable for conduit work. The single braided wires can also be finished with a white-fireproof compound over the braid.

#### SINGLE BRAID

List	Size B. & S.	Diam. of Copper	Capacity Circular Mils	Rubber Wall	Diam. Over All	Weight Lbs.
No.	Gauge	Mils		Inches	Inches	per 1000 Ft.
660097 660098 660099 660100 660101 660102 660103 660104	8 10 12 14 16 18 19	1285 1019 0808 0640 0508 0403 0354 0319	16509 10381 6530 4107 2583 1624 1252 1021	3/64 3/64 3/64 3/64 1/32 1/32 1/32 1/32	19/64 17/64 16/64 14/64 3/16 11/64 5/32 9/64	85 60 44 34 20 16 15

#### DOUBLE BRAID

Lis <b>t</b> No.	Size B. & S. Gauge	Diam. of Copper Mils	Capacity Circular Mils	Rubber Wall Inches	Diam. Over All Inches	Weight, Lbs per 1000 Ft
660105 660106	0000	4600 4096	211600 167805	5/64	52/64	832
660107	000	3648	133079	5/64 5/64	48/64 47/64	690 568
660108	0	3249	105512	5/64	45/64	476
660109	ľ	2893	83694	5/64	39/64	376
660110	1 2	2576	66373	1/16	35/64	297
660111	3	2294	52634	1/16	17/32	245
660112	4	2043	41742	1/16	1/2	204
660113	5	1819	33102	1/16	15/32	174
660114	6	1620	26250	1/16	28/64	147
660115	8	1285	16509	3/64	3/8	95
660116	10	1019	10381	3/64	21/64	68
660117	12	0808	6530	3/64	20/64	50
660118	14	0640	4107	3/64	9/32	40



No. 14 Solid Duplex Wire

**Duplex Copper Conductors** 

Duplex Rubber Covered Wire consists of two National Electrical Code, single braided wires laid parallel, with a braid over all. Wire of this construction is approved by the National Board of Fire Underwriters for use in unlined conduits while single conductor wires are required double braided when placed in unlined conduits.

#### DUPLEX, SOLID

List No.	Size	Size	Rubber Wall	Diam. Over All	Weight, Lbs.
	B. & S. Gaug	in C. M.	Inches	Inches	per 1000 Ft.
660119	8	16509	3/64	43/64	170
660120	10	10381	3/64	36/64	130
660121	12	6530	3/64	33/64	97
660122	14	4107	3/64	32/64	76

#### DUPLEX, STRANDED

T: 4 N.	Size B. & S.	Size	Rubber Wall	Concentr	IC STRANDS	Diam. Over All	Weight, Lbs.	
List No.	Gauge	in C. M.	Inches	No. Wires Diam. Each		Inches	per 1000 Ft.	
660123	1	83694	5/64	19	.067	1 15/64	820	
660124	2	66373	1/16	19	.059	1 7/64	651	
660125	3	52634	1/16	19	,052	1 2/64	540	
660126	4	41742	1/16	7	.077	62/64	451	
660127	5	33102	1/16	7	.069	57/64	375	
66012S	6	26250	1/16	7	.062	53/64	321	
660129	8	16509	3/64	7	.048	48/64	205	
660130	10	10381	3/64	7	.038	43/64	151	
660131	12	6530	3/64	7	.032	20/32	111	
660132	14	4107	3/64	7	.025	34/64	86	

#### Fixture Wire

No. 18 Solid Conductor Fixture Wire



A single conductor wire, designed for wiring fixtures, show cases, etc., and furnished in solid or stranded conductor as wanted.

Solid conductor wires are tinned. This is not required, however, for stranded conductor, which takes

a cotton wind in its place.

Conductors are insulated with new code compound and then covered with a saturated cotton braid or silk. Dry cotton can also be furnished, but is not generally required.

#### SOLID FIXTURE WIRE-N. E. C. STANDARD-TYPE F-32

The standard approved sizes are Nos. 16 and 18 R.&S. Can be used for wiring fixtures, without restriction, except where special forms of wire are required on account of temperature conditions.

List No.	Size B. & S.	Rubber Wall	Diameter Over All	Weight, Lbs.
	Gauge	Inches	Inches	per 1000 Feet
660133	12	3/64	$\begin{array}{r} 14/64 \\ 12/64 \\ 10/64 \\ 9/64 \end{array}$	40
660134	14	3/64		34
660135	16	1/32		20
660136	18	1/32		16

#### SOLID FIXTURE WIRE-LIGHT INSULATION-TYPE F-64

Used for wiring fixtures, except for the wiring of chains and where special forms of wire are required, because of temperature conditions. Size No. 18 B.&S. is the only size permitted by the Underwriters. Silk-covered light fixture wire is recommended for use with especially small fixture stems, where the

regular is too large.

Stranded fixture wire is recommended for use in movable stems.

COLLEGICAC ILLUCIA				
660137	14	1/32	10/64	27
660138	16	1/64	9/64	16
660139	18	1/64	8/64	13
660140	20	1/64	7/64	11



No. 00 Stranded Double Braid Wire

### Stranded Copper Conductors

Rubber-covered Stranded Conductors are made according to the specifications of the National Board of Fire Underwriters and each length is tested and stamped by the Wire Inspection Bureau before leaving the factory. The wires composing the conductors are thoroughly tinned and then laid up concentrically, giving the smallest diameter of any certain capacity. These conductors are pliable and are braided with cotton and saturated with a smooth and lasting compound, insuring their being readily handled in conduit work. The single braided conductors can also be finished with a white fireproof compound over the braid.

#### SINGLE BRAID

List No.	Size B. & S. Gauge	No. of Wires	Diameter of Each	Rubber Wall Inches	Diam. Over All Inches	Weight, Lbs. per 1000 Ft.
660151	8	7	048	3/64	21/64	93
660152	10	7	038	3/64	19/64	64
660153	12	7	032	3/64	17/64	48
660154	14	7	025	3/64	15/64	36
660155	16	7	018	1/32	14/64	29
660156	18	3	023	1/32	13/64	23
660157	20	3	018	1/32	12/64	21

#### DOUBLE BRAID

List No.	Size B. & S. Gauge	No. of Wires	Diameter of Each	Rubber Wall Inches	Diam. Over All Inches	Weight, Lbs. per 1000 Ft.
660158 660159 660160 660161 660162 660163 660164 660165 660166 660167 660168 660169 660170 660171	0000 000 00 0 0 1 2 3 4 5 6 8 10 12 14	19 19 19 19 19 19 19 7 7 7 7 7 7	105 094 084 074 067 059 052 077 069 062 048 038	5/64 5/64 5/64 5/64 5/64 1/16 1/16 1/16 1/16 1/16 3/64 3/64 3/64	30/32 56/64 52/64 47/64 43/64 39/64 36/64 32/64 29/64 26/64 24/64 21/64 19/64	942 782 647 526 417 329 272 227 192 164 105 72 55

#### Western Electric

#### **RUBBER-COVERED WIRES**



250000 C. M. Stranded Double Braid Cable

These stranded conductors are made according to the specifications of the National Board of Fire Underwriters and each length is tested and stamped before leaving the factory.

#### Circular Mils Cables

#### SINGLE BRAID

List No.	Size Cir.	Concentric Strands		Rubber Wall	Diam. Over All	Weight, Lbs
	Mils	No. of Wires	Diam. of Each	Inches	Inches	per 1000 Ft
660172	2000000	91	1485	1/8	1 60/64	7246
660173	1750000	92	138	1/8	1 56/64	6394
660174	1500000	91	1285	1/8	1 51/64	5539
660175	1250000	91	1175	1/8	1 43/64	4678
660176	1000000	61	128	7/64	1 1/2	3754
660177	950000	61	125	7/64	1 31/64	3581
660178	900000	61	122	7/64	1 28/64	3404
660179	850000	61	118	7/64	1 26/64	3233
660180	800000	61	115	7/64	1 24/64	3058
660181	750000	61	111	7/64	1 22/64	2881
660182	700000	61	107	7/64	1 20/64	2709
660183	650000	61	104	7/64	1 18/64	2534
660184	600000	61	0995	7/64	1 16/64	2355
660185	550000	37	122	7/64	1 14/64	2182
660186	500000	38	115	3/32	1 10/64	1959
660187	450000	37	111	3/32	1 7/64	1791
660188	400000	37	105	3/32	1 3/64	1608
660189	350000	37	098	3/32	1	1431
660190	300000	37	090	3/32	60/64	1250
660191	250000	37	083	3/32	56/64	1071

#### DOUBLE BRAID

660193	2000000	91	1485	1/8	2 5/64	7365
660194	1750000	92	138	1/8	1 59/64	6513
660195	1500000	91	1285	1/8	1 56/64	5658
660196	1250000	91	1175	1/8	1 52/64	4783
660197	1000000	61	128	7/64	1 40/64	3849
660198	950000	61	125	7/64	1 36/64	3676
660199	900000	61	122	7/64	1 34/64	3491
660200	850000	61	118	7/64	1 30/64	3310
660201	800000	61	115	7/64	1 32/64	3138
660202	750000	61	iii	7/64	1 30/64	2956
660203	700000	61	107	7/64	1 28/64	2880
660204	650000	61	104	7/64	1 26/64	2600
660205	600000	61	0995	7/64	1 24/64	2418
660206	550000	37	122	7/64	1 22/64	2210
660207	500000	38	115	3/32	1 16/64	2010
660208	450000	37	111	3/32	1 12/64	1840
660209	400000	37	105	3/32	1 11/64	1650
660210	350000	37	098	3/32	1 8/64	1468
660211	300000	37	090	3/32	1 4/64	1285
660212	250000	37	083	3/32	1 1 1/01	1103
01022	203000	"		3,02	1	2200



No. 1 Flexible Double Braid Switchboard Cable

#### Flexible Switchboard Cables

These wires are all National Electrical Code Standard and are especially designed for switchboard, dynamo and motor connections.

List No.	Size B. & S. Gauge	Size in C. M.	Rubber Wall Inches	No. of Wires	Size of Wires	Diam. Over All, Ins.	Weight, Lbs. per 1000 Ft.
660214	0000	211600	5/64	133	No. 18 B. & S.	53/64	791
660215	000	167805	5/64	134	No. 19 B. & S.		
660216	00	133079	5/64	131	No. 20 B. & S.	51/64	655
660217	0	105592	5/64	133		46/64	541
660218	1 1	83694			No. 21 B. & S.	42/64	444
660219	2		5/64	133	No. 22 B. & S.	40/64	366
660220		66373	1/16	133	No. 23 B. & S.	37/64	274
	3	52634	1/16	52	No. 20 B. & S.	32/64	225
660221	4	41742	1/16	52	No. 21 B. & S.	30/64	194
660222	5	33102	1/16	52	No. 22 B. & S.	28/64	159
660223	6	26250	1/16	50	No. 23 B. & S.	26/64	141
660224	8	16509	3/64	52	No. 25 B. & S.	24/64	86
660225	10	10381	3/64	33	No. 25 B. & S.	20/64	44
660226	12	6530	3/64	21	No. 25 B. & S.		
660227	14	4107	3/64	14	No. 25 B. & S. No. 25 B. & S.	18/64 16/64	36 26

#### Stranding

Standard, Flexible, and C. M. Conductors
When Strands are not Specified the Following will be Furnished:

	STANDARD	STRANDS		FLEXIBLE	E STRANDS		Will be I	STAND. ST		
Size B. & S. Gauge.	Strands	Stran'd Diam.	Wt.Lbs. per 1000 Ft.	Strands	Stran'd Diam.	Wt.Lbs. per 1000 Ft.	Size C. M.	Strands	Stran'd Diam.	Wt.Lbs. per 1000 Ft.
0000 000 00 0 1 2 3 4 5 6 8 10 12 14 16 18 20	19105 19094 19084 19074 19059 19052 7077 7069 7062 7048 7038 7032 7025 7018 5018 3018	.525 .470 .420 .370 .335 .295 .260 .231 .207 .186 .144 .114 .096 .075 .054 .050	655 525 420 325 266 206 160 130 104 84 51 32 23 131/2 71/2 31/2	133040 133035 133032 133025 133023 105023 49028 49025 49023 52018 33018 21018 30012 20012 12012 7012	.600 .525 .480 .420 .375 .345 .325 .252 .207 .162 .120 .097 .080 .064 .052	712 550 440 355 284 225 176 138 110 85 55 35 23 15 1/2 9 6 4	250000 300000 350000 400000 500000 550000 650000 750000 800000 950000 1000000 1250000 1750000 2000000	37082 37090 37098 37104 37116 42116 61099 68098 52116 56116 60116 67116 67116 71118 91128 91128 107128 122128	.630 .686 .728 .770 .812 .893 .891 .950 .986 1.010 1.044 1.090 1.125 1.16 1.152 1.330 1.408 1.557	770 915 1100 1260 1390 1540 1710 1840 2010 2160 2330 2500 2620 2790 2950 3150 3910 4650 5500 6280

#### Special Stranding

C. M. desired ÷ by C. M. in wire to be used equals number of wires in strand.

#### EXAMPLE:

How many 18 B. & S. will be required to make 250,000 C. M. cable? 18 B. & S. = 1624 C. M. 250,000 C. M. +1624 C. M. = 154, the number of 18 B. & S. in 250,000 C. M.

When the number of wires in a strand is given, but not their size, this can be determined as follows:

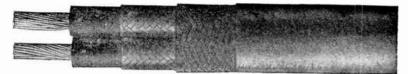
When the number of wires in a strand is given, but not their size, this can be determined as follows: The C. M. required + by the number of wires required = mileage of each wire in strand. The square root of the mileage will give the diameter of wire to be used in stranding.

#### EXAMPLE:

What is the diameter of a wire necessary to make 1,000,000 C. M. of 427 strands? 1,000,000 C. M. ÷ 427 = 2342 C. M. of each wire. Square root of 2342 C. M. = .0484, the diameter of each wire in strand. Prices on application.

# MINING AND PARK CABLES

# Mining Machine Cable



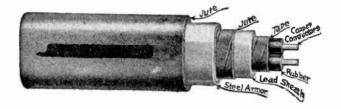
No. 4 Duplex Mining Machine Cable-Triple Braid

### **DUPLEX**

Duplex Mining Machine Cable consists of flexible strands, rubber insulated to N. E. C. standard thickness. Each conductor is finished with a weatherproof braid and two conductors are then laid parallel and covered with two or three braids of hard cotton, which is then saturated with a weatherproof compound.

~	List No.	Size B. & S.	Diameter Inches	Aprx. Wt. Lb per 1000 Ft.	s.
	660228	8	.85	186	
	660229		.95	284	Prices
	660230	4	1.10	417	on
	660231	3	1.20	498	Application
	660232	2	1.30	606	11ppmeauton

# Park and Suburban Cables



### For Underground Work

These cables are composed of conductors of any size required. High grade rubber insulation of whatever thickness necessary for the operating voltage. The insulation is covered with a rubber filled tape, then a lead jacket varying with the size of the cable. Over the lead is first a heavy bed of jute and tar, then two steel tapes covered with jute and asphalt. The cables are made single, duplex or triple conductor, as required.

These eables are laid directly in the ground. All that is necessary for installing is a trench wide enough to hold the cable and deep enough so that the cable is from twelve to fifteen inches under ground. They are a cheap and reliable substitute for the duct system, where the expense of ducts is not justified.

This method is not an experiment. It has been in successful operation for many years, and has proved as efficient, and much less expensive, than the duct system.

As prices will vary widely with cost of raw materials, and thickness of insulation required by operating voltage, no permanent price list can be prepared. Full information given on application. In writing please specify clearly all conditions of service.

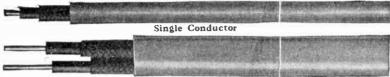
Prices on application.

SINGLE SOLID

# Western Electric

# LEAD ENCASED COPPER WIRES

NATIONAL ELECTRICAL CODE STANDARD



Duplex Conductor

# Leaded Wires and Cables Rubber Covered-For 600 Volts or Less

These lead cables have walls of rubber; black core of National Code specifications. All conductors are taped and the stranded cables are of regular standard strand. The lead used is commercially pure, of thickness as shown in each case.

In the two conductor cables the two taped cores are laid flat and leaded. The three conductor cables **DUPLEX SOLID** 

have taped cores twisted with fillers to make them round. Over all there is placed tape and lead. THREE CONDUCTOR SOLID

	SHAG	alle a	OLID	,			L	OFL	-7	50	LID			HILL	L COI	1000		~	<u> </u>	
List No.	Gauge B & S	Lead	Diam- eter	Lbs. 1000 ft.		List No.		Gauge B & S	Lea	ad	Diam- eter	Lbs. 1000 ft.		List No.	Gauge B & S	Lead	Dian eter		Lbs. 000 ft	
660939 660940 660941	20 19 18	1/32 1/32 1/32	.220 .225 .230	155 160 165		66096 66097 66097	0	20 19 18	.1/	/32 /32 /32	.372 .375 .380	230 240 250		660946 660948	19	3/64	.45 .46 .47	0	430 445 450	
660942 660248 660249	14	1/32 3/64 3/64			-	66097 66097 66097	3	16 14 12	3/	/32 /64 /64	.410 .470 .510	280 350 390		660949 66095 66095	14	1/16		0	500 658 730	
660250 660251 660252	8	3/64 $3/64$ $1/16$	.350	330		66097 66097 66097	6	10 8 6	1/	/64 /16 /16	.570 .660 .780	466 672 900		66095 66095 66095	3 .8	1/16	.73	0	850 1150 1550	1
660253 660254		1/16 1/16				66097 66097		5 4		/16 /16	.810 .840									
SINGLE STRANDED						I	DU:	PLEX	S	TR.	ANDE	ED		1	HRE	E CON			OR	
660943 660944 660945	14 12	3/64 3/64	300	$\begin{vmatrix} 236 \\ 262 \end{vmatrix}$	1	66098 66098	80	14 12 10	3/	/64 /64 /64	.500 .530 .590	376 423		66095 66095	3 12	1/16	. 63	0	680 780 850	)
660255 660256 660257	6	1/16	.470	580	)	66098 66098	34	8 6 5	1,	/16 /16 /16				66095 66095 66096	) (	5/64	. 94	0	1075 1635 1800	,
660258 660259 660260	3	1/16	.550	768	;	66098 66098	37	4 3 2	1,	/16 /16 /64	.970	1300		66096 66096	2 3	5/64	1.0	9	1970 2200 2480	)
660261 660262 660263	2 0	1/16	.690	1150	)	66098 66099	90	1 0 00	5	/64 /64 /64	1.28	2290		66096 66096	5 0	3/32	1.4	4	3330 3760 4260	)
660264 660265						66099	93	0000	5	/64	1.47 1.59	3450		66096 66096					4900 6085	
			1 0 1	7 1	_	. ,		IRCU	- 11				_	. 0	11	T):	+		1000 (1	
List N		auge B 50000 (		Lead 5/64	D	.950	Lbs	.1000ft	-11.	Lis 660	t No.	Gauge I 850000	_		3/32	Diamet 1.50		bs.	1000 ft	_
660266 660268	7   30	00000 ( 00000 (	C.M.	5/64 5/64		1.020 1.080		2480 2760		660:	279	900000	)	C.M.	3/32 3/32 3/32	1.53	0		5800 6040	) :
660270 660271	45	00000 ( 00000 (	C.M.	5/64 5/64 5/64		1.110 1.190 1.200		3000 3280 3480		660: 660: 660:	282	1000000 1250000 1500000	)	C.M.	3/32 7/64 7/64	1.59 1.78 1.91	0		6270 7960 9100	)
660273 660274	3   60	60000 ( 60000 (	C.M.	3/32 3/32 3/32		1.330 1.340 1.380		4160 4400 4650	-   -	660: 660:		1750000 2000000			7/64 7/64	2.03 2.12			10220 11300	
									-11.											

660275

660276

660277

700000 C.M. 750000 C.M. 800000 C.M.

3/32 3/32

3/32

1.410

1.440

1.470

4870

5100

5330

# Flexible Cords

Flexibility is the predominating feature of our standard and special flexible cords and cables, as listed hereinafter. Every step in the manufacture of our products is carefully inspected and no expense is spared to produce the best obtainable flexible cords and cables.

Our aim is not only to meet the requirements, as set forth by the National Board of Fire Underwriters, but surpass them. A sample of Western Electric Flexible Cord, which we will gladly furnish, will firmly convince you that it is a quality product.

A large stock of all standard cords is always available so as to give prompt and satisfactory service



Method of Packing No. 18 Lamp and Parallel Cords Other Cords and Sizes Packed in Coils

### PACKING-Lamp Cord

Lamp Cord is sealed in watertight and airtight packages, light, easy to handle and convenient to store in small spaces. Study the accompanying illustration.

The cartons are strong reinforced pasteboard boxes, each one bearing a full description of its contents.

Capacity-250 feet in coil form, uncoiling from center

Four cartons are placed in one strong corrugated container, which is sealed with a heavy gummed strip bearing our trademark at short intervals. This forms our standard package, as illustrated.

Special Flexible Cords

Special flexible cords are packed in coil form, securely wrapped with burlap. Each coil is clearly labeled.

# Flexible Lamp and Reinforced Cords

Description

The conductor consists of a number of small, annealed copper strands, each No. 30 B. & S. gauge, grouped into a cable of the required capacity. This conductor is then covered with a tight close wind of silk or cotton. Two of these finished conductors are then twisted around each other, or laid parallel, and braided over all with silk or cotton. Lamp cord is sold in three grades as designated, "New Code," "1909 Code," and "Commercial," which vary only in the thickness and quality of the rubber insulation enclosing

NEW CODE CORD

This cord is made to conform to the latest National Electrical Code Standard which requires that a vulcanized rubber insulation conforming to stretch, breaking weight, electrical and chemical test be placed around each conductor, over which is placed the usual cotton or silk outer braid, and differs from the "1909 Code" only in the fact that the insulation is of a higher quality of rubber.

National Electrical Code Standard (New Code) requires 1-32 inch wall of rubber insulation on Nos. 18 and 16 cords, and 3-64 inch wall on No. 14 and larger cords. Three threads, two green and one red

thread, cabled with copper strands.

1909 CODE CORD

This cord was known as "New Code" before the 1911 requirement of the National Board of Fire Underwriters specified the use of a higher quality of rubber in making up the insulation surrounding the conductor. The construction of the cord is identical with the New Code cord. with the exception that the rubber insulation is of a lower quality. It is no longer approved by the National Board of Fire Underwriters.

COMMERCIAL LAMP CORD

Commercial lamp cord has a seamless insulation of 1-64 inch rubber placed over a tight close wind of fine cotton over which is placed the usual cotton or silk outer braid. This cord is not approved by the

National Board of Fire Underwriters.

**World Radio History** 

# Western Electric Flexible Cords

The conductors of our regular cords are composed of a number of 30 B.&S. bare annealed copper strands, grouped into a cable of the required capacity, as follows: No. 8 B.&S., 165 strands; No. 10 B.&S., 104 strands; No. 12 B.&S., 65 strands; No. 14 B.&S., 41 strands; No. 16 B.&S., 26 strands; No. 18 B.&S., 16 strands; No. 20 B.&S., 10 strands; No. 22 B.&S., 7 strands. Sizes smaller than No. 18 are not approved by the Underwriters.

# Seven Points to Cover When Ordering W. E. Flexcords

Amount	Size	Insulation	Conductors	Style	Finish	Color
Feet	B.&S. Gauge	New Code 1909 Code Commercial	Single Pair Triple	Lamp Cord Parallel Cord Reinforced Cord Special Rein. Cord Special Cords	Silk Cotton Weatherproofed	Use Standard Colors as per Our Braid Color Card
Examples 250 250 250 250	18 20 16 14 16	New Code Commercial 1909 Ccde New Code 1909 Code	Twisted Pair Single *	Lamp Cord Lamp Cord Parallel Cord Reinforced Cord Reinforced Cord	Silk Cotton Silk Cotton Weatherproofed	Green Black Brown Black †

<sup>\*</sup>Pair Conductor is always understood (unless otherwise specified) for parallel and reinforced cords. tWeatherproof finish is always black and need not be specified.

LIST OF COLORS

Cotton covered cords may be furnished in any of the following colors. Standard green and yellow. White, Yellow, Blue, Maroon, Green, Oak, Brown, Red, Black, Gray, Old Gold Silk covered cords may be furnished in any of the following colors.
White, Silver, Gilt, Old Gold, Copper, Bronze, Tiffany Green, Dark Green, Red, Maroon Yellow, Gold, Brass, Old Brass, Green, Olive Green, Light Green, Brown, Navy Blue, Black

TABLE OF WEIGHTS (LBS.) PER 1000 FEET

Size	Insulation	Lamp Co	rds	Parallel Co	ords	Reinf	orced Cords—						
120	31104141102	Cotton	Silk	Cotton	Silk	Cotton	Silk	Wp.					
	( New Code	83	79	85	82	178	172	187					
12 B.&S.	$\frac{1}{64}$ in. Wall	60	52	64	56	108	104	114					
	New Code	63	59	65	62	133	128	141					
14 B.&S.	3 1 337 17	37	35	40	3	79	75.5	85					
	Now Code	37	34	38	36	75	70.5	80					
16 B.&S.	$\left\{\begin{array}{c} \frac{1}{64} \text{ in. Wall} \right.$	26	$\frac{24}{24}$	27	25.	52	49	57					
	New Code	$\tilde{27}$	$\frac{25}{25}$	$\frac{1}{29}$	27	64	60	69					
18 B.&S.	$\begin{cases} \frac{1}{64} \text{ in. Wall} \end{cases}$	<b>1</b> 9	17	20	18	43	40	47					
	New Code	$\frac{13}{22}$	19	23	21	51	47.5	56					
20 B.&S.	2 2 2 22 22	13.5	12	14.5	$\overline{13}$	32	29.5	36					
	$\frac{1}{64}$ in. Wall New Code	18	16	19	17	43	39	48					
22 B.&S.	L in Wall	10 5	10	11	10	26.5	24	30					
	in Wall	IU a	2.9	1.1	10	20.0							

Note: 1909 Code Cords, weight the same as New Code. Commercial Cords, weight the same as 1 inch Wall. The above weights are all based on pair conductors.



Lamp Cord—Type C. Single or twisted pair with cotton or silk braid over each conductor.



Parallel Cord—Type PO. Has cotton braid over each of two conductors laid parallel under cotton or silk outer braid.



Reinforced Cord—Type P. Has cotton braid over each conductor twisted together and covered with a rubber jacket, then braided over all with a hard glazed cotton.

Reinforced Cord WP.—Type PWP. Same as Type P except outer braid is saturated and finished

with a weatherproofed compound.

Special Reinforced Cord—Type PS. Underwriters only permit this cord in sizes Nos. 18 and 16

Special Reinforced Cord—Type PS. Underwriters only permit this cord in sizes Nos. 13 and 16 for office and dwelling only where appearance is essential.

1 inch wall of New Code insulation with cotton braid over each conductor, twisted together and cov-

ered with a rubber jacket to make round, then braided over all with either silk or hard glazed cotton.

# INTERIOR COPPER WIRES AND CABLES



# Annunciator Wire

### Regular

Insulated with two winds of cotton yarn applied in opposite directions, saturated with a special wax compound and highly polished. This makes a very compact insulation. Furnished either on spools containing about 8 lbs., or exactly 1 lb. and in 1 lb. coils, and packed in cases containing approximately 200 lbs. Furnished in colors and styles as follows—either plain copper or tinned; plain copper furnished unless otherwise ordered; red, blue, red and white, brown, white, olive, yellow, blue and white.

	Single Condu	ctor		Twisted Pairs	
		Weight			Weight
List No.	Size B. & S.	Lbs. per 1000 Ft.	List No.	Size B. & S.	Lbs. per 1000 Ft.
660422	14	15	660426	14	30
660423	16	9.5	660427	16	19
660424	18	6.5	660428	18	13
660425	20	4.5	660429	20	9

# Weatherproof Annunciator Wire

The construction of this wire is the same as regular annunciator wire except that the cotton wrapping is saturated with black weatherproof compound.

List No.	Size B. & S.	Weight Lbs. per 1000 Ft.	List No.	Size B. & S.	Weight Lbs. per 1000 Ft.
660430	14	16 6	660433	20	5.0
660431	16	11.1	660434	22	3.1
660432	18	7.7			• • •

# Damp-proof Office Wire



No. 18-Single Conductor Damp-proof Office Wire

This wire is double wound and braided, the two winds of cotton yarn applied in opposite directions, saturated with black weatherproof compound.

The braid is specially treated with wax, highly polished, and will not collect dust. Office wire is carried regularly in the following colors: red, red and white, blue, blue and white. It is put up in coils of about 17 lbs. each. and packed in cases of approximately 200 lbs. each.

## Single Conductor

List No. 660435 660436	Size B. & S. 14 16	Weight Lbs. per 1000 Ft.  24 13.5	List No. 660437 660438	Size B. & S. 18 20	Weight Lbs. per 1000 Ft. 10 8								
	Double Conductor												
660439 660440	14 16	55 34	660441 660442	18 <b>20</b>	25 20								

# **Annunciator Cables**

This cable is designed for connecting the annunciator in an elevator car with the push buttons on the different floors.

Each conductor is composed of 16 strands of No. 30 B. & S. gauge soft untinned copper wire and insulated with two reverse wrappings of cotton and one cotton braid. The insulated conductors are then cabled with a steel supporting strand, where necessary to give extra tensile strength, then covered with two cotton braids. This is a dry cable and the outer braids are flameproof.

Prices on application.

# BARE COPPER WIRE



Concentric Strands

# Bare Copper Concentric Strand Wire

All strands are concentric laid, giving the smallest outside diameter for any certain capacity. Unless otherwise specified, cables will be furnished according to regular style of stranding. The table shows the diameter in mils of wire used according to the number of wires of which the strand is composed.

Capacity	Wei	ight		ar Style anding	Diam.	Capacity	Wei	ght		ar Style	Diam.
Circular Mils	Per 1000 ft.	Per Mile	No. Wires	Diam. Each	Strand, Mils	Circular Mils	Per 1000 ft.	Per Mile	No. Wires	Diam. Each	Strand, Mils
2000000	6180	32640	91	148	1630	300000	927	4896	37	90	630
1750000	5409	28560	91	139	1530	250000	772	4080	37	82	574
1500000	4635	24480	91	128	1410	4/0 B. & S.	652	3442	19	105	525
1250000	3864	20400	91	117	1288	3/0 B, & S.	517	2730	19	94	470
1000000	3090	16320	61	128	1151	2/0 B. & S.	410	2165	19	84	420
950000	2936	15504	61	125	1125	1/0 B. & S.	325	1717	19	75	375
900000	2780	14688	61	121	1089	1 B. & S.	258	1361	7	109	327
850000	2627	13872	61	118	1061	2 B. & S.	204	1079	7	98	294
800000	2472	13056	61	115	1034	3 B. & S.	162	855	7	87	261
750000	2318	12240	61	111	998	4 B. & S.	128	680	7	77	231
700000	2164	11424	61	107	963	5 B. & S.	102	538	7	69	207
650000	2010	10608	61	103	928	6 B. & S.	80	427	7	61.2	183
600000	1854	9792	61	99	891	8 B. & S.	51	268	7	48.4	145
550000	1700	8976	61	95	855	10 B. & S.	32	169	7	38.6	116
500000	1545	8160	37	116	812	12 B. & S.	20	106	7	30.6	91.8
450000	1390	7344	37	110	770	14 B. & S.	13	67	7	24.2	72.6
400000	1236	6528	37	104	729	16 B. & S.	8	42	7	19.3	57.9
350000	1082	5712	37	97	679	18 B. & S.	5	26	7	15.1	45.3

O	Various Methods of Stranding								
Capacity Circular			Diam	eter in Mils W	hen Compose	d of			
Mils	7 Wires	12 Wires	19 Wires	27 Wires	37 Wires	61 Wires	91 Wires	127 Wires	
2000000 1750000 1500000 12500000 1250000 1000000 9500000 8500000 8500000 6500000 6500000 45000000 45000000 45000000 45000000 4500000000	123 109 98 87 77 69 61.2 48.4 38.6 30.6 24.2 19.3 15.1	118 105 94 83 75 66 59 52.5 46.8 37 29.4 23.4 18.5 14.7	126 115 105 94 84 75 66 59.2 52.5 46.8 41.8 37.2 229.4 23.4 18.6 14.7 11.7 9.2	136 129 122 114 105 96 86 79 70 62.6 55.6 49.7 44.1 39.3 35 31.2 24.6 19.6 15.6 12.3 9.8 7.7	143 138 133 127 122 116 110 104 97 90 82 76 67 60 53.4 47.5 42.4 37.7 33.5 29.9 26.6 21.1 16.8 13.3 10.5 8.4 6.6	157 142 128 125 121 118 115 111 107 103 99 95 91 86 81 76 70 64 58.9 52.5 46.7 41.6 37 33 29.3 20.7 16.4 13.1 10.4 8.2 6.5 5.1	148 139 128 117 105 102 100 97 94 91 88 84 81 78 74 70 66 62 57.4 52.4 48.2 43 38.3 34.1 30.3 27.1 24 21.4 19.1 17 13.4 10.7 8.5 6.7 5.3 4.2	126 117 109 99 89 86 84 82 79 77 74 72 69 66 62.7 59.5 56.1 52.6 44.3 40.8 36.4 32.8 22.9 20.3 116.2 11.4 91.1 91.7 25.7 4.5 3.5	

# BARE COPPER WIRE

# Trolley Wire







Figure 8

Hard drawn trolley wires are furnished in any of the standard styles, round, grooved or figure 8. Sizes 4/0 and 3/0 are put up in  $\frac{1}{2}$  mile lengths, 2/0 and 1/0 are furnished in  $\frac{1}{2}$  or 1 mile lengths. The cross sections of the various styles and sizes are shown above. The grooved shown is American Standard.

Size B. & S.	List No.	List No.	List No.	Approximate Wgt., Pounds		Electrical Conductivity
	Round	Grooved	Figure 8	Per Mile	Per 1000 Feet	(Minimum)
0 00 000 0000	660774 660775 660776 660777	660778 660779 660780 660781	660782 660783 660784 660785	1685 2132 2690 3386	319 404 509 641	Mile—ohm @ 68 degrees Fahr., not to exceed 890.1 equals 98% Matthiessen's Standard.

# Copper Line Wire

### Hard Drawn or Annealed

These wires are drawn accurately to gauge according to specification. They are of high conductivity and tensile strength.

All copper wires are regularly drawn to B. & S. gauge and annealed, and all orders will be filled accordingly, unless otherwise stated.

List No.	Size B. & S. Gauge	Diameter in Mils	Capacity Circular Mils	Per 1000 Feet Lbs.	Pounds per Mile	Put up in
660786 660787 660788 660789	0000 000 00 0	460 410 365 325	211600 167803 133079 105534	639 507 402 319	3376 2677 2123 1684	
660790	1	289	83694	253	1335	-
660791	3	258	66373	201	1059	200-lb. Coils.
660792 660793	3 4	229 204	52634 41743	159 126	840 666	200-ib. Colls.
	-					-[]
660794	5	182	33102	100	528	
660795	6	162	26251	79	419	
660796 660797	7 8	144 128	20817 16510	63 50	332 263	
660798	9	114	10004	40	202	
660799	10	102	13094 10382	40 31	209 166	
660800	ii	91	8234	25	131	{
660801	12	81	6530	20	104	
		PPyD:				100-lb. Coils.
660802	13	72	5178	16	83	1
660803	14	64	4107	13	66	1
660804	15	57	3257	10	52	1
660805	16	51	2583	8	41	-
660806	17	45	2048	6	33	50-lb, Coils,
660807	18	40	1624	5	26	[ 00-10. COIIB.
660808	19	36	1288	5	21	
660809	20	32	1022	3	16	J

Also put up in long lengths on reels, as desired. Prices on application.

# GALVANIZED WIRE STRANDS



Galvanized Wire Strand

# Uses of Strand

Guy Strand

Extra Galvanized Siemens-Martin Strand is frequently employed to guy electric railway, telegraph and telephone poles.

### Messenger Strand

15-inch diameter extra galvanized Siemens-Martin Strand, 3%-inch or 75-inch diameter extra galvanized high strength strand is stretched from pole to pole, and from this messenger strand, so called, the heavy lead-encased telephone cable is suspended by means of clips, wire or cord at short intervals. A messenger strand thus sustains the stress due to weight of cable, wind or ice load. Common galvanized strand should never be used for this purpose, as it does not possess the requisite strength.

# Catenary Method of Supporting Trolley Wires

One or more messenger strands are stretched from the center of the tracks. Every few feet along this messenger strand are pendent hangers that clamp on to the trolley wire, retaining it in a rigid, straight, horizontal line. For a single messenger strand earrying 4/0 Copper Trolley Wire, in spans of 125 to 150 feet,  $\frac{3}{6}$ -inch or  $\frac{7}{16}$ -inch diameter, extra galvanized Siemens-Martin Strand is frequently used. For longer spans, up to 225 feet, the  $\frac{3}{6}$ -inch or  $\frac{7}{16}$ -inch extra galvanized high strength strand is preferable.

### Lightning Arrester for Transmission Lines

To protect high-tension current transmission lines from destructive lightning a 3/6-inch diameter extra galvanized Siemens-Martin Strand, known as an "overhead ground strand," is strung at the highest point on the supporting towers, this "overhead ground strand" being connected at frequent intervals with the ground. The extra galvanized Siemens-Martin Strand, because of its great conductivity, is employed almost exclusively for the "overhead ground strand."

### EXTRA GALVANIZED SIEMENS-MARTIN STRAND

per 100 Ft. Inches

Diameter

\*List Price

Wgt. Lbs.

per 1000 Ft.

Tensile Strength

in Pounds

Diameter

Inches

Tensile Strength

in Pounds

Wgt. Lbs.

. per 1000 Ft.

\*List Price

per 100 Ft.

5/8 1/2 7 16 3/8 16	19,000 11,000 9,000 6,800 4,860	800 510 415 295 210	On Application	9 3 2 1 /4 3 1 6 1 /8	4,380 3,050 2,000 900	160 125 75 32	On Application
	EXT	RA GALVA	ANIZED HI	GH STF	RENGTH STR	AND	
Diameter Inches	Tensile Strength in Pounds	Wgt. Lbs. per 1000 Ft.	*List Price per 100 Ft.	Diameter Inches	Tensile Strength in Pounds	Wgt. Lbs. per 1000 Ft.	*List Price per 100 I't.
5/8 1/2 7 16 3/8 16	25,000 18,000 15,000 11,500 8,100	800 510 415 295 210	On Application	32 14 16 16 18	7,300 5,100 3,300 1,500	160 125 75 32	On Application
	EVEDA	CATVANITZ	ED EVTDA	ПІСП	STDENCTH	STRAND	

	LAIRA	CALVARIA	D LAINA	111/211	DIACEITOILI	0111111	
Diameter Inches	Tensile Strength in Pounds	Wgt. Lbs. per 1000 Ft.	*List Price   per 100 Ft.	Diameter Inches	Tensile Strength in Pounds	Wgt. Lbs. per 1000 Ft.	*List Price per 100 Ft.
5/8 1/2 1/6 8/8	42,000 27,000 22,500 17,250 12,100	800 510 415 295 210	On Application	9 32 1/4 3 16 1/8	10,900 7,600 4,900 2,250	160 125 75 32	On Application

\*Delivery F. O. B. Factories, Trenton, N. J., Worcester, Mass., or Phillipsdale, R. I. For warehouse deliveries write nearest house.

# GALVANIZED WIRE



# Telephone and Telegraph Wire

There are three grades of galvanized wire, classified as follows: Extra Best Best (E. B. B.), Best Best (B. B.) and Steel. Specify grade desired.

Extra Best Best (E. B. B.) wire is made from a special stock of great purity, producing wire of absolutely uniform quality, in which the elements of softness and elongation are combined with low electrical resistance to a marked degree. It is largely employed in long lines or service where low electrical resistance is both desirable and necessary.

Best Best (B. B.) wire is made from a stock of high quality, producing a wire somewhat less uniform and of higher resistance than E. B. B., but of greater tensile strength. This grade is used almost exclusively for the construction of subscribers' lines in exchanges, and on account of its great tensile strength is best

adapted for rural or farmer lines.

Steel wire has a greater tensile strength than either E. B. B. or B. B., but on account of its greater

electrical resistance is not very generally used.

The different grades of wire are Extra Galvanized, i.e., the wire is protected from atmospheric action by a heavy uniform coating of spelter.

List No.	B. W. G.	Diameter	Approximate	breaking strai	Weight in	Bundles	
	Gauge	in Inches	E. B. B.	В. В.	Steel	Lbs. per Mile	Mile
660810 600811 660812 660813 660814 660815 660816 660817	4 6 8 9 10 11 12 14	.238 .203 .165 .148 .134 .120 .109	2028 1475 975 785 645 515 425 247	2271 1652 1092 879 722 577 476 277	2433 1770 1170 1170 942 774 618 510 297	811 590 390 314 258 206 170 99	1/4 1/3 1/2 1/2 1/2 1/2 1/2 1/2 1/2

Prices on application.

# Standard Galvanized Steel Strand



Steel Strand

For guys, signal strand, trolley line span wire and other purposes. Composed of seven wires twisted together.

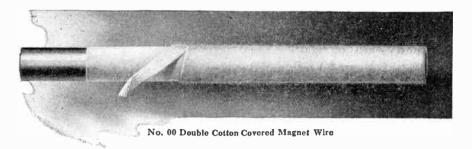
List No.	Diameter	Wgt. per 1000 Ft. in Lbs.	Approx. Breaking Strain in Lbs.	List Price per 100 Ft.
660818 660819 660820 660821 660822 660823 660824 660825 660937 660938	½-inch  ½-inch  ½-inch  ½-inch  ½-inch  ½-inch  ½-inch  ½-inch  ½-inch	510 415 295 210 125 95 75 55 32 20	8,500 6,500 5,000 3,800 2,300 1,800 • 1,400 900 500	On Application

Intermediate sizes take next higher list.

Galvanized strand is furnished both single and double galvanized. In ordering, state which is required.

NOTE: Add 10% for double strand.

# Western Electric MAGNET WIRE



Western Electric

# Cotton Covered Magnet Wire

Sizes No. 0000 to 19 Inc. Single and Double Cotton To obtain prices add to latest market con

Size		Round		Ashestos	Sq	uare	Rectangular		
B.&S. Gauge	s.c.c.	D.C.C.	T.C.C.	and S.C.C.	D.C.C.	T.C.C.	‡Square Mils.	D.C.C.	T.C.C.
4/0 to 6 7 8	Basc . 00 1/4 . 00 1/2	.001/4	.01¼ .01½ .01½	.003/4	$.01\frac{1}{4}$ $.01\frac{1}{2}$ $.02$	.023/4 .03 .031/2	3001 and over 25001 to 30000 20001 to 25000 15001 to 20000	.02 .02¼ .02¾ .03¾	.03¼ .03½ .04¼ .05¼
9 10 11	0034 .01 .0114	.01½ .02 .02½	.02½	.02	.02½ .03 .03½	.04 .04 <sup>3</sup> / <sub>4</sub> .05 <sup>1</sup> / <sub>2</sub>	10001 to 15000 9001 to 10000 8001 to 9000 7001 to 8000	. 04 <sup>8</sup> / <sub>4</sub> , 05 <sup>9</sup> / <sub>4</sub> . 06 <sup>3</sup> / <sub>4</sub> . 07 <sup>3</sup> / <sub>4</sub>	.06½ .07½ .08¾ .10
12 13 14	$.02 \\ .02\frac{1}{2} \\ .03$	.03 .0334 .041/2	.043/4 .06 .071/4	,,	.04 ,05¼ .06	.06¼ .08 .09	6001 tp 7000 5001 tp 6000 4001 tp 5000 3001 to 4000	.0834 .1034 .1234 .1534	.11 .13½ .16
15 16 17	.03½ .04 .04½	.05¼ .06 .07	.08½ .09¾ .11¼	1	Asbestos and D.C.C. Same		2501 to 3000 2001 to 2500 1501 to 2000 1001 to 1500	. 18 <sup>3</sup> / <sub>4</sub> . 23 <sup>3</sup> / <sub>4</sub> . 30 <sup>3</sup> / <sub>4</sub> . 45 <sup>3</sup> / <sub>4</sub>	
18 19	.051/4	.08	.12%4	Pr	ice as T.C.	U.	501 to 1000 500 and under	. 65% . 90%	

The width multiplied by the thickness equals square mils.

Freight Additions for Above Sizes

Carloads   Less   Min   Than   Wt   Car   30000   Car
Than   Wt   Car   3000   Car
Car   3000   Car   3000   To   Loads   Lbs   To   Loads   Lbs   Louisiana   So. 60   So. 40   Ohio
To         Loads         Lbs.         To
Arizona   \$3.80   \$2.60   Louisiana   \$0.60   \$0.40   Ohio   \$0.20   \$0.40   Alabama   \$1.10   \$0.60   Maine   \$1.5   \$0.50   Oklahoma   \$1.75   Arkansas   \$7.5   \$50   Maryland   \$0.5   \$0.00   Oklahoma   \$1.75   Oregon   *1.65   *1.10   Massachusetts   \$0.5   \$0.00   Ohio   \$0.20   \$0.00   Oklahoma   \$1.75   Oregon   *1.65   *1.10   Ohio   \$0.20   Oklahoma   \$1.75   Ohio   \$0.20   Ohio   \$0.
Alabama
Arkansas.     75     50     Maryland.     .05     .00     Oregon.     *1.65     *1.       California.     *1.65     *1.10     Massachusetts.     .05     .00     Pennsylvania.     .05       Colorado.     †2.25     †1.25     Michigan.     .25     16     Rhode Island.     .05       Connecticut.     .05     .00     Minnesota.     .60     .35     South Carolina.     .90       Dist. of Columbia.     .15     .00     Missouri.     .60     .25     Tennessee.     .60       Florida.     .75     .45     Montana.     .2.60     1.75     Texas.     †1.25     †       Georgia.     .80     .55     Nobraska.     1.00     .50     I'tah.     †2.75     †1.
California     *1.65     *1.10     Massachusetts     .05     .00     Pennsylvania     .05       Colorado     †2.25     †1.25     Michigan     .25     16       Connecticut     .05     .00       Delaware     .05     .00       Dist of Columbia     15     .00       Florida     .75     .45       Georgia     .80     .55       Nobraska     1.00     .50       Pennsylvania     .05       Rhode Island     .05       South Carolina     .90       South Dakota     1.25       Tennessee     .60       Tennessee     .60       Texas     †1.25     †       Texas     †1.25     †       †1     †2     †       †2     †2     †1       **Tennessee     .60       **Texas     †1.25     †       **Texas     †1.25     † <tr< td=""></tr<>
Colorado.     †2.25     †1.25     Michigan     25     16     Rhode Island     .05       Connecticut     .05     .00     Minnesota     .60     .35     South Carolina     .90       Delaware     .05     .00     Mississippi     .90     .50     South Carolina     .90       Dist. of Columbia     .15     .00     Mississippi     .60     .25     Tennessee     .60       Florida     .75     .48     Montana     .26     1.75     Texas     †1.25     †       Georgia     .80     .55     Nebraska     1.00     .50     Utah     †2.75     †1
Connecticut         .05         .00         Minnesota         .60         .35         South Carolina         .90           Delaware         .05         .00         Mississippi         .90         .50         South Dakota         .125           Dist. of Columbia         .15         .00         Missouri         .60         .25         Tennessee         .60           Florida         .75         .46         Montana         .2         .60         .175         Texas         .1         .25         .5           Nobraska         .1         .00         .50         [Vtah         .12         .75         .5         .5
Delaware         .05         .00         Mississippi         .90         .50         South Dakota         1.25           Dist of Columbia         1.5         .00         Missouri         .60         .25         Tennessee         .60           Florida         .75         .45         Montana         2.60         1.75         Texas         .1.25         †           Georgia         .80         .55         Nobraska         1.00         .50         Utah         .†2.75         †
Dist. of Columbia     15     00     Missouri     60     25     Tennessee     60       Florida     75     46     Montana     2     60     1.75     Texas     †1.25     †       Georgia     80     55     Nobraska     1.00     50     Utah     †2.75     †1
Florida
Georgia 80 .55 Ncbraska
Idaho 3.10 2.10 Nevada actual rates from New York. Vermont 10
Illinois
Indiana 35 .10   New Jersey
Indian Territory. 1.75 95 New Mexico
Iowa
Kansas 1.20 .70   North Carolina
Kentucky 35 .20   North Dakota

†In the States of Colorado, Texas and Utah freight rates shall cover so-called common points only, or those taking a lower rate. To all other points in Colorado, Texas and Utah which take a higher rate than to common points the delivery price shall he made by adding to the freight rate for common points the local rate from the nearest common point to the point of delivery. Ogden, Salt Lake City and Provost are arbitrarily made the only common points in Utah.

\*Coast terminal points are:

San Francisco

San Diego

Portland

Sacramento Los Angeles Astoria Marysville

Stockton Seattle San Jose

Portland Mt. Vernon Oakland Olympia

On sales to other than coast terminal points local freight must be paid by the purchaser.

Note: Freight will be allowed on all shipments of 100 lbs. or over, east of the Mississippi River; west of the Mississippi River on 200 lbs. or over. Shipments less than 100 lbs. are F. O. B, cars Ansonia and carry the Connecticut delivery charge as noted above.

Boxing and Reel Charges and Allowances. On all shipments of magnet wire from factory an extra charge of \$1.50 Net is made for a recl., 75 cents Net for a 50 lb. spool and 50 cents Net for a 25 lb. spool; and in addition a boxing charge of from 50 cents to \$1.50 is made; both of which charges are refunded when the reel or spool is received at factory in good condition,

# MAGNET AND BINDING WIRE

# "Deltabeston" Magnet Wire

# Round and Rectangular



This wire is particularly adapted to field and armature coil winding. The insulation is an asbestos composition designed to stand extraordinary temperature, which particularly adapts it to street railway and similar use, where motors and generators experience very severe overloads. Attempts at imitation of this wire have been made without success. The trade name, "Deltabeston," represents the wire of this character that has proven its merit.

Deltabeston magnet wire, while generally used in the round type, is also manufactured in wire of a rectangular cross-section. The advantages of square or flat wires are numerous. Much greater copper section can be put into a given winding space by the use of rectangular wires, than by employing round conductors. This is

due to the fact that the small interstices necessarily occurring between adjacent round wires are practically eliminated when flat-sided wire is used.

Size B. & S. Gauge	Approx. Feet per Lb.	List No. Round	Size B. & S. Gauge	Approx. Feet per Lb.	List No. Round
0	3.078	660613	13	61.07	
1	3.880	660614	14		660639
$\bar{2}$	4.873	660615		76.62	660640
2			15	95.99	660641
ં	6.136	660616	16	120.0	660642
4	7.731	660617	17	150.4	660643
5	9.719	660618	18	188.0	660644
6	12.22	660619	19	233.5	660645
7	15.35	660620	20	290.8	
8	19.38	660621	21		660646
9	24.34			363.5	660647
		660622	22	449.9	660648
10	30.49	660623	23	549.1	660649
11	38.47	660624	$\frac{1}{24}$	682.7	
12	48.27	660625	25		660650
	10.27	000020	2.0	834.4	660651

Note: Square, flat and stranded "Deltabeston" wire is also manufactured. Prices on application.

# Tinned Steel Binding Wire

This is a tinned steel wire which has no equal for armsture binding. Its tensile strength is over 200,000 lbs. per sq. in. It is heavily and evenly tinned and true gauge.

List No.	B & S Gauge	List Price per 100 Lbs.	List No.	B & S Gauge	List Price per 100 Lbs.
660933 660934 660935 660936 660994 660995 660666	No. 11 No. 12 No. 13 No. 14 No. 15 No. 16 No. 17 No. 18	Prices on Application	660668 660669 660671 660672 660673 660674 660675	No. 22 No. 23	Prices on Application

# Phosphor Bronze Binding Wire

This wire is tinned for use in binding armatures and is finished smooth to gauge and ready to take solder with acid. It has high elastic limit and tensile strength.

List No.	Gauge B. & S.	Diam.	List Price per Lb.	List No.	Gauge B. & S.	Diam.	List Price
660678 660679 660680 660681 660682 660683	10 11 12 13 14 15	.101890 .090743 .080808 .071961 064084 .057068	Prices on Application	660684 660685 660686 660687 660688	16 17 18 19 20	.050820 .045257 .040303 .035890 .031961	Prices on Application

On application

# DELTABESTON WIRES



# Deltabeston Stove Wire

Solid Conductor

This wire is insulated with a wall of especially treated asbestos fiber over which is woven an asbestos braided covering.

This wire is approved by the Underwriters' Laboratories, Inc. for the wiring of electric stoves and ranges in and around ovens, in boiler rooms and similar places where excessive moisture is not present.

Size	Approx. Thickness	Approx. Diameter	Approx. Weight	W. E. List
B.&S.	Asbestos	Overall	per 1000 Feet	Price per
Gauge	Wall Mils.	Inches	Lbs.	100 Feet
6	.029	19/64	105	
8	.027	1/4	70	
10	.025	7/32	45	On application
12	.022	13 ′64	30	
14	.020	3/16	20	}
All sizes	put up in 1000 foot coils.			

# Deltabeston Fixture Wire

Stranded Conductor This wire is insulated with an .025 inch wall of the best grade of asbestos fiber, purified by a special

process. Deltabeston fixture wire is recommended for all classes of fixture wiring including fixtures for gas filled incandescent lamps, car fixtures, and is especially adapted for fixtures in which the temperatures liable to be attained by some parts are such as to render the use of rubber covered wires or cords either undesirable or

impracticable. Deltabeston fixture wire is smooth and flexible so that it may be "fished" through fixtures with the ut-

most ease. This wiring is approved by the Underwriters' Laboratories, Inc., for wiring fixtures.

i ms wu	mg is approved	ify the chacimine			
	Conductor		Approx. Diameter		
Size	No.	B.&S. Gauge	Over	Approx. Weight	W. E. List
B.&S.	of	of Each	Insulation	Lbs. per	Price per
Gauge	Wires	Wire	Inches	1000 Feet	100 Feet
14	41	No. 30	.125	18	
16	26	No. 30	. 110	12	} On application
18	16	No. 30	. 100	9	J
All sizes	s nut up on 250	foot spools.			

# Deltabeston Fixture Wire with Silk Covering

Stranded Conductor

This wire is supplied in single and parallel or twisted twin conductors. The latter is manufactured in two forms. One style has each conductor braided separately with a silk covering and the two then twisted together. The other has the two asbestos insulated conductors first twisted together and finally braided with the silk covering. In ordering, the style should be specified.

38

26

20

14

16

If it is desired, an outer covering of cotton may be substituted for the silk. These wires are approved by the Underwriters' Laboratories, Inc., for wiring fixtures.

I nese wi	ires are appi	oved by the chaer	Willers Laboratories, in	ic., for wiring fixed	100.	
		9	Single Conductor			
	Conduct	or	Approx. Diameter			10.7
Size	No.	B.&S. Gauge	Over	Approx. Wt.,		W. E. List
B.&S.	of	of Each	Insulation	Lbs. per		Price per
Gauge	Wires	Wire	Inches	1000 Feet		100 Feet
14	41	No. 30	. 145	19		
16	26	No. 30	. 130	13	}	On application
18	16	No. 30	.120	10	)	
All sizes	put up on 2	250 foot spools.				
		W. E. List Price				
Size B.&S.		Approx. Weight Ll	os. per 1000 Feet			per 100 Feet
Gauge		Parallel	Twisted			Twisted

28

 $\overline{21}$ 

All sizes put up on 250 foot spools. Delivery F. O. B. Factory Providence, R. I For warehouse deliveries write nearest house.

# **DELTABESTON WIRES**



# Deltabeston Heater Cord Stranded Conductor

For service where rubber is not necessary Deltabeston heater cord is manufactured wherein each conductor is insulated with a .025 inch wall of pure asbestos fiber. This is thoroughly filled with a compound which gives it high dielectric strength and provides a very tough and pliable insulation.

For an all fireproof cord the twisted conductors are covered with an asbestos braid, but where this is not

essential, cotton braid is supplied in any colors required.

Approved by the Underwriters' Laboratories, Inc.

		With Asbestos I	Sraid			Wi	th Cotton Bra	id	
Size B.&S. Gauge 12	Style	Approx. Weight per 1000 Feet Lbs. 82		W. E. List Price per 100 Ft. \$28.00	Size B.&S. Gauge 12	Style	Approx. Weight per 1000 Feet Lbs. 65	Mfrs. List 100 Ft. \$13.00	W. E. List Price per 100 Ft. \$26.00
14 16 18	A A A	60 43 34	10.50 7.50 6.00	21,00 15,00 12,00	14 16 18	CCC	45 30 22	9.00 6.30 5.60	18.00 12.60 11.20
A 1	1 -1	A OFO C /	*						

All sizes put up on 250 foot spools. In ordering specify the style required.



# Deltabeston Switchboard Wire Solid Conductor

The insulation on this wire consists of a .025 inch wall of standard high-grade pure asbestos fiber, thoroughly filled with a moisture-proof compound which gives it very high dielectric strength and an exceptionally tough finish. Over this is braided an asbestos covering which can be furnished in either black or white finish. Approved by the Underwriters' Laboratories, Inc.

4 4	•				
Size B.&S. Gauge	Approx. Thickness Asbestos Wall Mils.	Approx. Diameter Overall Inches	Approx. Weight per 1000 Feet Lbs.	Mfrs. List 100 Feet	W.E. List Price per 100 Feet
6	.029 .027	19/64 1/4	110 75	\$10.00 7.50	\$20.00
10	.025	7/32	50	5.50	$15.00 \\ 11.00$
12 14	.022 .020	13 '64 3/16	35 25	4.50 3.80	9.00 7.60

All sizes put up in 1000 foot coils.

In ordering specify whether black or white finish is desired.



# Deltabeston Moving Picture Machine Cable Stranded Conductor

The stranded conductor is insulated with a wall of compactly applied asbestos fiber over which is woven an asbestos braided covering. The outer covering is treated with a compound which completely saturates the braid producing a smooth finish and rendering it moisture-proof.

This cable is widely used for the wiring of moving picture projectors, search lights, railway controllers, cranes and other devices in which the wires are subjected to high temperatures.

Approved by the Underwriters' Laboratories, Inc.

	Conductor		Approx.	Approx.	Approx.		W. E. List
Size	No.	B.&S. Gauge	Thickness	Diameter	Weight per	MITTS.	Price
B.&S.	_of	of Each	Asbestos	Over All	1000 Feet	List	per 100
Gauge	Wires	Wire	Wall Mils.	Inches	Lbs.	100 Feet	Feet
1	133	No. 22	.035	17/32	310	\$27.50	\$55.00
2	133	No. 23	.034	31/64	255	24.00	48.00
4	82	No. 23	.032	13/32	170	17.00	34.00
6	84	No. 25	.029	11/32	115	12.50	25.00
8	52	No. 25	.027	19/64	75	10.00	20.50
10	104	No. 30	.025	15/64	50	8.00	16.00
12	65	No. 30	.022	13/64	35	6.00	12.00
14	41	No. 30	.020	7/32	25	4.50	9.00

The cables listed above are flexible and are furnished with the strandings indicated unless otherwise spec-

Prices on special stranding quoted upon request.

Delivery F. O. B. Providence, R. I. For warehouse deliveries write nearest house.

Special Flexible Cords



# Deck Cable

A watertight flexible cord, made to stand severe abrasion. It is especially designed for use on boat decks and is made as follows: Two conductors of new code cotton braided cord, twisted together, reinforced by jute, and a rubber jacket, over which is then placed one cotton braid thoroughly saturated and weather-proofed.

		Approx. Weight [[		Approx. Weight
Size	Diameter	Lbs. per   Size	Diameter	Lbs. per
B. & S.	Inches	1000 Ft. B. & S.	Inches	1000 Ft.
10	.730	182   16	.505	65
12	.665	144   18	.485	52
14	.650	112		



# Border Light Cable

A stage cable made up of usually more than two conductors.



# Elevator Cable

An extremely flexible and durable cord, especially constructed for elevator control and lighting. The conductors of this cable (usually more than two) are constructed in the usual way of New Code cord. These conductors are then grouped together and covered with three cotton braids, the outer one weatherproofed. A steel supporting strand running through the center is usually required, and this adds materially to the strength of the cable.



### Heater Cord

The conductor consists of a number of small copper strands grouped into a cable of the required capacity, cotton wrapped, insulated with a thin wall of rubber compound, asbestos braided. Two of these finished conductors are then twisted together and braided over all with cotton of any desired color combination. Standard color is black and brown. This cord can also be furnished in parallel form.

Size B. & S. 18 16 <b>14</b>	Diameter Inches .310 .330 .345	Approx. Weight Lbs. per 1000 Ft.  34 44 58  Size B. & S. 12 10	Diameter Inches .360 .390	Approx. Weight  Lbs. per 1000 Ft.  80 105
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Special Flexible Cords



# Brewery Cord

A weatherproof lamp cord which conforms in all respects with the requirements of the National Board of Fire Underwriters. This is a specially designed cord for use in breweries and other places where dampness is prevalent.

Size B. & S. 10 12 14	Diameter Inches .540 .480 .460	Approx. Weight Lbs. per 1000 Ft. 130 95 72 Size B. & S. 16 18	Diameter Inches .360 .340	Approx. Weight Lbs. per 1000 Ft. 46 35

# Canvasite Cord

An acidproof flexible cord, unusually tough and durable. This is especially designed for use in dyeing establishments, cold storage plants, tanneries and other places where mechanical and chemical conditions are severe. It is made up similar to Brewery Cord except that it has an extra weatherproof braid over the twisted conductors.

Size B. & S. 10 12 14	Diameter Inches .600 .540	Approx. Weight  Lbs. per 1000 Ft.  Size B. & S.  144 98 18	Diameter Inches .400 .380	Approx. Weight Lbs. per 1000 Ft. 50 38
14	.520	82		• •
	The same of the sa		ELVI.	

# Theater or Stage Cable

An extremely durable and flexible cord, constructed to withstand severe abrasion such as is found on theater stages and similar places. The conductors of this cord are constructed in the usual manner of New Code cord. They are then reinforced with jute and a rubber jacket. It is then covered with an outer weatherproof braid.

Size B & S.	Diameter Inches	Approx. Weight Lbs. per 1000 Ft.   Size B. & S.	Diameter Inches	Approx. Weight Lbs. per 1000 Ft.
2 3 4 5 6	1.110 1.000 .925 .870 .830	620 525 435 435 395 14 310	.740 .665 .600 .585	195 140 106 80
9	.000	010 11		



# Packing House Cord

Especially constructed for use in packing houses. The conductors of this cord are constructed in the usual way for New Code cord. The twisted conductors are then reinforced with jute and a cotton outer braid weatherproofed.

S'ze B. & S. 10 12 14	Diameter Inches . 665 . 600 . 585	Approx. Weight Lbs. per 1000 Ft. 140 106 80	Size B. & S. 16 18	Diameter Inches .440 .420	Approx. Weight Lbs. per 1000 Ft. 49 38
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Special Flexible Cords



# Vacuum Cleaner Cord

As the result of careful study and observation, we offer to the trade this especially constructed cord for vacuum cleaners. It has all the strength desired and yet is small in size and extremely flexible. A cord better adapted for this purpose cannot be made.

The conductors of this cord are composed of a number of flexible copper strands, assembled into a cable having extreme flexibility. Cotton wrapped, insulated with 1/64 inch wall of New Code rubber compound and cotton braided. A rubber jacket of New Code insulation is then placed over the twisted conductors, after which it is braided with a close non-fraying braid of fast black cotton.

		127	Approx. Weight		Approx. Weight
Size B. & S. 18	Diameter Inches .280		Lbs. per   Size   B. & S. 44   16	Diameter Inches . 300	Lbs. per 1000 Ft. 65



No. 2-49 Strand Flexible Car Wire

# Car Wire

This wire is made in two styles, stranded or 7 wire, and flexible or 49 wire. The strand is covered with a wrap of cotton or paper, after which a coating of rubber is applied conforming to N. E. C. specifications. It is then covered with one, two or three braids, as specified.

Size B. & S.	Diameter Inches	Approx. Weight Lbs. per 1000 Ft.   Size B. & S.	Di <b>ameter</b> Inches	Approx. Weight Lbs. per 1000 Ft.
1 2 3 4	.560 .490 .460 .430	387 5 303 6 249 8	.400 .380 .320	173 147 93

# Bell Cord

Is designed for small bell and battery use. The conductors are composed of a few strands of soft copper assembled into a small cable. A cotton braid is then applied over each conductor. These are then twisted together and a silk braid placed over all. This cord can be furnished in any of our standard silk shades. (Standard green.)

Prices on application.



# ARC LAMP SUPPLIES



Mast Arm Rope

Sash Cord

# GALVANIZED MAST ARM OR ARC LIGHT ROPE

Standard strengths, adopted May 1, 1910
Used for arc lights, mast arms or other purposes where exposed to moisture. This rope is more durable than manila rope and does not shrink.

Approx.

	GALVANIZED SASH CORD
Used	for window weights, bell cords, automobile
brakes,	and whistles. 3 inch diameter is used on
electric	open ear curtain fixtures. 16 inch diameter

List No. 230219 230220 230221 230222 230223	Diameter in Ins. 1/2 1/6 3/8 1/4	Weight per Ft. in Lbs335 .245 .163 .107 .077	Approx. Breaking Stress in Lbs. 4700 3400 2200 1530 1125	Con- struction 9 x 7 9 x 7 9 x 7 9 x 4 9 x 4	List Price per Ft. \$0.17 .15 .12 .08 .07	List No. 26 27 27 <sup>1</sup> / <sub>2</sub> 28 28 <sup>1</sup> / <sub>2</sub> 29	Diameter in Ins.  1/4 37 38 186 188 38 38 312 16	Approx. Weight per Ft. in Lbs101 .077 .056 .025 .014 .006	Approx. Strength in Lbs. 1650 1411 1100 425 250 110	Drice per Ft. uoitabilde
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### CUTTER'S EBONY WIRE ROPE

A flexible wire rope with a black center of very flexible material. The only rope really pliable enough to work freely over standard types of pulleys.

List No.

230230 Cutter's Ebony Wire Rope.

Weight per 100 Ft. in Lbs.





Samson Wire Center Cordage

### CUTTER'S WEATHERPROOF LAMP ROPE

A fine braided cotton rope with a weatherproof finish, which keeps out the rain and makes it extra durable.

List No.			List Price per Lb.	II List No.	Diameter		1	List Price per Lb.
230231	$\frac{3}{16}$ in.	50 ft. to a lb	\$2.46				ft. to a lb	
230232	1/4 in.	40 ft. to a lb	2.46	230235	½ in.	121/2	ft. to a lb	2.46
230233	$\frac{5}{16}$ in.	32 ft. to a lb	2.46	ii .	, 2	/2		2.10

# SAMSON WIRE CENTER CORDAGE



Samson Spot Cord

### SAMSON SPOT WATERPROOFED CORD

The sizes most frequently used for hanging arc lamps are Nos. 12, 14 or 16; for trolley cord, Nos. 8, 10 or 12.

It is put up in coils of about 1200 feet each.

List Average Weight List Price    List Average Weight List Price	
No.         Diameter         per Coil         per Lb.         No.         Diameter         per Coil         per Lb.           8 $\frac{1}{4}$ in.         32 lbs.         \$1.90         12 $\frac{3}{8}$ in.         70 lbs.         \$1.90           9 $\frac{37}{26}$ in.         40 lbs.         1.90         14 $\frac{7}{16}$ in.         90 lbs.         1.90           10 $\frac{5}{16}$ in.         50 lbs.         1.90         16 $\frac{1}{2}$ in.         115 lbs.         1.90	No. 8 9

# ONEIDA GALVANIZED CHAIN

This chain is made from a steel case and is heavily hot galvanized. Guaranteed rust proof.

List | List | List | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | N

		17120	13120		List
No.		Price	No.		
31	For Arc Lampsper 100 Ft.	\$10.00	.31	Rings per 100	Price
35	For Arc Lamps per 100 Ft.	9.30	35	Rings per 100	5 10
31	Hooks per 100	5.10		Links per 100	3 16
35	Hooks per 100	3.30	35	Links per 100	1 28

# COPPER SPLICING SLEEVES



Seamless Splicing Sleeves

# Single Tube Seamless Splicing Sleeves

For Copper and Steel Cable

These sleeves are of pure seamless copper tube, specially annealed, and when encasing a steel cable, it is tinned inside and out. The splice is made by simply placing the two conductor ends into the oval sleeve and twisting at either end in opposite directions with specially designed wrenches as listed below. The resulting joint is stronger than the encased conductor (up to ½ inch stranded Sienens Martin steel cable) and the line is guaranteed, with the splice in place, to develop in excess of 96 per cent. of its ultimate tensile strength. The joint has a conductivity about  $2\frac{1}{2}$  times that of the copper conductor encased.

		For	r Solid Copper Condi	uctor			
List No. 660996 660997 660998 660999 661000	Size Conductor 14 B. & S. 12 B. & S. 10 B. & S. 8 B. & S. 6 B. & S. 4 B. & S.	Wgt. per 100 1.5 lbs. 2.5 lbs. 3 lbs. 5 lbs. 9 lbs. 15 lbs.	List Price per 100 Special Special Special Special Special Special Special Special Special Special Special Special Special Special Special Special Special 661008	Size Conductor 2 B. & S. 1 B. & S. 1/0 B. & S. 2/0 B. & S. 3/0 B. & S. 4/0 B. & S.	Wgt. per 100 28 lbs. 35 lbs. 51 lbs. 59 lbs. 75 lbs.	List Price per 100 Special Special Special Special Special	
661009 661010 661011 661012	4 B. & S. 3 B. & S. 2 B. & S. 1 B. & S.	Seven Stra 23 lbs. 28 lbs. 35 lbs. 51 lbs.	Special   661013   Special   661014   Special   661015   Special   661016   Special   661016   Special   661016   Special   661016   Special   661016   Special   661016   Special   Spe	trand Cable  1/0 B. & S. 2/0 B. & S. 3/0 B. & S. 4/0 B. & S.	100 lbs. 66 lbs. 77 lbs. 110 lbs. 120 lbs.	Special Special Special Special Special	
Tinned Copper Splicing Sleeves							
661017 661018 661019	½ in. ½ in. ½ in. ½ in.	35 lbs. 85 lbs. 125 lbs.	For Steel Cable Special   661020 Special   661021 Special	176 in. 1/2 in.	155 lbs. 185 lbs.	Special Special	

# Steel Twisting Wrenches

For Use with Seamless Copper Splicing Sleeves

List No.



Split Tinned Connector

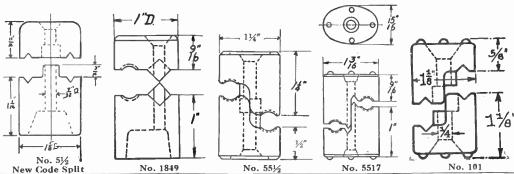
# Split Tinned Copper Connectors

For Splicing Underground Cable Lines

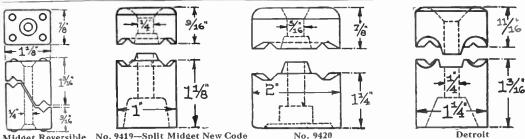
These connectors are made of soft copper and the entire surface is tinned. They are especially adapted for use on underground cables.

	ins. 14 ins. 34 ins.	List Price per 100 \$9.84 18.96 31.92 86.40 162.00 470.96
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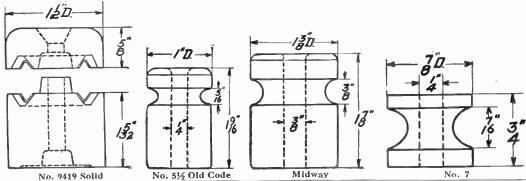
# PORCELAIN KNOBS



HEW COUR CAPITA									
List No.	Height Inches	Diam. Inches	Size Wire	Hole Inches	Std. Pkg.	Pkg. Wt.	Mfrs. List Price per 1000	W. E. List per 1000	
5½ Old Code *5½ New Code 55½ Square 5517 5135 5147	134 134 158 134 178 214	1 1 1/8 1 1/4 1 1/8 1 3/8 1 7/8	12 and 14 12 and 14 12 and 14 12 and 14 12 and 14 8 and 10 4 and 6	1/4 1/4 1/5 1/5 1/4 1/6 1/6 1/6 1/6 1/6 1/6 1/6 1/6 1/6 1/6	3250 3000 2500 3750 1500 900	415 415 410 465 415 430	\$22.00 24.00 32.00 32.00 48.00 69.00	\$34, 32 37, 44 49, 92 49, 92 74, 88 86, 94	



Wildget Revers	311)16 1101 /1	(2) (3)					244	11/ 13
List No.	Height Inches	Diam. Inches	Size Wire	Hole Inches	Std. Pkg.	Pkg. Wt.	Mfrs. List Price per 1000	W. E. List per 1000
Midget 9419 Midget 9420 Detroit	$\begin{array}{r} 1\frac{3}{4} \\ 1\frac{11}{11} \\ 2\frac{1}{8} \\ 1\frac{5}{8} \end{array}$	7 8 1 2 1 1/4	12 and 14 10 and 12 4 and 6 12 and 14	1/4 1/4 1/4 5 16 1/1	4000 5000 875 3000	500 500 430 450	\$26.00 22.00 63.00 26.00	\$40,56 39,60 79,38 40,56



							214	1 937 T3
List No.	Height Inches	Diam. Inches	Groove Inches	Hole Inches	Std. Pkg.	Pkg. Wt. Lbs.	Mfrs. List Price per 1000	W. E. List per 1000
9419 5½ Old 5½ New 5½ New 5 Nidway 4 4½ 10 10 6 8	1 7/8 1 1/8 1 3/4 1 1/4 1 1/8 1 1/8	11/2 1 11/8 1 13/8 11/2 11/2 11/2 11/2 11/2 11/2 11/2 11	1/4		1500 4500 3500 6000 2000 1900 1700 1500 15000 13500 8000 12500	415 400 410 430 390 415 410 400 415 370 465 375 450	\$41.00 13.00 16.00 13.00 22.00 22.00 30.00 30.00 31.00 11.00	\$63.98 20.28 24.96 23.40 34.32 39.00 46.80 46.80 23.40 17.16 20.28 17.16
1.4	1 24	1 /6	1.0					

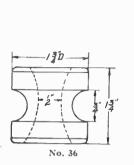
Delivery F. O. B. Factory, East Liverpool and Lisbon, O. For warehouse deliveries write nearest house. \*New code will be shipped on all orders unless otherwise specified.

List

No.

36

# PORCELAIN KNOBS



Height

Inches

13/4

Diam.

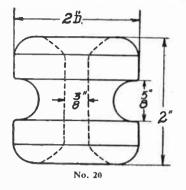
Inches

 $1\frac{3}{4}$ 

Groove

Inches

3/4 5/8 1/2 1/2 7/16 3/4



Hole

Inches

•	_/40.		4	
5	= 7 = 16 =		100	150
<u> </u>	No	. 15		•

Mfrs.

List Price

per 1000

\$35.00 53.00

35.00

38.00

W.E.

per 1000

\$54.60

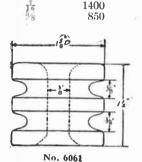
 $66.78 \\ 54.60$ 

59.28

List

20 15 41 47 48	120	1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	15/4 2 13/4 2 13/4 21/2
	1211		
)-	3" 8	-(	1 /2

No. 23



Std.

Pkg.

1500

1000

1900

1300

Pkg. Wt.

Lbs.

415

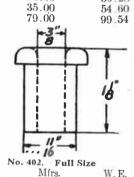
440

415

400

340

450

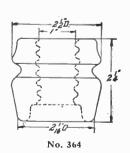


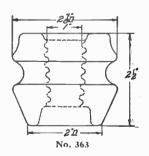
List	Height
No.	Inches
<b>2</b> 3	11/2
6061 2-Groove	1 7
6062 4-Groove	$2\frac{i\lambda}{4}$
400 Bushing	9
401 Bushing	5/8
402 Bushing	11/8
403 Bushing	1
0	

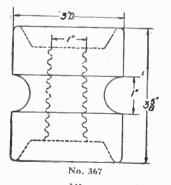
Diam. Inches 1½ 15/8 13/4 1/2 3/4 11/6 3/4	Groove Inches  1	Hole Inches 3/8 3/8 3/8 1/6 1/6 3/8 3/8 3/8 3/8 3/8 3/8 3/8 3/8 3/8 3/8	Std. Pkg. 2000 2000 1000 15000 6000 5000 4000
		_	

	MIII'S.	W . P.
Pkg. Wt.	List Price	List
Lbs.	per 1000	per 1000
250	\$31.00	\$48.36
455	36.00	56.16
375	60.00	75.60
250	26.00	46.80
200	22.00	39.60
225	26.00	46.80
275	34.00	53.04

# Mine and Pony Duplex Insulators







List	Height
No.	Inches
364 Pony	$2\frac{1}{4}$
363 Pony	$2\frac{1}{2}$
367 Mine	35/8

Inches	Hole
$\frac{1}{4}$ 1	in. std.
5/8 1	in. std.
1 1	in. std.
iverpool and I	ighon O T

Pony 21/2 27/8 5/8 1 in std 250 1071/	List per 100 \$9.00 10.00 18.00 house,	
---------------------------------------	---	--

List Price

per 1000

\$73.32

102.06

39.60

 $\frac{43.20}{37.44}$ 

34.20

34.32

List Price

per 1000

\$68.04

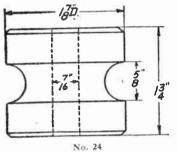
71.82

119.70

68.04

81.90





Diam.

Inches

Height

Inches

List

No.

List

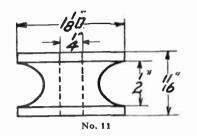
No.

Groove

Inches

Hole

Inches



Std.

Pkg.

1200

Std.

Pkg.

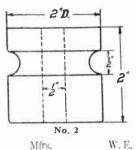
1000

1000

600

900

1000



List Price

per 1000

\$47.00

81.00

22.00

24.00

24.00

19.00

22.00

Pkg. Wt.

Lbs.

425

420

330

275

300

300

350

Pkg. Wt.

Lbs.

390

400

420

430

435

24 26 11 12 13 45 46 2	134 2	178 $214$ $118$ $138$ $146$	5
45 46 2	34 1 2	$\frac{1}{1}\frac{14}{14}$	
	28D	7	т
E	-/"-	5.5	5
		1	8

No. 22

Diam.

Inches

Groove

Inches

Height

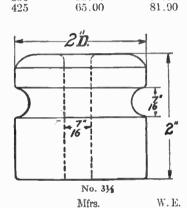
Inches

7 6 6 7 8 1 6 1 7 8 5 1 6 6 1 7 2	1200 700 10000 5000 4500 5000 4500 850
28	
N	0. 1

Hole

Inches

 $\frac{7}{16}$ 



List Price

per 1000

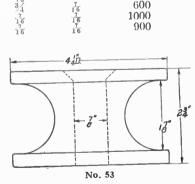
\$54.00 57.00

95.00

54.0065.00

3WG 22 1 3 3½	134 15/8 3 13/4 2	2 2 1/8 21/8 21/8 2
	220	1/6 1/2

No. 25

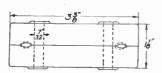


-	3 'D,	-	
	14-		24
	No. 0		

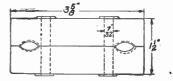
List	Height Inches	Diam. Inches	Groove Inches	Hole Inches	Std. Pkg.	Pkg. Wt. Lbs.	List Price per 1000	List Price per 1000
No. 25	11/2	21/2	$1\frac{1}{16}$	11 16	750	330	\$81.00 132.00	\$102.06 166.32
29 49	$\frac{21}{4}$	$\frac{2\frac{1}{2}}{2\frac{3}{4}}$	11/4	3/4	500 700	$\frac{400}{425}$	79.00	99.54
53	$\frac{1}{2}$ $\frac{23}{4}$	4 1/4	178	7/8	130 125	$\frac{275}{250}$	432.00 $540.00$	544.32 680.40
54 0	$\frac{3\frac{1}{4}}{2\frac{1}{4}}$	4 1/8 3	$\frac{23}{8}$	$1\frac{1}{4}^{8}$	350	350	158.00	199.08

# PORCELAIN CLEATS

# Two and Three Wire Cleats

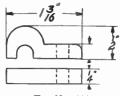


No. 334 Length  $3\frac{3}{8}$  in. Width  $\frac{6}{8}$  in. Groove  $\frac{3}{16}$  in.



No. 350 Length 3% in. Width ¾ in. Groove ½ in.

List No.	No. per Barrel	Wt., Lbs. per Bbl.	W. E. List Price per 1000	Description	List No.	No. per Barrel	Wt., Lbs. per Bbl.	W. E. List Price per 1000
334-U2	1850	385	\$32.76	Unglazed, two wire	350-U2	1250	395	\$67.08
334-G2	1850	395	53.04	Glazed, two wire	350-G2	1250	395	107.64
334-U3	1850	385	32.76	Unglazed, three wire	350-U3	1250	395	67.08
334-G3	1850	395	53.04	Glazed, three wire	350-G3	1250	395	107.64



Top No. 333 Bottom No. 3331/2

# Single Wire Cleats

# NO. 333 TELEPHONE CLEAT

(Bottom No. 333½)

DIMENSIONS: Length, 13 inches; Width, 1/2 inch; Groove, 1/4 inch.

List No.	Description	No. per Bbl.	Shpg. Wgt. per Bbl.	W. E. List Price per 1000
333	Top, Glazed	21500	465 lbs.	\$18.00
333½		22000	475 lbs.	16.20

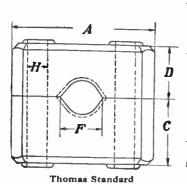
# \*B. & D.—STYLE A

A	7
	B
C	
	B
Style A	

List No.	Dimensions  A B C D		No. per Bbl.	Wgt. per Bbl.	W. E. List Price per 1000		
1 1 <sup>1</sup> / <sub>2</sub> 2 2 <sup>1</sup> / <sub>2</sub> 3 3 <sup>1</sup> / <sub>2</sub> 4	113" 214" 214" 214" 211" 318" 3 18" 3 34"	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1/4" 3/8" 5/8" 1/16" 11/4" 115"	5 // 16 // 1	1800 1250 1175 750 500 450 350	415 lbs. 415 lbs. 415 lbs. 490 lbs. 440 lbs. 440 lbs. 460 lbs.	\$60.84 84.24 101.40 98.28 129.78 163.80 219.98

<sup>\*</sup>Glazed unless otherwise specified.

# THOMAS STANDARD One Wire Cleats



List No.	Length		Groove	Qty. per Bbl.	Wgt. per Bbl.	25000	1" Base t Top
328 329 330 331 331½ 332 332¼ 332½	2" 21/8" 21/8" 21/8" 27/8" 27/8" 4" 4" 4"	1" 1" 1'4" 114" 114" 114" 114" 112" 112" 112"	16 " 18 " 14 " 15 " 17 8 " 17 8 " 17 8 " 17 8 " 17 8 " 17 8 " 17 8 " 17 8 " 17 8 " 17 8 " 18 18 18 18 18 18 18 18 18 18 18 18 18	1800 1200 1200 600 600 300 250 250	460 450 435 410 400 420 410 400	\$43.68 67.08	\$60.84 \$78.00 84.24 101.40 101.40 121.68

On the above cleats given under heading "Old Code Base" these are less than 1-inch base.

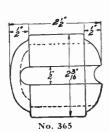
Those given under "A" are 1-inch oase and are regular top, the groove being 1 inch from bottom of base.

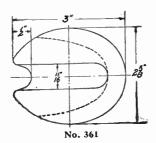
Those given under "B" are 1 inch base and 1 inch top.

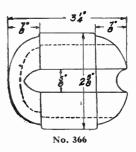
Nos. 332,  $332\frac{1}{4}$  and  $332\frac{1}{2}$  are the same in every respect except groove.

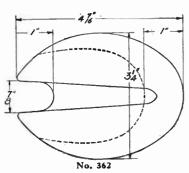
Delivery F. O. B. Factory, East Liverpool, O. For warehouse deliveries write nearest house.

# STRAIN INSULATORS





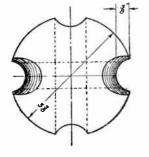




List No.	Height Inches	Diam. Inches	Groove Inches	Std. Pkg.	Pk. Wt. Lbs.	Mfrs. List Price per 1000	W. E. List per 1000
365	21/2	$2\frac{5}{16}$	1/2	500	500	\$73.00	\$91.98
361	3	23/4	11	350	350	110.00	138.60
366	31/4	23/4	5/8	350	420	110.00	138.60
362	$4\frac{7}{16}$	33/8	7/8	200	425	291.65	367.48

### IMPROVED STRAIN INSULATOR

The improved porcelain strain insulator has protected end coverings. The wires passing through instead of around the insulator make it impossible for the ends of the span or dry wires to come in contact with each other or allow any chance for leakage of current.



# 3 No. 506

TEST AND WEIGHT DATA

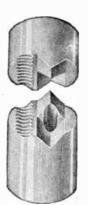
				Ult. Crushing	
List No.	Weights per Bbl.	Flashover Va Dry	lues in Volts Wet	Strength in Lbs.	Quantity per Bbl.
500	370 lbs.	16000	9000	4000	400
502	475 lbs.	23000	14000	11000	400
504	450 lbs.	25000	15000	19000	250
506	400 lbs.	31000	20000	45000	150
508	500 lbs.	19000	8000	· 19000	300

### DIMENSIONS AND LIST PRICES

List N		ight Diam. Ins. Ins.		Mfrs. W. E. List Price List Price per 1000 per 1000
	Telephone wire insulator		~ ~	\$88.00 \$137.28 146.65 184.78
	Guy wire insulator	, ,	1/2	180.00 226.80
	Guy wire insulator		4 0	373.35 470.42 293.35 369.62

Delivery F. (). B. Factory, East Liverpool and Lisbon, O. For warehouse deliveries write nearest house.

# PORCELAIN KNOBS



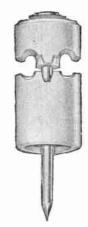
No. 1829 Split Old Code



Grip It Old Code



No. 2 Screw It



No. 1 Nail It

List No.	Description	No. Groove	Size Wire	Diam. Inches	Height Inches	Std. Pkg.	Std. Pkg Gross Weight	List Price
1829	Split, old code	1	12 to 14	1		0		per 100
1849	Split, old code	9	12 to 14	- 64	134	4500	500	\$4.40
	Grip It, old code	2		16	1,8	4500	500	4.40
1849	Split, new code		12 to 14	1	124	4500	500	4.40
1010	Grip It now code	2	12 to 14	1,16	178	4500	500	4.80
9	Grip It, new code	2	12 to 14	118	134	3200	480	5.20
5	Screw It, old code	$\frac{2}{2}$	12 to 14	- 1	134	4000	500	8.00
51/	Nail It, old code	2	12 to 14	11/8	134	4000	495	6.00
0 /2	Nail It (solid), old code		12 to 14	11/8	1 -9	4500	500	4.80
51/2	Nail It (solid), new code		12 to 14	11%	137	4000	500	4.80
1	Nail It, new code	$^2$	12 to 14	116	137	4000	650	6.40
1	Screw It, new code	2	12 to 14	118	134	4000	600	8.40

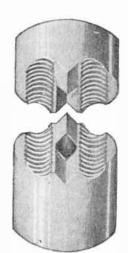


Grip It Detroit





No. 1911 Interchangeable



No. 1729, 1730 and 1731

List No. 1729 1730 1731	Description Grip It Detroit Detroit Screw It New code Second size Third size	$\frac{2}{2}$	Size Wire 12 to 14 12 to 14 12 to 14	Diam. Inches 114 114 114 112 2	Height Inches 134 134 134 2 214	Std. Pkg. 3000 3000 3000 2000 1000	Std. Pkg. Gross Weight 500 500 490 500 475	List Price per 100 \$5.20 9.00 8.20 12.40 13.80
-------------------------------------	--	---------------	--	--------------------------------	---------------------------------	--	---	--

12

14

16

18

20

22

14.40 15.60

37.50 40.30

23.10

25.90

28.80

31.70

36.00

20.20

23.10

25.90

28.80

33.10

# PORCELAIN TUBES Standard Unglazed Porcelain Tubes



Special Discounts on Application

Tube list dimensions conform to the new rules of the Underwriters' Board. Barrel lots constitute a standard package.

Mfr's. Standard List Price per 100.

Hole 38 Hole 1/2 Hole. Length 16 Out- 18 Out- 18 Outin Inches side side side side side side side side side side side side Diam-Under Diam-Diam-Diam-Diam-Diam-Diam-Diam-Diam-Diam-Diam-Diam-Head eter eter eter eter eter eter eter eter eter eter eter eter 1/2 \$1.30\$1.40 1.40 \$2.10 \$2.70 \$3.00 \$4.50 1.30 11/2 1.302.10 2.70 3.30 5.301.502.60 3.204.20 6.002 1.40 1.80 21/2 \$12.20 \$19.80 \$23.40 \$26.80 1.502.20 3.00 4.00 5.00 7.00\$15.60 \$30.30  $\frac{25.80}{27.70}$ 2.60 3.40 5.5013.80 22.00 3 1.60 4.708.00 17.40 29.6032.5019.20 23.902.70 3.00 6.8015.6035.30 4 4.105.5010.0031.503.20 3.60 4.80 6.40 8.00 12,50 18.10 25.3034.10 41.70 48.8056.80 5 19.206 3.90 4.505.507.309.5014.30 31.2045.3057.9070.5083.20  $89.80 \\ 97.70$ 8 7.208.40 9.60 10.8012.0016.80 $\begin{array}{c} 24.00 \\ 31.20 \end{array}$ 38.4058.10 73.90105.60 12.00 14.40 16.80 19.20 66.0081.80 10 9.60 10.80 45.60113.50

26.40

34.60

43.20

49.00

54.70

59.10

63.40

45.60

63.40

74.90

86.40

95.10

103.70

112.30

69.20

97.90

109.50

122.70

135.40

148.30

161.30

102.10

145.70

158.40

190.30

211.40

321.60

For glazed tubes, add 50 per cent. to list prices. For split regular tubes, multiply list by ten (10).

For floor tubes, multiply list by six (6).

16.80

25.90

28.80

34.60

37.50

40.30

43.20

For split floor tubes, multiply list by ten (10). For headless tubes, multiply list by four (4).

Curved and curved end tubes, multiply list by six (6).

19.20

28.80

34.60

40.30

43.20

46.10

49.00

21.60

31.70

37.50

43.20

46.10

51.90

57.60

Crossover tubes solid, multiply list by ten (10). Crossover tubes solid, multiply list by eight (8).

Note.—In computing prices on split floor tubes, headless tubes, curved and curved end tubes, the above list prices and lengths must be used as referring to "OVER-ALL" lengths, and not lengths under head. Split regular tubes lengths refer to under head.

Crossover, solid and split tubes lengths refer to between heads.

# SPECIAL PACKAGES Standard Porcelain, Packed in Corrugated Paper Boxes

Special attention is called to the method of packing Standard Porcelain in heavy corrugated paper cartons. This method entirely eliminates the breakage incident to the usual barrel packages. Packing in cartons is done by hand, which insures inspection of every piece and the selection of only perfect material; this fact easily compensates for the slightly increased cost over the usual barrel packages.

### Packed 100 in a Cartor

100 in a	Carton
3	Over-all Dimension of Carton
	$8 \times 8 \times 4$ inches
	$8 \times 8 \times 5$ inches
	$7 \times 6 \times 7$ inches
	$9 \times 8 \times 5$ inches
	$9 \times 8 \times 5$ inches
	$9 \times 8 \times 6$ inches
	100 in a

### Packed 500 in a Carton

<sup>5</sup> / <sub>16</sub> x 3 inch Tubes	8 x 10 x 12 inches
5 x 4 inch Tubes 3/8 x 3 inch Tubes	10 x 10 x 12 inches
	8 x 10 x 16½ inches
3/8 x 4 inch Tubes	10 x 10 x 16½ inches
5½ Split Knobs	10 x 10 x 14 inches
2-wire Cleats	$10 \times 10 \times 16 \frac{1}{2}$ inches



128.00

183.70

196,50

234.10

259.20

285.10

252.30 | 311.10

154.00

221.80

234.50

277.70

307.60

338.70

369.90

180.00

259.80

272.40

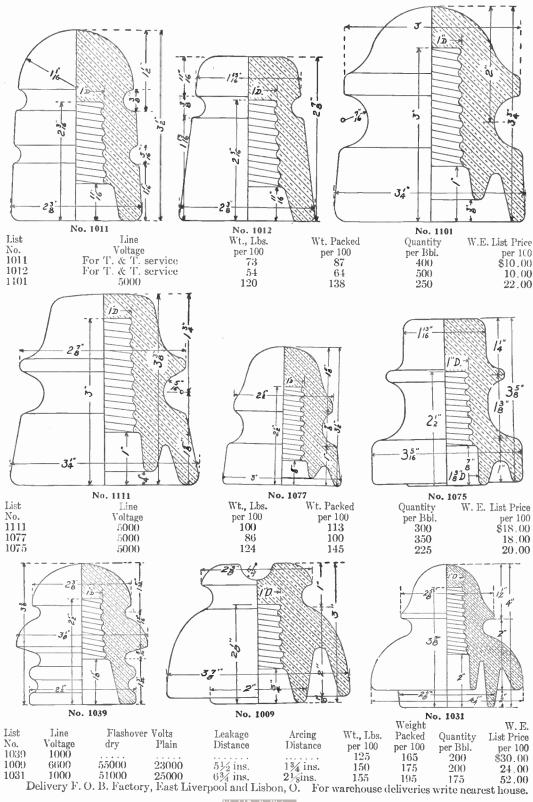
321.10

355.90

392.30

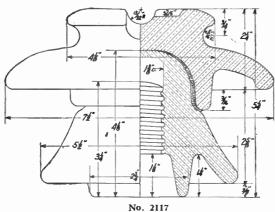
428.50

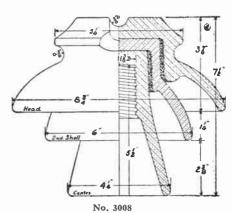
# HIGH VOLTAGE INSULATORS BROWN GLAZE, UNLESS OTHERWISE SPECIFIED



# HIGH VOLTAGE INSULATORS

# Brown Glaze Furnished Unless Otherwise Specified





List Line Voltage 25000 No. 2117 3008\* 33000

Flashover Volts Dry 89000 110000

Wet 54000

73000

Leakage Distance 12 ins 18¾ ins.

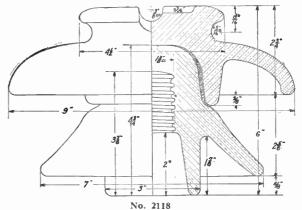
Arcing Distance 5 ins. 478 ins. Wt. Lbs. per 100 650 1000

Wt. Packed per 100 805 1170

W. E. List Price per 100 Quantity per cr. 18 per bbl. 12 \$198.00

275.00

83 CONTOR No. 3026



Wt. Lbs. Wt. Packed

W. E. List

List Line Voltage 35000 No. 2118 3020 33000

List

1049

No. 1010A

Flashover Volts
Dry Wet
111000 65000 Dry 111000 118000

Leakage Distance 1414 ins. 81000 20 ins.

Distance 6 ins. 51/4 ins.

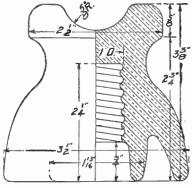
Arcing

per 100 850 900

per 100 1210 1150

Quantity per cr. 12 per bbl. 12

Price per 100 \$275.00 286.00



No. 1049

Flashover Volts Line Voltage 6600 Dry 54000 Wet 34000 5500 43000 21000

Leakage Distance 4 ins. 43/4 ins.

Arcing Distance 1¾ ins. 1¾ ins.

Wt. Lbs. per 100 100 110

Wt. Packed per 100 130 135

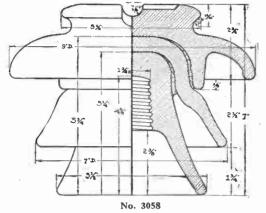
Quantity per bbl. 250 250

No. 1010A

W. E. List Price per 100 \$24.00 24.00

\*Can be furnished with 1 inch pinhole.
Delivery F. O. B. Factory, East Liverpool and Lisbon, Ohio. For warehouse deliveries write nearest house

# HIGH VOLTAGE INSULATORS Brown Glaze Furnished Unless Otherwise Specified



10F

List	Line
No.	Voltage
3058	35000
4000	66000

Flashover Volts
Dry Wet
118000 78000
195000 138000

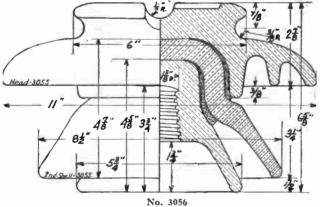
Leakage Distance 19 ins. 53 ins. Arcing Distance 6 4 ins. 10 4 ins.

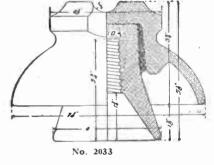
Wt. Lbs. per 100 1300 3760

Wt. Packed per 100 1665 5000

Quantity per crate 6 3

W. E. List Price per 100 \$330.00 1176.00





LIST	
No.	
2033	
3056	

Line Voltage 20000 40000 Flashover Volts
Dry Wet
82000 47000
131000 81000

Leakage Distance 10<sup>3</sup>4 ins. 21<sup>1</sup>2 ins. Areing Distance 334 ins. 7 ins.

Wt. Lbs. per 100 510 1800

14 b

Wt. Packed per 100 635 2270

8 %

9% | 8¾ | 7½' 40

81/20

No. 4032

ked Quantity per bbl. 30 per crate 6

12 Radiu

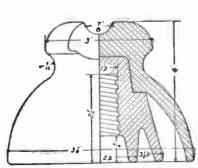
W. E. List Price per 100 \$154.00 484.00

314

234

3%

122



No. 2102

List Line No. Voltage 2102 17500 4032 66000 Flashover Volts
Dry Wet
74000 37000
194000 137000

Leakage Arcing
Distance Distance
10 ins. 2½ ins.
42 ins. 10¾ ins.

tance Wt. I bs. per 100 2 ins. 320 4600

Wt. Packed per 100 380 6300

110

Quantity per bbl. 75 per crate 2

6%

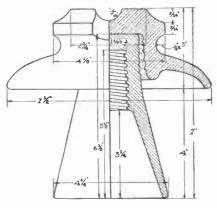
W. E. List Price per 100 \$90.00 485.00

Delivery F. O. B. Factory, East Liverpool and Lisbon, Ohio. For warchouse deliveries write nearest house,

World Radio History

# HIGH VOLTAGE INSULATORS

# Brown Glazed Furnished Unless Otherwise Specified



No. 2111

List Line No. \*2111 Voltage 25000 \*2021 27500

Flashover Volts Dry 90000 Wet 60000 68000 98000

Leakage Arcing Distance Distance 13 ins. 1334 ins. 4 % ins. 4 ¼ ins.

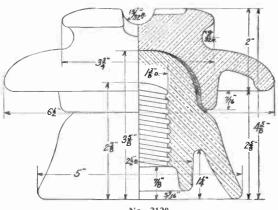
Wt. Lbs. per 100 500 635

No. 2021

Wt. Packed per 100 700 740

Quantity per bbl. 25

W. E. List Price per 100 \$166.00 166.00



No. 2120

Line List No. 2120 Voltage 20000 3020 50000

Flashover Volts Wet Dry 87000 52000 162000 128000

Leakage Arcing Distance Distance 1014 ins. 4 14 ins. 9 ins. 36 ins

Wt. Lbs. per 100 480 2330

36 Pad

10 No. 3020

Wt. Packed per 100 3000

1/2 Podiu

81/

91/2

Ô

71/4

7%

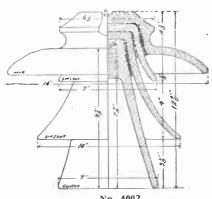
Quantity per crate 25

W. E. List Price per 100 \$160.00 638.00

23/4

HI 3/4

101/2



No. 4002

List No. Line Voltage 4002 4033 55000

Flashover Volts Dry Wet Dry 188000 125000 171000 120000

Leakage Distance 42 ins. 32 ins.

Arcing Distance ins.  $0 \quad \text{ins}$  $9^{1} \text{g ins}$ 

Wt. Lbs. per 100 2600 3000

Wt. Packed per 100 3670 4100

Quantity In Crate

No. 4033

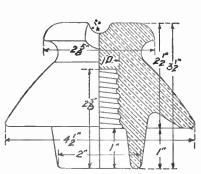
51/4

W. E. List Price per 100 \$878.00 930.00

\*Can be furnished with 1 inch pinhole. Delivery F. O. B. Factory, East Liverpool and Libson, Ohio. For warehouse deliveries write nearest house, 1100

# HIGH VOLTAGE INSULATORS

# Brown Glaze Furnished Unless Otherwise Specified



No. 1076 List Line Flashover Volts Voltage 7500 No. 1076 Dry 53000

10000

Leakage Distance 22000 5 1/4 ins. 6 1/2 ins. 31000

Arcing Distance 2 14 ins. 2 14 ins.

Wt. Lbs. per 100 130 340

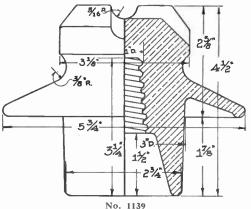
Wt. Packed per 100 165 500

Quantity per bbl. 200 50

No. 1100

23

W. E. List Price per 100 \$40.00 78.00



List Line No. 1139 Voltage 15000 17500

List No. 3055

3057

Line

Voltage

45000

55000

Flashover Dry 73000 81000

Volts Wet 41000 47000

Leakage Distance 7½ ins. 9 ins. ins.

Arcing Distance 3 4 ins. 4 1/8 ins. Wt. Lbs. per 100 320 450

12

95

75

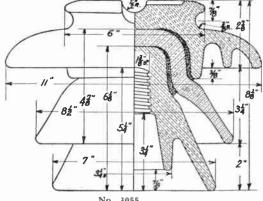
Wt. Packed per 100 400 550

Quantity per bbl. 50

No. 2020

W. E. List Price per 100 \$78.00 118.00

4



No. 3055

Volts Wet 102000 Arcing Distance 7½ ins. 9 ins. Flashover Leakage Distance 28 ins. 30½ ins. Dry 147000 165000 121000

Wt. Lbs. per 100 2000 2300

Wt. Packed per 100 2530 3400

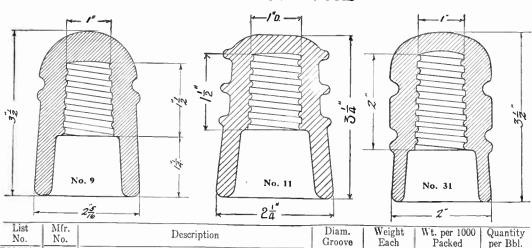
Quantity per crate 3

No. 3057

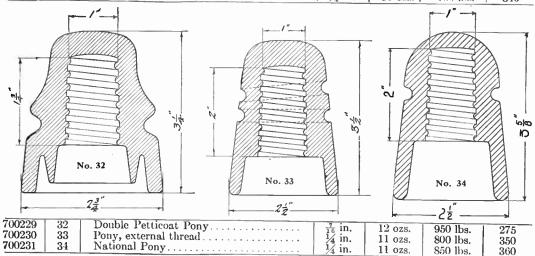
W. E. List Price per 100 \$550,00 737.00

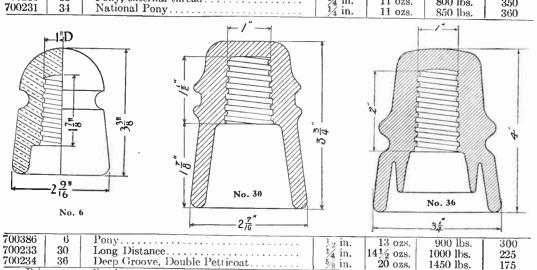
Delivery F. O. B. Factory, East Liverpool and Lisbon, Ohio. For warehouse deliveries write nearest house.

# **GLASS INSULATORS**



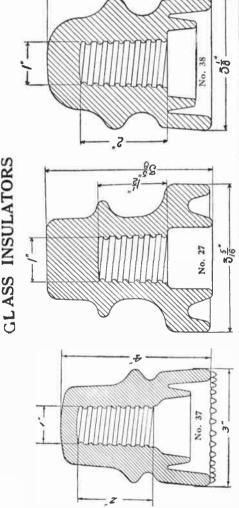
List	Mfr.	Description	Diam.	Weight	Wt. per 1000	Quantity
No.	No.		Groove	Each	Packed	per Bbl.
700225	9	Pony, without drip points Pony, with drip points. Exchange Line Double Groove Pony	1/4 in.	10 ozs.	750 lbs.	350
700226	10		1/4 in.	10 ozs.	750 lbs.	350
700227	11		1/2 in.	10 ozs.	700 lbs.	400
700228	31		1/4 in.	10 ozs.	760 lbs.	340



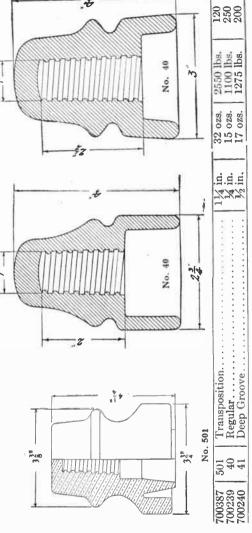


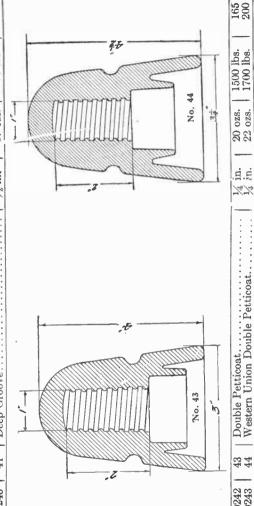
Mail Orders Filled at Prevailing Prices

# INSULATORS ASS



25.5	Quantity Per Bbl.	175 175 165
No. 38	Wt. per 1000 Packed	1450 lbs. 1375 lbs. 1375 lbs.
	Weight	20 ozs. 19 ozs. 19 ozs.
\$2 \$1	Diam. Groove	11% ins.
No. 27	Description	Deep Groove, Double Petticoat, drip points. Wide Deep Groove, Double Petticoat. Extra Deep Groove, Double Petticoat.
No. 37		Deep Gra Wide De Extra De
- Philipping & B	Mfr.	277
	List No.	700235 700236 700237



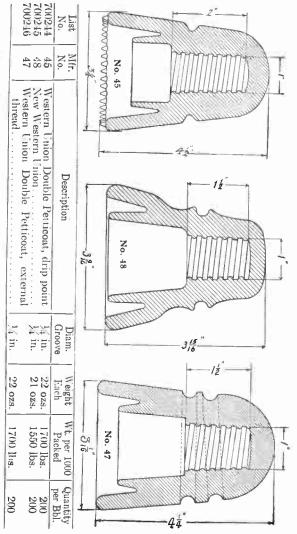


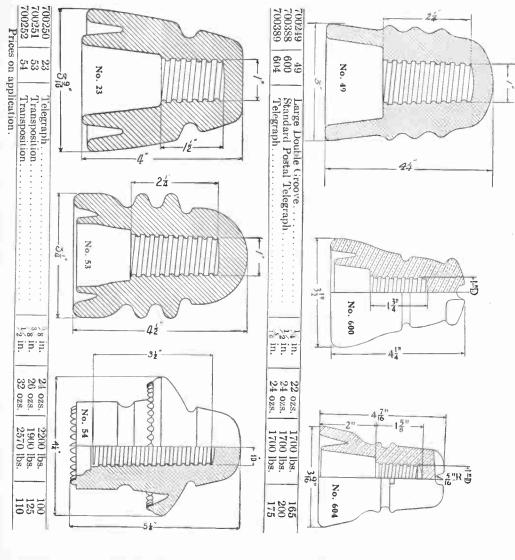
World Radio History

Prices on application. 24 43 700242 700243

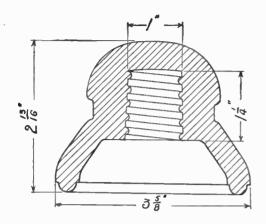
7474 in.

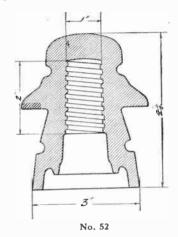
# GLASS **INSULATORS**

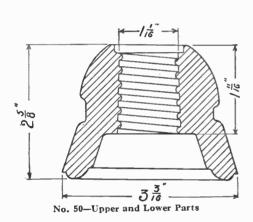


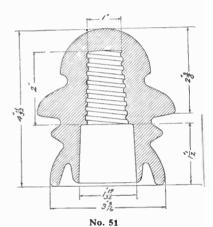


# **GLASS INSULATORS**

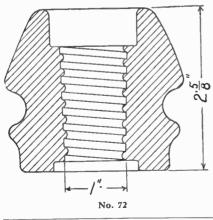


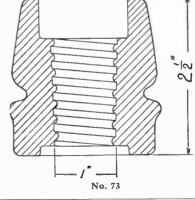






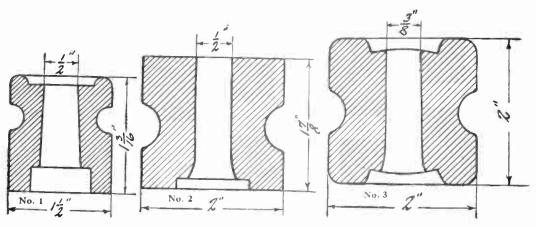
List	Mfr.	Description	Diam.	Weight	Wt. per 1000	Quantity
No.	No.		Groove	Each	Packed	per Bbl.
700259	50	Two Piece Transposition. Transposition. Transposition.	1/4 in.	27 ozs.	2000 lbs.	125 prs.
700260	52		5/16 in.	22 ozs.	1700 lbs.	125
700261	51		3/8 in.	29 ozs.	2250 lbs.	100



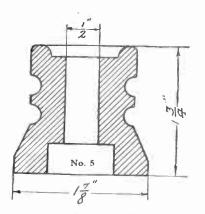


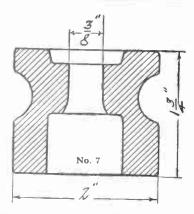
700262 700263	72 73	Brown or Duplex Deep Groove Brown or Duplex Pony	14 ozs. 10 ozs.	250 350
100200		271011111 01 11 11 11 11 11 11 11 11 11 11	 	

# **GLASS INSULATORS**

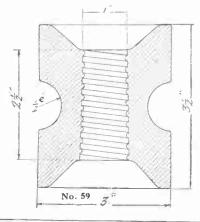


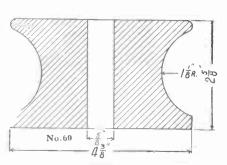
List No.	Mfr. No.	Description	Diam.	Height	Diam. Groove	Diam. Hole	Weight   Each	Wt. per 1000   Packed	Quantity per Bbl.
700266	1	Knob	112 ins.	$1_{16}^{3}$ ins.		1/2 in.		220 lbs.	500
700267	2	Knob	2 ins.	1 1/8 ins.		12 in.		500 lbs.	500
700268	3	Knob	2 ins.	2 ins.		³ g in.	[	530 lbs.	500





=	~	1 37 1						
700209	5	Ivnop	1 to ins.	134 ins.	10 10		350 lbs	500
700070	7	I L'arab	3	4.0	64	1	000 105.	000
100210	-6	MIOD	2 ms.	134 ins.	3 g In.		530 lbs.	500 -
				The second secon	7.0	1	0 0 0 113m1	000

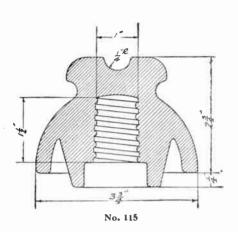


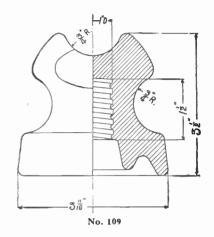


100273   00	Mine Insulator  3 Mine Insulator  4	ins.	$\frac{31_{2}}{25_{8}}$ ins.	$\begin{vmatrix} 1 & \text{in.} \\ 2 \end{vmatrix}$ fins.	$1$ in. $5 \le $ in.	21 ozs. 36 ozs.	1600 lbs. 2200 lbs.	150
T)								

Prices on application.

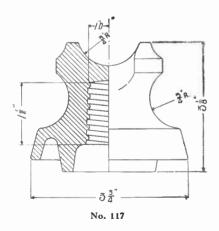
# **GLASS INSULATORS**

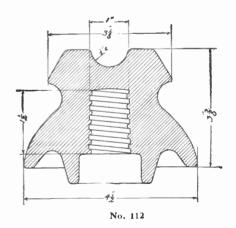




List	Mfr.	Description	Line	Radius	Weight	Wt. per 1000	Quantity
No.	No.		Voltage	Groove	Each	Packed	per Bbl.
$\frac{700274}{700275}$	115* 109	Top Groove, Double Petticoat Top Groove, Double Petticoat	5000 6600	1/4 in. 3/4 in.	22 ozs. 23 ozs.	1750 lbs. 1950 lbs.	150 160

<sup>\*</sup>Radius side groove  $\frac{5}{16}$  inch.

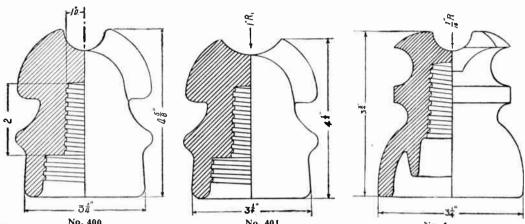




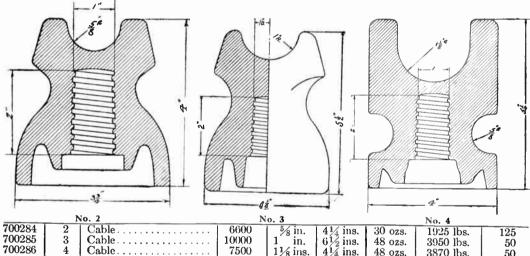
	Large Top Groove, Double Petticoat Large Top Groove, Double Petticoat					
700279   112	Large 1 op Groove, Double Fetticoat	3000	½ in.	29 ozs.	2150 IDS.	110

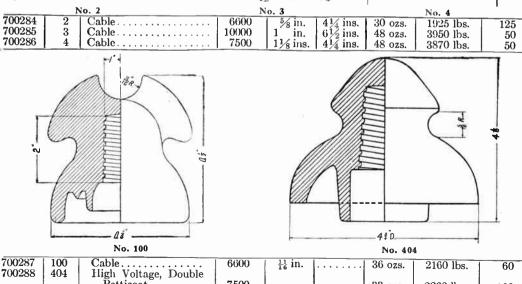
Prices on application.

# **GLASS INSULATORS**



		. 400	No.	401		No. 1			
List	Mfr.	Description	Line	Radius	Leakage	Weight	Wt. per 1000	Quantity	
_ No.	No.	Description	Voltage	Groove	Distance	Each	Packed	per Bbl.	
700281	400	Cable	6600	5/8 in.	41/4 ins.	30 ozs.	2100 lbs.	110	
700282	401	Cable	6600	l in.		30 ozs.	2100 lbs.	110	
700283	1	Cable	6600	$\frac{7}{16}$ in.		18 ozs.	1385 lbs.	170	





Petticoat..... 7500 33 ozs. 2260 lbs. 120 Prices on application.

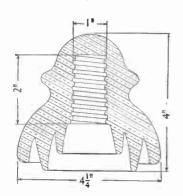
# **GLASS INSULATORS**

Line

Voltage

Radius

Groove



No. 135

Mfr.

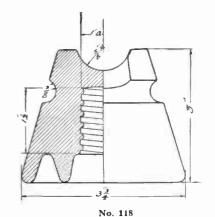
No.

List

No.

700290 | 118

700390



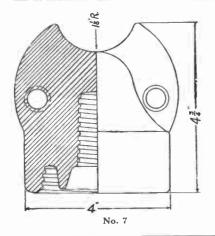
Weight	Wt. per 1000	Quantity
Each	Packed	per Bbl.
30 ozs.	2200 lbs.	125
21 ozs.	1650 lbs.	150_

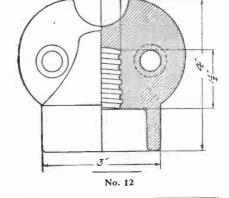
110.	1101			
00390 00290	135 118	Triple PetticoatLarge Top Groove, Double Petticoat	10000 6600	<sup>5</sup> / <sub>6</sub> in. 5/ <sub>8</sub> in.
		. 7.	Zi R	

Description

		No.	8				
700292	8	Columbia Double Petticoat	6600	16 in.	40 ozs.	2900 lbs.	78

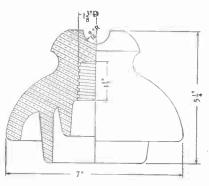
4" Q



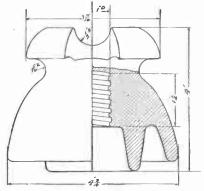


	Columbia Double Petticoat Columbia Single Petticoat				2900 lbs. 1750 lbs.	78 110
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# GLASS INSULATORS

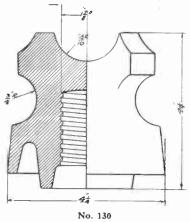


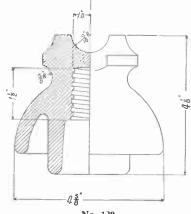
No. 137



No. 124

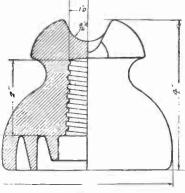
List	Mfr.	Description	Line	Diam.	Weight	Wt. per 1000	Quantity
No.	No.		Voltage	Groove	Each	Packed	per Bbl.
700391	137	High Voltage, Triple Petticoat	20000	½ in.	6 lbs.	6535 lbs.	33
700297	124	High Voltage, Double Petticoat.	10000		44 ozs.	3300 lbs.	50



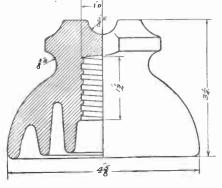


No. 129

700298 700299	130	High Voltage, Double Petticoat. High Voltage, Double Petticoat.	11000 10000	11/8 in	i.	40 ozs. 33 ozs.	3300 lbs.   2600 lbs.	60 75
		Lip				← l'o		



No. 140



No. 132

700300   140   High Voltage, Triple Petticoat 700301   132   High Voltage, Triple Petticoat	10000   1½ in.   32 ozs. 11000   ¾ in.   32 ozs.	
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### ELECTROSE LINE INSULATORS

#### **INSULATED PINS**















No. 3000

No. 3001

No. 3003

No. 3004

No. 3005

No. 3007

No. 3008























No. 3010

No. 3012

No. 3084

Pin Type Insulators

#### INSULATORS 1,000 TO 1,000,000 VOLTS

			Width	Width			Electrical	Electrical		Net	W.E.
		Height	of Top	of Side	Diameter	Depth of	Value	Value		Weight	List
List	Diameter	of Body	Groove	Groove		of Pinhole	Dry	Rain	Line	Each	Price
No.	in Ins.	in Ins.	in Ins.	in Ins.	in Ins.	in Ins.	in Volts	in Volts	Voltage	in Lbs.	Each
3000	$2\frac{1}{4}$	$3\frac{3}{8}$		3/8	1	$1\frac{7}{8}$	39000	20000	2200	1/2	\$0.80
3001	$3^{1}_{16}$	41/8		14	î	113	42000	20000	6600	$1\frac{1}{4}^{2}$	1.50
3003	$3\frac{16}{3}$	4	• • •	$1_{16}^{\frac{74}{3}}$	1	$2\frac{1}{4}^{6}$	42000	20000	6600	$1\frac{74}{1\frac{1}{2}}$	1.80
			11/	0.13	1	274					
3004	$\frac{41}{8}$	$4\frac{1}{2}$	$1\frac{1}{2}$	$2\frac{13}{16}$	Ţ	$2\frac{1}{16}$	43000	26000	6600	$1\frac{1}{4}$	2.00
3005	$5\frac{7}{8}$	$3^{\frac{15}{16}}$	11/8	11/8	1	$1\frac{5}{8}$	52000	30000	11000	$2\frac{3}{4}$	4.00
3006	$5\frac{7}{8}$	7	$1\frac{1}{8}$	$1\frac{1}{8}$	Note		80000	45000	22000		8,00
3007	$2\frac{15}{1.6}$	$2\frac{5}{8}$		$\frac{1}{4}$	1	$1\frac{13}{16}$	10000				.80
3008	$3\frac{9}{16}$	$2\frac{13}{16}$		1/4	1	$1\frac{5}{16}$	20000	5000	1100		1.20
3009	$4\frac{1}{2}$	$3\frac{1}{8}$	3/4	3/8	1	$1\frac{1}{1}\frac{3}{6}$	40000	28000	6600	$1\frac{1}{4}$	2.00
3010	$4\frac{1}{2}$	$4\frac{1}{2}$	3/4 3/4	3/8	Note		60000	28000	11000	2	3.00
3012	$3\frac{1}{8}$	$5\frac{3}{8}$		1/4 3/8 3/8 3/8	Note		50000	25000	11000		-4.00
3013	$3\frac{3}{4}$	$2\frac{3}{8}$	3/4	3/8 3/8	Note		40000	25000	6600	$1\frac{1}{2}$	1.40
3016	$3\frac{3}{4}$	$2\frac{7}{8}$	3/4	3/8	1	15/8	39000	25000	6600	$\frac{3}{4}$	1,40
3018	7	$5\frac{1}{2}$	3/4/4/4/8/8/8/8/8/8/8/8/8/8/8/8/8/8/8/8/	1/2	$1\frac{3}{8}$	$2\frac{1}{4}$	80000	45000	22000	$3\frac{1}{4}$	4.60
3019	7	8	3/4	$\frac{1}{2}$ $\frac{7}{16}$ $\frac{3}{8}$	13/8	$2\frac{1}{4}$	100000	60000	22000		6.00
3020	5	378	3/2	7	1	$2\frac{1}{2}$	65000	35000	11000	13/4	3,40
3084	5	$4\frac{1}{4}$	5%	3,%	1	$1\frac{1}{16}$	70000	40000	11000	-/-	3,40
3085	7	6	3/4	1/2	13/8	$2^{\frac{1}{16}}_{16}$	85000	55000	22000		6,00
			/ %	/ 6/	/ 0	10					

NoTE: No. 3006 has 34 inch diameter steel pin. No. 3010 has 58 inch diameter steel rod. No. 3012 has  $\frac{5}{8}$  inch diameter steel tube. No. 3013 has  $\frac{3}{8}$  inch rod,  $1\frac{1}{2}$  inch extension. Specify size pinhole desired.

Delivery F. O. B. Factory, Brooklyn, N. Y. For warehouse deliveries write nearest house.

# ELECTROSE SAFETY STRAIN INSULATORS



No. 10A-B. (Old Style)



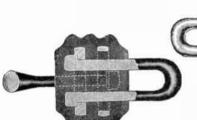
No. 10 (New Type)



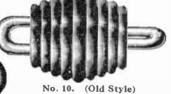
No. 10. (New Type)



No. 10. (New Type)



No. 10X. (New Type)





No. 10X. (Old Style)

# Safety Strain Insulators

List No.	Diam. in Ins.	Length of Body in Ins.			Breaking Strength in Lbs	Mechan-	Electrical Value Dry in Volts	Electrical Value Rain in Volts	Test Voltage Dry in Volts	Line Voltage	Net Weight Each in Lbs.	W. E. List Price per 100
Old 10 Old	4 (Combin	4 3	1 16 x 78	8 1	20000	10000	40000	20000	15000	11000	41/4	\$392,00
10AB		OA and	1 16 x 78	1418	20000	10000	70000	35000	30000	15000	8½	852.00
Old 10X	4 '	4 16	1 16 x 1/8	8 4	20000	10000	40000	20000	15000	11000	43/8	420.00
10AB	(Combir Nos. 1 10B)	OA and	1½ x 3/8	121/8	20000	10000	75000	40000	35000	20000	71/4	Each 10.92
10ADA	(Combir	A. 10D	1½ x %	16 16	20000	10000	100000	50000	45000	25000	10 7/8	16.72
New 10	4	3	1½ x 1/8 1½ x 1/8	7 18	20000	10000	45000	25000	20000	11000	35/8	5.12
10A	4	3	1 ½ x 1/8	638	20000	10000	15000	25000	20000	11000	35/8	5.46
10B 10C	4	3	1½ x 1/8	63 g	20000	10000 10000	45000 45000	25000	20000	11000	35/8	5,46
10D	4	3		5	20000	10000	45000	25000 25000	20000 20000	11000	35/8	5.80
10G	4	3	1½ x 1/8	71/2	20000	10000	45000	25000	20000	11000	35/8 33/4	5.80 5.68
10H	4	3		77/8	20000	10000	45000	25000	20000	11000	3 5/8	5.74
10X	4	3	11/2 x 7/s	7 18	20000	10000	45000	25000	20000	11000	35/8	5.40

10A-5% inch threaded socket at one end.

10B-5% inch threaded stem at one end.

10C-5% inch threaded socket at each end.

10D-5% inch threaded stem socket at each end.

10F-16 inch clevis at one end.

10G-11 inch clevis at one end. 10H-11 inch clevis at one end.

Delivery F. O. B. Factory, Brooklyn, N. Y. For warehouse deliveries write nearest house,

# ELECTROSE LOCKING INSULATING BUSHINGS AND CONNECTORS



No. 6206



No. 6210. With a ½ Inch Rod This Is No. 6821



No. 6266

No. 6275



No. 6277

Adir Umsamma Yay - Masamma

No. 6282



No. 6296. With a 3/2 Inch Rod, This Is No. 6867



No. 6811 With ½ Inch Through Hole, This Is No. 6222



No. 6815



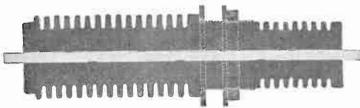
No. 6833



No. 6851

# Locking Insulating Bushings and Connectors

		Diameter of							W.E.
List	Overall	Section Fitting	Largest	Diameter of		lectrical Value		Net Wt.	List Price
No.	Length	Into Barrier	Diameter	Rod or Hole	Dry Test	Rain Test	Line Voltage	Each	Each
6200	23 ins.	416 ins.	7 ins.	112 ins.	100000 v.	80000 v.	44000 v.	13% lbs.	\$26.00
6206	61/4 ins.	1 7/8 ins.	2½ ins.	16 in.	50000 v.	20000 v.	6600 v.	1 1/2 lbs.	4.00
6210	2734 ins.	5 - ins.	7 ins.	13 ins.	180000 v.	120000 v.	66000 v.	40 lbs.	90.00
6222	15 ins.	2 13 ins.	416 ins.	1/2 in.	75000 v.	50000 v.	22000 v.	4 7/8 lbs.	10.00
6226	331/2 ins.	714 ins.	914 ins.	$3\frac{1}{2}$ ins.	185000 v.	130000 v.	66000 v.	70 lbs.	150.00
6266	53% ins.	$1_{16}^{5}$ ins.	1 15 ins.	3/8 in.	45000 v.	15000 v.	6600 v.	5/8 lbs.	3.40
6275	234 ins.	1 in.	112 ins.	3% in.	30000 v.		2200 v.	1/4 lb.	1.20
6277	93% ins.	$2\frac{1}{4}$ ins.	35g ins.	11 in.	60000 v.	35000 v.	11000 v.	23 lbs.	6.00
6282	5 % ins.	1 in.	2 ins.	in.	45000 v.	20000 v.	6600 v.	1/2 lb.	2.40
6296	11½ ins.	3 % ins.	5 ins.	134 ins.	55000 v.	25000 v.	11000 v.	6½ lbs.	12.00
6811	18 ins.	2 16 ins.	412 ins.	½ in.	75000 v.	50000 v.	22000 v.	6 lbs.	14.00
6815	91/2 ins.	1 % ins.	212 ins.	½ in.	50000 v.	20000 v.	6600 v.	2 lbs.	5.60
6833	7 % ins.	1 5 ins.	1 15 ins.	3% in.	45000 v.	15000 v.	6600 v.	$\frac{7}{8}$ lbs.	4.60
6845	434 ins.	1 in.	112 ins.	3gin.	3000 <b>0</b> v.		2200 v.	3/8 lb.	1.80
6851	6 13 ins.	1 in.	2 in.	14 in.	45000 v.	20000 v.	6600 v.	5/8 lb.	2.80



No. 6816. With a 31/2 Inch Ilole, This Is No. 6226



No. 6858

No. 6818. With 1/2 Inch Through Hole, This Is No. 6200

No. 7211

# Locking Insulating Bushing and Connectors

		Diameter of							W.E.
List	Overall	Section Fitting	Largest	Diameter of		Electrical Value		Net Wt.	List Price
No.	Length	Into Barrier	Diameter		Dry Test	Rain Test	Line Voltage	Each	Each
6816	31 1/2 ins.	714 ins.	914 ins.	l in.	185000 v.	130000 v.	66000 v.	100 lbs.	\$200.00
6818	26 ins.	413 ins.	7 ins.	½ in.	1000000 v.	80000 v.	44000 v.	19 lbs.	<b>3</b> 8.00
6821	313/4 ins.	5 ins.	7 ins.	3/2 in.	180000 v.	120000 v.	66000 v.	45 lbs.	104.00
6858	123 ins.	214 ins.	35/8 ins.	1/2 in.	60000 v.	35000 v.	11000 v.	3¾ lbs.	8,40
6867	14 1/2 ins.	3% ins.	5 ins.	12 in.	55000 v.	25000 v.	11000 v.	8 ½ lbs.	16.00
7211	83% ins.	3 % ins.		11/2 x 11/4 x 61/2	55000 v.	25000 v.	11000 v.	4½ lbs.	9.00
	0/8	0/0 -1101		-74 - 74 - 74				1.7	1

The locking ring construction as illustrated enables the insulator to be locked on to the barrier quickly and easily, obviating the could apply and comparing process.

ing the costly and awkward cementing process.

In the connectors the conductor rod is permanently imbeded in the electrose insulation, making a water and air-tight construction. Delivery F. O. B. Brooklyn, N. Y. For warehouse deliveries write nearest house.

# **ELECTROSE SAFETY STRAIN INSULATORS**



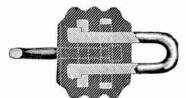
No. 10A-B. (Old Style)



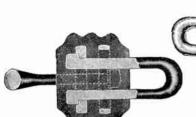
No. 10 (New Type)



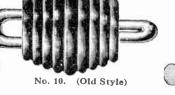
No. 10. (New Type)



No. 10. (New Type)



No. 10X. (New Type)





No. 10X. (Old Style)

# Safety Strain Insulators

List No.	Diam. in Ins.	Length of Body in Ins.	Opening of Eye in Ins.	Overall l.ength in Ins.	Breaking Strength in Lbs.	Mechan-	Electrical Value Dry in Volts	Electrical Value Rain in Volts	Test Voltage Dry in Volts	Line Voltage	Net Weight Each in Lbs.	W. E. List Price per 100
Old 10 Old	(Combin	4 %	1 16 X 78	8 16	20000	10000	40000	20000	15000	11000	41/4	\$392.00
10AB		IOA and	1 1 x 38	141/8	20000	10000	70000	35000	30000	15000	81/2	852.00
Old 10X	4	4 3 nation of	1 1 x 7/8	816	20000	10000	4000	20000	15000	11000	43/8	420.00
10AB		IOA and	1½ x 1/8	121/8	20000	10000	75000	40000	35000	20000	71/4	Each 10.92
10ADA	(Combin	nation of DA, 10D	11/2 x 7/6	16 16	20000	10000	100000	500G0	45000	25000	103/8	16.72
New 10 10A	4 4	3	1½ x 7/8 1½ x 7/8	7 13 63%	20000 20000	10000 10000	45000 45000	25000 25000	20000 20000	11000	35/8	5.12
10B 10C	4	3 3	1½ x 3/8	63 g	20000 20000	10000	45000 45000	25000 25000 25000	20000 20000 20000	11000 11000 11000	35/8 35/8	$\frac{5.46}{5.46}$
10D 10G	4	3 3	1½ x 7/8	5	20000 20000	10000 10000	45000 45000	25000 25000 25000	20000 20000 20000	11000	35/8 35/8 33/4	5.80 5.80
10H 10X	4	3 3	116 x 74	778	20000 20000	10000 10000	450(E) 4500()	25000 25000 25000	20000 20000 20000	11000 11000 11000	3 5/8	$\frac{5.68}{5.74}$
				10				=.,5()()	=170070	1 11000 1	35/8	5.40

10A-5% inch threaded socket at one end.

10B-56 inch threaded stem at one end.

 $10C-\frac{5}{8}$  inch threaded socket at each end  $10D-\frac{5}{8}$  inch threaded stem socket at each end.

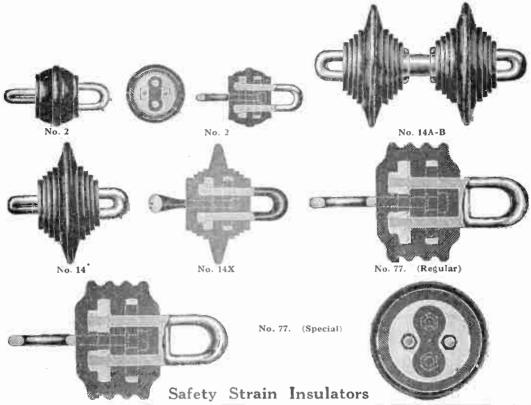
10F— $\frac{9}{16}$  inch clevis at one end.

10G-H inch clevis at one end.

10H-13 inch clevis at one end.

Delivery F. O. B. Factory, Brooklyn, N. Y. For warehouse deliveries write nearest house,

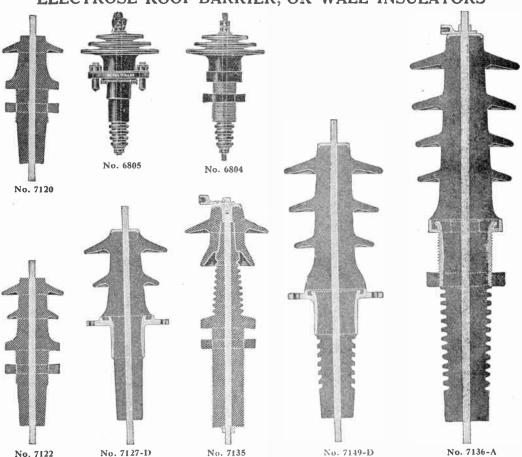
# **ELECTROSE SAFETY STRAIN INSULATORS**



		40	(24)	~~~								
List No.	Diam.	Length of Body in Ins.	Opening of Eye in Ins.	Overall Length in Ins.	Breaking Strength in Lbs.		Electrical Value Dry in Volts	Electrical Value Rain in Volts	Test Voltage Dry in Volts	Line Voltage	Net Weight Each in Lbs.	W. E. List Price per 100
1	28 <sub>4</sub> 23 <sub>4</sub>	23 %	114 x 34	512	10000	5000	20000	10000	7000	3500	11/2	\$163.00
1 A	234	238	114 x 34	4 3	10000	5000	20000	10000	7000	3500	11/2	187.00
1ADA		nation of IA, 1D	1¼ x 34	1212	10000	5000	50000	30000	20000	11000	41/2	585.00
1B	234	1 236	114 x 34	-4 4	10000	5000	20000	10000	7000	3500	114	187.00
1C	234	236		418	10000	5000	20000	10000	7000	3500	112	211.00
1 ID	23	23		414	10000	5000	20000	10000	7000	3500	112	211.00
1 I	234	23%		5 %	10000	5000	20000	10000	7000	3500	134	243.00
1K	234	23 8	11/ x 3/	531	10000	5000	20000	10000	7000	3500	15%	203.00
1X	235	23 %	1 8 X 5 1 1 X 5 5	501	10000	5000	20000	10000	7000	3500	134	186.00
2	213	13,	1 x 5 s	416	7000	1000	12000	7000	5000	2500	7/8	121.00
$\bar{2}X$	91,	137	1 x 5 g	458	7000	4000	12000	7000	5000	2500	1	138.00
7	1,1-	25	1 x 3 4	51,	10000	6000	25000	12000	10000	(660)	134	168.50
7A	31.	25	1 x 1	5	10000	6000	25000	12000	10000	6600	134	192.50
	(Con:bi	nationof	`									1
7AB		7A and	1 x 3 i	919	10000	6000	10000	25000	20000	11000	31/2	385.00
	7B)		)									Į.
		nation of	1									
7ADA	Nos.	7A, 7D	1 x 84	1314	10000	6000	60000	35000	25000	13000	514	601.50
	and 7	A)			1					1		1
7B	215	258	1 x 34	5	10000	6000	25000	12000	10000	6600	134	192.50
7C	313	258		4 5 g	10000	6000	25000	12000	10000	6600	134	216.50
7D	334	25 %		404	10000	6000	25000	12000	10000	6600	134	216.50
717	318	2 8		618	10000	6000	25000	12000	10000	6600	2	248.50
7G	315	25 8	1 x 3 i	537	10000	6000	25000	12000	10000	6600	178	208.50
7X	31/8	25 8	1 x 34	587	10000	6000	25000	12000	10000	6600	2	192.00
14	5	25%	78 x 13	514	10000	6000	25000	15000	15000	6600	21/8	282.00
14AB	.5	25 %	78 X 13 78 X 16 78 X 16	911	10000	6000	45000	25000	25000	11000	412	680.00
14ADA	5	258	78 X 13	131,	10000	6000	60000	35000	25000	13200	612	1020.00
14 X	· i	25 g	25 x 17	514	10000	6000	25000	15000	15000	6600	214	306.00
77 Reg.	714	514	25 x x 17	13%	40000	20000	75000	50000	40000	22000	21	\$64 each
77 Spec.	837	6	21, x 212	143	50000	30000	100000	60000	50000	33000		100 each
*77A	111/4	778	3 16 x 2 1	$20^{5}_{8}$								Prices
*77B	15	1012	514 x 334	$27^{1}_{2}$								on
77C	1334	131%	6 16 X 1 11	341								Appl.

Nos. 1A and 7A have a \$\frac{5}{2}\$ inch threaded socket at one end.
Nos. 1B and 7B have a \$\frac{5}{2}\$ inch threaded stem at one end.
Nos. 1C and 7C have a \$\frac{5}{2}\$ inch threaded socket at each end.
Nos. 1D and 7D have a \$\frac{5}{2}\$ inch threaded stem at each end.
Nos. 1K and 7G have a \$\frac{5}{2}\$ inch clevis at one end.
Nos. 11 and 7F have a \$\frac{5}{2}\$ inch clevis at each end.
Nos. 11 and 7F have a \$\frac{5}{2}\$ inch clevis at each end.
No. 14 can be furnished with special terminals, same as the No. 7.

# ELECTROSE ROOF BARRIER, OR WALL INSULATORS



# Roof Barriers and Wall Insulators

These insulators are adapted for indoor or outdoor service. The connecting rods are imbedded permanently in the electrose insulation, making a watertight construction. Various patented methods of locking the insulators to the roof, wall, transformer, tank, cover, etc., are shown. The insulators can also be furnished with through holes if desired.

			Diameter of			
List	Overall	Diameter of	Section Fitting	Locking	Diameter of	Net Wgt.
No.	Height	Largest Disk	into Barrier	Space	Conductor Rod	Each
6804	13 ins.	$6\frac{1}{2}$ ins.	2 ins.	$2\frac{1}{4}$ ins.	3/8 ins.	$4\frac{5}{8}$ lbs.
6805	13 ins.	$6\frac{1}{2}$ ins.	2 ins.		3/8 ins.	$7\frac{1}{2}$ lbs.
7120	$13\frac{7}{8}$ ins.	$5\frac{1}{8}$ ins.	$2\frac{13}{16}$ ins.	2 ins.	$\frac{1}{2}$ ins.	5 lbs.
7122	16 ins.	6 ins.	$2\frac{13}{16}$ ins.	2 ins.	$\frac{1}{2}$ ins.	8 lbs.
7127D	19 ins.	7 ins.	$2\frac{13}{16}$ ins.		$\frac{1}{2}$ ins.	15 lbs.
7135	21 ins.	7 ins.	$2^{\frac{13}{16}}$ ins.	7 ins.	$\frac{1}{2}$ ins.	<ol> <li>lbs.</li> </ol>
7136A	37 ins.	9 ins.	412 ins.	$3\frac{1}{2}$ ins.	$\frac{1}{2}$ ins.	43 lbs.
7149D	27 ins.	3 ins.	$3\frac{1}{2}$ ins.	******	$\frac{1}{2}$ ins.	25 lbs.

#### LIST PRICES AND DATA

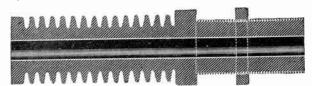
		-Electrical Value	es				W. E.
List	Rain Test	——Dry	Test	Puncture Value	Tested	Line	List Price
No.	Upper End	Upper End	Lower End	in Oil	To	<b>V</b> oltage	Each
6804	30000 v.	60000 v.	60000 v.	85000 v.	60000 v.	11000 v.	\$20.00
6805	40000 v.	60000 v.	60000 v.	85000 v.	60000 v.	11000 v.	30.00
7120	25000 v.	60000 v.	50000 v.	135000 v.	50000 v.	6600 v.	14.00
7122	50000 v.	80000 v.	45000  v.	135000 v.	45000 v.	16500 v.	18,00
7127D	60000 v.	100000 v.	65000 v,	135000 v.	65000 v.	22000 v.	32.00
7135	60000 v.	110000 v.	80000 v,	135000  v.	86000 v.	22000 v.	32.00
7136A	135000 v.	180000 v.	115000 v.	200000 ₩.	115000 v.	44000 v.	94.00
<b>71</b> 49D	85000 v.	135000 v.	75000 v.	170000 v.	75000 v.	33000 v.	56.00

Delivery F. O. B. Brooklyn, N. Y. For warehouse deliveries write nearest house.

#### INSULATING BUSHINGS AND ELECTROSE LOCKING CON-**NECTORS**



No. 6206



No. 6210. With a 1/2 Inch Rod This Is No. 6821



No. 6266



No. 6275



No. 6277



No. 6282



No. 6296. With a ½ Inch Rod, This Is No. 6867



No. 6811 With ½ Inch Through Hole, This Is!No. 6222



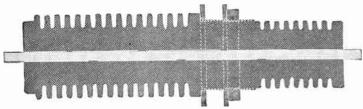




No. 6851

# Locking Insulating Bushings and Connectors

		Diameter of							W.E.
List	Overall	Section Fitting	Largest	Diameter of		Electrical Value		Net Wt.	List Price
No.	Length	Into Barrier	Diameter	Rod or Hole	Dry Test	Rain Test	Line Voltage	Each	Each
6200	23 ins.	41/2 ins.	7 ins.	1 1/2 ins.	100000 v.	80000 v.	44000 v.	13¾ lbs.	\$26.00
6206	61/4 ins.	1% ins.	$2\frac{1}{2}$ ins.	1/2 in.	50000 v.	20000 v.	6600 v.	1 1/2 lbs.	4.00
6210	2734 ins.	5 ins.	7 ins.	134 ins.	180000 v.	120000 v.	66000 v.	40 lbs.	90.00
6222	15 ins.	2 11 ins.	4½ ins.	½ in.	75000 v.	50000 v.	22000 v.	4 % lbs.	10.00
6226	33½ ins.	71/4 ins.	$9\frac{1}{2}$ ins.	3½ ins.	185000 v.	130000 v.	66000 v.	70 lbs.	150.00
6266	5 % ins.	1 % ins.	1 👬 ins.	3/8 in.	45000 v.	15000 v.	6600 v.	5/8 lbs.	3.40
6275	234 ins.	1 in.	1 1/2 ins.	3/8 in.	30000 v.		2200 v.	1/4 lb.	1.20
6277	9% ins.	$2\frac{1}{4}$ ins.	35/8 ins.	₩ in.	60000 v.	35000 v.	11000 v.	23/4 lbs.	6.00
6282	5 % ins.	1 in.	2 ins.	¼ in.	45000 v.	20000 v.	6600 v.	⅓ lb.	2.40
6296	11 1/2 ins.	$3\frac{7}{8}$ ins.	5 ins.	134 ins.	55000 v.	25000 v.	11000 v.	61/2 lbs.	12.00
6811	18 ins.	2 14 ins.	4 ½ ins.	$\frac{1}{2}$ in.	75000 v.	50000 v.	22000 v.	6 lbs.	14.00
6815	91/4 ins.	1 1/2 ins.	212 ins.	½ in.	50000 v.	20000 v.	6600 v.	2 lbs.	5.60
6833	7 % ins.	I is ins.	1 1% ins.	3% in.	45000 v.	15000 v.	6600 v.	$\frac{7}{8}$ lbs.	4.60
6845	434 ins.	1 in.	1½ ins.	³∕gin.	30000 v.		2200 v.	3∕8 lb.	1.80
6851	6 11 ins.	1 in.	2 in.	¼ in.	45000 v.	20000 v.	6600 v.	5∕8 lb.	2.80



No. 6816. With a 31/2 Inch Hole, This Is No. 6226



No. 6858

No. 6818. With 11/2 Inch Through Hole, This Is No. 6200

No. 7211

# Locking Insulating Bushing and Connectors

		Diameter of							W.E.
List	Overall	Section Fitting	Largest	Diameter of		Electrical Value	9	Net Wt.	List Price
No.	Length	Into Barrier	Diameter		Dry Test	Rain Test	Line Voltage	Each	Each
6816	31½ ins.	71/4 ins.	91/2 ins.	1 in.	185000 v.	130000 v.	66000 v.	100 lbs.	\$200.00
6818	26 ins.	4 ½ ins.	7 ins.	⅓ in.	100000 v.	80000 v.	44000 v.	19 lbs.	38.00
6821	3134 ins.	5 ins.	7 ins.	3/4 in.	180000 v.	120000 v.	66000 v.	45 lbs.	104.00 8.40
6858	123/8 ins.	2¼ ins.	35% ins.	½ in.	60000 v.	35000 v.	11000 v. 11000 v.	3¾ lbs. 8¼ lbs.	16.00
6867	14 1/2 ins.	37/8 ins.	5 ins.	½ in.	55000 v.	25000 v. 25000 v.	11000 v.	4 1/2 lbs.	9.00
7211	8% ins.	$3\frac{7}{8}$ ins.	5 ins.	1½ x 1¼ x 6½	55000 v.	25000 V.	11000 A*	472 100.	

The locking ring construction as illustrated enables the insulator to be locked on to the barrier quickly and easily, obviating the construction and awkward cementing process.

In the connectors the conductor rod is permanently imbeded in the electrose insulation, making a water and air-tight construction. Delivery F. O. B. Brooklyn, N. Y. For warehouse deliveries write nearest house.

# WOOD CROSSARMS Washington Fir or Yellow Pine



#### Wood Crossarm STANDARD ARMS

Size  $3\frac{1}{4}$  x  $4\frac{1}{4}$  ins. Bored for  $1\frac{1}{2}$  in. Pins, or  $1-\frac{5}{8}$  in. Machine Bolt and  $2-\frac{3}{8}$  in. Brace Bolts

Length	Number	Sta	ndard Spac	ings		Washingt	on Fir	Yellow	Pine
Feet	of Pins	Center	Side	End	Brace	List No.	Wt. Lbs. Each	List · No.	Wt. Lbs. Each
3 4 5 6 6 8	2 4 4 4 6 6	28 16 18 22 16 18	12 17 21 12 12 17½	4 4 4 4 4	25 28 28 32 32 32 32	740092 740093 740094 740095 740096 740097	10.2 13.6 17 20.4 20.4 27.2	740112 740113 740114 740115 740116 740117	13.2 17.6 22 26.4 26.4 35.2
8 8½ 10 10 10	8 10 8 10 12	$ \begin{array}{c c} 16 \\ 16 \\ 17\frac{1}{2} \\ 16 \\ 16 \end{array} $	12 9 <sup>3</sup> / <sub>4</sub> 15 <sup>3</sup> / <sub>4</sub> 12 9 <sup>5</sup> / <sub>8</sub>	4 4 4 4 37/8	32 32 42 42 42 42	740098 741146 740099 740100 741147	27.2 29.9 34 34 34	740118 741148 740119 740120 741149	35.2 37.4 44 44 44 44

#### PONY TELEPHONE ARMS

Size  $2\frac{3}{4}$  x  $3\frac{3}{4}$  ins. Bored for  $1\frac{1}{4}$  in. Pins,  $1-\frac{5}{8}$  in. Machine Bolt and  $2-\frac{3}{8}$  in. Brace Bolts

Length	Number	Standard Spacings			Washington Fir		Yellow Pine		
Inches	of Pins	Center	Side	End	Brace	List No.	Wt. Lbs. Each	List No.	Wt. Lbs. Each
24	2	17		31/2		740101	5	740122	6 5
30	2	23		3½		740102	6.25	740123	8.125
36	2	29		3½	25	740103	7.5	740124	9.75
42	4	16	$9\frac{1}{2}$	3½	28	740104	8.75	740125	11.575
62	6	16	$9\frac{3}{4}$	3½	28	740106	13	740126	16.8
82	8	16	$9\frac{3}{4}$	33/4	28	740108	17	740127	22.2
102	10	16	93/4	4	28	740110	21.25	740129	27,625
120	12	16	95/8	37/8	28	740111	25	740130	32.5

N. E. L. A. ARMS

Standard Sizes Adopted by the National Electric Light Association Size  $3\frac{1}{2} \times 4\frac{1}{2}$  ins. Bored for  $1\frac{1}{2}$  in. Pins,  $1-\frac{5}{8}$  in. Machine Bolt and  $2-\frac{3}{8}$  in. Brace Bolts

Length	Number				Washing		Yellow Pine		
Feet	of Pins	Center	Side	End	Brace	List No.	Wt. Lbs. Each	List No.	Wt. Lbs. Each
3 ft. 2 ins.		30		4	32	740105	122/3	741120	15.83
5 ft. 7 ins.	4	30	$14\frac{1}{2}$	4	38	740107	$22\frac{1}{3}$	741121	27.92
8 ft.	6	30	141/2	4	38	740109	32	741122	40
9 ft. 2 ins.	8	30	12	4	38	741119	363/8	741123	45.83

RAILROAD ARMS
Size 3 x 4½ ins. Bored for ½ in. Steel Pins, 1—56 in. Machine Bolt and 2—36 in. Brace Bolts

Length	Number	Standard Spacings				Washingt	on Fir	Yellow Pine		
Feet	of Pins	Center	Side	End	Brace	List No.	Wt. Lbs. Each	List No.	Wt. Lbs. Each	
6 6 8 8	4 6 6 8	22 16 18 16	$\begin{array}{c} 21 \\ 12 \\ 17\frac{1}{2} \\ 12 \end{array}$	4 4 4 4	32 32 32 32 32	741662 741124 740128 741125	19.2 19.2 25.6 25.6	741127 741128 741129 741130	24.6 24.6 32.8	
10 10	8	17½ 16	$\frac{1534}{12}$	4 4	42 42	741125 741663 741126	$\begin{array}{c c} 25.0 \\ 32 \\ 32 \\ \end{array}$	741130 741131 741132	32.8 41 41	

STANDARD POWER ARMS AND SPECIAL BORED ARMS

List No.	Size	Weight per Lineal Foot	List No.	Size	Weight per Lineal Foot
741133 741134 741135 741136 741137 741138 741139	3 \( \times 4 \) \( \	3.4 lbs. 3.2 lbs. 2.5 lbs. 4 lbs. 4.2 lbs. 4.43 lbs. 4.5 lbs.	741140 741141 741142 741143 741144 741145	33¼ x 5 33¼ x 53¼ 4 x 5 4 x 6 43¼ x 53¼ 5 x 6	4.72 lbs. 5.4 lbs. 5 lbs. 6 lbs. 6 75 lbs. 7.4 lbs.

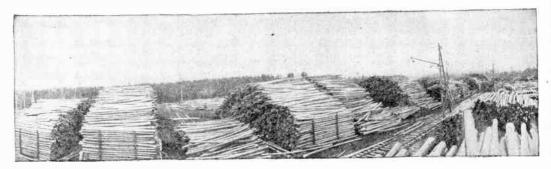
Prices on application.

# Western Electric WOOD POLES

### **Poles**

The Western Electric Company is noted for the quality of the poles it handles and the service it renders. Our facilities for securing stock, our large and numerous concentrating yards, make it possible for us to meet any demand at a moment's notice. Our record has given us an enviable reputation in the pole business throughout the United States and Canada.

In order to give our friends and patrons a more intimate knowledge of what we can supply in the way of poles and pole-line material, we have assembled in these pages a representative list of the standard stocks carried by us



Section of One of Our Many Pole Yards

# Large Posts and Small Poles

Northern White Cedar Association Specification

"Sizes 4 inch 10 foot to 4 inch 18 foot inclusive. Sizes at top may be ¼ inch less than the diameter specified. Four inch 20 foot poles circumference measurement at top end 12 inches for seasoned stock and 12½ inches for green or water soaked stock, 5 inch top and larger 20 foot poles take same circumference top measurement as longer poles of same size. Lengths may be two inches scant. On posts and poles 10, 12, 14, 16 feet long, 4 inch crook one way allowed. Eighteen and 20 foot poles, 4 inch crook one way allowed, the sweep to be measured from a point 4 feet from the butt. Pipe holes in top allowed. Must be cut from live timber and in other respects, except as above mentioned, conform to post specifications. Green, fresh cut or water soaked stock must be plump measure for the diameter or circumference specified."

# Standard Telegraph, Telephone and Electric Poles

Northern White Cedar Association Specification

"Sizes 4 inch 25 feet and upwards. Above poles must be cut from live growing timber, peeled and reasonably well proportioned for their length. Tops must be reasonably sound, must measure in circumference as follows: seasoned 4 inch poles, 12 inches; 5 inch poles, 15 inches; 6 inch poles, 18½ inches; 7 inch poles, 22 inches. If poles are green, fresh cut or water soaked, then 4 inch poles must measure 12½ inches; 5 inch poles, 16 inches; 6 inch poles, 19½ inches; 7 inch poles, 22¾ inches in circumference at top end. Lengths may be ½ inch scant for each 5 feet in length and 6 inches long for any length from 20 feet up.

"One way sweep allowable not exceeding 1 inch for every 5 feet, for example, in a 25 foot pole, sweep not to exceed 5 inches, and in a 40 foot pole, 8 inches. Measurement for sweep shall be taken as follows: That part of the pole when in the ground (6 feet) not being taken into account in arriving at sweep, tightly stretch a tape line on the side of the pole where the sweep is greatest, from a point 6 feet from the butt to the upper surface at top, and having so done measure widest point from tape to surface of pole and if, for illustration, upon a 25 foot pole said widest point does not exceed 5 inches, said pole comes within the meaning of these specifications. Butt rot in the center including small ring rot outside of the center; total rot must not exceed 10 per cent. of the area of the butt. Butt rot of a character which plainly seriously impairs the strength of the pole above ground is a defect. Wind twist is not a defect unless very unsightly and exaggerated. Rough, large knots if sound and trimmed smooth are not a defect."

### **WOOD POLES**

# Northern White Cedar Poles

### Northern White Cedar Association Specifications

Diam.		Approx.		ı	Diam.		Approx.		
Top	Length	Weight	No. to (	Carload	Top	Length	Weight	No to	Carload
Inches	Feet	Lbs.	From	To	Inches	Feet	Lbs,	From	То
4	16	85	340	400	6	30	350	90	125
5	16	105	300	400	612	30	350	75	100
6	16	135	230	300	7	30	450	75	100
7	16	165	200	250	8	30	600	50	75
8	16	200	150	225	5	35	400	75	100
9	16	300	100	130	512	35	400	75	100
4	18	95	325	400	6 -	35	450	75	100
5	18	125	250	300	$6^{1}_{2}$	35	450	60	80
6	18	155	200	250	7	35	600	50	75
7	18	200	150	225	8	35	850	40	60
8	18	325	95	125	6	40	625	50	75
9	18	425	90	125	612	40	625	45	60
4	20	100	300	400	7	40	850	40	60
5	20	130	230	300	8	40	1100	30	4.5
$5\frac{1}{2}$	20	130	230	300	120	longing gian	magazina tara		
6	20	190	150	225	10	rowing sizes	s require two	cars for ship	ping
7	20	250	125	150	6	4.5	900	60	80
8	20	350	90	125	7	45	1100	50	70
9	20	450	75	100	8	4.5	1350	4.5	60
5	22	175	175	250	6	50	1450	50	70
4	25	150	200	250	7	50	1350	45	60
5	25	200	150	225	8	50	1700	35	45
$5\frac{1}{2}$	$\frac{25}{25}$	200	135	190	6	55	1400	40	50
6	25	250	125	150	7	55	1700	35	45
612	25	250	100	130	8	55	2200	25	35
7	25	350	90	125	7	60	2200	25	35
8	25	425	90	125	8	60	2500	22	30
5	30	275	110	175	7	65	2500	22	30
$5\frac{1}{2}$	30	275	100	130	8	<b>65</b>	3000	18	25
7									

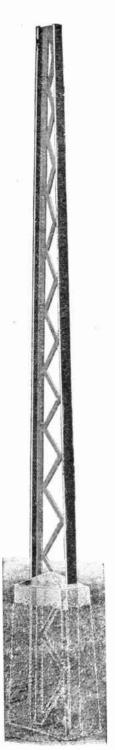
Prices on application.

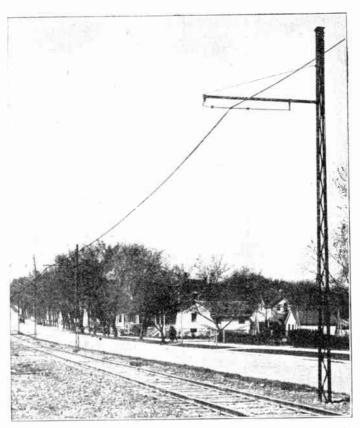
# A. T. and T. Co., Western Union and Nat. Electric Light Association Specifications

			Circum.		-			Circum.	
		Circum,	6 Feet	Approx.			Circum.	6 Feet	Approx.
	Length	Top	from Butt	Weight		Length	Тор	from Butt	Weight
Class	Feet	Inches	Inches	Lbs.	Class	Feet	Inches	Inches	Lbs.
G	20	$12^{1}_{2}$		100	A	35	24	43	850
$\mathbf{F}$	20	1512		130	E	40	1834	1.5	625
D	20	1714		150	D	40	1834		625
C	20	1834	27	190	C	40	1834	40	625
Æ	22	$15^{1}_{2}$		175	В	40	22	43	850
D	22	$17\frac{1}{4}$		175	A	40	21	47	1100
C	22	1834	$28\frac{1}{2}$	250					1100
В	22	22	30	275	Foll	owing sizes	require two	cars for ship	ning
G	25	1212		150				cars for simp	bing
$\mathbf{I}_{\mathcal{C}}$	25	$15\frac{1}{2}$		200	E	45	22		1100
$\mathbf{E}$	25	1734		200	D	45	$\overline{22}$	* *	1100
D	25	1834		250	C	45	183/4	43	900
C	25	1834	30	250	В	45	22	47	1100
В	25	22	32	350	A	45	$2\overline{4}$	50	1350
A	25	24	<b>3</b> 6	425	D	50	$\overline{22}$		1350
D	30	1834		350	C	50	1834	46	1150
$\mathbf{C}$	30	183/4	33	350	В	50	22	50	1350
$\mathbf{B}$	30	22	36	450	Λ	50	$\frac{-7}{24}$	<b>5</b> 3	1700
A	30	24	40	600	В	55	$\overline{22}$	53	1700
D	35	$18\frac{3}{4}$		450	A	55	24	<b>5</b> 6	2200
C	35	1834	36	450	В	60	$\frac{21}{22}$	56	2200
B	35	22	38	600	Ā	60	24	59	2500
				1				00	2000

Prices on application.

### BATES TROLLEY POLES





Bates Poles Selected to Ornament the Approach to the New Wisconsin State Capitol Building, Madison, Wis.

The Bates One-Piece Steel Pole possesses many advantages. It is used for bracket and span wire construction in all types of trolley installations. It has great strength because of its light, automatically tested truss. Bates Poles are not fabricated. They are ornamental and possess long life (no joints or hollow centers to rust away). Bates Poles can always be completely repainted. There are no covered surfaces of any kind. Because of the open construction, they do not turn in the concrete, but are solidly locked. These one-piece expanded truss poles have all the advantages of a riveted truss and eliminate all of its disadvantages. They are superior to tubular steel poles from an engineering point of view as well as being more artistic. We can supply quickly and cheaply the pole you need. Let us figure on your requirements.

Prices on Application

### Western Electric

### BATES POWER POLES



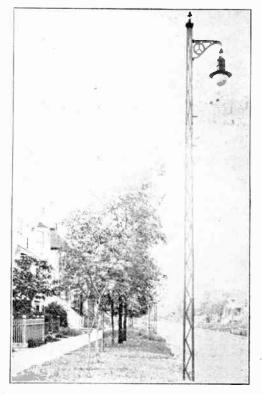
#### STEEL POLE TREATISE

This book, sent to you upon request, covers weight, strength and list price of steel poles from 20 ft. to 60 ft. in length. Bates poles are made for all pole purposes. Photographs of installations, valuable engineering data, in fact, complete pole line engineering is covered in this publication.

We carry in stock a complete line of fittings and fixtures for all types of construction that can be fitted to the pole at any point without drilling.

By the use of light, strong, one-piece steel poles it is entirely possible to install a line as cheaply as with good wood poles. Being stronger and longer lived, they are spaced farther apart; consequently, using fewer insulators and diminishing to a great extent the cost of labor. They are the result of modern engineering in pole design; viz., flexible with the line, great strength across the line and small depreciation charges. Boys cannot climb these structures to a point of danger, because the expanded truss becomes too small to admit the foot.

Prices on Application



Bates Steel Poles Ornamenting Chicago Streets—Forming an Important Factor in the Vast Lighting System of the Second Largest City of the World

**World Radio History** 



Peirce Forged Steel Pins

		Long	Shank	Type	for Woo	d Cross	arms-	-With	1 Inc	h Sprin	g Thre	ad	
		Above	Below	Total		*List	ı		Above	Below	Total		*List
List	Diam.	Shoulder	Shoulder	Length	Weight	Price	List	Diam.	Shoulder	Shoulder	Length	Weight	Price
No.	Ins.	Ins.	Ins.	Ins.	Lbs.	per 100	No.	Ins.	Ins.	Ins.	Ins.	Lbs.	per 100
71	1/2	43/4	$4\frac{3}{4}$	$9\frac{1}{2}$	81	\$22.20	84	5/8	6	$51_{\frac{1}{2}}$	$11\frac{1}{2}$	132	\$37.00
74	1/2	$4\frac{3}{4}$	$5\frac{1}{2}$	$10\frac{1}{4}$	86	25.16	83	5/8	6	$6^{1}_{2}$	$12\frac{1}{2}$	140	38.48
80	5/8	43/4	43/4	$9^{1/2}$	115	32.56	95	3/4	6	5	11	183	49.50
81	5/8	$4\frac{3}{4}$	$5\frac{1}{2}$	$10\frac{1}{4}$	122	34.80	90	3/4	6	$5\frac{3}{4}$	$11\frac{3}{4}$	192	53.28
81A	5/8	$4\frac{3}{4}$	$6\frac{1}{2}$	$11\frac{1}{4}$	129	37.00	91	$\frac{3}{4}$	6	$63_{4}$	$12\frac{3}{4}$	205	54.76
82	5/8	6	$4\frac{3}{4}$	$10\frac{3}{4}$	126	35.52	90.7	$\frac{3}{4}$	$4\frac{3}{4}$	53	$10\frac{1}{2}$	177	50.32
5					Crossa	rms						es, Etc.	
	V	Vith 1	Inch Sp	ring T	'hread			V	Vith 1	Inch Sp	oring T	hread	
72	1/2	$4\frac{3}{4}$	$1\frac{1}{4}$	6	54	\$21.76	73	1/2	$4\frac{3}{4}$	3	734	65	\$21.76
86	1/2 5/8 5/8 3/4	434	$1\frac{1}{4}$	6	85	29.60	88	5/8 5/8 3/4	43/4	3	$7\frac{3}{4}$	88	34.04
87	5/8	6	$1\frac{1}{4}$	$7\frac{1}{4}$	96	31.82	89	5/8	$7\frac{1}{2}$	4	$11\frac{1}{2}$	120	38.48
93	3/4	6	$1\frac{1}{2}$	$7\frac{1}{2}$	123	42.92	94	3/4	6	4	10	130	47.36
93A	$\frac{3}{4}$	$4\frac{3}{4}$	$1^{\frac{1}{2}}_{2}^{\frac{7}{2}}$	$6\frac{1}{4}$	107	39.96	94.1	3,4	13/4	4	834	114	41.44

		iamp	rins				
List		Size of	Height		Std.	Wt. *I	ist Price
No.	Size of Arms	Channel	Above Arm	Type of Thimble	Pkg.	per 100	per 100
4300	4 ins. x 5 ins. and smaller	Sheet	$4\frac{3}{4}$ ins.	1 in, spring thread	300	75	\$33.60
4400	4 ins. x 5 ins. and smaller	$\frac{3}{4}$ in.	$4\frac{3}{4}$ ins.	1 in. spring thread	300	120	39.90
4401	$3\frac{1}{2}$ ins. x $4\frac{1}{2}$ ins. and smaller	34 in.	$4\frac{3}{4}$ ins.	1 in. spring thread	300	105	37.80



No. 897 No. 900 No. 912 No. 915 No. 916 No. 920 No. 921 No. 923 No. 924 No. 925 No. 934 No. 935 No. 1923 HIGH INSULATION PINS

HIGH INSULATION PINS													
				eight				‡List ]	Price Eac	ch			
T:-4	1 int lift if the low life low					Japan	Finish			Galva	nized		
No.	Diamet	Below	Above	Shipping per 1		thout ertion	With Insertion		Without Insertion			Vith ertion	
				Sh	Each	Per 100	Each	Per 100	Each	Per 100	Each	Per 100	
897 Mall	11/2	41/2	5	345	\$1.02	\$93.34	\$1.05	\$98.66	\$1.55	\$141.34	\$1.58	\$144.00	
900 Gray	1 1/4	5	41/8	300	.58	53.34	.64	58.66	1.02	93.34		96.00	
916 Gray	11/2	33/8	41/8	280	. 56	50.66	.58	53.34	.94	85.34		88.00	
920 Mall	11/2	37/8	47/8	125	.35	32.00	.41	37.34	.47	42.66		48.00	
921 Mall	11/4	37/8	47/8	125	.35	32.00	.41	37.34	.47	42.66		48.00	
923 Gray	11/2	4	9	365	.85	77.34	.91	82.66	1.53	138.66		144.00	
924 Mall	$1\frac{1}{2}$	31/4	41/2	·280	.67	61.34	.70	64.00	1.09	98.66		101.34	
925 Mall	$1\frac{1}{2}$	4	51/2	350,	.76	69.34	.79	72.00	1.20	109.34		112.00	
934 Mall	11/2	31/4	41/2	150	. 53	48.00	.56	50.66	.70	64.00		69.34	
935 Mall	$1\frac{1}{2}$	4	9	365	1.23	112.00	1.27	114.66	1.79	162.66		165.34	
1923 Gray	11/2	4	9	470	1.06	96.00	1.11	101.34	1.71	154.66		157.34	

liveries write nearest house.

POLE LINE MATERIAL



No. 8000

No. 8010



Oak Pin



Locust



Duplex Pin



Duplex Wood Bracket Bracket



No. 8070 Bolt No. 8078

September 1985

# Standard Western Union Pins

Hot Galvanized or Plain
-Length, Inches--- Weight

		Showt	Shanla	Western	Union	Pine		
List No. 8000 8005	Diameter Inches	Above Shoulder 41/4 41/4	Below Shoulde 5 5	$\begin{array}{c} \text{Pounds} \\ \text{per 100} \\ \hline 73 \\ 110 \end{array}$	—List Pric Plain \$0.22 .28	Galv. \$0.26	Plain \$19.00 25.00	Galv. \$23.16 30.48

#### Short Shank Western Union Pins

		Hot	Galvanized or	Plain			
8010	4	1	48	\$0.20	\$0.24	\$18.00	\$21.92
	5	1	54	.30	.36	26.00	31.68
	4	1	65	.26	.32	23.00	28.06
	5	1	73	.35	.42	31.00	37.76

# Wood Pins

		"List Frice
Size	Description	per 1000
1½ x 8 ins. 1½ x 9 ins.	Standard oak pin	• •
	Standard oak pin	
1½ x 8 ins.	Standard locust pin	• •
1 1/4 x 9 ins.	Standard locust pin	
$1\frac{1}{2}$ x 8 ins.	Standard locust pin	
$1\frac{1}{2} \times 9 \text{ ins.}$	Standard locust pin	• •
$1\frac{1}{2} \times 11 \text{ ins.}$	Standard locust pin	• •
$1\frac{1}{4} \times 12$ ins.	Standard duplex locust pin	
$1\frac{1}{2} \times 12$ ins.	Standard duplex locust pin	
1 1/4 x 9 ins.	Standard transposition focust pin	· · Prices
$1\frac{1}{2} \times 9 \text{ ins.}$	Locust corner pin, without bolts, nuts and washers	on
	Brown duplex locust bracket	Appli-
	Brown duplex oak bracket	· · cation.
1½ x 2 x 16 ins.	Duplex oak bracket, painted or paraffined	
$1\frac{1}{2} \times 2 \times 10$ ins.	Oak bracket, painted or paraffined	• •
$1\frac{1}{2} \times 2 \times 12$ ins.	Oak bracket, painted or paraffined	
$1\frac{1}{2} \times 2\frac{1}{4} \times 12$ ins.	Oak bracket, painted or paraffined	• •
2 x 2 1/4 x 12 ins.	Oak bracket, painted or paraffined	• •
2 x 23/8 x 12 ins.	Oak hracket, painted or paraffined	• •
1% x 2 x 12 ins.	Oak bracket, painted or paraffined	
	Oak brakeet, painted or paraffined	
2 x 2% x 11% ins	s. Oak bracket, painted or paraffined	

# Wood Top Pins with Steel Bolts

Bolts Hot Galvanized

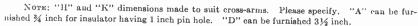
List No. 8070 8071 8072 8073 8074 8075 8076 8077 8078 8079 8080 8081 8082	Diam. Top  1 1 13/8 13/8 13/8 13/8 13/8 13/8 13/8	f Wood Top Diam. Bottom 178 214 214 178 214 214 214 214 214 214 214 214 214 214	Length 544 144 144 144 144 144 144 144 144 144	Size of B Diameter	Length 51/2 61/2 51/2 61/2 91/2 101/2 101/2 101/2 101/2 101/2 101/2 114/3	Length of Bolt Below Top, Ins. 1 11/4 1 11/4 5 5 1/4 6 1/4 5 6 6 6 6 7	Wt. Lbs., 52 60 90 115 72 80 88 135 160 165 190 225 250	—List Price Plain \$0.40 \$.42 \$.48 \$.52 \$.44 \$.56 \$.60 \$.63 \$.71 \$.88 \$.94	Per 100 — 3 Each— Galv. \$0.46 .48 .54 .58 .50 .53 .54 .64 .68 .71 .80 .98 1.06	List Plain \$33.00 34.38 39.20 41.96 36.14 38.50 39.46 46.08 49.50 51.54 57.76 71.50	Price—Galv. \$37.50 \$39.08 \$44.52 \$47.66 \$41.10 \$43.76 \$44.86 \$52.36 \$58.60 \$65.62 \$81.26 \$87.50
	1		tory. For	warehouse		7 write neares		.94	1.06	77.00	87.50

### Western Electric

### POLE LINE MATERIAL

### All Metal "Lee" Pins

#### WITH SEPARABLE THIMBLES



No. 03, 11/8 inch thimble always furnished unless otherwise specified. Thimbles are always furnished plain, as they are cemented into the insulators.

On prices given bolts can be decreased or increased 1 inch in length without extra charge.

Bolt can be furnished either hot galvanized, threads cut and recut, or sherardized, as desired.

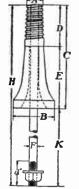
Bolts are always threaded  $2\frac{1}{8}$  inches at top and  $2\frac{1}{2}$  inches at bottom, unless otherwise specified, and are fitted with standard hot pressed square nuts and standard washers.

Where pin hole in insulators is 1 inch in diameter No. 01, 34 inch thimble will be furnished.

When ordering always specify the size cross-arm to be used.

The approximate weights given below are for complete pin, but when thimble is cemented in the insulator, which is usually the case, this weight is reduced by approximately 100 lbs. per 100 pins.

								Approx.	*1	List Price per	100
List No.	A Inches	B Inches	C Inches	I) Inches	E Inches	F-H Inches	N Inches	Weight per 100 in Lbs.	Complete Pin, Plain	Body and Bolt Galvanized	Plain Body and Galv. Bolt
9006 9007 9007 9007 9008 9008 9009 9010 9010 9011 9011 9012 9012 9013	11/8/11/8/8/11/8/8/11/8/8/8/8/8/8/8/8/8	3 3 3 4 3 3 3 4 3 3 4 3 4 3 4 4 4 4 4	61/4 71/2 71/2 71/2 81/4 81/4 9 9 10 10 11 11 11 11 13 13	33 33 33 33 33 33 33 33 33 33 33 33 33	3 1/4 4 1/2 4 1/2 4 1/2 5 1/4 5 6 6 7 7 - 8 8 10 10	34 x 10 ½ 34 x 11 ½ 34 x 12 ½ 34 x 12 ½ 34 x 13 34 x 13 34 x 13 34 x 14 ½ 34 x 16 ½ 34 x 17 ½ 34 x 17 ½ 34 x 17 ½ 34 x 17 ½	134 134 134 134 134 134 134 134 134 134	400 450 500 550 510 550 650 650 650 700 725 750 800 850 900	\$76,00 86.00 90.00 96.00 90.00 94.00 102.00 112.00 114.00 122.00 132.00 132.00 144.00 160.00	\$100.00 114.00 122.00 130.00 122.00 126.00 136.00 146.00 150.00 156.00 156.00 164.00 180.00 198.00 220.00	\$ 88.00 100.00 104.00 110.00 104.00 104.00 116.00 122.00 128.00 130.00 136.00 148.00 160.00 176.00



All Metal "Lee" Pin

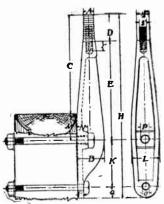
Porcelain Base Pin

### With Wood Thimbles

List No.	A Inches	B Inches	C Inches	I) Inches	E Inches	F Inches	H Inches	Base No.	Weight per 100 Lbs.
101 103 105 116 118 120 122 124 125 127 128 130 130A 130B	1 1 3/8 1 3/8 1 3/8 1 3/8 1 3/8 1 1 3/8 1 1 3/8 1 1 3/8 1 1 3/8 1 3/8 1 3/8	22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	4 1/2 51/2 51/2 51/2 9 4 1/2 8 51/2 9 10 1/2 10 1/2 11 1/2	2 1/2 2 1/2 2 1/2 2 1/2 3 1/2 3 1/2 3 1/2 4 1/2 3 3/2	21/4 31/4 21/4 5 6 6 6 6 6 6 6 8		91/2 10/2 10/2 10/2 10/2 15 51/2 14 61/2 9 61/2 10/2 17 17 17	6000 6001 6000 6001 6005 6001 6003 6001 6003 6001 6005 6006 6004 6005 6006	125 165 175 200 450 100 375 175 325 130 410 600 525 450

#### List Prices per 100

List No.	Approx. Weight per 100	List Price per 100					
	in Lbs.	Plain Bolt	Galv. Bolt				
101 103 105 116 118 120 122 124 125 127	125 165 190 200 550 115 265 175 190 115	\$26.40 32.50 33.90 38.90 76.30 22.80 64.80 34.90 53.70 28.40 64.80	\$29.70 35.50 41.30 46.30 88.20 25.60 75.50 38.40 58.40 31.50 72.20				



Pole Top Pin, Malleable Iron

### POLE TOP PINS

#### Malleable Iron Pins-Separable Thimble

Made of malleable iron of channel design. The top of base or body is threaded and the thimble is attached by means of a 3/4 inch threaded stud, one end of which threads into the base and the other into the thimble. When both pins and insulators are furnished by us the thimbles This adds one pound to weight of insulator. Thimbles are always furnished plain, not galvanized. Through bolts for fastening pins to pole are not included in price; these are standard machine bolts. The great convenience of having thimbles cemented into the insulator at the factory is worthy of special consideration. When extra insulators are wanted with thimbles cemented in, the price of thimbles plain is \$14.00 per 100. Insulators with 1\(^3\)<sub>8</sub> inch pin hole take 1\(^1\)<sub>8</sub> inch thimble and 1 inch pin hole takes \(^3\)<sub>4</sub> inch thimble.

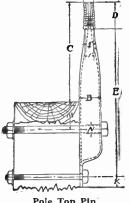
Note: Thimble No. 03, 11/8 inch, furnished unless otherwise specified.

Thimbles always furnished plain.

In ordering, always specify whether plain or galvanized wanted.

Price of through bolts not included in above, but we can quote on such bolts, either plain, galvanized, or sherardized. Please give length of through bolt required.

List	A	B	C	D	E	H	F	K	L	M	N	O	P	Q
No.	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches
9550 9551 9552 9553 9554 9555	11/8 11/8 11/8 11/8 11/8 11/8	$ \begin{array}{c} 2\frac{1}{4} \\ 2\frac{1}{2} \\ 2\frac{3}{4} \\ 3\\ 3\frac{1}{4} \\ 3\frac{1}{2} \end{array} $	6½ 7½ 9 11 13 15	3 3 3 3 3	5½ 7 8¾ 11 13 15½	13 15 17½ 20½ 23¼ 27	1/2 5/8 5/8 3/4 3/4 3/4	3½ 4 4½ 5¼ 6 7	21/4 21/2 23/4 3 31/4 31/2	$2\frac{1}{4}$ $2\frac{1}{2}$ $2\frac{3}{4}$ $3$ $3\frac{1}{2}$	$ \begin{array}{c c} \hline 1 \\ 1 \\ 1 \\ 1 \\ 4 \\ 1 \\ 4 \\ 1 \\ 4 \\ 1 \\ 2 \end{array} $	9 16 9 16 11 16 11 16 11 16	9 16 116 116 116 116 116 116	1 1 1 <sup>1</sup> / <sub>4</sub> 1 <sup>1</sup> / <sub>4</sub> 1 <sup>1</sup> / <sub>4</sub> 1 <sup>1</sup> / <sub>2</sub>



Pole Top Pin

List No.	Approximate	List Price per 100				
List NO.	Wgt. per 100	Plain	Galvanized			
9550 9551 9552 9553 9554 9555	500 lbs. 670 lbs. 700 lbs. 775 lbs. 875 lbs. 1300 lbs.	Prices on Application	Prices on Application			

### Pole Top Pins-Separable Thimble

These are hollow, being drawn from steel tube. A threaded 1/4 inch stud is sweated into the top, and the thimble is screwed on this stud. Bottom part of pin is closed and securely welded; thus the lower bolt hole passes through one solid piece of flat metal, while the upper hole passes through a hollow tube. When both pins and insulators are furnished by us the thimbles are cemented into the insulators at the factory without extra charge. This adds one pound to weight of insulator. The great convenience of having thimbles cemented into the

insulators at the factory is worthy of special consideration. When extra insulators are wanted with thimbles cemented in, the price of thimbles plain is \$14.00 per 100. Insulators with 1% inch pin hole take 1½ inch thimble and 1 inch pin hole takes ¾ inch thimble.

Note: Thimble No. 03, 1½ inch, furnished unless otherwise specified. Thimbles always furnished

plain.

In ordering, always specify whether plain or galvanized.

Price of through bolts not included in list, but we can quote on such bolts, either plain, galvanized, or sherardized. Please give length of through bolts required. We can furnish all sizes of pipe pins for pole top or cross-arm, such as 2 inch, 2½ inch, and 3 inch standard and extra heavy. Prices made on application.

List	A	В	Ç	D	E	K	inches inches		Apprx. Wt. per Diam. and Leng of Bolt, inches		List per	Price 100
No.	inches	inches	inches	inches	inches	inches	inches	100 lbs.	Upper	Lower	Plain	Galv'd
9600 9601 9602 9603 9604 9605	11/8 11/8 11/8 11/8 11/8 11/8	2 2 2 2 2 2	61/4 71/2 9 11 13 15	3 3 3 3 3 3	9 11 13 <sup>1</sup> / <sub>4</sub> 16 <sup>1</sup> / <sub>4</sub> 19 22 <sup>1</sup> / <sub>2</sub>	1 1 1 <sup>1</sup> / <sub>4</sub> 1 <sup>1</sup> / <sub>4</sub> 1 <sup>1</sup> / <sub>2</sub> 1 <sup>1</sup> / <sub>2</sub>	21/4 21/2 23/4 3 31/2	460 475 580 670 760 880	1/2 x 11 5/8 x 11 1/2 5/8 x 11 1/2 5/8 x 11 1/2 5/8 x 11 1/2 5/8 x 11 1/2 3/4 x 11 1/2	1/2 x 9 1/2 x 9 1/2 x 9 1/2 x 9 1/2 x 9 1/2 x 9 1/2 x 9	\$132.00 138.00 156.00 180.00 200.00 228.00	\$144.00 142.00 168.00 200.00 226.00 258.00

Delivery F. O. B. Factory, East Liverpool, O. For warehouse deliveries write nearest house.

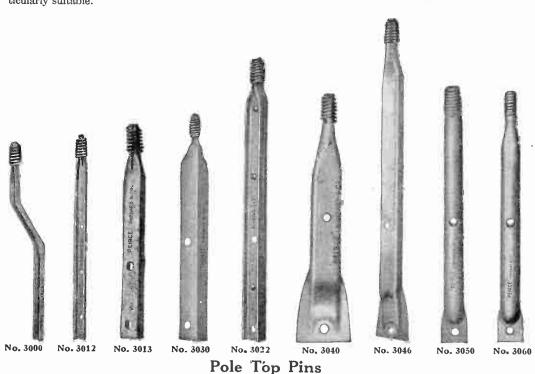
# POLE TOP PINS

### HOT GALVANIZED

Pins Nos. 3000 to 3012 inclusive have  $\frac{7}{16}$  inch bolt holes, all other pins  $\frac{11}{16}$  inch holes. The pipe pins are superceding cast and malleable iron pins for high voltage work, as they are lighter,

stronger and cheaper.

The Presteel pins are useful on lighter lines, and for 6600 and 11,000 volt work the No. 3013 pin is particularly suitable.



### Pole Top Pins PIPE PINS

Tink	D:			IFE FINS			
List	Dimens	sions in Inc					
Stock	C: Charl	r . Ia	Spacing	Style of			Price
No.	Size Steel	Length	Between Hole		Wt. Lbs.	Each	Per 100
3050	1¼ pipe	18	8	138 in. spring	336	\$1.30	\$112.80
3052	1¼ pipe	24	8	138 in. spring	448	1.64	142.88
3054	1¼ pipe	36	10	13/8 in. spring	672	2.31	201.16
3060	1½ pipe 1¼ pipe	18	8	1 <sub>32</sub> in. thimble	336	1.40	122.20
3062	1¼ pipe	24	8	$1_{\frac{7}{32}}$ in. thimble	448	1.75	152.28
3064	$1\frac{1}{4}$ pipe	36	10	1 32 in. thimble	672	2.40	210.56
			ANGLE	STEEL PINS			•
3030	$2 \times 2 \times \frac{3}{16}$ angle	18	8	1 in. spring	366	\$1.18	\$103.40
3031	$2 \times 2 \times \frac{3}{16}$ angle	24	8	1 in. spring	488	1.58	137.24
3033	$2 \times 2 \times \frac{3}{16}$ angle	36	10	1 in. spring	732	1.88	163.56
			PRES	TEEL PINS			
3040	10 gauge	18	8	in. spring thread	227	\$0.97	\$80.10
3041	10 gauge	18		135 in. spring thread	230	.97	80.10
3042	10 gauge	18	8	3; in. thimble	227	1.08	89.00
3043	10 gauge	18	8 8 8	1 % in, thimble	230	1.08	89.00
3045	10 gauge	24	8	1 in. spring thread	303	1.32	108.58
3046	10 gauge	24	8	133 in spring thread	305	1.32	108.58
3047	10 gauge	24	8	in. thimble	303	1.43	117.48
3048	10 gauge	24	8	13 in. thimble	305	1.43	117.48
			СНА	NNEL PINS			
<b>3</b> 00 <b>0</b>	1 x 1/2 channel	18	4	1	140	\$0.64	\$56.96
3010	1 x ½ channel	12	4	1	74	.38	33.82
3012	1 x ½ channel	18	4	1	140	.64	56.96
3013	1½ x ¾ channel	15	4	1	163	.52	45.12
3020	134 x 5/8 channel	18	8	$1\bar{3}_{8}$	369	1.43	124.08
3022	134 x 5/8 channel	25	8	13%	480	1.81	154.16
3023	1¾ x 5/8 channel	36	10	138	725	2.50	208.08
D	elivery F. O. B. Fac	tory Ditt	abunah D.	For warehouse deliverie			

HIGH INSULATION ERACKETS 3 Inch Extension



List

No.

1018

1028

1019

1029

1058

1018G

1028G

1019G

1029G

1058G



Gray Iron Short Wall Bracket...



No. 1019



o. 1029	1
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1.11

Shipping -\*List Price-Weight Without Insertion With Insertion per 100 Each Per 100 Each Per 100 \$0.47 \$42.66 210 \$0.44 \$40.00 Galvanized Gray Iron Short Wall Bracket..... 215 .74 69.34 66.66 .76 Gray Iron Curved-back Pole Bracket..... 210 44 40.0047 42.66 Galvanized Gray Iron Curved-back Pole Bracket.
Gray Iron Short Wall Bracket.
Galvanized Gray Iron Short Wall Bracket.  $\overline{215}$ .74 66.66 .7669.34 215 51 45.34 .56 50.66 220 .83 74.60.85 77.20Gray Iron Heavy Wall Bracket.
Gray Iron Heavy Wall Bracket.
Gray Iron Heavy Curved-back Pole Bracket. .67 61.20 285 65 58 60 290 93.20 1.021.06 96.00 290 .65 58.60 .67 61.20





Galv. Gray Iron Heavy Curved-back Pole Bracket . . . . .

Description



295



No. 2070

1.14

104.00

101.20

No. 2016 No. 1071

Shipping -\*List Price List Weight Without Insertion With Insertion No. Description per 100 Each Per 100 Each Per 100 1020 Short Malleable Wall Bracket . . 85 \$0.26 \$24.00 \$0.30 \$26.60 1020G Galvanized Short Malleable Wall Bracket ..... 90 .41  $\frac{37.20}{32.00}$ 40.00 .44 Short Malleable Wall Bracket.
Galvanized Short Malleable Wall Bracket. 2016 100 35 37.20 .41 2016G 105 .47 42 60 .53 48.00Short Malleable Wall Bracket ..... 1071 85 35 32.00.41  $\frac{37.20}{53.20}$ 1071G Galvanized Short Malleable Wall Bracket..... 90 .5650 60 .58 Malleable Curved-back Pole Bracket..... .42 2070 120 .41 37.20 38.50 Galvanized Malleable Curved-back Pole Bracket..... 125 2070G .51 48.00 .56 50.60 Note: When ordering, specify finish desired and state whether with or without insertion

#### MALLEABLE IRON, WOOD THIMBLE





No. 1075

No.	3038

		Shipping		*List	Price	
List		Weight	Without	Insertion	With In	nsertion
No.	Description	per 100	Each	Per 100	Each	Per 100
1074	Malleable Wall Bracket, with paraffined oak head	85	\$0.35	\$32.00		
1074G	Galvanized Wall Bracket, with paraffined oak head	90	. 47	42.60		
1075	Malleable Wall Bracket, with locust head	85	. 41			
1075G	Galvanized Wall Bracket, with locust head		.56	50.60		
3038	Malleable Wall Bracket, with oak head		.41	37.20		
3038G	Galvanized Wall Bracket, with oak head	145	. 58	53.20		
497	O. P. D. 4 O. Fr 1 11' :	. 1 .				

# Wall Brackets

6 inch extension



No. 1007



No. 2008



Nos. 2006 and 2007



No. 2010

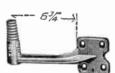
List		Shipping.		—— *List	Price	
		Weight	Without	Insertion		sertion
No.	Description	per 100	Each	Per 100		Per 100
1007	Gray Iron Wall Bracket, japanned	225	\$0.50	\$45.20	\$0.56	\$50.60
1007G	Galvanized Gray Iron Wall Bracket	230	.83	74.60	.85	77.20
200a	Gray from Wall Bracket, innanned	99 5	.58	53.20	.65	58.60
2000G	Galvanized Gray Iron Wall Bracket	230	.88	80.00		85.20
2000	Gray from Wall Bracket, for 14 in hin	280	.56	F 0 110		
2000G	Galvanized Grav Iron Wall Bracket for 11/2 in nin	262	.97			
2007	Gray Iron Wall Bracket, for 11% in hin	300	.56	50.60		
2007 G	Galvanized Grav Iron Wall Bracket for 11% in him	205	. 97	88.00		
2010	Gray Iron Wall Bracket, for 11/6 in hin	300	. 58	53.20		
2010G	Galvanized Gray Iron Wall Bracket, for 11/2 in. pin	305	. 97	88.00		



No. 1038



No. 1039



No. 1012



No. 1011

List		Shipping.		——*List	Price——	
		Weight	Without	Insertion	With Ir	sertion
No.	Description	per 100	Each	Per 100	Each	
1038	Malleable Wall Bracket	100				
	Calconic 3 M-11 11 Try v	180	\$0.53	\$48.00	\$0.56	\$50.60
10000	Galvanized Malleable Wall Bracket.	190	.76	69.20	.79	72.00
1099	Walleable Wall Bracket	175		50.60		
1039G	Galvanized Malleable Wall Bracket	170			.58	53.20
1011	Charles I - to a 1 D	185	.83	74.60	.88	80.00
1011	Gray Iron Lateral Bracket, right.	310	.65	58.60	.67	61.20
10110	Ualvanized Grav Iron Lateral Kracket right	205		101.20		
1012	Gray Iron Lateral Bracket, left.	020			1.14	104.00
10100	California Control Macket, left,	310	.65	58,60	.67	61.20
1012G	Galvanized Gray Iron Lateral Bracket, left	325	1.11	101.20		104.00
			- /	- 0 - 1 - 0		1071.00



No.2018



No. 2019



No. 1022 Patented



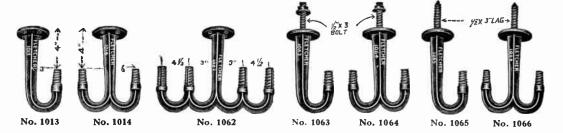
# Wall Brackets

10 Inch Extension

	10 Inch Extension							
List No. 2018 2018G 2019 2019G	Description  Gray Iron Wall Bracket, japanned. Galvanized Gray Iron Wall Bracket. Gray Iron Wall Bracket, japanned. Galvanized Gray Iron Wall Bracket.	Weight per 100 520 545	Each \$1.02 1.76 1.02	*List Insertion Per 100 \$93.34 160.00 93.34 154.66	With I	nsertion Per 100 \$96.00 162.66 96.00 160.00		
	Malleable Drive Brackets							
1022 1022G 1023 1023G	Malleable Drive Bracket. Galvanized Malleable Drive Bracket. Malleable Drive Bracket. Galvanized Malleable Drive Bracket.	95	\$0.35 .47 .35 .47	\$32.00 42.60 32.00 42.60	\$0.41 .53 .41 .53	\$37.20 48.00 37.20 48.00		

### Ceiling Brackets

4 Inch Drop, 6 Inch Spread



		Shipping		*List	Price	
List		Weight	Without	Insertion	With I	nsertion
No.	Description	per 100	Each	Per 100	Each	Per 100
1013	Gray Iron Single Ceiling Bracket, japanned	300	\$0.74	\$66.60	\$0.76	\$69.20
1013G	Galvanized Gray Iron Single Ceiling Bracket	315	1.14	104.00	1.20	109.20
1014	Gray Iron Double Ceiling Bracket, japanned	350	.85	77.20	.94	85.20
1014G	Galvanized Gray Iron Double Ceiling Bracket	365	1.35	122.60	1.44	130.60
1062	Gray Iron Four-wire Ceiling Bracket, japanned	545	1.62	146.60	1.79	162.60
1062G	Galvanized Gray Iron Four-wire Ceiling Bracket	570	2.38	216.00	2.55	232.00
1063	Gray Iron Single Ceiling Bracket, japanned	310	.74	66.60	.76	69.20
1063G	Galvanized Gray Iron Single Ceiling Bracket	325	1.14	104.00	1.20	109.20
1064	Gray Iron Double Ceiling Bracket	360	.85	77.20	.94	85.20
1064G	Galvanized Gray Iron Double Ceiling Bracket	375	1.35	122.60	1.44	130.60
1065	Gray Iron Single Ceiling Bracket, japanned	270	.74	66.60	.76	69.20
1065 <b>G</b>	Galvanized Gray Iron Single Ceiling Bracket	285	1.14	104.00	1.20	109.20
1066	Gray Iron Double Ceiling Bracket	360	.85	77.20	.94	85.20
1066G	Galvanized Gray Iron Double Ceiling Bracket	380	1.35	122.60	1.44	130.60

Note: When ordering, specify finish desired and state whether with or without insertion.

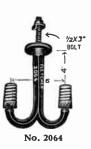
### 4 Inch Drop, 6 Inch Spread

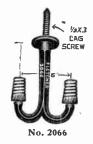
#### With Wood Thimbles

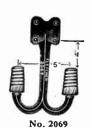






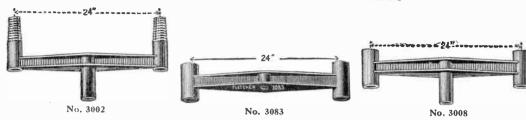






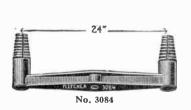
List		Shipping Weight	—*List	Price-
No.	Description	per 100	Each	Per 100
2063	Malleable Single Ceiling Bracket	250	\$0.83	\$74.60
2063G	Galvanized Malleable Single Ceiling Bracket	255	1.06	96.00
2065	Malleable Single Ceiling Bracket	250	.83	74.60
2065G	Galvanized Malleable Single Ceiling Bracket	255	1.06	96.00
2068	Malleable Single Pendant Bracket	275	.83	74.60
2068G	Galvanized Malleable Single Pendant Bracket	280	1.06	96.00
2064	Malleable Double Ceiling Bracket	350	.91	82.60
2064G	Galvanized Malleable Double Ceiling Bracket	355	1.20	109.20
2066	Malleable Double Ceiling Bracket	350	.91	82.60
2066G	Galvanized Malleable Double Ceiling Bracket.	355	1.20	109.20
2069	Malleable Double Pendant Bracket	340	.91	82.60
2069G	Galvanized Malleable Double Pendant Bracket	345	1.20	109.20
4				

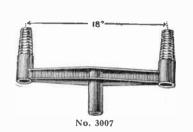
# FLETCHER IRON BREAK-ARMS



# Iron Break-arms

T 1-4						_	−*List Pric	ce Each—
List				For		Weight	Without	With
No.		Spread	Stem	Pins	Finish	per 100	Insertion	Insertion
3002	Gray Iron Break-arm	18 ins.	$1\frac{1}{2}$ ins.		Jap.	820	\$1.44	\$1.53
3002G	Gray Iron Break-arm	18 ins.	$1\frac{1}{2}$ ins.		Galv.	860	2.55	2.64
3083	Gray Iron Break-arm	24 ins.	Use ½ in, bolt	1½ ins.	Jan.	1040	$\frac{1}{2}.00$	
3083G	Gray Iron Break-arm	24 ins.	Use 1/2 in, bolt	$1\frac{1}{2}$ ins.	Galv.	1090	3.48	
3008	Gray Iron Break-arm	24 ins.	1 1/2 ins.	$1\frac{1}{2}$ ins.	Jap.	1100	2.00	
3008G	Gray Iron Break-arm	24 ins.	$1\frac{1}{2}$ ins.	$1\frac{1}{2}$ ins.	Galv.	1155	3.48	
				-				







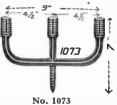
### Iron Break-arms

						-	—*List Pri	ce Each—
List				For		Weight	Without	With
No.		Spread	Stem	Pin	Finish	per 100	Insertion	Insertion
3084	Gray Iron Break-arm	24 ins.	Use ½ in. bolt		Jap.	1000	\$1.88	\$1.97
3084G	Gray Iron Break-arm	24 ins.	Use ½ in. bolt		Galv.	1050	3.43	3.52
3007	Gray Iron Break-arm	24 ins.	$1\frac{1}{2}$ ins.		Jap.	1080	1.88	1.97
3007G	Gray Iron Break-arm	24 ins.	$1\frac{1}{2}$ ins.		Galv.	1130	3.30	3.39
1035	Gray Iron Break-arm	12 ins.	15 in. arms		Jap.	815	1.62	1.71
1035G	Gray Iron Break-arm	12 ins.	15 in. arms		Galv.	855	2.55	2.64
							6	









# Malleable Screw Pins and Brackets

		Shipping.		*List	Price	
List		Weight	Withou	t Insertion	With I	nsertion
No.	Description	per 100	Each	Per 100	Each	Per 100
1025	Malleable Screw Bracket	85	\$0.35	\$32.00	\$0.41	\$37.20
1025G	Galvanized Malleable Screw Bracket	90	.44	40.00	.47	42.60
1026	Malleable Screw Pin	65	.26	24.00	.32	29.20
1026G	Galvanized Malleable Screw Pin	70	.41	37.20	.44	40.00
1072	Two-wire Malleable Screw Bracket	120	. 53	48.00	.58	53.20
1072G	Galvanized Two-wire Malleable Screw Bracket	125	.67	61.20	.79	72.00
1073	Three-wire Malleable Screw Bracket	165	.79	72.00	.88	80.00
1073G	Galvanized Three-wire Malleable Screw Bracket	170	1.06	96.00	1.14	104.00

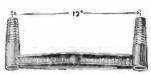
### FLETCHER IRON BREAK-ARMS



Nos. 1080 and 1081



Nos. 1001, 1031, 1033 and 1034



No. 1082

### Iron Break-arms

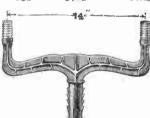
List				For		Weight	—*List Pr Without	ice Each— With
No.		Spread	Stem	Pins	Finish	per 100	Insertion	Insertion
1080	Gray iron	12 ins.		$1\frac{1}{4}$ ins.	Jap.	500	\$1.14	
1080G	Gray iron	12 ins.		$1\frac{1}{4}$ ins.	Galv.	525	1.90	
1081	Gray iron	12 ins.		$1 \frac{1}{2}$ ins.	Jap.	525	1.14	
1081G	Gray iron	12 ins.		$1\frac{1}{2}$ ins.	Galv.	535	1.90	
1001	Gray iron	12 ins.	$1\frac{1}{2}$ ins.	$1\frac{1}{2}$ ins.	Jap.	645	1.14	
1001G	Gray iron	12 ins.	$1\frac{1}{2}$ ins.	$1\frac{1}{2}$ ins.	Galv.	<b>67</b> )	2.06	
1031	Gray iron	12 ins.	114 ins.	$1\frac{1}{4}$ ins.	$\mathbf{Jap}.$	525	1.14	
1031G	Gray iron	12 ins.	114 ins.	$1\frac{1}{4}$ ins.	Galv.	550	1.90	
1033	Gray iron	12 ins.	$1^{1}_{2}$ ins.	$1\frac{1}{4}$ ins.	Jap.	565	1.14	
1033G	Gray iron	12 ins.	$1\frac{1}{2}$ ins.	$1\frac{1}{4}$ ins.	Galv.	595	1.97	
1034	Gray iron	12 ins.	114 ins.	1½ ins.	Jap.	665	1.14	
1034G	Gray iron	12 ins.	$1\frac{1}{4}$ ins.	$1\frac{1}{2}$ ins.	Galv.	695	2.08	
1082	Gray iron	12 ins.	Use 11/2	in. bolt	Jap.	510	1.11	\$1.14
1082G	Gray iron	12 ins.	Use 11/2	in. bolt	Galv.	535	1.82	1.88



Nos. 1002 and 1032



No. 2001



No. 2002

### Iron Break-arms

002	Gray iron	12 ins.	$1\frac{1}{2}$ ins.		Jap.	565	\$1.11	\$1.14
1002G	Gray iron	12 ins.	$1\frac{1}{2}$ ins.		Galv.	595	1.82	1.90
1032	Gray iron	12 ins.	$1\frac{1}{4}$ ins.		Jap.	580	1.11	1.14
1032G	Gray iron	12 ins.	$1\frac{1}{4}$ ins.		Galv.	610	1.82	1.90
2001	Malleable iron	14 ins.		$1\frac{1}{2}$ ins.	Jap.	440	1.06	
2001G	Malleable iron	14 ins.		$1\frac{1}{2}$ ins.	Galv.	460	1.67	
2002	Malleable iron	14 ins.			Jan.	420	1.02	1.06
2002G	Malleable iron	14 ins.			Galv.	440	1.50	1.58



Nos. 3080 and 3081



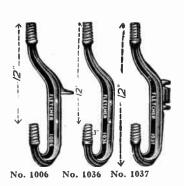
Nos. 3001, 3005 and 3010

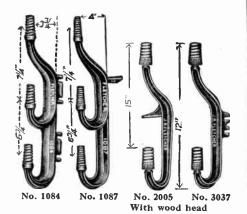


No. 3009

#### Iron Break-arms

		11	on brea	an-artiis	•			
3080	Gray iron	18 ins.		$1\frac{1}{4}$ ins.	Jap.	685	\$1.53	
3080G	Gray iron	18 ins.		11/4 ins.	Galv.	720	2.46	
3081	Gray iron	18 ins.		$1\frac{1}{2}$ ins.	Jap.	660	1.53	
3081G	Gray iron	18 ins.		$1\frac{1}{2}$ ins.	Galv.	690	2.46	
3001	Gray iron	18 ins.	$1\frac{1}{2}$ ins.	1/2 ins.	Jap.	830	1.53	
3001G	Gray iron	18 ins.	$1\frac{1}{2}$ ins.	$1\frac{1}{2}$ ins.	Galv.	870	2.63	
3005	Gray iron	18 ins.	$1\frac{1}{4}$ ins.	$1\frac{1}{4}$ ins.	Jap.	750	1.53	
3005G	Gray iron	18 ins.	$1\frac{1}{4}$ ins.	$1\frac{1}{4}$ ins.	Galv.	785	2.55	
3010	Gray iron	18 ins.	11/4 ins.	114 ins.	Jap.	750	1.53	
3010G	Gray iron	18 ins.	$1\frac{1}{4}$ ins.	114 ins.	Galv.	785	2.55	
3009	Gray iron	18 ins.	Use 12	in. bolt	Jap.	685	1.44	\$1.53
3009G	Gray iron	18 ins.	Use ½	in. bolt	Galv.	<b>72</b> 0	2.38	2.46





# Spreader Brackets

12 Inch Spread

				*List	Price	
List		Weight	Without	Insertion	With I	nsertion
No.	Description	per 100	Each	Per 100	Each	Per 100
1006	Gray Iron Spreader Bracket, forward	600	\$1.12	102.00	\$1.14	\$104.00
1006G	Galvanized Gray Iron Spreader Bracket, forward	630	1.88	170.60	1.97	178.60
1036	Gray Iron Spreader Bracket, forward	460	1.12	102.00	1.14	104.00
1036G	Galvanized Gray Iron Spreader Bracket, forward	485	1.79	162.60	1.88	170.60
1037	Gray Iron Spreader Bracket, forward	475	1.12	102.00	1.14	104.00
1037G	Galvanized Gray Iron Spreader Bracket forward	500	1.79	162.60	1.88	170.60
1084	Gray Iron Three-wire Spreader Bracket, forward	780	1.62	146.60	1.73	157.20
1084G	Galvanized Gray Iron Three-wire Spreader Bracket,					
	forward	820	2.73	248.00	2.85	258.60
1087	Gray Iron Three-wire Spreader Bracket, forward	800	1.62	146.00	1.73	157.20
1087G	Galvanized Gray Iron Three-wire Spreader Bracket,					
	forward	840	3.01	274.00	3.12	284.00
2005	Malleable Spreader Bracket, right	360	.94	85.20		
3037	Malleable Spreader Bracket, forward	360	.83	74.60		







Nos. 2027 and 2028



No. 2017 Malleable Iron

### Corner Brackets

		Shipping		*List	Price	
List		Weight	Without	Insertion	With Ir	sertion
No.	Description	per 100	Each	Per 100	Each	Per 100
1027	Gray Iron Corner Bracket, japanned	260	\$0.83	\$74.60	\$0.85	\$77.20
1027G	Galvanized Gray Iron Corner Bracket	270	1.23	112.00	1.29	117.20
2027	Gray Iron Corner Bracket, for 1½ in. pin	310	.94	85.20		
2027G	Galv. Gray Iron Corner Bracket, for 1½ in. pin	325	1.53	138.60		
2028	Gray Iron Corner Bracket, for 1¼ in. pin	300	.94	85.20		
2028G	Galv. Gray Iron Corner Bracket, for 11/4 in. pin	315	1.53	138.60		
2017	Malleable Corner Bracket	205	. 56	50.60	.58	52.60
2017G	Galvanized Malleable Corner Bracket	215	.83	74.60	.88	80.00

Note: When ordering, specify finish desired and state whether with or without insertion \*F.O. B Dayton, O. For warehouse deliveries, write nearest house.

# FLETCHER PINS AND BRACKETS



GREY



IRON 80

No. 997







No. 918 Nos. 994, 995 and 996 2094, 2095 and 2096

No. 998

No. 1021

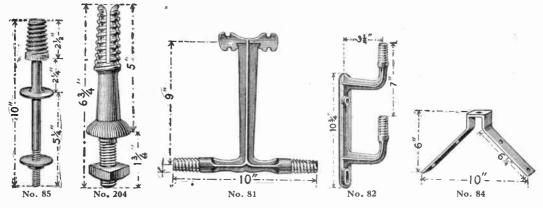
# Pole Top Material

_53		Shipping		*List	Price	
List No.	Description	Weight	Without	t Insertion	With	Insertion
370	Description	per 100	Each	Per 100	Each	Per 100
918	Gray Iron Pole Top Bracket	265	\$0.74	\$66.66	\$0.76	\$69.34
	Galvanized Gray Iron Pole Top Bracket	280	1.14	104.00	1.20	109.34
994	Gray Iron Pole Top Bracket, for 8 in. pole, 1 in.					
0040	head		1.11	101.34	1.14	104.00
994G	Galvanized Gray Iron Pole Top Bracket, for 8 in.					
005	pole, 1 in. head	630	1.96	178.66	1.99	181.34
995	Gray Iron Pole Top Bracket, for 6 in. pole, 1 in.					
0050	head	500	1.11	101.34	1.14	104.00
995G	Galvanized Gray Iron Pole Top Bracket, for 6 in.		4 00			
996	pole, 1 in. head	525	1.82	165.34	1.88	170.66
990	Gray Iron Pole Top Bracket, for 7 in. pole, 1 in.					
0060	headGalvanized Gray Iron Pole Top Bracket, for 7 in.	550	1.11	101.34	1.14	104.00
990G	pole, 1 in. head		1 0	100 00	4	
997	Gray Iron Ridge Bracket, 8 in. extension	575	1.87	170.00	1.90	173.20
	Galvanized Gray Iron Ridge Bracket, 8 in. extension	400	.85	77.20	.88	80.00
331 G	sion	420	1 49	190 20	1 50	100.00
998	Gray Iron Ridge Bracket, 4 in. extension	225	$\substack{1.43\\.47}$	$130.60 \\ 42.60$	1.50	136.00
	Galvanized Gray Iron Ridge Bracket, 4 in. exten-		.47	42.00	.50	45.20
0000	sion	235	.83	74.60	0=	77. 20
2094	Gray Iron Pole Top Bracket, for 8 in. pole, 13/8 in.		.00	74.00	.85	77.20
	head	700	1.29	117,20	1.32	120.00
2094G	Galvanized Gray Iron Pole Top Bracket, for 8 in.	100	1.20	114.20	1.02	120.00
	pole, 13% in. head	730	2.26	205.20	2.29	208.00
2095	Gray Iron Pole Top Bracket, for 6 in. pole, 13/8 in.	100	2.20	200.20	2.29	200,00
	head	600	1.29	117.20	1.32	120.00
2095G	Galvanized Gray Iron Pole Top Bracket, for 6 in.	000	1.20	111.20	1.02	120.00
	pole, 1% in. head	630	2.15	194,60	2.17	197,20
2096	Gray Iron Pole Top Bracket for 7 in. pole, 13% in.					104.20
	head	650	1.29	117.20	1.32	120.00
2096G	Galvanized Gray Iron Pole Top Bracket, for 7 in.					120.177
	pole, 13/8 in. head	680	2.17	197.20	$^{2.20}$	200.00
1021	Gray Iron Ridge Bracket, japanned	80	.26	24.00	.30	26.66
1021G	Galvanized Gray Iron Ridge Bracket	85	.39	34.66	.41	37.34
1059	Gray Iron Single Prong Bracket, japanned	178	.44	40.00	.47	42.66
1059G	Galvanized Gray Iron Single Prong Bracket	190	.67	61.34	.73	66.66

Note: When ordering, specify finish desired and state whether with or without insertion.

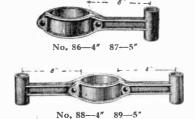
<sup>\*</sup>F. O B. Dayton, O. For warehouse deliveries write nearest house.

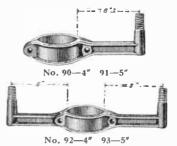
### FLETCHER IRON BRACKETS AND PINS



### Malleable Iron Pins and Brackets

		Shipping		*List	Price	
List	Mfr.	Weight	Without	Insertion	With I	nsertion
No.	No. Description	per 100	Each	Per 100	Each	Per 100
85	Malleable Iron Pin, with oak head, 1 in		\$0.32	\$29.20		
85G	Galvanized Iron Pin, with oak head, 1 in		.41	37.20		
204	Mal. Iron Pin, for bolting to iron plate, 1 in. hea	d 120	.35	32.00	\$0.41	\$37.20
204G	Galv. Iron Pin, for bolting to iron plate, 1 in. hea	d 120	.58	53.20	.63	58.60
81	Malleable Iron Ceiling Bracket, 1 in. hcad	275	.72	64.00	.79	72.00
81G	Galvanized Iron Ceiling Bracket, 1 in. head	275	1.05	96.00	1.14	104.00
82	Malleable Iron Bracket, 1 in. head		.79	72.00	.83	74.60
82G	Galvanized Iron Bracket, 1 in. head		1.14	104.00	1.20	109.20
83	Malleable Iron Bracket, 1 in. head	425	1.25	114.60	1.39	126.00
83G	Galvanized Iron Bracket, 1 in. head		1.71	154.60	1.82	165.20
84	Mal. Iron Corner Bracket, for Nos. 82 and 83.		.26	24.00		
84G	Galv. Iron Corner Bracket, for Nos. 82 and 83		.41	37.20		





# Gray Iron Brackets

For Iron Poles Shipping \*List Price List Mfr. Weight Without Insertion With Insertion No. No. Description Per 100 per 100 Each Per 100 Each \$1.35 \$122.60 86 Gray Iron Bracket, 4 in. dia., single..... 750 86G Galv. Iron Bracket, 4 in. dia., single..... 750 2.34213.20 87 Gray Iron Bracket, 5 in. dia., single..... 850 1.53 138,60 157.20 87G Galv. Iron Bracket, 5 in. dia., single..... 1.73 850 181.20 88 Gray Iron Bracket, 4 in. dia., double..... 1000 1.99 Galv. Iron Bracket, 4 in. dia., double.
Gray Iron Bracket, 5 in. dia., double.
Galv. Iron Bracket, 5 in. dia., double. 88G 312.00 1000 3.4389 1050 2.06186,60 89G 1050 3.48 316,00 Gray Iron Bracket, 4 in. dia., single, 1 in. head.... Galv. Iron Bracket, 4 in. dia., single, 1 in. head.... Gray Iron Bracket, 5 in. dia., single, 1 in. head.... \$122.66 \$1.35 90 700 1.32 120.00  $\frac{2.29}{1.50}$ 2.2690G 700 205.20208.00 1.44 91 800 130.60 136,00 91G Galv. Iron Bracket, 5 in. dia., single, 1 in. head.... 800 2.55232.00 2.59 234,60 92 Gray Iron Bracket, 4 in. dia., double, 1 in. head. 900
92G Galv. Iron Bracket, 4 in. dia., double, 1 in. head. 900
93 Gray Iron Bracket, 5 in. dia., double, 1 in. head. 1000
93G Galv. Iron Bracket, 5 in. dia., double, 1 in. head. 1000 1.62 146.601.71 154.602.67  $242.60 \\ 165.20$ 2.76 250.601.82 1.87 170.402.76 350.60 2.85 258,60

# PEIRCE WALL BRACKETS AND CORNER IRON











				Peirce W	all Brack	ate	2.00		AND THE PERSON NAMED IN
T 7.4		re-					No.	305	No. 306
List		Dize	Size	Width	Wire	Std.	Wt., Lbs.	Lis	t Price-
No.	Ext.	Channe	l Holes	Back	Spacing	Bundle	per 100	Each	
234	31/2 in	3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	9						Per 100
			9 in.	U	8 ins.	25	90	\$0.42	<b>\$</b> 35,70
236	3½ in	s. 1 in	32 in.	0	10 ins.	25	143		
204	100	40.00	0.4	V3.1411/01				. 49	42.00
	9 III	s. % in.	16 In.	316 ins.	$6\frac{1}{2}$ ins.	20	160	.57	48.30
205	3 in	s. I in	in.	3½ ins.	9 ins.	20	175	.62	52.50
206	2 in	s. 1 in	5						
	o m	s. lin	16 In.	3 ½ ms.	9 ms.	20	225	.96	81.90
305	3 in	s. 4 in.	55 in.	31% ins.	$6\frac{1}{2}$ ins.	20	260	.91	77.70
306	9	0 1 1	5						
900	3 in		16 In.	$3\frac{1}{2}$ ins.	$6\frac{1}{2}$ ins.	10	330	1.48	126.00
	No. 234	bracket for	telephone	wires and p	ony insulators	only		etulos one	

All other styles are for deepgrooved double petticoat insulators. They are made from hearth steel channel and angle which under severe strains will bend but will not break and lct the wires down.



315

316









.26

22.48

18.20

105

No. 150 Wall Brackets

No. 342 No. 242			242 4 C1	rence wan brackets				No. 214		
List		Size	Size.	Size	Wire		3371 T.1	No. 31		
	71 .					Std.	Wt., Lbs.	——List	Price-	
No.	Ext.	Base	Channe	l Holes	Spacing	Bundle	per 100	Each	per 100	
342	' 3 ins.	0	3/4 in.	$\frac{5}{16}$ in.	6 1/2 ins.	20	261			
242		0		20.	0/2 1113			<b>\$</b> 0,98	\$84.00	
	3 ins.		3/4 in.		9 ins.	20	186	.66	56.70	
145	$3\frac{1}{2}$ ins.	3 x 2 ii	ns. ¾ in.	$\frac{5}{16}$ in.	0	25	56	.24	19.80	
146	$4\frac{1}{2}$ ins.	31/2 x 2 in	ns. Ī in.	7,0	ñ					
		072 4 2 1		$\frac{\delta}{16}$ in.	U	25	100	.36	35.70	
150	$3\frac{1}{2}$ ins.	0	3/4 in.	15 in.	0	25	74	.32	27.30	
		1	Rracket		and Cam			.00	41.00	

and Corner Iron List Size Width Spread Std. Wt., Lbs. - List Price-No. Ext. Channel Holes of Base Bundle per 100 Each Per 100  $4\frac{3}{6}$  ins.  $1 \times \frac{3}{6}$  in.  $\frac{5}{16}$  in.  $10\frac{3}{6}$  ins. 20 ins. 85 \$0.30 \$25.20 For use with Nos. 204, 205, 206, 305, 306 wall brackets. Makes brackets extend 8 inches from wall to 500 get around obstructions such as rain conductors. May also be used on corners. Furnished complete with

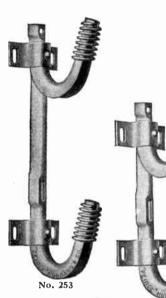
Peirce Prussian Hook Brackets two stove bolts.

Is made of two sizes of square steel, ½ and ½ inch, and of ½ inch round, with Peirce steel spring threads for insulators with 1 inch diameter pin holes. The bracket is 6½ inches long, with a lag screw threaded end 3 inches long. Size Steel Wt., Lbs. \*List Price List No. Inches per 100 per 100 Each 314 5/8 Square 130 \$0.36 **\$**31.04

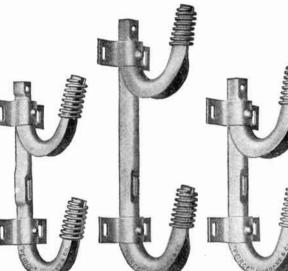
1/2 Square 1/2 Round 90 .21 \*Delivery F. O. B. Factory, Pittsburg, Pa. For warehouse deliveries write nearest house.







No. 253½



No. 254







Peirce Presteel Brackets are hot galvanized and this coating preserves their original strength. They won't rust or break. Excessive strains may bend them but they will never break and let the wires down.

List		Extension		Size of	Standard	Weight	—List	Price
No.	Style	Inches	Spacing	Hole	Bundle	per 100	Each	Per 100
136	Light	4	0	32	25	60	\$0.22	\$18.90
137	Heavy	$4\frac{1}{2}$	O	3/8	25	100	. 42	35.70
138	Heavy	$4\frac{1}{2}$	O	3/8	25	100	.42	35.70
153	Light	4	O	32	25	75	. 25	21.00
154	Heavy	$4\frac{1}{2}$	O	$\frac{5}{16}$	25	100	.37	31.50
253	Light	4	9	$\frac{5}{16}$	20	188	.64	54.60
$253\frac{1}{2}$	Light	4	$6\frac{1}{2}$	5 16	20	175	.60	52.50
254	Heavy	$4\frac{1}{2}$	9	5	20	244	.86	73.50
$254\frac{1}{2}$	Heavy	$4\frac{1}{2}$	61/2	.5_ 16	20	235	.80	69.30
353	Light	4	$6\frac{1}{2}$	.5 16	20	275	.93	79.80
354	Heavy	$4\frac{1}{2}$	$6\frac{1}{2}$	16	20	350	1.20	102.90

Delivery F. O. B. Factory, Pittsburgh, Pa. For warehouse deliveries write nearest house.

# PEIRCE BRACKETS AND BREAK ARMS

Hot Galvanized







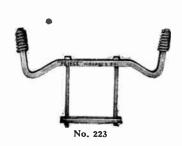


Peirce Spreader Brackets

Peirce Spreader Brackets fasten around the arm with the crossarm strap. The ends of straps fit in the long center slot of bracket.

List No.	Ext.	Spacing	Width of Back	Size Channel	Diam. Side Holes	Std. Bundle	Wt. Lbs.	Each	st Price————————————————————————————————————
$\frac{201}{202}$	4½ ins. 4½ ins.	10 ins. 12 ins.	$2\frac{1}{2}$ ins. $2\frac{1}{2}$ ins.	1 in. 1 in.	$\frac{7}{16}$ in.	10 10	290 375	\$1.23 1.33	\$105.00 113.40
$\frac{301}{302}$	$4\frac{1}{2}$ ins. $4\frac{1}{2}$ ins.	$6\frac{1}{2}$ ins. $6\frac{1}{2}$ ins.	$2\frac{1}{2}$ ins. $2\frac{1}{2}$ ins.	1 in. 1 in.	76 in. 716 in. 716 in.	10 10	390 450	$\frac{1.35}{1.75}$ $\frac{1.85}{1.85}$	149.10 157.50







# Peirce Break Arms

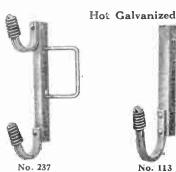
List No. 222 223 224 225	Spacing 9 ins. 12 ins. 12 ins. 10 ins.	Size Channel 34 in. 1 in. 1 in. 1 in.	Size Bolt 3/8 in. 3/8 in.	Std. Bundle 10 10 20 10	Wt. Lbs. 160 240 200 205	Each \$0.76 .93 .93	Per 100 \$65.10 79.80 79.80 81.90
---	--	---------------------------------------	------------------------------------	--	---	------------------------------	---

The Nos. 222, 223 and 225 break arms bolt around the arms and are adjustable to any size of arm between  $3\frac{1}{4} \times 4\frac{1}{4}$  ins. and  $4 \times 5$  ins. The No. 224 fits in  $1\frac{1}{2}$  in. pin hole.

<sup>\*</sup>F. O. B. Factory, Pittsburgh, Pa. For warehouse deliveries write nearest house.

### TRANSPOSITION BRACKETS











No. 114

.71

.81

\$46.20

60.90

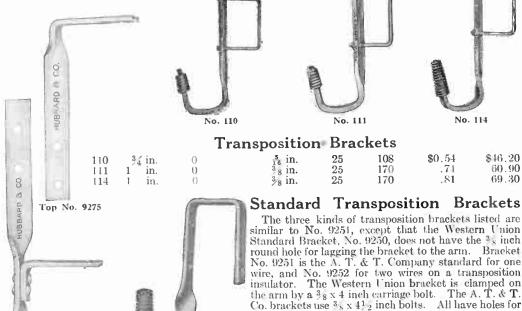
69.30

Brackets

Transposition Brackets

The brackets shown with "U" bolts are furnished with bolts bent for 314 x 4 inch arm unless otherwise specified, but can be furnished with bolts bent for any size up to 4 x 5 inches. The No. 115 Bracket bolts to the shank of a ½ inch steel pin below the arm and is held by the pin nut.

List	Size of	Size of	Size of	Std.	Wt. Lbs.	List	Price
No.	Channe!	Back	U Bolt	Bundle	Per 100	Each	Per 100
437	34 in.	134 ins.	3 s in.	10	400	\$1.72	\$147.00
237	3 in.	1 in.	3 g in.	20	201	.84	71.40
113	3 in.	114 ins.	0	25	156	.62	<b>5</b> 2. <b>5</b> 0
112	3 in.	1 in.	()	25	96	. 47	39.90
115	1 in.	()	()	25	135	.54	46.20



Co. brackets use 3 x 412 inch bolts. All have holes for 1/2 inch insulator pins. List Price Wt., Lbs. per 100 List Dimensions in Inches per 100 Galv. Steel Crossarm No.

235 \$67.80 9250  $1\frac{1}{4} \times \frac{5}{16}$ 3 x 4 9251 11/4 X 16 11/2 X 3/8 314 x 414 235 67.80 360 87.00 9252 314 x 414

The A. T. & T. Company standard transposition bracket for 4 wire transpositions with large, double petticoated porcelain insulators, such as are used on the transcontinental circuits, is fastened to the crossarin by two 16 x 43% inch machine bolts, spaced 23% inches apart, and has holes for 5% inch pins. The price by two 12 x 434 inch machine bolts, spaced 238 inches apart, and has holes for 58 inch pins. includes the two parts shown. the smaller of which projects above the arm, but no bolts or pins. \$204.00

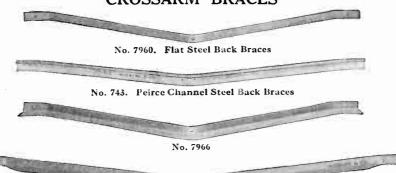
11/2 x 3/8 31/4 x 41/4 9275

Delivery F.O.B. Factory, Pittsburgh, Pa. For warehouse deliveries, write nearest house.

No. 9251

No. 9275

#### CROSSARM BRACES



No. 7969. Angle Steel Back Braces

#### Flat Steel Back Braces

These braces are used for back bracing crossarms at corners and terminal poles, and in many cases eliminate the necessity for double arming. They are made of three shapes of open hearth steel: flat, angle and channel, and are fastened to the crossarm by ½ inch carriage bolts, and to the pole by the ½ inch cross arm through bolt. The Peirce Channel Braces are stiffer than any other form of brace of the same weight. They are provided with two prongs at each bolt hole, which bite into the arm and pole, and prevent any lost motion between the arm, brace and bolt.

Nos. 7967 and 7969 are the A. T. & T. Co. standard braces.

ListNo.	Size Steel, Inches	Length, Feet	Weight, Lbs.	List Price Each
7960	112 x 38	6 ft.	1150	\$1.96

# Angle Steel Back Braces

List No. 740 741 742 713 744 745	Size Steel Inches  1	Length 5 ft. 6 ft. 5 ft. 6 ft. 8 ft. 9 ft. 2 ins.	Weight Lbs. 410 510 670 820 1060 1250	Price Each   80.85   1.04   1.19   1.38   1.84   1.94	List No. 746 7964 7965 7966 7967 7969	Size Steel Inches  134 x 55 x 14  142 x 142 x 14  142 x 142 x 14  142 x 142 x 14  134 x 14 x 15	Length 4 ft. 4 ft. 5 ft. 6 ft. 7 ft. 10 ins. 9 ft. 2 ins.	Weight Lbs. 420 512 635 1100 1650 1935	Price Each \$1.04 1.19 1.40 2.04 2.69 3.35	
---	----------------------	---	--	---	--	---	---	---	---	--



No. 7994 Vertical Brace

#### Flat Crossarm Braces

The standard crossarm brace of the National Electric Light Association is the ½ x 1½ inch brace, 28 inches long over all, with one & inch hole and one & inch hole, the centers of which are one in h from the ends of the brace. This arrangement of holes is also standard with the A. T. & T. Company and the Western Union Telegraph Company, and will be furnished on all orders unless otherwise specified, although the Railway Signal Association brace with ½ and ½ inch, holes similarly arranged, or any other desired combination, can be supplied. Hot galvanized or plain.

1 INCH	Y .1.	INCH	BRACES

List No. 7920 7922	Length Inches 20 22	Weight Lbs. per 1000 1000 1100	List Price Galvanized per 100 No. \$18.60 20.60 7924	Length Inches 24	Lbs. per 1000 1200	Galvanized per 100 \$22.50
			INCH X 3 INCH BRA	ACES		
8020	20	1420	\$24.50   8026	26	1840	\$31.80
8022	22	1560	26.90 8028	26	1840	36.60
8024	24	1700	29.30   8030	30	2120	36.60
		;	14 INCH X 14 INCH BR.	ACES		
8120	20	1670	\$28.40 11 8126	26	2165	\$37.40
8122	22	1835	31.60   8128	28	2335	40.20
8124	24	2000	34.50   8130	30	2500	43.10
			VERTICAL BRACES			

	Dimension	ons in Inches-			-	— Per 100	
List		Length		No. of	Weight	——List Pr	ice
No.	Size Angle	Over All	Spacing	Arms	Lbs.	Plain	Galv.
7990	112 x 112 x 3	16	12	2	240	\$51.56	\$68.76
7991	11. x 1 2 x 3	28	12	3	420	78.56	104.76
7992	1 1/2 x 11/2 x 16	40	12	.4	600	114.76	153.00
7993	134 x 134 x 15	22	18	2	385	70.88	94.50
7994	134 x 134 x 36	40	18	3	700	123.54	164.70
7995	134 x 134 x 35	58	18	4	1015	174.54	234.74

Delivery F. O. B. Pittsburgh, Pa. For warehouse deliveries write nearest house.

# SPACING BOLTS AND LAG SCREWS



Standard Double Arming Bolt

### Double Arming Bolts

Hot Galvanized or Plain

The standard length of thread on each end is: For 12 inch bolts, 5 inches; 13 and 14 inch bolts, 6 inches; 15 and 16 inch bolts, 7 inches; 17 inch and longer polts, 8 inches. The points are finished and prices include 4 square nuts, but no washers.

Manufacturer's List.	Special Dis	counts on Application

	_		100	1			r 100——	1		——Per	100
Diam.	Length	Weight	List	Diam.	Length	Weight	List	Diam.	Length	Weight	List
Ins.	Ins.	Lbs.	Price	Ins.	Ins.	Lbs.	Price	lns.	Ins.	Lbs.	Price
1/2	12	78	\$12.70	5/8	12	138	\$19.44	3/4	12	220	\$28.80
1/2	13	83	13.22	5/8	13	145	20,20	3/1	13	232	29,90
1/2	14	88	13.74	5/8	1.4	1.53	20.96	8/4	14	244	31.00
1/2	15	93	14.26	5/8	15	162	21.72	8/4	15	256	32.10
1/2	16	98	14.78	5/8	16	168	22.48	3/4	16	268	33,20
1/2	17	103	15.30	5/8	17	178	23.24	3/4	17	280	34.30
1/2	18	108	15.82	5/8	18	188	21.00	3/1	18	292	35,40
1/2	19	113	16.34	5/8	19	198	24.76	37	19	304	36.50
1/2	20	118	16.86	5/8	20	208	25.52	3/4	20	316	37.60
1/2	21	123	17.38	5/8	21	218	26.28	3/4	21	328	38.70
1/2	22	128	17.90	5/8	22	228	27.04	3/1	22	340	39,80
1/2	23	133	18.42	5/8	23	238	27.90	3/4	23	352	40,90
1/3	24	138	18.94	5/8	24	248	28.66	3/4	24	364	42 00



Twist Drive Thread

HUBBARD & CO

Wood Screw Thread

Fetter Drive Thread

# Standard Lag Screws

Three types of lag screws are illustrated, with the wood screw, twist drive and fetter drive types of thread. The National Electric Light Association, American Telephone & Telegraph Company and Railway Signal Association specifications call for the fetter drive thread, and 90% of the lag screws made for pole work are of this type. The fetter drive lag does not tear the wood of the pole when driven, and, if given a few turns with a wrench, has greater holding power than the other types of lags which have been screwed with a wrench from the start. For this reason, fetter drive screws will be furnished on all orders, unless otherwise specified.

Lengt		Manufacturer	's List Price p		cial Discounts		tion	
	r Head 1/4 and A	3/8	176	1/2	eter, Inches—— A and %	3/4	7/8	1
11/2	\$2.25	\$2.70	\$3.15	\$3.75				
2	2.45	2.96	3.47	4 11	\$6.00			
$\frac{21}{2}$	2.65	3.22	3.79	4.47	6.50	\$9.20		
3	2.85	3.48	4.11	4.83	7.00	9.90	\$15.00	
31/2	3.05	3.74	4.43	5.19	7.50	10.60	16,00	\$22.00
4	3.25	4.00	4 75	5.55	8 00	11.30	17.00	23.30
4 ½ 5	3.45	4.26	5.07	5.91	8.50	12.00	18.00	24.60
5	3.65	4.52	5.39	6.27	9.00	12.70	19 00	25.90
$5\frac{1}{2}$	3.85	4.78	5.71	6.63	9.50	13,40	20,00	27.20
6	4.05	5.04	6.03	6.99	10.00	14.10	21.00	28.50
$\frac{61/2}{7}$	4.25	5.30	6.35	7.35	10.50	14.80	22.00	29.80
7	4.45	5.56	6.67	7.71	11.00	15.50	23.00	31.10
71/2	4.65	5.82	6.99	8.07	11.50	16.20	24.00	32.40
8	4.85	6.08	7.31	8.43	12.00	16.90	25.00	33.70
9	5.25	6.60	7.95	9.15	13.00	18.30	27.00	36.30
10	5.65	7.12	8.59	9.87	14.00	19.70	29.00	38.90
11	6.05	7.64	9.23	10.59	15.00	21.10	31.00	41.50
12	6,45	8,16	9.87	11.31	16.00	22.50	33.00	44.10
II	lexagon heads, 10						-3,00	22

i i	0.00	4.04	9.20	10.09	13.00	21.10	31.00	41.00
12	6.45	8,16	9.87	11.31	16.00	22.50	33.00	44.10
Hexag	on heads 10	per cent. extra						
22.11.10	gott Bettering To	per center outre		ght in Lbs., j	100			
Length			******					
		3/	•		r, Inches	2.4		
Inches	16	3/8	3 <sup>7</sup> 6	1/2	5/8	3/4	₹8	1
11/2	3.8	5.4	8.4	11.4				
2	4.7	6.6	10.2	13.8	22.2			
$2\frac{1}{2}$	5.6	7.9	11.9	16.1	26	41		
3 "	6.5	9.1	13,6	18.4	29.8	46.5	64.8	• • •
31/2	7.4	10.4	15.4	20.8	33.7	52	72.5	103
4	8.3		17.1					
		11.6		23.1	37.5	57.5	80.2	113
4 1/2	9.2	12.9	18.9	25.5	41.4	63	87.9	123
5	10.1	14.1	20.6	27.8	45.2	68.5	95.6	133
$5\frac{1}{2}$	11	15.4	22.4	30.2	49.1	74	103.3	143
6	11.9	16.6	24.1	32.5	52.9	79.5	111	153
7	13.7	19.1	27.6	37.2	60.6	90.5	126.4	173
8	15.5	21.6	31.1	41.9	68.3	101.5	141 8	193
9	17.3	24.1	34.6	46.6	76	112.5	157.2	213
10	19.1	26.6	38.1	51.3	83.7	123.5		
ii	20.9						172.6	233
		29.1	41.6	56	91.4	134.5	188	253
12	22.7	31.6	45.1	60.7	99.1	145.5	203.4	<b>- 27</b> 3

#### ANCHOR RODS AND EYE BOLTS



Standard Anchor Rods with Drop Forged Oval Eye

#### **Anchor Rods**

#### Hot Galvanized

The eyes of Anchor Rods are drop forged except on the 1½ and 1½ inch rods, which have welded eyes. This insures rods of maximum strength with no possibility of the rods' being burned, as there is in welding the eyes.

Rods under ¾ inch diameter have  $3\frac{1}{2}$  inches of rolled threads. The ¾, 1,  $1\frac{1}{4}$  and  $1\frac{1}{2}$  inch rods have  $3\frac{1}{2}$  inches of cut threads. All rods are made of full size stock as shown.

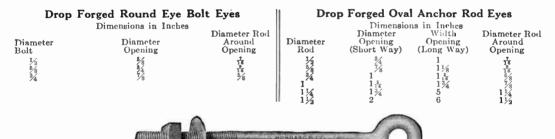
Rods with two eyes can be furnished at the same prices as standard rods. All prices include square nuts, but no washers.

Rods with welded eyes can be supplied at the same prices, if desired.

List	List Dia, Length Inches Weight List Prices									Length	Size Eye Inches Weigh		Weight	Per 100——— t List Prices	
No.	Inches	Feet	Width	Length	Lbs.	Plain	Galv.	No.	Inches	Feet	Width	Length	ı Lbs.	Plain	Galv.
7405	1/2	5	3/4	1	355	\$52,12	\$70.54	7427	3/4	7	1	1 15	1125	\$139,06	
7406	1/2	6	3/4	1	410	45.84	80.96		3/4	- 8	1	1 5	1275	155.72	
7407	1/2	7	8/4	1	465	67.54	91.38	7429	3/4	9	1	118	1475	172.26	<b>233.</b> 06
7415	5/8	5	7/8	11/8	550	72.54	98.12	7438	1	8	1 15	1 3/4	2320	218.20	392.94
7416	5/R	6	7/8	1 1/8	650	83.90	113.46	7440	1	10	1 1 6	1 3/4	2850	349.06	472.54
7417	5/8	7	7/8	11/8	750	95.20	128.80	7444	11/4	10	1 3/4	5	4550	578.66	
7418	5/8	8	7/8	11/8	850	106.52	144.12	7446	11/2	12	2	6	7750	979.18	1324.12
7426	3.7	В	1	1.3	975	122 36	165.60	11							

### **Drop Forged Eyes**

The drop forged eye is furnished on all standard rods and bolts except those of  $1\frac{1}{4}$  and  $1\frac{1}{2}$  inches diameter. In addition to having nearly 40 per cent. greater strength than the welded eye, being in all cases stronger than the rod itself, the drop forged type of eye is absolutely reliable because it is forged from solid metal at a much lower temperature than the welding heat, and the chance of the metal burning, crystallizing, or being only partially welded is completely eliminated.



Standard Eye Bolts with Drop Forged Round Eyes

# Drop Forged Eye Bolts

#### Hot Galvanized

All bolts are rolled threaded 6 inches. Eye bolts are measured from the center of the eye to the end of the bolt. Prices include one square nut and one round washer.

Per 100						Pe		Per 100-			
-Inches		Weight	List Prices		nches	Weight	List Prices			Weight	List Prices
Dia.	Length	Lbs.	Galv.	Dia.	Length	Lbs.	Galv.	Dia.	Length	Lbs.	Galv.
1/2	6	56.7	\$28.12	5/8	8	111.3	\$37.56		10	190.6	\$56.36
1/2	8	66.9	30.08	5/8	10	127.7	40.40	34	12	214.4	60,46
1.5	10	77.1	32.02	5/8	12	144.1	43.22		14	238.2	64.60
1,5	12	87.3	* 33.98	5/8	11	160.5	46.08	34	16	262	68.70
13	14	97.5	31.50	5/8	16	176.9	48.96		18	285.8	72.86
13	16	107.7	31.50 37.96 39.90	5/8	18	193.3	51.78	34	20	309.6	76.96
1/3	18	117.9	39,90	5/8	20	209.7	54.66	1.			
1/2	20	128	41.86	1.							

Delivery F. O. B. Factory, Pittsburgh, Pa. For warehouse deliveries write nearest house.

### MACHINE BOLTS

# Square Heads, Square Nuts and Finished Points

Hot Galvanized or Plain



Standard Crossarm or Through Bolt Manufacturer's Price List, per Hundred. Discounts on Application

Length		000000000000000000000000000000000000000									
Inches	1/4	5 16	3/8	716	1/2	Diameter, In	nenes 3/4	1/8	1	11/8	11/4
3/1 to 1	1/2 \$1.70	\$2.00	\$2.40	\$2.80	\$3.60	\$5.20	\$7.70	\$10.50	\$15.10	\$22.50	\$30.00
2	1.78	2.12	2.56	3.00	3.86	5.58	8.25	11.20	16.00	23.70	31.50
21/2	1.86	2.24	2.72	3.20	4.12	5.96	8.80	11.90	16.90	24.90	33.00
3	1.94	2.36	2.88	3.40	4.38	6.34	9.35	12.60	17.80	26.10	34.50
31/2	2.02	2.48	3.04	3.60	4.64	6.72	9.90	13.30	18.70	27.30	36.00
4	2.10	2.60	3.20	3.80	4.90	7.10	10.45	14.00	19.60	28.50	37.50
43/2	2.18	2.72	3.36	4.00	5.16	7.48	11.00	14.70	20.50	29.70	39.00
5	2.26	2.84	3.52	4.20	5.42	7.86	11.55	15.40	21.40	30.90	40.50
534	2.34	2.96	3.68	4.40	5.68	8.24	12.10	16.10	22.30	32.10	42.00
6	2,42	3.08	3.84	4.60	5.94	8.62	12.65	16.80	23.20	33.30	43.50
634	2.50	3.20	4.00	4.80	6.20	9.00	13.20	17.50	24.10	34.50	45.00
7	2.58	3.32	4.16	5.00	6.46	9.38	13.75	18.20	25.00	35.70	46.50
712 8	2.66	3.44	4.32	5.20	6.72	9.76	14.30	18.90	25.90	36.90	48.00
8	2.74	3.56	4.48	5.40	6.98	10.14	14.85	19.60	26.80	38.10	49.50
9	2.90	3.80	4.80	5.80	7.50	10.90	15 95	21.00	28.60	40.50	52.50
10	3.06	4.04	5.12	6.20	8.02	11.66	17.05	22.40	30 40	42.90	55.50
11	3.22	4.28	5.44	6.60	8.54	12.42	18.15	23.80	32.20	45.30	58.50
$1^{2}$	3.38	4.52	5.76	7.00	9.06	13.18	19.25	25.20	34.00	47.70	61.50
13			6.08	7.40	9.58	13.94	20.35	26.60	35.80	50.10	64.50
14	4000	40.00	6.40	7.80	10.10	14.70	21.45	28.00	37.60	52.50	67.50
15		4.4.4.4	6.72	8.20	10.62	15.46	22.55	29.40	39.40	54.90	70.50
16	****		7.04	8.60	11.14	16.22	23.65	30.80	41.20	57 30	73.50
17	18/20/18/19:		90	+ + + + +	11.66	16.98	24.75	32.20	43.00	59.70	76.50
18	***			***	12.18	17.74	25.85	33.60	41.80	62.10	79.50
19	10.000		8.7.1.1	+ + + +	12.70	18.50	26.95	35.00	46.60	64.50	82.50
20	26.4.3.4.	10000	10.000	4.49.40	13.22	19.26	28.05	36.40	48.40	66.90	85.50

Bolts with hexagon heads or hexagon nuts, 10 per cent. extra.

If both hexagon heads and hexagon nuts, 20 per cent. extra.

In ordering bolts please specify length from under head to point, except for countersunk head bolts, which are measured over all. Name diameter first, and then length, thus: ½ x 3.

		Weight, Lbs., per 100											
Leng Inch		1/4	<u>5</u> 16	3/8	7 16	1/2	Diameter, Ir $\frac{1}{16}$ and $\frac{5}{8}$		7/8	1	118	114	
$\frac{1}{2}^{\frac{1}{2}}$	2	$\frac{3.1}{3.7}$	$\frac{5.6}{6.5}$	$\frac{8.8}{10.2}$	$13.5 \\ 15.4$	$\frac{18.5}{21}$	$\frac{33.4}{37.5}$	53.8 59.7	88 96.2	130			
21/	ź	4.4	7.5	11.7	17.4	23.6	41.6	65.7	104.4	$\frac{140.8}{151.6}$			
3	,	5	8.4	13.1	19.3	26.1	45.7	71.6	112.6	162.4	210	286	
3!: 4	_	$\begin{array}{c} 5.7 \\ 6.3 \end{array}$	$\frac{9.4}{10.3}$	$\begin{array}{c} 14.6 \\ 16 \end{array}$	$\frac{21.3}{23.2}$	$\frac{28.7}{31.2}$	$\frac{49.8}{53.9}$	$77.6 \\ 83.5$	$\frac{120.8}{129}$	$\frac{173.2}{184}$	$223.8 \\ 237.6$	302.5 $319.1$	
$\frac{41}{5}$	2	$\frac{7}{7.6}$	$\frac{11.3}{12.2}$	$\frac{17.5}{18.9}$	$25.2 \\ 27.1$	$\frac{33.8}{36.3}$	$\frac{58}{62.1}$	$89.5 \\ 95.4$	$137.2 \\ 145.4$	194.8 205.6	$251.4 \\ 265.2$	$335.6 \\ 352.2$	
$\frac{51}{6}$		$8.3 \\ 8.9 \\ 9.6$	$13.2 \\ 14.1 \\ 15.1$	$20.4 \\ 21.8 \\ 23.3$	29.1 31 33	38.9 41.4 44	$66.2 \\ 70.3 \\ 74.4$	101.4 107.3 113.3	153.6 $161.8$ $170$	216.4 227.2 238	279 292.8 306.6	368.7 385.3 401.8	
7		10.2	16	24.7	34.9	46.5	78.5	119.2	178.2	248.8	320.4	418.4	
7½ 8 9	2	10.9 11.5	17 17.9	$26.2 \\ 27.6 \\ 30.5$	36.9 $38.8$ $42.7$	49.1 51.6 56.7	82.6 86.7 94.9	125.2 $131.1$ $143$	186.4 194.6 211	$259.6 \\ 270.4 \\ 292$	$334.2 \\ 348 \\ 375.6$	434.9 $451.5$ $484.6$	
10				33.4	46.6	61.8	103.1	154.9	227.4	313.6	403.2	517.7	
11 12 13 14		• • • • •	• • • • •	36.3 39.2	50.5 54.4	66.9 72 77.1	111.3 119.5 127.7	166.8 178.7 190.6	243.8 260.2 276.6	335.2 356.8 378.4	430.8 458.4 486	550.8 583.9 617	
15						$82.2 \\ 87.3$	135.9 144.1	202.5 $214.4$	293 309.4	400 421.6	513.6 $541.2$	650.1 $683.2$	
16	•					92.4	152.3	226.3	325.8	443.2	568.8	716.3	
17 18						$\begin{array}{c} 97.5 \\ 102.6 \end{array}$	$160.5 \\ 168.7$	$238.2 \\ 250.1$	342.2° 358.6	464.8 48 <b>6</b> .4	$\frac{596.4}{624}$	$749.4 \\ 782.5$	
19 20						$107.7 \\ 112.8$	$\begin{array}{c} 176.9 \\ 185.1 \end{array}$	$\begin{array}{c} 262 \\ 273.9 \end{array}$	$\begin{array}{c} 375 \\ 391.4 \end{array}$	$\begin{array}{c} 508 \\ 529.6 \end{array}$	$\begin{array}{c} 651.6 \\ 679.2 \end{array}$	815.6 848.7	
	Del	ivery F.	O. B.	Pittsburgl	ı, Pa.	For ware	house deliv	veries wr	ite neares	t house.			

### CARRIAGE BOLTS

Hot Galvanized or Plain



#### Standard Carriage Bolt

Carriage bolts are used for attaching the braces to crossarms on most overhead lines, the standard N.E.L.A. bolt being 3/8 x 41/2 inches and that of the A.T.&T. Company 3/8 x 4 inches. Carriage Bolts have standard heads, square nuts, finished points and rolled threads, although cut threads can be supplied if required. Like machine bolts, carriage bolts have a generous length of thread, the size mentioned having 11/2 inches, and other bolts in proportion to their length. The round washers used with carriage bolts are listed below.

Manufacturer's List Price per 100. Special Discounts on Application

Length			———Diam	eter, Inches-			
Inches	$\frac{3}{16}$ and $\frac{1}{4}$	$\frac{5}{16}$	3/8	7	1/2	16 and 58	$\frac{3}{4}$
1	\$1.00	\$1.40	\$1.90	\$2.20	\$3.25	\$5.75	\$8.50
11/2	1.00	1.40	1.90	2.20	3.25	5.75	8.50
2	1.10	1.52	2.06	2.40	3.25	5.75	8.50
21/2	1.20	1.64	2.22	2.60	3.25	5.75	8.50
3	1.30	1.76	2.38	2.80	3.53	6.13	9.00
31/2	1.40	1.88	2.54	3.00	3.81	6.51	9.50
4	1.50	2.00	2.70	3.20	4.09	6.89	10.00
41/2	1.60	2.12	2.86	3.40	4.37	7.27	10.50
5	1.70	2.24	3.02	3.60	4.65	-7.65	11.00
$5\frac{1}{2}$	1.80	2.36	3.18	3.80	4.93	8.03	11.50
6	1.90	2.48	3.34	4.00	5.21	8.41	12.00
61/2	2.00	2.60	3.50	4.20	5.49	8.79	12.50
7	2.10	2.72	3.66	4.40	5.77	9.17	13.00
$7\frac{1}{2}$	2.20	2.84	3.82	4.60	6.05	9.55	13.50
8	2.30	2.96	3.98	4.80	6.33	9.93	14.00
81/2	2.40	3.08	4.14	5.00	6.61	10.31	14.50
9	2.50	3.20	4.30	5.20	6.89	10.69	15.00
91/2	2.60	3.32	4.46	5.40	7.17	11.07	15.50
10	2.70	3.44	4.62	5.60	7.45	11.45	16.00
11	2.90	3.68	4.94	6.00	8.01	12.21	17.00
12	3.10	3.92	5.26	6.40	8.57	12.97	18.00
13	3.30	4.16	5.58	6.80	9.13	13.73	19.00
14	3.50	4.40	5.90	7.20	9.69	14.49	20.00
15	3.70	4.61	6.22	7.60	10.25	15.25	21.00
16	3.90	4.88	6.51	8.00	10.81	16.01	22.00
17	4.10	5.12	6.86	8.40	11.37	16.77	23.00
18	4.30	5.36	7.18	8.80	11.93	17.53	21.00
19	4.50	5.60	7.50	9.20	12.49	18.29	25.00
20	4.70	5.84	7.82	9.60	13.05	19.05	26.00

Add 15 per cent, extra for hexagon nuts. Intermediate lengths take next higher list.

Larger diameters than 3/4 inch take machine bolt list.

#### Carriage Bolts Weight, Lbs., per 100

			weight, Lo	s., per 100			
Length				Diameter, Inches			
Inches	1/4	5 16	3/8	7 16	1/2	5/8	3/4
1	2.6	4.6	7.1	10.8	14.5	27.1	
$1\frac{1}{2}$	3.2	5.6	8.5	. 12.8	17.1	31.2	
<b>2</b>	3.9	6.5	10	14.7	19.6	35.3	. ,
21/2	4.5	7.5	11,4	16.7	22.2	39.4	58.4
3	5.2	8.4	12.9	18.6	24.7	43.5	64.4
31/2	5.8	9.4	11.3	20.6	27.3	47.6	70.3
4	6.5	10.3	15.8	22.5	29.8	51.7	76.3
$4\frac{1}{2}$	7.1	11.3	17.2	24.5	32.4	55.8	82.2
5	7.8	12.2	18.7	26.4	34.9	59.9	88.2
$5\frac{1}{2}$	8.4	13.2	20.1	28.4	37.5	64	94.1
6	9.1	14.1	21.6	30.3	40	68.1	100.1
61/2	9.7	15.1	23	32.3	42.6	72.2	106
7	10.4	16	24.5	34.2	45.1	76.3	112
$7\frac{1}{2}$	11	17	25.9	36.2	47.7	80.4	117.9
8	11.7	17.9	27.4	38.1	50.2	84.5	123.9
81/2	12.3	18.9	28.8	40.1	52.8	88.6	129.8
9	13	19.8	30.3	42	55.3	92.7	135.8
91/2	13.6	20.8	31.7	44	57.9	96.8	141.7
10	14.3	21.7	33.2	45.9	60.4	100.9	147.7
11	15.6	23.6	36.1	49.8	65.5	109.1	159.6
12	16.9	25.5	39	53.7	70.6	117.3	171.5
			TWO IS NOT THE PERSON OF THE P				

**World Radio History** 

### IRON WOOD SCREWS



### Manufacturer's List; Prices per Gross. Special Discounts on Application.

No.	List Price 4 Inch	No. 3	List Price & Inch	No.	List Price Inch	No. 5/8	List Price Inch	No.	List Price Inch	No.	List Price & Inch	No.	List Price Inch
0 1 2 3 4	\$0.72 .72 .72 .72 .72 .72	0 1 2 3 4 5 6 7 8 9	\$0.72 .72 .72 .72 .72 .75 .78 .82 .88	1 2 3 4 5 6 7 8 9	\$0.72 .72 .75 .78 .80 .84 .90 .96	1 2 3 4 5 6 7 8 9	\$0.72 .72 .75 .78 .82 .86 .92 .98 1.07	2 3 4 5 6 7 8 9 10 11	\$0.72 .75 .78 .82 .85 .90 .95 1.00 1.10	2 3 4 5 6 7 8 9 10	\$0.74 .78 .82 .85 .90 .94 1.00 1.05 1.15 1.25	3 4 5 6 7 8 9 10 11 12	\$0.80 .84 .87 .92 .98 1.05 1.10 1.20 1.30
-	\$0.88 .92 .98 1.05	11/2	Inches	11 12	1.10 1.20 Inches	11 12 13 14	1.12 1.20 1.25 1.30	12 13 14 15 16	1.25 1.35 1.50 1.65 1.80	12 13 14 15 16	1.35 1.45 1.55 1.75 2.00	13 14 15 16 17	1.60 1.70 2.00 2.50 2.70
3 4 5 6 7 8 9	$egin{array}{c c} 1.10 \\ 1.15 \\ 1.20 \\ \end{array}$	5 6 7	1.05 1.10 1.15 1.20	5 6 7	\$1.30 1.35 1.45		Inches		Inches		Inches	18 20	2.80 3.50
10 11 12 13 14 15 16 17 18 20 22 24	1.30 1.40 1.55 1.70 1.90 2.15 2.50 2.75 3.30 4.00 4.80 5.40	8 9 10 11 12 13 14 15 16 17 18 20 22 24	1.30 1.35 1.40 1.50 1.65 1.80 2.00 2.35 2.80 3.20 3.80 4.30 5.10 5.90	8 9 10 11 12 13 14 15 16 17 18 20 22 24	1.50 1.55 1.60 1.70 1.80 2.00 2.25 2.60 2.90 3.50 4.00 4.50 5.20 6.00	5 6 7 8 9 10 11 12 13 14 15 16 17 18 20 22 24	1.50 1.55 1.60 1.65 1.75 1.85 2.00 2.20 2.45 2.75 3.10 3.70 4.20 4.80 5.50 6.40	5 6 7 8 9 10 11 12 13 14 15 16 17 18 20 22	\$1.55 1.60 1.65 1.75 1.85 1.95 2.05 2.20 2.35 2.65 3.10 3.50 3.85 4.55 5.30 6.10	5 6 7 8 9 10 11 12 13 14 15 16 17 18 20 22	\$1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.90 3.30 3.65 4.20 4.70 5.80 6.70	6 7 8 9 10 11 12 13 14 15 16 17 18 20	\$2.40 2.60 2.70 2.80 2.90 3.00 3.10 3.20 3.30 3.60 4.50 5.00
6	Inches \$2.95	$\frac{3\frac{1}{2}}{8}$	Inches \$3.90	8	Inches \$4.90			24	6.90	24	7.50	22 24	6.10 7.20 8.50
7 8 9 10 11 12 13 14 15 16 17 18 20 22 24 26	3.00 3.05 3.10 3.15 3.20 3.30 3.40 3.50 4.20 4.80 5.50 6.50 7.50 8.70	9 10 11 12 13 14 15 16 17 18 20 22 24 26	4.00 4.10 4.20 4.30 4.40 4.75 4.75 5.40 6.15 7.30 8.70 10.20	10 11 12 13 14 15 16 17 18 20 22 24 26 28	5.10 5.20 5.30 5.40 5.60 5.90 6.20 6.50 7.00 7.60 8.60 9.70 11.20 14.00 16.00 18.50	12 13 14 15 16 17 18 20 22 24 26 28 30	\$7.00 7.60 7.85 8.15 8.60 9.15 9.85 11.20 13.50 16.00 18.50 21.50	12 13 14 15 16 17 18 20 22 24 26 28 30	\$8.10 8.30 8.60 9.10 9.70 10.10 11.50 13.00 15.00 18.00 24.00	12 13 14 15 16 17 18 20 22 24 26 28 30	\$10.00 10.30 11.00 12.40 13.00 14.50 16.00 18.00 20.00 23.00 27.00 30.50		

**World Radio History** 

### MISCELLANEOUS POLE STEPS



No. 7125 Step for Wood Poles



No. 7140 for Steel Poles



No. 7129 Step for Wood Poles



No. 7131

Steps for Concrete Poles

No. 7136

Steps for Wood Poles

Of the steps for wood poles, the 10 inch hook head step is the standard of the National Electric Light Association, the American Telephone & Telegraph Company and the Western Union Telegraph Company. It has the fetter drive thread, which makes it easy to install and does not tear the wood of the pole when driven. The 10 inch button head step is also an A. T. & T. Co. standard and has the twist drive thread and a square shoulder under the head for a wrench hold.

#### Hook Head **Button Head** Per 100-Per 100-List Weight, -List Price-Length Weight, Diam., Length List -List Price-Diam., No. 7128 No. Inches Inches Plain Plain Hot Galv. Lbs. Hot Galv. Inches Inches Lbs. 7123 \$12.16 9 652 \$9.60 \$11,69 5/8 5/8 9 833 \$14.81 7124 9 810 11.84 ||7129|13.22 14,69 10 913 16.12 890 7125 12.90 10 15.72 Steps for Concrete Poles 7131 14 160 \$5.34 \$6,49 160 \$5.34 **\$**6.49 5.556.78 5.55 7132 16 16 175 $\frac{6.76}{7.28}$ 175 $\overline{20}$ 7133 210 20 210 5.97 $7.28 \parallel 7138$ 5.97

### Steps for Steel Poles and Towers

List	Diam.,	Length,	Weight,	——List Price—	
No.	Inches	Inches	Lbs.	Plain	Galv.
7140	5/8	$6\frac{1}{4}$	78	\$2.66	\$3,24

### POLE STEP AND BANDS



No. 7206



No. 7306

# Steps for Tubular Poles

Open hearth steel  $1\frac{1}{2}$  inches wide,  $\frac{3}{16}$  inch thick, is used in making steps for tubular poles. The steps are 6 inches long from pole to tip, which is turned up  $\frac{1}{2}$  inch. Machine bolts  $\frac{1}{2}$  inch diameter,  $\frac{1}{2}$  inches long, are furnished with these steps. Hot galvanized or plain.

#### SOLID STEPS

#### SPLIT STEPS

				Nominal	Actual				
List	Weight	List Price	per 100	Size Pole	Outside Diameter	List	Weight	List Pr	ice per 100
No.	Lbs.	Plain	Galv.	Inches	of Pole, Inches	No.	Lbs.	Plain	Galv.
7204	215	\$72.20	\$95.02	4	41/2	7304	260	\$88.66	\$116.66
$7204\frac{1}{2}$	230	77.30	101,66	$4\frac{1}{2}$	5	73041/2	275	93.74	123.32
7205	245	82.34	108.32	5	$5\frac{1}{2}$	7305	290	98.78	130.00
7206	260	88.67	116.66	6	65/8	7306	315	104.50	137.50
7207	295	80.28	128.32	7	$7\frac{5}{8}$	7307	340	114.00	150.00
7208	320	97.54	140.82	8	85/8	7308	365	123.48	162.52
7209	345	116.00	153.34	9	95/8	7309	390	133.00	175.02
7210	375	126.68	166.68	10	103/4	7310	420	143.16	188.32

### DI-EN-KEY EXPANSION SHIELDS

W. E. LIST PER 100



(Patented) **Button Bearing or Open Back** 

				-		
Diameter, inches. Shields only	\$9.00	$$10^{\frac{5}{16}}.50$	\$12.00	\$19.00	\$25.00	\$35.00
Length shields, inches Size drill to use.	1	13/4	2	21/2	$2\frac{1}{2}$	4
inches	7 16	76	$\frac{11}{16}$	7/8	1	11/4

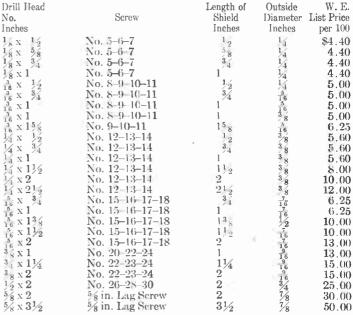
The above prices are for Shields only, when ordered complete add the prevailing market price for the Machine Bolts.

### Diamond N-Y Screw Anchors

W. E. LIST PER 100, WITHOUT SCREWS



(Patented) Diamond N-Y





Diamond N Screw Anchor

Put up in wooden boxes 100 to a box.

Made of non-corroding, rust-proof composition metal.
The above prices are for Screw Anchors only, when ordered complete add the prevailing market price for the Wood Screws.

### "Diexco" Extension Brick Drill Heads

Made in the following sizes are carried in stock.



Drill Heads

	Size Pipe	Diameter		W.E.
Drill Head	for Handle	of Hole	Mfrs. Price	List
No.	Inches	Inches	per Dozen	per Dozen
2	LS	9	\$3.00	\$5.40
$\frac{2}{3}$	1,1	11	3.00	5.40
4 5	3 8	7.8	3.00	5.40
5	1/2	1	3.00	5.40
5A	1.2	$1\frac{1}{8}$	3.60	7.20
6	34	$1\frac{1}{4}$	4,20	8.40
6A	3/4	138	7.50	15.00
7	$\frac{3}{4}$	$1\frac{1}{2}$	9.00	18.00
7A	1	134	10.50	21.00
8	1	2	12,00	24.00
9	1	$2\frac{1}{4}$	18.00	36.00
$9\Lambda$	1	$2\frac{1}{2}$	22.00	44.00
10	1	$2\frac{3}{4}$	<b>27</b> ,00	54.00
-0A	1	3	31.00	62.00
11	$1\frac{1}{4}$	$3\frac{1}{4}$	<b>36.00</b>	72.00
11 <u>A</u>	$1\frac{1}{4}$	31/2	40.00	80.00
11B	$1\frac{1}{4}$	$3\frac{3}{4}$	44.00	88.00
12	$1^{1}_{21}$	4	48.00	96.00
CI	4 /37 0 0 4 =			

Sets of 4 (Nos. 2, 3, 4, 5) in wood boxes or on cards, \$1.80.

### **EXPANSION BOLTS AND SHIELDS**





Shield with Screw

Shield

#### W. E. LIST PER 100 FOR SHIELDS ONLY. (MALLEABLE)

Based	on	Diameter	of	Screw

3 "	1/4"	5 " 16	3/8"	7 "	1/2"	5/8"	3/4"	7/8"	1"	1½″ \$100.00
\$8.40	\$9.40	\$10.50	\$13.35	\$17.75	\$22.00	\$27.80	\$39.95	\$53.30	\$66.60	\$100.00

### Dimensions of Diamond Expansion Shields Long Standard Shields. (Malleable)

Two-Par

Diameter of screw	16	1/4"	16	3.8"	16	1/2"	5/8"	34"	7/8"	1"	11/4"
Outside diameter of shield.	3 8	1/2	9	5/8	110	3/4	7/8	11/8	13/8	$1\frac{1}{2}$	17/8
Length of shield	1	11/2	134	$2^{3}4$	23/4	31/2	312	$3\frac{1}{2}$	5	5	8
Diameter of drill required	3 8	1/2	10	5/8	16	3/4	7/8	11/8	138	11/2	17/8

#### SHORT STANDARD AND EXTRA SHORT STANDARD. (MALLEABLE.) TWO-PART

		Short S	tandard		Stanc	Extra lard for (	Short Concrete	Walls
Diameter of screw Outside diameter of shield Length of shield Diameter drill required.	2 5/8 5/8	$egin{array}{c} rac{rac{7}{16}''}{16} \ 2 rac{11}{15} \ \end{array}$	2 3/4 2 3/4	$2^{\frac{5}{8}''}_{7_{8}}$	11/8 2 11/8	3/8" 5/8 11/2 5/8	$ \begin{array}{c c} 1/2'' \\ 3/4 \\ 11/2 \\ 3/4 \end{array} $	5/8" 7/8 11/2 7/8

### "Diamond N" Midget Expansion Shields

Two Part (Malleable) The Most Powerful Little Shield

For use where shields are required for heavy duty and where conditions will allow the use of only a small expansion.

For attaching opera chairs, ornamental iron work, metal grilles, ornamental hand railings, etc.



Midget

#### W. E. LIST PER 100 FOR SHIELDS ONLY (MALLEABLE)

#### DIMENSIONS OF "DIAMOND N" MIDGET SHIELDS

Diameter of shield	$\frac{3}{16}''$ $\frac{1}{4}''$	5 1/6
Outside diameter of shield		1/2
Length of shield	1 1	1
Diameter drill required	$\frac{3}{8}$ $\frac{7}{16}$	/2

The above prices are for shields only; when ordered complete add the prevailing market price for the Lag Screws or Wood Screws.



(Patented) Midget

#### Keystone Expansion Shields For Use with Machine Bolts

		Double			
Diameter, inches		5 W	3/8"	716	1/2"
Shields only, per 100.	\$11.70	\$14.30	\$16.90	\$20.80	\$23.40
Length of expansion,	11/	17/	93/	91/	95/
Size drill to use, inches	11/2	$1\frac{7}{8}$	$2\frac{3}{8}$	$2\frac{1}{7}$	$2\frac{5}{8}$
, and the second					/8
Diameter, inches		5/8	3/4	7/8	1
Shields only, per 100		\$31.20	\$46.80	\$78.00	\$84.50
Length of expansion, in		$\frac{31}{4}$	$\frac{4}{1\frac{1}{4}}$	$\frac{4\sqrt{3}}{1\sqrt{2}}$	$\frac{5}{15\%}$
Size drill to use, inches		Single	1 74	172	1 > 8
Diameter, inches		1/4	5	3/8	1/2
Shields only, per 100		\$9.76	<b>\$</b> 11.06	<b>\$</b> 13.66	\$20.80
Length of expansion, in		13/8	$1\frac{1}{2}$	13/4	13/4
Size drill to use, inches	·	1/2	$\frac{9}{16}$	$\frac{11}{16}$	7/8
Diameter, inches	<b></b>	5/8	3/4	7/8	1
Shields only, per 100.		\$27.30	\$37.70	\$46.80	\$57.20
Length of expansion, in		2	3	$3\frac{3}{4}$	$3\frac{3}{4}$
Size drill to use, inches		1	1 3 16	$1\frac{3}{8}$	1 7 F6

The above prices are for Shields only, when ordered complete add the prevailing market price for machine bolts.



(Patented)
Square Head Bolt



(Patented) Square Head Bolt

Per Set



### Diamond Rapid-fire Drill

Drilling Holes in Concrete, Brick and Stone Made Easy With Diamond Rapid-fire Drill

Diamond Rapid-fire Drill (without drill points) \$35.20 each.



### Rapid-fire Bits (Extra)

Assorted Sets, Consisting of 1 Each

Set No. 1 Set No. 2 Set No. 3 Set No. 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		6.98 5.34
	Drill Points	s, per Dozen	
	Overall	Depth of Hole	Price per
Diameter	Length	Drilled	Dozen
½ in. 56 in. 3/8 in.	$4\frac{1}{4}$ ins.	3 ins.	\$10.18
$\frac{5}{16}$ in.	$4\frac{1}{4}$ ins.	3 ins.	10.18
3/8 in.	$4\frac{1}{4}$ ins.	3 ins.	10.18
$\frac{7}{16}$ in.	$4\frac{1}{4}$ ins.	3 ins.	10.78
<sup>7</sup> / <sub>16</sub> in. 1∕2 in.	6 ins.	$4\frac{1}{2}$ ins.	11.96
5% in. 34 in. 7% in.	6 ins.	$4\frac{1}{2}$ ins.	14.36
3/4 in.	6 ins.	$4\frac{1}{2}$ ins.	16.76
$\frac{7}{8}$ in.	$6\frac{1}{2}$ ins.	5 ins.	19.16
1 in.	$6\frac{1}{2}$ ins.	5 ins.	21.54

Extra length of drill points, 12, 18 and 24 inches.

Diamond N Hand Drills

### Diamond N Hand Drills

Four Point

					-rer Dozen-					$\overline{}$	
Length	1/4 Inch	5 Inch	3/8 Inc	h 7/16 Ir	$\frac{1}{2}$	Inch 5/8	Inch	1 Inch	7/8 Inch	1 Inch	
12 ins.	\$6.80	\$6.80	\$6.80	0 \$7.5	20 \$8	.00 \$9	9.60	§11.20	\$12.80	\$14.40	
18 ins.	8.80	8.80	8.80	9.5	20 - 10	.00 13	2.00	14.00	16.00	18.00	
24 ins.	10.80	10.80	10.80	0 11.5	20   12	.00 1-	1.00	16.00	18.00	20.00	
Length	11/8 Inches	11/4 Inches	13/8 Inches	1½ Inches	15% Inches	13/4 Inches	11/8 Inches	2 Inches	21/4 Inches	2½ Inches	
12 ins.	\$19.20	\$24.00	\$32.00	\$40.00	\$48.00	\$60.00	\$72.00	\$84.00	\$108.00	\$132.00	
18 ins.	22.40	28.00	36.00	44.80	52.80	64.80	77.60	89.60	116.00	140.00	
24 ins.	25.60	32.00	40.00	49.60	57.60	69.60	83.20	96.00	132.00	156.00	



Diamond N Drill Holders

### Diamond N Drill Holders and Points

Per Dozen Diamond N Drill Points  $\frac{\frac{7}{16}}{16}$  Inch \$10.78 5/8 Inch ¾Inch 3/8 Inch ½ Inch 1/4 Inch Holders  $\frac{5}{16}$  Inch \$14.36 \$10.17 \$11.98 \$16.76 \$21.60 \$10.17 \$10.17 Sets put up in wooden boxes make a most convenient drill outfit in most compact form for those requiring various sizes of holes for different diameters of expansion bolts.

(Patented) **Drill Press Combination** 

### Trident Drill Press Combination

A drill press, vise, anvil and hardy with a swivel base. Quickly adjustable and removable. Weight, 60 lbs.

Will drill holes in iron or steel up to 1 inch diameter.

List	List Price
No.	Each
40	 \$25.00

# DIAMOND TOGGLE BOLTS

#### PARTICULARLY DESIGNED FOR MAKING QUICK AND PERMANENT FASTENINGS TO HOLLOW TILE, HOLLOW CEMENT BLOCKS, WALLS CONSTRUCTED OF EXPANDED METAL OR WOOD LATH

Can be used with either the finished stove bolt head or the nut exposed or with loose ornamental ap nuts.

FIRST: Insert round head of stove bolt through the grooves in sides of toggle and it is ready for use rith the nut at the outside of the work.





SECOND: Insert the nut through slot in sides of toggle head and turn the thread of stove bolt into the The toggle is then ready for use with a finished stove bolt head at the outside of the work exposed nut. o view.





THIRD: Diamond Toggles are also furnished with long threaded rods as listed below with loose ornamental brass or nickel plated on brass cap nuts round, flat or acorn.







Flat Cap



Acorn Cap

### LIST PRICE PER HUNDRED

		ind or Flat ove Bolts		ose Head Brass	Nickel	ose Head Plated	Brass T with Bras	s Bolts
Size of Screw	Mfrs. List	W. E. List	Mfrs. List	W. E. List	Mfrs. List	W. E. List	Mfrs. List	W. E. List
inches $\frac{3}{8}$ or $\frac{3}{16} \times 3$	\$4.50	\$5.86	\$5.00	\$6.50	\$6.00	\$7.80	\$11.00	\$14.30
$\frac{1}{8}$ or $\frac{3}{16} \times 3\frac{1}{2}$	4.70	6.12	5.20	6.76	6.20	8.06	11.30	14.70
$\frac{1}{8}$ or $\frac{3}{16} \times 4$ $\frac{3}{8}$ or $\frac{3}{16} \times 5$	$\frac{5.00}{5.20}$	$\frac{6.50}{6.76}$	$\frac{5.40}{5.80}$	$7.02 \\ 7.54$	$\frac{6.40}{6.80}$	$8.32 \\ 8.84$	$11.55 \\ 12.10$	$15.02 \\ 15.74$
$\frac{1}{8}$ or $\frac{3}{16} \times 6$	5.70	7.42	6.20	8.06	7.20	9.36	12.65	16.44
1/4 x 3 1/4 x 3 1/2	$^{\circ}$ 6.10 6.50	$7.94 \\ 8.46$	$\frac{6.60}{7.00}$	$8.58 \\ 9.10$	$\substack{7.80\\8.20}$	$10.14 \\ 10.66$	$12.20 \\ 12.60$	$\begin{array}{c} 15.86 \\ 16.38 \end{array}$
$\frac{1}{4} \times 4$	6.90	8.98	7.40	9.62	8.60	11.18	13.00	16.90
$\frac{14}{2} \times 5$	7.90	10.28	8.40	10.92	9.60	$12.48 \\ 14.04$	13.80 14.60	$17.94 \\ 18.98$
⅓ x o	$8.50 \\ 6.60$	$\frac{11.06}{8.58}$	$9.60 \\ 10.60$	$12.48 \\ 13.78$	$10.80 \\ 12.20$	15.86	20.00	26.00
5 x 4	7.40	9.62	11.40	14.82	13.00	16.90	25.00	32.50
14 x 5 14 x 6 15 x 3 16 x 4 15 x 5 16 x 6	$\frac{8.40}{9.00}$	$\begin{array}{c} 10.92 \\ 11.70 \end{array}$	$12.40 \\ 13.60$	16.12 $17.64$	$14.00 \\ 15.20$	$\substack{18.20\\19.76}$	$30.00 \\ 35.00$	$\frac{39.00}{45.50}$



# DISTRIBUTING RACKS AND KNOB FIXTURES

Hot Galvanized

No. 2920



No. 2924



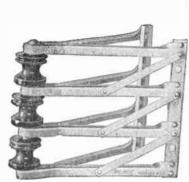








No. 356



No. 351

With Inquistant

Peirce Single Knob Fixtures

refree biligie ithiob i ixeures	
List Wt. I.	hs. ——List Price——
No. per	.00 Each Per 100
2020 Single knob fixture	\$0.17 \$13.96
2922 Single knob fixture	.25 20.64
2924 Single knob fixture. 40	.22   17.20

# Peirce Distributing Racks

		For Telephon	ie Wires		/
List	Pair	-	Wt. Lbs.	I.ist	Price
No.	Wires	Frame	per 100	Each	Per 100
2900	4	Channel single	225	\$1.04	\$90.00
2901	6	Channel single	300	1.37	118.80
2902	8	Channel single	475	1.70	147.60
2910	5	Malleable single	350	2.56	221.40
2911	8	Mallcable single	400	3.18	275.40
2912	10	Malleable double	515	3.99	345.60
2913	16	Malleable double	615	5.62	486.00
All pr	rices are for racks	s complete with knobs.			

# Peirce Secondary Racks Without Insulators

_							nators			ators
List	No. of	Wire	Overall	Std.			Price		list	Price-
	Live Wires	s Spacing	Length	Bundle	Wt. Lbs.	Each	Per 100	Wt. Lbs.	Each	Per 100
-250	2	4 ins.	$8\frac{3}{4}$ ins.	3()	360	\$1.34	\$112.00	560	\$1.71	\$144.00
350	3	4 ins.	$12\frac{3}{4}$ ins.	10	<b>5</b> 00	1.79	150.00	800	2.36	198.00
450	4	4 ins.	$16\frac{3}{4}$ ins.	10	620	2.28	192.00	1020	3.05	256.00
540	5	4 ins.	$20\frac{3}{4}$ ins.	10	740	2.74	230.00	1240	3.69	310.00
258	2	8 ins.	$12\frac{3}{4}$ ins.	10	500	1.79	150.00	700	2.17	182.00
358	3	8 ins.	$20\frac{3}{4}$ ins.	10	740	2.74	230.00	1040	3.05	278.00
			Pairce	Fyta	neion	Second	dary Ra	cke		
			Peirce	Exte	nsion	Secon	dary Ra	cks		
251	2	4 ins.	Peirce 8¾ ins.	Exte	nsion 735	Second \$2.62	dary Ra \$220.00	cks 935	\$3.00	\$252.00
251 351	2 3	4 ins. 4 ins.					•		\$3.00 4.14	\$252.00 348.00
			$8\frac{3}{4}$ ins.	5	735	\$2.62	\$220.00	935		
351	3	4 ins.	$8\frac{3}{4}$ ins. $12\frac{3}{4}$ ins.	5 5	735 1100	$$2.62 \\ 3.57$	\$220.00 300.00	935 1400	4.14	348.00 436.00
$\frac{351}{451}$	$\frac{3}{4}$	4 ins. 4 ins.	8¾ ins. 12¾ ins. 16¾ ins. 20¾ ins.	5 5 5	735 1100 1245	\$2.62 3.57 4.43	\$220.00 300.00 372.00	935 1400 1645	4.14 $5.19$ $6.24$	$348.00 \\ 436.00 \\ 524.00$
351 451 541	3 4 5	4 ins. 4 ins. 4 ins.	$8\frac{3}{4}$ ins. $12\frac{3}{4}$ ins. $16\frac{3}{4}$ ins.	5 5 5 5	735 1100 1245 1500	\$2.62 3.57 4.43 5.28	\$220.00 300.00 372.00 444.00	935 1400 1645 2000	$\frac{4.14}{5.19}$	348.00 436.00

# Insulators for Peirce Secondary Racks

List		Wt. Lbs.	—List	Price
No-		per 100	Each	Per 100
355	Standard single groove	100	\$0.19	\$16.80
356	Special double groove	115	0.21	18.90
	Delivery F. O. B. Factory, Pittsburgh, Pa. For warehouse deliveries wi	rite neares	st house.	







No. 8905



No. 8906

### Universal Messenger Hangers HOT GALVANIZED

									-10	1 100
List			Size Steel			Length	of Legs		Weight	*List Price
No.			Inches			Inc	nes		Lbs.	Galv.
3911			$2 \times \frac{1}{2}$			5 x	31/4		325	<b>\$7</b> 8.70
3912			13/4 x 3/8			5 x	31/4		235	72.66
	-		•	1.0	•	ο.		~		

Reinforcing and Safety Straps for Suspension Clamps

t	•	Size Steel	Pe	er 100
		Inches	Wt., Lbs	List Price
	Reinforcing strap	$1\frac{3}{4} \times \frac{1}{8}$	50	On
	Safety strap	13/4 x 1/8	87	application
	Combination strap	$1\frac{3}{4} \times \frac{1}{8}$	130	

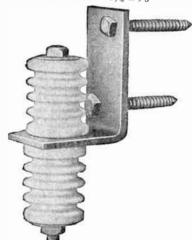


List No. 3905 3906 3907

No. 9200



No. 9210



Bracket No. 9202 with No. 9220 Knobs and Two 3/8 x 4 inch Lag Screws



No. 9215

# Hubbard Telephone Distributing Brackets

		•	Pei	r 100———
List	Style	Length of Legs	Weight	*List Price
No.	Bracket	Inches	Lbs.	Galv.
)200	L House	$3\frac{11}{16} \times 2\frac{13}{16}$	51	\$15,20
3202	L Pole	4 x 3	87	25.32
)210	T Pole	5 x $2\frac{1}{2}$	65	30.40

### Porcelain Knobs Complete With Galvanized Bolts for Distributing Brackets

	-		—Per 100——	
List		Weight		*List Price
No.		Lbs.		Galv.
215	One double groove	68		\$7.28
1216	One four-groove	128		12.13
1220	Two four-groove	250		23.10
*Delivery:	F. O. B. Pittsburgh, Pa. †Delivery: F. O. B. C	hicago III. For	warehouse	deliveries

write nearest house.







No. 7570

### Strain Plates and Guy Shims

#### HOT GALVANIZED

The purpose of strain plates and guy shims is to keep the guy strand from cutting into the pole, which not only injures the pole, but retains moisture about the strand and accelerates corrosion. The strain plate has been adopted as standard by the Bell companies and by most large central stations, as it give better protection to the pole, costs less, and is much cheaper to install than shims, which were former standard. From two to four plates are required per pole, depending on its diameter. Strain plates are mad from 14 gauge galvanized steel plates. Guy shims are furnished either hot galvanized or plain.

			Per	100
List		Dimensions	Weight	List Price
No.		in Inches	Lbs.	Galv.
7575	Strain plate	4 x 8	85	\$22.88
7570	Pole shim		45	9.72
7571	Pole shim		57	10.30



No. 7102

#### **Hub Guards**

#### HOT GALVANIZED OR PLAIN

Hub Guards are used on corner poles to protect them from the hubs of wagons The dimensions given are those of the flat plates, before bending, the 14 inch guards being bent to a  $5\frac{1}{2}$  inch radius, and the 16 inch to a  $7\frac{1}{2}$  inch radius. All holes are  $\frac{9}{16}$  inch diameter for  $\frac{1}{2}$  inch lag screws, there being three holes on each side of the 18 inch guards and five on the 30 inch sizes. The 18 inch lengths are the A. T. & T. Co. standard.

	Dimensions	Per 100——	
List No.	in Inches	Weight, Lbs. Plain	Galv.
7100	14 x 18 x ½	1050 \$215.33	\$278.70
7101	16 x 18 x ½	1100  232.35	300.64
7102	$14 \times 30 \times \frac{3}{16}$	2400 438.04	601.33
7103	$16 \times 30 \times \frac{3}{16}$	2500 460.64	630.70

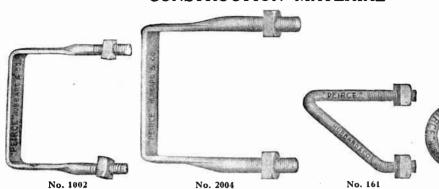
No. 7110

## Pole Protection Strips

#### HOT GALVANIZED

These are also known as cribbing guards and are used to prevent horses gnawing poles. Made of 24 gauge galvanized sheet steel, 2 inches wide and 48 inches long, and curved to fit the pole, to which they are nailed, generally spaced about 3 inches on centers.

List No. 7110 Weight per 100 165 lbs. List Price per 100 \$17.16





# Peirce Crossarm Straps and Clamps Hot Galvanized

		D	imensions in Inch	es———			
List No.   Description   Size Arm   Flat   Round   Pounds per 100   Each   per 100							
No.	Description	Size Arm	Flat	Round	Pounds per 100	Each	per 100
1001	Strap	$3\frac{1}{4} \times 4\frac{1}{4}$	$\frac{5}{22} \times 11/8$	1/2	91	<b>\$0.23</b>	<b>\$22</b> .06
1002	Strap	$3\frac{1}{2} \times 4\frac{1}{2}$	$\frac{5}{32} \times 11/8$	1/2	102	.24	23.10
1003	Strap	$3\frac{3}{4} \times 4\frac{3}{4}$	$\frac{5}{32} \times 1\frac{1}{8}$	1/2	113	.25	24.16
1004			$\frac{5}{32} \times 1\frac{1}{8}$	1/2	126	.26	25.20
List				rossarm			
No.	Des	scription	Inc	hes	Weight, Lbs. per 10	00 Each	
2001	Heavy Cro	ssarm Strap	$3\frac{1}{4} \times 4\frac{1}{4}$	Wood Arm	142	<b>\$0</b> .30	
2002	Heavy Cro	ssarm Strap	$3\frac{1}{2} \times 4\frac{1}{2}$	Wood Arm	148		
2003	Heavy Cro	ssarm Strap	$3\frac{3}{4} \times 4\frac{3}{4}$	Wood Arm	154	.34	
2004	Heavy Cro	ssarm Strap	4 x 5	Wood Arm	160	.36	
159	Angle	e Clamp	$2\frac{1}{2} \times 2\frac{1}{2}$	Notched Angle	90	.14	
160	Angle	e Clamp	3 x 2	Notehed Angle	90	.14	
161			3 x 3	Notched Angle	100		
162			$3\frac{1}{2} \times 3\frac{1}{2}$	Notched Angle	115	.16	
165	Pipe	Clamp	$1rac{1}{4}$ to $2$	Standard Pipe	160	.25	23.80









No. 1860

No. 1872

No. 7840

#### PEIRCE DOUBLE CLEVISES FOR CROSSARMS Hot Galvanized

T	he Double Clevis consists of a clev	is plate and a crossarr	n clamp or strap.		
List		•	_	Lis	st Price——
No.		Size Arm, Inches	Wt., Lbs. per 100	Each	per 100
1860	Standard Clevis Plate	All Arms	120	\$0.29	\$26.60
1861	Angle Clamp only	3 x 3 Angle	e 70	.12	10.46
1862	Angle Clamp only	3½ x 3½ Angle		.14	12.36
1871	Crossarm Strap only	31/4 x 41/4 Wood		.23	20.90
1872	Crossarm Strap only	3½ x 4½ Wood	l 108	.25	22.80
1873	Crossarm Strap only	3¾ x 4¾ Wood	119	.28	25.66
1874	Crossarm Strap only	4 x 5 Wood	132	.32	28.50

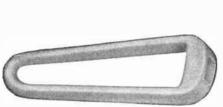
### HUBBARD GUARD IRONS

								Ivanna		
rd	Irons are	fastened	to	the	arm	by	two	wood	screws.	

7	The Guard Irons are fa	stened to the arm b	by two wood screws.	<b>—</b>	
List	Dir	nensions in Inches		Per 1	
No.	Diameter	Width	Height	Weight, Lbs.	List Price
7840	1/2	<b>5</b>	$7\frac{1}{4}$	85	Prices on
7841	5/8	5	$7\frac{1}{4}$	125	Application
F	C. O. B. Factory, Pitts	burgh, Pa. For w	varehouse deliveries writ	e nearest house.	

7515

### CONSTRUCTION MATERIAL



No. 7515





No. 7501



No. 7595

\$0.40

\$36.30

### Drop Forged Bolt Clevis Hot Galvanized

The bolt clevis is used where a long eye is necessary, for instance, in supporting suspension type insulators with a hook in the cap of the upper unit. It is attached to the crossarm or building by a 1/8 inch machine bolt, with either the head or nut inside the eye, which is 31/4 inches long, and tapers from 1/8 inch wide at one end to 11/4 inches at the other, inside measurements. -List Price-Weight per 100, Lbs.

#### Drop Forged Eye Nuts Hot Galvanized

These eye nuts were primarily designed for use on the threaded ends of ½ or 5% inch machine bolts passed vertically through crossarms for attaching suspension type insulators. They are also useful for dead ending lines. By their use a second eye may be added to the 1/2 or 5/8 inch eye bolts, which permits the attachment of a back guy to the same bolt that supports the strain insulators to the dead ended wire, thus removing the stress from the crossarm without the trouble and expense of using an additional eye bolt. A pole head guy can be attached to an eye nut on the end of the crossarm bolt. The ½ inch eye nut may be used on the end of a Peirce crossarm strap for back guying a line dead ended on a Peirce clamp pin. Many other uses will be found. The eye nuts are threaded to screw on standard 1/2 or 1/8 inch bolts, have eyes 1 inch inside diameter, and are sufficiently strong to develop the full strength of the bolt.

List No 7500 Diameter Bolt, Inches 7501

Weight, Lbs. 40

-List Price Each .47

Per 100 \$36.40

42.68



Guy Thimbles Hot Galvanized

Size of Strand
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I Weight, Lbs. List No. List Price 191/2 22 73  $7593 \\ 7594$ \$9.30 10.50 58 and 34 7595 17.00



No. 8937



No. 75831/2



No. 7584



No. 7586

Wall Straps Hot Galvanized

Wall straps are used by telephone and electric railway companies for dead ending messengers or span wires on buildings and walls. They are made of  $\frac{1}{4} \times 2$  inch flat steel,  $\frac{12}{2}$  inches long, with an eye of 1 inch inside and 2½ inch outside diameter. Holes are provided for four 3% inch Peirce Expansion Bolts or lags. List No.

Weight per 100, Lbs. 8937 238

List Price per 100 .Price on application

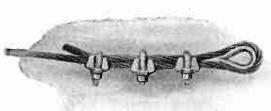
# Guy Hooks Hot Galvanized

The No. 7584 guy hook is the A. T. & T. Company's standard and is in general use, although the 2 bolt type is preferred by some construction men. For lighter work, the 31/2 inch hook gives very satisfactory results.

		Dimensions in Inches—			100
List No.	Size Steel	Length	Diameter Holes	Weight, Lbs.	List Price
75831/2	11/4 x %	$3\frac{1}{2}$	11	38	\$12.50
7584	134 x 38	4	11	75	20.00
7586	1½ x ¾	6	7.6	75	20.00

Delivery F. O. B. Pittsburgh, Pa. For warehouse deliveries write nearest house,







Showing Rope Wire Clip Applied

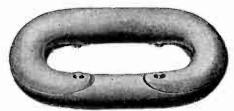
Bulldog Clip

### Drop Forged Wire Rope Clips

#### Hot Galvanized

Wire Rope Clips are drop forged to the Crosby pattern and made from best quality open hearth steel.

			-1'er 100	And the second s				
List No.	Size Strand, Ins.	Weight, Lbs.		List No.	Size Strand, Ins.	Weight, Lbs.	List Price Galv.	
7480	1,4	25	\$33.00	7485	5 8	87	\$63.00	
7481	.5	25	33.00	7486	34	175	81.00	
7482	3 6	37	41.00	7487	7.8	200	99,00	
7483	73 16	37	44.00	7488	1	300	123.00	
7484	$\mathcal{L}_{2}^{\circ}$	75	47.00					
			BULLDO	G CLIPS				
			Galva	anized				
740408	1/4 in, strand		\$15.00	740411	1/2 in. strand		\$24.00	
740409	in strand.		15.00	740412	5% in strand.		35 . 00	
740416	3/8 in. strand.		18.00					



Connecting Link



Guy Shackle

### Acme Connecting Link

#### Drop Forged

List		*List Price	per Doz.    L	ist	*List	Price per Doz.
No.	Size	Plain		o. Size	Plain	Galv.
741435	$\frac{3}{16}$ in.	\$1.62	\$2.37 741	441 9 in.	\$4.37	\$6.39
741436	14 in.	1.62	$2.37 \mid 741$	442 $\frac{5}{8}$ in.	5.01	7.38
741437	5 in.	1.88	2.75   741		4 4 0 7	10.11
741438	3 g in.	2.55	3.62 741		1 2 (14)	16.50
741439	$\frac{7}{16}$ in.	3.12	4 26 741	445   m.	. 15.63	22.71
741440	$\frac{1}{2}$ in.	3.62	5.49			

# Screw Guy Shackles

#### Drop Forged Steel

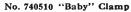
													5.
			Width		*List	Price				Width		*List	
- 1		Length	B'twn	Diam.	per	100			Length	B'twn	Diam.	per	100
List		Inside	Eves	of Pin	l	1	List		Inside	Eyes	of Pin	~ -	
No.	Size	Inches		Inches	Galv.	Jap.	No.	Size	Inches	Inches	Inches	Galv.	Jap.
741446	3	7/8	3/8	1/4	\$48.75	\$41.85	741454	3/4	234	1 7 3 2	7/8	\$142.80	
741447	3 16 1/4 5 16	116	1/2	15	48.75	44 85	741455	3/4 7/8	338	13/8	1		173.40
741448	5	$1\frac{1}{16}$ $1\frac{1}{4}$	1/2 9 16	16 3/8	48.75	44 85	741456	1	334	15/8	11/8	306.00	
741449	3/8	13/8	11	16	52.65		741457	11/8	43/8	17/8	11/4	408.00	
741450	7	13/4	11	1/2	60.45		741458	11/4	5	2	138	579.00	
741451	1/2	17/8	3/4	9	72.15		741459	138	51/4	21/8	$1\frac{1}{2}$	780.00	
741452	9 16 5/8	2	116 3/4 7/8	5/8	104.55		741460	11/2	51/2	21/4	15/8	975.00	780.00
741453	5/R	238	$1\frac{1}{16}$	3/4	122 40	112.20				<u> </u>	ļ	ł	

<sup>\*</sup>Delivery F. O. B. Factory, South Portland, Me. For warehouse deliveries write nearest house.

### Western Electric

### CONSTRUCTION MATERIAL







No. 740508 Showing Top

### Matthews Boltless Guy Clamp

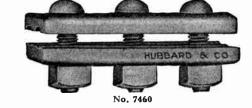
			-Trice per i	00
	Wt.	Less 500	500 to 1000	1000andOver
"Baby" guy clamp" Giant" guy clamp	50 lbs. 130 lbs.	\$23.00 38.00	$$22.00 \\ 36.00$	$$21.00 \\ 34.00$

### Matthews Two Bolt Guy Clamp

			- Price Each -	
	Wt.	Less 500	500 to 1000 1	.000 and Over
2 bolt guy clamp	175 lbs.	\$0.32		\$0.32
Chain lever for use with 2 bolt clamp		3.00	3.00	3.00

†Delivery F. O. B. Factory, St. Louis, Mo. For warehouse deliveries write nearest house.





# Rolled Steel Guy Clamps

			Wt.	*List	Price
List No.	$\mathbf{T}\mathbf{y}\mathbf{p}\mathbf{e}$	Length	per 100	Each	Per 10C
7448	2 bolt	6 in.	115 lbs.	\$0.39	\$31.74
7449	3 bolt	4 in.	185 lbs.	.53	42.67
7450	3  bolt	6 in.	$210 \mathrm{\ lbs}.$	.63	50.88

### Heavy Malleable Iron Guy Clamps

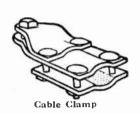
7460	3 bolt	6 ft. 2 in. wide	370 lbs.	<b>\$</b> 1.29	\$103.60

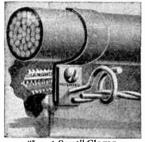


No. 7465

### Schaper Forged Guy Clamps

						—∗List Pri	ce Galvd-
List No.	Bolt	Length	Width	Size Strand	Wt. Lbs.	Each	Per 100
7465	3	$5\frac{1}{2}$ in.	$1\frac{1}{2}$ in.	1/4 to 1/2 in.	210	\$0.96	\$77.20







"Long-Saut" Clamp

# Matthews Cable Clamp

			Lis	t Price per 1	00
List		Wt. per	Less	25 to	50 or
No.	Description	100	than 25	49	More
740509	For all cables larger than 00	400 lbs.	Plain, \$270,00 Galv. 320,00	\$260.00 ° 300.00	\$250,00 290,00

### Matthews Dead End Eyes or Eyenuts

List No.		Weight per 100	List Price per 100
1	For ½ in. eyebolt.	100 lbs.	\$44.00
2	For 5% in, eyebolt	100 lbs.	44.00
3	For ¾ in. eyebolt	100 lbs.	44.00

### "Long-Saut" Combination Cable Clamp

For attaching telephone cables and bridle wires with one fastening to brick or wood buildings, fences, etc.

List No.	No.	Outside Diam. of Cables	List Price	List No.	No.	Outside Diam. of Cables	List Price per 100
740158	00000	3/8	\$2.85	740165	2	11/8	\$14.72
740159	0000	76	3.24	740166	3A	114	21.38
740160	000	1/2	3.42	740167	3	11/2	22.80
740161	00	5/8	3.62	740168	4 A	137	25.66
740162	0	+1	7.88	740169	4	2	28.50
740163	1	3/4	9.78	740170	5	25/8	35.62
740164	2A	1	14.16				

### Bridle Rings

Are for the carriage and distribution of wires. Due to the superior process of enameling, no chafing of the wires, absolute smoothness, perfect insulation, and proof against rust are points of distinction.

List No.	Eye	Opening	Shank	Steel	—List Price per 1000—
Style	Inches	Inches	Inches	Inches	Enameled Galvanized
A C E	$1\frac{5}{8}$ $1\frac{1}{4}$ $\frac{5}{8}$	14 14 14	1 14 1 14 75	1/4 1/4 1/6	On Application

Prices for bridle rings with machine threads, quoted on application.



No. 8901

### Cable Suspension Clamps

#### Hot Galvanized

These are the standard A. T. & T. Cable Suspension Clamps, the One-Bolt type being used for light cables and on cable arms, and the Three-Bolt Clamp for heavy cables and long spans. Clamps are made of special rolled sections of open hearth steel 2½ inches wide and ¾ inch thick, and are shaped so as to securely grip messenger \*trands of the sizes shown.

List No.	Type	Longth Inehes	Size Strand	Wt., Lbs.	100 ——— List Price
8901 8903	One-bolt Three-bolt	$2\frac{1}{2}$ $5\frac{3}{4}$	14 to 7 14 to 7 14 to 7	$\frac{80}{205}$	\$21.75 57.00

### Acme Beam Clamps



Acme Beam Clamp

These clamps are made of a forging with a left-hand running thread on one end and a right-hand running thread on the other. The square in the center is drilled with 11 inch hole. These clamps are of malleable iron.

The state of the s	J11.	
List No. v	Vt., Lbs.	List Price Each
<ul> <li>Takes beams with flange 4 to 7 inches in width</li> <li>Takes beam with flange 8 to 13 inches in width</li> </ul>	$\frac{11_{2}}{23_{4}}$	\$1.25 1.70
% inch brass machine bolts for above ½ inch long under the inches long over all and threaded up to within % inch of the	e head, 2	50





Duct Rods

Strand Connector

### Diamond Screw Duct Rods

This form of Duct Rod is furnished with cast bronze couplings, hickory sticks 1 inch diameter and furnished with either octagonal or round sticks. They lack the quick acting features of the automatic couplings used in the Empire Duct Rods but are used with good results by a number of telephone companies who prefer this type.

W. E. List on 4 ft. long, each....

### Diamond Strand Connector

Diamond Strand Connectors are designed for connecting up dead ends of messenger strands when they

occur between poles and result in great economy in pole line construction for various reasons.

With the Diamond Strand Connector the dead end of wire strands are looped in opposite directions and held with Trident 3 Bolt Guy Clump, as illustrated, and forms a continuous line of messenger strand from one end of the pole line to the other.

W. E. List price, galvanized, each ...... \$1.17



Safety Straps



Drive Rings

### Diamond Safety Straps

The purpose of safety straps is to prevent heavy lead cable from falling to the ground should the aerial rings through accident be stripped off the strand. Great danger of injury to employees and to the public is the result of heavy lead cables becoming detached from the strand.

W.E. LIST PER 100

List 2	\$84.00
List 2.	63.00

### Diamond Drive Rings

Diamond Drive Rings are designed to accomplish the same purpose as the Screw Bridle Ring with the added advantage of their use in stucco exterior walls and plaster interior walls over wood where it is difficult to secure a wood screw bridle ring. They are quick to attach, being driven in with an ordinary nail hammer and will hold securely. They are made of hard nail wire, galvanized by the hot process.

Diameter	Wire	· · · · · · · · · · · · · · · · · · ·	List Per
of Eye	Gauge	Length	1,000
$\frac{1}{2}$ ins.	No. 11	2 ins.	\$11.00
$1\frac{1}{4}$ ins.	No. 9	3 ins.	25.00

Delivery: F.O.B. Factory, Garwood, N.J. For warehouse deliveries write nearest house.







Wire Clamp

# Metropolitan Electric Light Wire Connector

Type C wire connectors, for aerial service wire No. 6 and smaller.  Type D wire connectors, for aerial service wire No. 6 and smaller; to main line		
wire No. 6 and larger.	Per 100	30.00

# O. G. "Long Saut" Ground Wire Clamp

Fastening for Ground Wires to Walls of Brick, Stone, Concrete or Wood







# Telegraph and Telephone Pothead Support

List No. 9017

Weight per 100 125 lbs. List Price per 100 On application

# Presteel Cable Rack Sections

No.         Holes         Spacing         Length         Hole         weight Lbs.         List Price           2125         14         1½ ins.         24 ins.         ½ ins.         290         On           2126         18         11½ ins.         20 ins.         5% ins.         290         On							-
	2125	14	Spacing 112 ins.	24 ins.	Hole 5% ins.	per 100 290	1'er 100

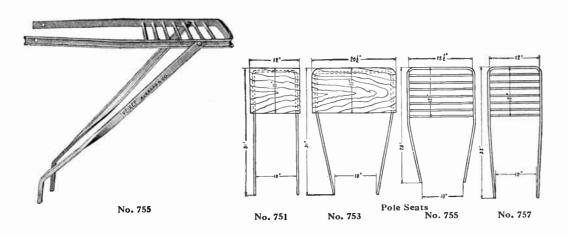
#### Rack Hooks Angle Steel Cable Racks Extension Thickness List from Face -\*Per 100of List No. of Length \*Per 100 Wt., Lbs. No. of Rack, Inches Plate List Price No. Hooks Inches Wt., Lbs. List Price 2131 33 3 16 3 40 On 9125 14 30 530 On 71/2 2132 86 application 28 9126 60 1060 application 2133 10 112

### Cast Iron Cable Hooks

Extension from Face of Rack 4 inches 7 inches 10 inches 13 inches	No. of Cables 1 2 3 4	Wt., Lbs. 90 150 240 305	List Price On application
	Face of Rack 4 inches 7 inches 10 inches	Face of Rack         Cables           4 inches         1           7 inches         2           10 inches         3	Face of Rack Cables Wt., Lbs.  4 inches 1 90 7 inches 2 150 10 inches 3 240

-List Price

### CONSTRUCTION MATERIAL



#### Peirce Pole Seats

#### Hot Galvanized or Painted

These seats in a competitive test held a dead load of 1740 lbs. without deflection. A 1¼ inch angle iron seat, weighing fifty per cent. more, collapsed with 960 lbs. load. The frames and braces of all styles are of 1 x ½ inch channel steel. The wood seats are 1¼ inch cypress, boiled in creosote. The bars of the all steel seats are 3% inch square steel let into the frame in such manner as to leave no projecting ends. There is no strain on the riveted joints. The bars are placed with corners up, to prevent slipping. They are shipped completely assembled in bundles of five.

List		Std.	Weight	*Lis	t Price
No.		Bundle	per 100	Each	Per 100
750	No. 1, painted Pole Seat	5	1260	\$2.59	\$234.60
751	No. 1, galvanized Pole Seat	5	1260	3.03	276.00
752	No. 2, painted Pole Seat	5	1400	3.80	345.00
753	No. 2, galvanized Pole Seat	5	1400	4.40	400.20
754	No. 3, painted Pole Seat	5	1400	2.88	262.20
755	No. 3. galvanized Pole Seat	5	1400	3.64	331.20
756	No. 4, painted Pole Seat	5	1260	2.88	262.20
	No. 4, galvanized Pole Seat		1260	3.64	<b>331</b> ,20

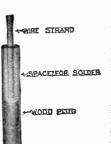
<sup>\*</sup>Delivery F.O.B. Pittsburgh, Pa. For warehouse deliveries write nearest house.

### Ground Rods

#### HOT GALVANIZED

\_List Price\_

The wired rods have, soldered firmly to their upper ends, No. 12 copper wires with free ends 5 inches long for attaching to the grounding wires running down the poles. Unwired rods are provided with holes through their upper ends for attaching grounding wires. These holes are  $\frac{1}{8}$  inch in diameter for  $\frac{3}{8}$  inch rods,  $\frac{5}{12}$  inch for  $\frac{1}{2}$  inch rods, and  $\frac{3}{16}$  inch for  $\frac{5}{8}$  and 1 inch rods, and are located 1 inch from the ends of the rods.



#### GROUND RODS WITH COPPER WIRE

				-17191	, 11100					. 2200	0 2 1 100 1
List	Dia. I	ength	Wt.		Per	List	Dia. I	ength.	Wt.		per
No.	Ins.	Ft.	Lbs.	Each	100	No.	Ins.	Ft.	Lbs.	Each	100
9505	1/2	5	340	\$0.94	\$84.84	9516	5/8	6	615	\$1.54	\$144.00
9506	1/2	6	405	1.05	94.77						
		G	ROU	ND RC	DS WI	LHOU.	T CO	PPER	WIRE	Ē	
9555	3/8	5	180	\$0.43	\$39.24	9567	1/2	7	460	\$0.92	\$84.24
9556	3/8	6	215	.51	46.26	9576	5/8	6	660	1.19	108.00
9565	1/2	5	330	.70	64.35	9577	5/8	7	700	1.39	126.00
9666	1/2	6	395	.81	74.29	9578	5/8	8	800	1.54	144.00

### **GUY ANCHORS**

#### Matthews Scrulix Anchors



These anchors are screwed down into the solid ground without disturbing it. Each turn of the helix causes it to feed down into the ground and as it goes down the upper half again compresses the earth so that it is as solid above the anchor as around it.

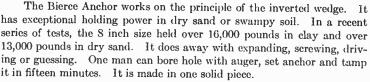
		——List Pri	ices per 100, Galvani	zed
Mfrs.		Less	Less than 50	50 or
No.	Diameter of Anchor	than 12	and Over 11	More
502R	5 in		\$350.00	\$330.00
603R	6 in	540.00	520.00	500.00
704R	7 in	640.00	620.00	600.00
567	Wrench.	1000.00	1000.00	1000.00
<b>*</b> 765	Handle	1000.00	1000.00	1000.00
800	8 in	1650.00	1650.00	1650.00
1000	10 in	2100.00	2100.00	2100.00
1200	12 in	2800.00	2800.00	2800.00

All rod anchors are 6 feet long overall. A No. 567 wrench must be used with all anchors smaller than 800. No wrench is needed for the 800, 1000 or 1200 anchors.

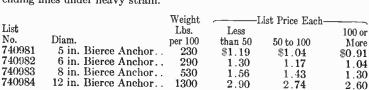
\*The 765 ratchet handle is for use with the 567 wrench, and is very useful where it is desired to put the anchor down next to walls, fences, etc.

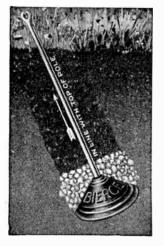
Delivery F. O. B. St. Louis, Mo. For warehouse deliveries write nearest house.

### Bierce Guy Anchors



To install, bore a hole not less than five feet with an earth auger of same diameter as Bierce Anchor. Use ½ inch, 5% inch or 3¼ inch anchor rods as desired for 8 inch size and 1 inch rods for 12 inch size. Drop the anchor into the hole with the point up. Tamp a quantity of broken stone or brick firmly around the anchor and it is ready to attach to the guy wire. The earth may be back filled loosely or tamped, as desired. We recommend the 8 inch anchor for a general purpose and the 12 inch for deadending lines under heavy strain.





Bierce Anchor

Delivery F. O. B. Cincinnati, O. For warehouse deliveries write nearest house. Prices do not include rods.

### Harpoon Guy Anchors

Harpoon Guy Anchors are made of steel throughout. They are driven down with a sledge and set by a pull. One man can install a Harpoon Guy Anchor in ten minutes. No digging, boring, tamping or special tool is required. The wings open out in the undisturbed ground and will withstand any strain met in ordinary pole line service.

** .	T				List Price Eacl	h———
List	Length		Weight	Less		100 and
No.	Rod	Finish	Lbs.	than 49	50 to 99	Over
741274	5 ft.	Black enamel	23	\$5.32	\$5.04	\$4.64
741275	5 ft.	Electro galvanized.	23	6.20	5.88	5.50

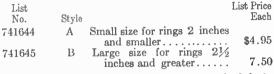
Delivery F. O. B. Syracuse, N. Y. For warehouse deliveries write nearest house.

Crimping Pliers

### CABLE ACCESSORIES

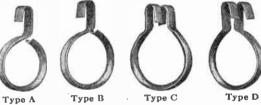
#### STYLE A CRIMPING PLIERS

These pliers are for clamping rings to suspension strand. They are made in two sizes. The small size is for rings 2 inches inside diameter and smaller; the large size for  $2\frac{1}{2}$  inches and greater.



Note: When ordering state size of strand:  $\frac{5}{16}$  inch,  $\frac{5}{16}$  inch,  $\frac{7}{16}$  inch or special size.

	DIAMOND	CRIMPER	
List No.			List Price Each
741659	Crimper complete		
	e com	_	-





Crimper

# Galvanized Aerial Cable Rings

Made of steel heavily and smoothly galvanized after forming. They are placed on the strand by a lineman, seated in a cable car or boatswain's chair.

A tool called a crimping plier is used to fasten them to the strand and the cable is then pulled into the

suspended rings.

The inside diameter of ring should be from ½ to ¾ inch greater than the outside diameter of cable to be installed.

740970	Size, Inches Inside Diameter 1% in. Type A cable rings 1% in. Type B cable rings 2 in. Type C and D cable rings.	Per 100 \$3.06 3.12	20.03 1	No. 740972 740973	Inside Diameter	I'er 100 \$4.16 4.84	Price————————————————————————————————————
--------	--	---------------------------	---------	-------------------------	-----------------	----------------------------	---

## Matthews Cable Splicing Joints

This device is designed to take the place of horizontal splices in multiconductor lead-covered cables, and is adapted particularly for underground manholes.

				rrice rach-	
	List No.	Description	Less than 25	25 to 49	50 or More
B	1	Will take for straightaway splice any cable up to and including 1 in., outside diameter, for each cable. Weight 3 lbs., inside dimensions, 21/4 x 8 ins.	\$5.80	\$5.60	<b>\$5.</b> 30
A OC	2	Will take for straightaway splice any cable up to and including 1½ ins., outside diameter, for each cable. Weight, 4 lbs., inside dimensions,	•		4 70
	3	3½ x 8 ins	7.40	7.00	6.70
Splicing Joint	4	each cable. Weight, 7½ lbs., inside dimensions, 4% x 9 ins	11.50	11.00	10.50
		and including 2¾ ins., outside diameter, for each cable. Weight, 15 lbs., inside dimensions 5¾ x 11% ins.	,	20 00	18.00

### CABLE GRIPS





Universal Single Eve Cable Grip



Universal Double Eye Cable Grip



Universal Double Eye Split Cable Grip

### Universal Cable Grips

These cable grips are made in three different styles, as shown in illustrations. The single eye grip is used for attaching the pulling line to the end of the aerial or underground cable.

The double eye grip is designed for a luffing tool, to pull additional cable into a manhole after the single eye grip has been removed. It is invaluable for pulling out old underground cable, leaving it in the best of condition for future use.

The double eye split grip can be lashed on a working cable at any desired point, allowing slack to be pulled without interruption to the service. To determine size of Universal Cable Grips to order, refer to table of measurements.

### Table of Measurements

Cable Grip Size	Cable Diameter, Inches	[] Cable Grip Size	Cable Diameter, Inches
3/4 in	For 34 in. to 3/8 in.	2½ in	For 2 in. to 23% in. For 21½ in. to 27% in. For 3 in. to 37% in. For 3½ in. to 37% in.
Single E	List Price	s and Data	Eve Grip
• • •			

	Single Lye Grip			Single Lye Grip	
List		*List Price	List		*List Price
No.	Size	Each	No.	Size	Each
191701	1/2 x 21 ins	\$6.42	191709	½ x 36 ins	\$8.97
191702	34 x 21 ins	7.05	191710	34 x 36 ms	9.63
191703	1 x 21 ms	7.71	191711	1 X 36 Ins	$-10^{\circ}26^{\circ}$
191701	1½ x 24 ins	8.84	191712	1 1/2 x 36 ins	10.89
191705	2 x 21 ins	8.97	191713	2 x 30 ms	11.55
191706	21½ x 21 ins	9.63	191714	$2\frac{1}{2}$ x 36 ins	12.18
191707	3 x 21 ins	10.26	191715	3 × 30 ms	12.84
191708	3½ x 24 ins	10.89	191716	3½ x 36 ins	13.47
	Double Eye Grip			Double Eye Split Grip	
191733	¾ x 18 ins	\$8.97	191754	3/4 x 18 ins	\$10.26
191734	1 x 18 ins	10.26	191755	1 x 18 ins	11.55
191735	1½ x 18 ins	11.55	13:1756	$1\frac{1}{2} \times 18$ ins	12.84
191736	2 x 18 ins	12.84	191757	2 x 18 ins	14.10
191737	2½ x 18 ins	14.10	191758	$2\frac{1}{2}$ x 18 ins	15.39
191738	3 x 18 ms	15.39	191759	3 x 18 ins	16.68
191739	3½ x 18 ins	16.68	191760	3½ x 18 ins	17.97

## Universal Leather Collar Protector

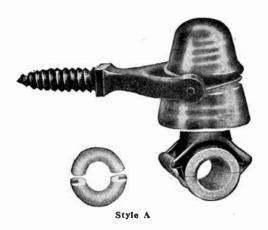
The Universal Leather Collar Protector is for use with single eye grips only. It will prolong the life of the cable grip, as it protects the point of greatest wear.

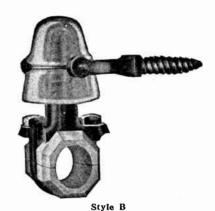
#### Single Eye Grip For 24 Inch and 36 Inch

List		*List Price			*List Price
No.	Size		No.	Size	Each
191775	1 in	\$1.00	191778	2½ ins	\$4.30
191776	1 1/2 ins	4.10	191779	3 ins	4 40
191777	2 ins	4.20	191780	3½ ins	4.50

<sup>\*</sup>Delivery F. O. B. Syracuse, N. Y. For warehouse deliveries write nearest house.

### INSULATOR SPECIALTIES

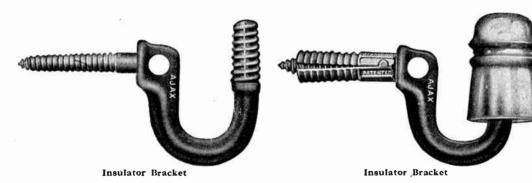




#### Holmes Tree Insulators

These insulators are made of malleable iron and furnished with double petticoat glass insulator. They are always in an upright position, regardless of the slant of the tree. The current cannot leak even if wire is bare. They can be quickly applied to tree without cutting the wire.

Style	*List Pr	rice Each
A	Holmes Tree Insulator, ¾ in. hole, will take wire up to 2-0	\$1.12
В	Holmes Tree Insulator, 1 in. hole, will take wire up to and including 4-0	1.40



### Ajax Insulator Bracket

The new Ajax Insulator Bracket is made of malleable iron with lag screw in one piece and the insulator pin is made of a soft tough lead composition.

The comparatively soft insulator pin eliminates cracking the glass or porcelain insulator which is screwed over it. Where iron pins are used the expansion and contraction of the metal often results in cracking the glass or porcelain.

The lag screw used without expansion shield is adapted for use in wood house-walls, trees, poles, etc., and with the addition of a Diamond N Two-part Expansion Shield it makes a most secure attachment to brick, stone or concrete walls. Furnished in two diameters, ½ inch and  $\frac{5}{8}$  inch.

#### List per 100

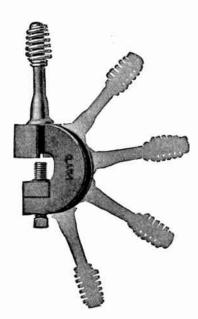
		alvanized		-Black
Diameter of Screw	Without Shield	With Shield	Without Shield	With Shield
½ in.	\$57.00	<b>\$70.50</b>	\$48.76	\$60.00
5/8 in.	67.50	82.50	57.76	70.50

<sup>\*</sup>Delivery F. O. B. Factory, Newton, Mass. For warehouse deliveries write nearest house.

### EFFICIENCY ADJUSTABLE INSULATOR SUPPORTS







Showing Adjustable Feature

This style of support is made in three sizes and is designed for carrying lines on bridges, in steel frame buildings, mills, foundries, piers elevated railways, subways, train sheds and similar structures, and for stringing temporary circuits in mills and factories in process of construction.

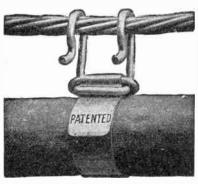
#### List Price of Support, Bolt and Nut

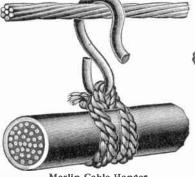
List		Mfr. List	W. E. Price
No.	For	per 100	per 100
100	Porcelain Insulator, 1 inch high	\$28. <b>00</b>	\$33.60
150	Porcelain Insulator, 1½ inch high	40.00	48.00
300	Glass Insulator	110.00	114.40
201	Cleat Fitting, 2 inches long	40.00	48.00
202	Cleat Fitting, 3 inches long	74.00	81.40
203	Cleat Fitting, 4 inches long	110.00	114.40
343	2 Wire Cleat	35.50	42.60
344	3 Wire Cleat	47.50	57.00

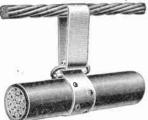
All Efficiency Adjustable Supports instead of being drilled and tapped for a set screw are cored and equipped with a cup point set screw and steel nut seated on the concave side of the lower jaw of the support. This patented feature retains intact the full strength of the support and provides for firm attachment to columns, girders, angle iron and similar steel work without danger of stripping threads.

Among other advantages is its adaptability for carrying lines parallel with and at right angles, or both, to girders, columns, angle irons, etc., on top, under and at the side of the structural steel.

### CABLE HANGERS







Boston Cable Clip

Marlin Cable Hanger

Metropolitan Cable Clip Type A

### Boston Cable Clip

Furnished with two sizes of Hooks

No. 1 for 1/4 inch Messenger Wire; No. 4 for 1/2 inch Messenger Wire

List			*W. E. List
No.	Length of Strap	Hook No.	per 1000
1	6 ins.	1	\$60.00
2	7 ins.	1	60.00
3	8 ins.	1	60.00
4	$6\frac{1}{2}$ ins.	4	60.00
5	$6\frac{1}{2}$ ins.	1	60.00

### Marlin Cable Hanger

No. 1 Grade

No. 1 grade is an excellent hanger, quality of hemp not quite as good as No. 3. Hooks are made from No. 9 galvanized steel wire.

Size	Length of Loop	Hook No.	Material	Weight per 1000	tW.E.List per 1000
25 pair	9 ins.	9	2-ply Marlin	30 lbs.	<b>\$1</b> 6.88
50 pair	11 ins.	9	2-ply Marlin	33 lbs.	18.12
75 pair	12 ins.	9	2-ply Marlin	34 lbs.	18.76
100 pair	14 ins.	9	2-ply Houseline	40 lbs.	21.74
150 pair	15 ins.	9	2-ply Houseline	42 lbs.	22.50
200 pair	16 ins.	9	2-ply Houseline	44 lbs.	23.74

#### No. 3 Grade

No. 3 Grade Marlin Cable Hanger is made in accordance with A. T. & T. Co.'s specifications. The marlin used is 3-ply and is made of the finest quality of selected long line American hemp. The hooks are of No. 9 wire, galvanized by hot dip process after they are formed.

Size	Length of Loop	Hook No.	Material	Weight per 1000	tW. E. List per 1000
25 pair 50 pair 75 pair 100 pair 150 pair 200 pair	9 ins. 11 ins. 12 ins. 14 ins. 15 ins. 16 ins.	9 9 9 9 9	3-ply Houseline 3-ply Houseline 3-ply Houseline 3-ply Houseline 3-ply Houseline 3-ply Houseline	35 lbs. 37 lbs. 38 lbs. 40 lbs. 42 lbs. 45 lbs.	\$22.26 24.50 25.62 27.86 29.00 30.12

### Metropolitan Cable Clip

Will stand 400 lbs. strain. The steel wire loop is heavily galvanized and the band which encircles both cable and supporting strand is of zinc.

	*List Price		W. E. List
Type A		Type B	per 1000
		7 inches	\$57.00
8 inches	. 66.00	9 inches	66.00
9 inches	72.00		

\*Delivery F. O. B. Boston, Mass. †Delivery F. O. B. Cleveland, O. For warehouse deliveries write nearest house.

# INSULATED FORKS AND TURNBUCKLES

Hot Galvanized



No. 650



No. 660

### Insulator Fork and Turnbuckles

List No.	Style	Bundle	Wt. Lbs. per 100		*List Price per 100
$\frac{650}{651}$	Insulator Fork and Eye, 6 in. Turnbuckle. Insulator Fork and Eye, 9 in. Turnbuckle.	10	$\frac{356}{381}$	\$3.54	\$311.04 336.96
600	Two Insulator Forks and 6 in. Turnbuckle. Two Insulator Forks and 9 in. Turnbuckle.	10	435	3.94	345.60
0.71	THE THEOREM TO BE AND S III. I UTIDUCKIE	10	460	<b>4</b> . <b>3</b> 3	380.16



# Insulated Turnbuckles

List No. 27383 100293 114997 114998	Test Load in Lbs. 3000 4000 5000 4000	Average Breaking Load in Lbs. 6000 8000 6000 8000	Max. Takeup in Ins. 6 6 12 12 13	Diam. Bolt in Ins.	Max. Length Between Centers of Eyes in Ins. 1834 1834 2934 30	Approx. Net Wt. per 100 275 lbs. 325 lbs. 325 lbs. 410 lbs.	List Price Each \$2.90 3.56 4.36 5.15	‡List Price per 100 \$264.00 324.00 396.00 468.00
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Eye and Eye

### Plain Turnbuckles

0:	†List Price			†List Price	Each
Size	Self-colored	Galv.	Size	Self-colored	Galv.
$\frac{3}{16}$ x 3 ins.	\$0.81	80.90	$\frac{3}{24}$ x 6 ins.	\$3.13	\$3.48
$^{1}$ $\downarrow$ x 4 ins.	. 95	1.05	$\frac{3}{4}$ x 9 ins.	3.92	4.35
<sup>5</sup> <sub>16</sub> x 4 <sup>1</sup> 4 ins.	1.08	1.20	$^{3}4$ x 12 ins.	4.81	5.34
$\frac{3}{8}$ x $\frac{4}{2}$ ins.	1.22	1.35	7 8 x 6 ins.	4.29	4.77
<sup>7</sup> <sub>16</sub> x 5 ins.	1.35	1.50	<sup>7</sup> 8 x 9 ins.	5.67	6.30
$\frac{1}{2}$ x 6 ins.	1.76	1.95	78 x 12 ins.	6.29	6.99
$\frac{1}{2}$ x 9 ins.	2.30	2.55	1 x 6 ins.	5.40	6.00
$\frac{1}{2}$ x 12 ins.	2.70	3.00	1 x 9 ins.	6.29	6.99
5 8 X 6 ins.	2.70	3.00	1 x 12 ins.	7.16	7.95
$\frac{5}{8}$ x 9 ins.	2.84	3.15	11/8 x 12 ins.	11.61	12.90
<sup>5</sup> s x 12 ins.	3.59	3.99	11 x 12 ins.	14.85	16.50

Prices of clevis combinations on application.

\*Delivery F. O. B. Pittsburgh, Pa.; †Schenectady, N.Y.; †Portland, Mc. For warehouse deliveries write nearest house.

### FIBRE CONDUIT AND FITTINGS













Extra

Each

\$0.14

Couplings

Sleeve Joint

Inside

‡1 11/2

2

3

21/2

31/2

Diameter 1

Screw Joint



Conduit

per

Foott \$0.27

.21

 $.21 \\ .23$ 

.24

.45

.54





Harrington Joint

In the process of manufacturing fiber conduit and fittings, wet pulp or fiber is wrapped in a minutely thin film upon a forming mandrel, under pressure, until the desired thickness of wall is obtained. The individual fiber becomes and forms a solid homogeneous wall. Taken off the mandrel, the wet pulp structure is subjected to a drying process, after which it is placed in a vat of liquid compound. This compound is a preservative, and is also insulating and water proofing. It thoroughly permeates the entire structure so that after treatment the wall of the conduit, when cut, presents a strong resemblance to hard rubber. ends are cut in a lathe to make a socket joint, sleeve joint, Harrington joint, or screw joint, as may be desired.



### The Sleeve Joint Type

a sleeve by means of which and faced.

Tees

Each

\$3.53



Tee

Inches Cross

The ends of each length	are turned down to fit snugly in $\epsilon$
a tight connection is made.	The ends of the pipe are squared
,	W. E. List Price

Standard

Bends

Each

\$2.48

2.851.054.80.14 3.003.90 $\frac{3.38}{3.38}$ .152.85 4.43 1.13 5.48 .18 3.00 4.43 1 13 5.483.15 3.45 4.50 1.205.63.211.28 .33 4.05 5.556.60 5.786.984.35 6.151.357.20.42

Caps or Plugs

Each

\$1.05

Crosses

Each

\$4.35

# Harrington Joint Type

Elbows

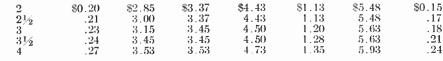
Each

\$2.70



Cap

This type of joint is a modification of the sleeve joint and is made with a tapered end. Sleeves are tapered also, thereby allowing more swing to the conduit than ean be secured by other types of joints. In this type the conduit does not butt, in consequence of which more flexibility may be had.





Coupling

### Screw Joint Type

This type of fiber conduit is manufactured with a slightly thicker wall than the socket joint type, owing to the necessity of securing a sufficiently heavy structure for carrying the thread that is cut on the ends of the pipe. The thread is "United States Standard"—four to the inch—and a coupling is provided for completing the joint. liquid compound can be furnished to be wiped on the threads of the pipe when making This compound hardens and renders the joint watertight.



Reducer

the com	cction. Im	5 compound	i maracino ma	at remedia ti	io joine man		
$1\frac{1}{2}$	\$0.30	\$4.65	\$4.05	\$5.78	\$1.28	\$7.35	\$0.18
2	. 33	4.80	4.50	6.30	1.35	7.88	.21
$2\frac{1}{2}$	. 33	4.80	4.50	6.30	1.35	7.88	.24
3	.42	5.25	4.65	6.45	1.50	8.03	. 27
$3\frac{1}{2}$	. 48	5.85	4.80	6.75	1.65	8.40	.36
4	.60	7.05	5.10	7.35	1.80	9.00	. 45



Elbow

†Prices include couplings required.

†Manufactured only on special order.

\*Delivery F. O. B. Orangeburg, N. Y. For warehouse deliveries write nearest house.

### FIBER CONDUIT AND FITTINGS

### The Socket Joint Type

Socket or mortise and tenon connections are automatically turned on the ends of each length, being 3/8 inch long, slightly tapering and uniform in size. This connection secures laying the conduit perfect in fit and alignment.

				Prico		
Inside Diameter	Conduit	Standard			Caps or	
	per	Bends	Elhows	Tees	Plugs	Crosses
Inches	Foot	Each	Each	Each	Each	Each
1	\$0.18	<b>\$2</b> .33	\$2.55	\$3.23	\$1.05	\$3.98
11/2	.15	2.63	2.85	3.53	1.05	4.35
2	.15	2.63	3.23	4.05		
21/2	.17	2.70			1.13	4.88
272			3.23	4.05	1.13	4.88
3	.18	2.78	3.30	4.13	1.20	5.10
31/2	.20	3.00	3.30	$4.1\bar{3}$	1.28	
4	.23	3.38	3.38			5.10
	.20	0.00	0.00	4.28	1.35	5.25





### Junction Boxes

Fiber junction boxes can be used with either screw, sleeve or socket joint conduit. They are especially recommended for service connections and where it is necessary to light up private roads. These boxes are made two, three and four way. The inside dimensions are, approximately, 8 x 8 inches, and the weight is 16 pounds.

	44 . E.
	List Price
	Each
Junction Box, two, three or four openings	\$9.70

### Fibre Conduit Bends

In producing these bends the conduit is first formed in the usual manner. When the pulp structure is removed from the mandrel it is bent on a special form to the radius and degree desired after which it is dried and thoroughly saturated with an insulating and preservative compound. Special bends of short radii are mitered to give the degree and radii desired.

### Standard Bends

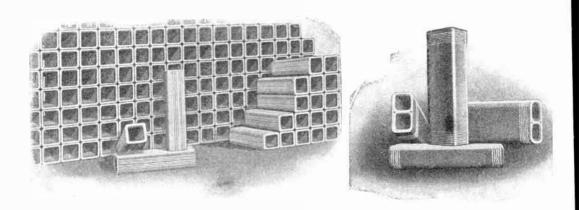
Inside diameter	1 ins.	$1\frac{1}{2}$ ins.	2 ins.	2½ ins.	3 ins.	3½ ins.	4 ins.		
	D.	ATA, 45 DEG	REES AND 90	DEGREES	BENDS		4		
Length Radius	2½ ft. 18 ins.	5 ft. 18–24–36 ins.	5 ft. 18–24–36 ins.	5 ft. 24–36 ins.	5 ft. 36 ins.	5 ft. 35 ins.	5 ft. 36 ins.		
			DATA "S" B	ENDS					
Offset Radius		20 ins. 36 ins.	20 ins. 36 ins.	20 ins. 36 ins.	20 ins. 36 ins.	20 ins. 36 ins.	20 ins. 36 ins.		
Socket*Sleeve*Harrington	\$2.36 2.48 	\$2.63 2.85 4.65	\$2.63 2.85 2.85 4.80	\$2.70 3.00 3.00 4.80	\$2.78 3.45 3.15 5.25	\$3.00 5.78 3.45 5.85	\$3.38 6.98 3.53 7.05		
***	_								

<sup>\*</sup>Prices include couplings.

<sup>†</sup>Delivery F O. B. Orangeburg, N. Y. For warehouse deliveries write nearest house.

### VITRIFIED CLAY CONDUIT

This conduit is made of the purest fire-clay, salt glazed, and guaranteed to comply rigidly with the American Telephone and Telegraph Company's specifications. We inspect all conduit as it is loaded. Conduit is manufactured in all standard sizes and designs, and includes some special economic forms.



Single Duct Conduit: May be obtained in either of two forms: the square or round duct. The square duct single is heavier and has no real advantage over the round duct single. The round duct is now the popular single duct conduit. Its weight is much less, thus saving on freight. It is especially efficient in building up trunk lines, the beveled corners allowing square interstices between the pieces, thus forming an additional concrete support, and insuring good alignment before and after cable pulling.

Two-way and Three-way Multiple Conduit can only be manufactured in 2 foot lengths, and is designed for building up trunk lines to the desired capacity of laying singly in the trench for terminal and lateral construction.

### VITRIFIED CLAY CONDUIT

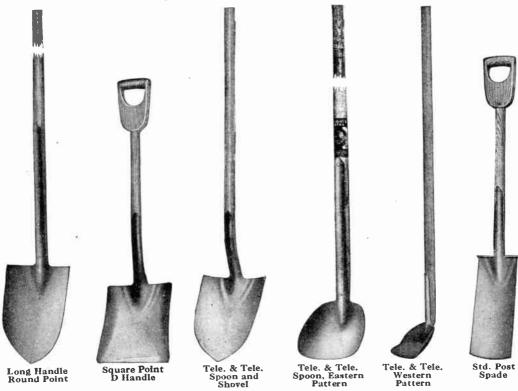
Is the most satisfactory conduit made, strong in the web, straight in line, smooth in the duct, and flat on the ends. This ware is the most economical per duct foot to lay in the trench.

Style	Length of Piece, Feet 1.5	Duct Feet in Piece, Feet	Weight per Duct Foot	Duct Diameter Inches 316	Duct Feet Minimum Cor. 4278	Price per Duct Foot
Square Duct, Single Round Duct, Single 2-Way Multiple 3-Way Multiple 4-Way Multiple 6-Way Multiple 9-Way Multiple	1.5 1.5 2 2 3 3	1.5 4 6 12 18 27	8 8 8 7.50 7.50 7.50	3 1 2 3 8 3 8 8 3 3 8 8 3 3 8 8 3 8 8 8 8 8	5000 6250	Prices on Applica- tion

### STANDARD WOODEN CONDUIT

This pine "pump-log duct" is largely used by telephone companies with underground lead-covered cable; it is creosoted, and, therefore, there is no limit to its life; the price is moderate, freight is low, breakage is very slight, cost of laying is low; dimensions, square,  $4\frac{1}{2} \times 4\frac{1}{2}$  inches outside; hole, 3 inches.

Prices on application.



Standard Long or D Handle Shovels

The standard shovel furnished with either D or long handle (D handle is 27 inches long, long handle is 4½ feet from top of blade to top of handle), furnished in either polished or black finish, round or square point and with plain back (welded).

Pom c	Square	Point-		Round	Point		List Price
List		g Handle	D Ha	andle	Long I	Iandle	per Dozen
No.	Width	Length	Width	Length	Width	Length	Black Finish
2	91/2	113/4	91/4	$12\frac{3}{4}$	$9\frac{1}{4}$	113/4	\$37.50
3	934	$12\frac{1}{4}$	91/2	131/4	$9\frac{1}{2}$	121/4	38.50
4	$10\frac{1}{2}$	$12\frac{1}{2}$	93/4	133/4	$9\frac{3}{4}$	$12\frac{3}{4}$	39.75
5	$10\frac{7}{8}$	13	$10\frac{1}{2}$	$14\frac{1}{4}$	$10\frac{1}{4}$	131/4	40.85

Telephone or Telegraph Shovels

These shovels are from 6 to 8 feet in length with round point (blade straight with handl, no lift), plain back finished in black; has strap regularly 91/2 inches to 28 inches, inclusive.

Length	List Price	per Dozen    Length	List Price	
	With 9½ in. strap	* 810 80   B ft	With 28 in. strap	\$42.80
6 ft.	With 9½ in. strap	340.00   010.		
7 ft.	With 9½ in. strap	41.80    7 ft.	With 28 in. strap	43.80
, 201	17 1011 (7 / Z 111. Bottop)		With 28 in. strap	44.80
8 ft.	With 9½ in. strap	42.00    016	With 20 m. swap	11.00
0 2 00			. ~	

Telephone or Telegraph Spoons These spoons are made from 6 to 8 feet long with regular round point (Eastern pattern) or flat toe

(Western pattern) with plain back in black 6 ft. With 9½ in. strap	\$40.80   6 ft. 41.80   7 ft.	With 28 in. strap	\$42.80 43.80 44.80
	dard Post S	pades	

16 in. D SHOVEL HANDLES SHOVEL HANDLES SPOON HANDLES Length List Price per Doz. Length 6 ft. List Price per Doz. List Price per Doz. Length \$15.35 XX Grade \$16.25 6 ft. X Grade 9.10 7 ft. 18.3519.057 ft.

20.458ft. 21.15 8 ft. 23.959 ft. 24.659 ft. 30.2510 ft. 30.9510 ft. 33.75 12 ft. 34.4512 ft.

Delivery F. O. B. Factory, Anderson, Ind. For warehouse deliveries write nearest house.

List

853

Loy or slick, 8 ft. handle.....

Weight

List Price

\$6.55

### **CONSTRUCTION TOOLS**



Plain Digging Bar

### Crow and Digging Bar HIGH GRADE OPEN HEARTH STEEL

	HIGH GRADE OF EN HEARTH STEEL							
List No. 1061 1062	List Price Wgt. Each 1 in. octagon, 7 ft. long 20 lbs. \$4.45 l in. octagon, 8 ft. long 23 lbs. 5.15 l 1065 1½8 in. octagon, 8 ft. long 30 lbs. 6.40							
	Tamping and Digging Bar							
$\begin{array}{c} 1071 \\ 1072 \end{array}$	1 in. octagon, 7 ft. long 20 lbs. \$5.25   1074   1½ in. octagon, 7 ft. long 26 lbs. \$6.40   1075   1⅓ in. octagon, 8 ft. long 30 lbs. 7.35							
	Plain Digging Bar							
1081 1082	1 in. round, 7 ft. long 19 lbs. \$4.10 $\parallel$ 1084 11/8 in. round, 7 ft. long $24\frac{1}{2}$ lbs. \$4.80 1 in. round, 8 ft. long $21\frac{1}{2}$ lbs. 5.95 $\parallel$ 1085 11/8 in. round, 8 ft. long 28 lbs. 5.10							
Digging Spud with Tamper								
	nsh, osh							

Loy or Slick

Electric Tamping Bar

# Digging Spud With Tamper

No. 852	Digging spud with tamper, 9 ft. long	per Doz. 234	Each \$7.70	
1044	Electric Tamping Bar		\$6.30	
1011	Loy or Slick	, , , ,	<b>\$0,00</b>	



Tamping Bar with Heavy Iron Shoe



Tamping Bar with Extra Heavy Iron Shoe

### Tamping Bar

	WITH HEAVY IRON	SHOE		1	WITH EXTRA HEAVY IF	ON SH	OE
List		Wgt.	List Price	List		Wgt.	List Price
No.		per Doz.				per Doz.	
854	Tamping bar, 7 ft. handle.						
855	Tamping bar, 8 ft. handle.	170 lbs.	3,00	1055	Tamping bar, 8 ft. handle.	180 lbs.	3.55
	*Delivery F. O. B. Oshkosh, V	Vis. Fo	r warehou	se deliv	veries write nearest house.		





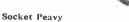


Regular Pattern

Carrying	or	Lug	Hooks
----------	----	-----	-------

	REGULAR PATTERN	E	XTRA HEAVY WITH STEE	L SWIV	ELS
List No. 295 297	Weight List Price per Doz. Each 4 ft. maple handle. 85 lbs. \$3.80 5 ft. maple handle 95 lbs. 4.00	List		Weight Li	ist Price
	Western Un	Pattern			
800 801	4 ft. maple handle	802 803	6 ft. maple handle	165 lbs. 1 <b>75</b> lbs.	\$4.90 5.25





Cant Hook

List No.	Malleable Socket Peavies		List Price
124 137	With 4 ft. select maple handle With 4 ft. select hickory handle	per Doz. 110 lbs. 110 lbs.	01 15

### Cant Hooks

List No. 188 189	Handles 4 ft. select maple handle. 4½ ft. select maple handle.	List Price   Each   \$3.20   3.40	No.	Handles 4 ft select hiskory bandle	List Price Each . \$3.80 3.80

Weight per dozen, 4 ft., 85 lbs.

Weight per dozen, 412 ft., 90 lbs.



Pike Poles Nos. 805-816



Western Electric Pattern Nos. 818-824

## Washington Fir Pike Poles

### Standard Small Size

List No. 805 806	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Handles     Weight List Price per Doz.       14 ft.     110 lbs.       16 ft.     130 lbs.       2.55				
	Ct. 1 1 17	C:				
	Standard Heav	y Size				
809 810 811 812	10.0	18 ft				
Western Electric Pattern						
818 819	12 ft	18 ft				

..... 185 lbs. 4.20 823 Delivery F. O. B. Factory, Oshkosh, Wis. For warehouse deliveries write nearest house.

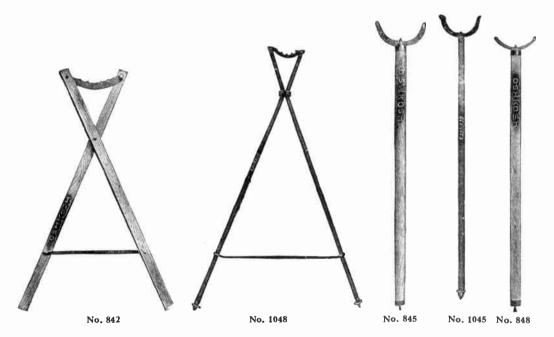
# Western Electric

### CONSTRUCTION TOOLS



### Guarded Pike Poles

			List				List
List		Weight	Price	List		Weight	Price
No.	Handle, Washington Fir	per Doz.	Each	No.	Handle, Washington Fir	per Doz.	Each
832	10 ft., 1¾ ins	100 lbs.	\$3.00	797	14 ft., 2¼ ins	180 lbs.	\$4.00
833	12 ft., 1 <sup>3</sup> / <sub>4</sub> ins	120 lbs.	3.15	835	16 ft., 21/4 ins	195 lbs.	4.25
834	14 ft., 1¾ ins	140 lbs.	3.35	836	18 ft., 2¼ ins	210 lbs.	4.45
795	16 ft., 1¾ ins	160 lbs.	3.75	837	20 ft., 2¼ ins	235 lbs.	4.85
796	12 ft., 21/4 ins	165 lbs.	3.75	798	22 ft., 21/4 ins	250 lbs.	5.40



### Pole Supports

	WOODEN JENNEY POLE SUPPORTS				IRON JENNEY POLE SUI	PPORTS
List No. 842 843 844	6 ft., 2½ x 3 ins	57 lbs.	-11.90	1049	6 ft. pole support	34 lbs. 22,40
845 846 847	WOODEN MULE SUPP 6 ft., 3½ in. diam	23 lbs. 26 lbs.	10.10	1046	IRON MULE SUPPO 6 ft. mule pole support 7 ft. mule pole support 8 ft. mule pole support	32 lbs. \$16.80 35 lbs. 19.60

# Standard Dead Man

#### WESTERN ELECTRIC PATTERN



No. 318 Simplex Pole Jack

### No. 318 Simplex Pole Jack

Single acting—operating on the down stroke of lever, or tripping at any point.

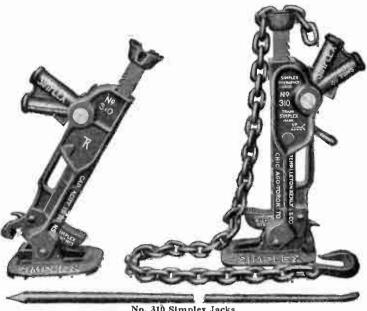
This jack has been especially designed for pulling, reinforcing and straightening telephone, trolley and lighting poles.

"It pivots on its base," and lifts the largest pole from solid ground in but a fraction of the time required by former methods.

The pivoting base allows the jack to follow the angle of the pole with pressure exerted constantly. The recessed cap into which any of the links of the chain are dropped, holds firmly under every load. The double lever socket insures a convenient position of the lever bar, no matter the angle of inclination of the jack.

Standard Equipment. Eight feet of heavy chain with pear link attached. Five foot steel lever bar, pinch bar construction. Two feet of 10 inch, 25 lb. I beam base support to prevent slipping.

List No. 318 Capacity Tons Lift Height Weights. List Price Each Total Wt. Inches Inches Jack Chain 17 lbs. \$80.00 15 30 90 lbs. 34\_lbs.



No. 310 Simplex Jacks

### Simplex Emergency Jack

This jack pivots on its base and has recessed eap which holds the links of a chain firmly. It is used for turning the fly-wheels of large engines off center, as an emergency jack on trucks, on electric and steam railroads, for tank cars, moving heavy machinery, etc. It performs the service of a combined crane and jack.

Single acting—operating on the down stroke of the lever.

Uning	id acting operating on the do	" M CWOLC OI (	nic ic ver.					
						Weights-		List
List		Capacity	Lift	Height	Jack	Chain	Total	Price
No.	Style	Tons	Inches	Inches	Lbs.	and Box	Wt.	Each
310	Emergency	15	121/2	211/2	59	30 lbs.	89 lbs.	\$63.00
315	Ordnance and Emergency	15	12	2334	67	13 lbs.	102 lbs.	68.00

Delivery F. O B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.



### Standard Tree Trimmer

		Appro	x. Wt.	List [	1		Appro	x. Wt.	List
List			ch	Price	List		E	ach	Price
No.	Length	Lbs.	Oz.	Each	No.	Length	Lbs.	Oz.	Each
760275	4 ft. Standard	2	8			10 ft. Standard		4	\$2.80
	6 ft. Standard			2.50	760279	12 ft. Standard	5	0	3.35
	8 ft. Standard			2.80					

Extra blades \$3.10 per doz.







W. E. Cable Reel Jack Side View

Western Union Cable Reel Stand

List Price , per Pair Ratchet adjustable cable reel, without wood base..... \$95.25

### W. E. Cable Reel Jack

List No.	`		Weight Lbs.	List Price per Pair
760184	W. E. cable reel jack	d	150	\$78.40



No. 2000-30. Cable Roller

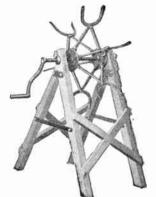




Cable Car No. 3

### "Matlock" Cable Roller

List No.		Weight Lbs.	List Price
	Cable roller with wooden roller.	41/2	\$7.00
2000-31	Cable roller with iron roller.	8	9.00



Folding Take-up Reel

# Security Messenger Cable Cars

List		Weight	List Price
No.	Description	.Lbs.	Each
1	With adjustable seat and table	53	\$33.30
1	With adjustable seat, no table	37	25.95
3	Without safety strap	28	19.85

### Take-up Reels

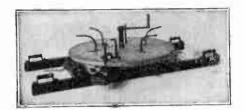
	· · · · · · · · · · · · · · · · · · ·		
List		Weight	List Price
No.		Lbs.	Each
895	Folding, for 12 inch coil	39	\$22.40
896	Folding, for 18 inch coil	40	23.10
897	Folding, for 21 inch coil	41	23.80
898	Folding, for 24 inch coil	42	24.50







No. 4609-102 Reel in Operation



No. 4609-102 Combined Take-up and Pay-out Wire Reel

# Combined Take-up and Pay-out Auto Truck Wire Reel

The "EICHOFF" No. 4609-104

This combination reel is made with No. 12 galvanized sheet steel disc, 28 inches in diameter, and has the same labor saving features as the combination reel No. 4609–102. By simply reversing the ends of the T axle in the socket of the base the reel is changed from a horizontal to a perpendicular position for either taking-up or paying-out wire. The T axle turns in the socket of the base so that the reel will take up wire in any direction without turning the auto truck. It is especially adapted for railway signaling, telegraph and telephone departments.

List			*List Price
No.		Weight	Each
	Combined take-up and pay-out reel (reel disc, 28 inches)	57 lbs.	\$57.40

### Combined Take-up and Pay-out Wire Reels

No. 4609-102

Heretofore most telephone, telegraph and electric light companies used separate reels, one to pay out and one to take up. These new combination reels will fill both of these requirements and will do it better and in less time. The reel disc proper instead of being made of wood is of No. 10 galvanized sheet steel; is 34 inches in diameter and has a 1 inch flange turned around the edge. The axles are made from ½ inch cold rolled steel with cast iron hub bored to fit. Weight of the reel about eighty lbs.

No. 4609-108 reel has the same labor saving features as the No. 4609-102 and has the added advantage of being mounted on wheels, making it very convenient for one man to handle.

List		Wainht	†List Price
No.		Weight	Each
4609-102	Combined take-up and pay-out reel (reel disc 34 ins.)	91 lbs.	\$58.80
4609-108	Same as the No. 4609-102, but is mounted on wheels	129 lbs.	77.00
1000 100	Large wire guide for barbed wire (extra)		4.20



The Wasson Reel

### Wasson Reels

List		*List Price
No.	Weight	Each
4607-1 Wasson single reel and cart	90 lbs.	\$42.00
4607-2 Wasson double reel and cart	129 lbs.	58.80
and the second second		

\*Delivery F. O. B. Factory, Chicago, Ill. †Delivery F. O. B. Factory, Oshkosh, Wis. For warehouse deliveries write nearest house.



No. 401 Improved Reel



No. 402 Improved Wagon Reel

#### PAY OUT REELS

No. 402 Improved wagon reel. Can be bolted on any wagon box, platform or fence post for putting up wire fences.

List			*List Price
No.		Wt.	Each
$\frac{401}{402}$	Improved Reel Improved Wagon Reel	95 lbs.	\$32.15 25.00



No. 409 Tool Cart



No. 408 Track Dolly

#### TOOL CART

#### **Dimensions**

Main box, 6 feet 2 inches x 30 inches deep.

Lower tool box, 33 x 30 x 8½ inches deep. Side tool box, 5 compartments, 5 ft. 10 inches x 6 inches wide, 10 inches deep.

Front tool box 30 x 6 x 10 inches.

List			*List Price
No.	m 10	Wt.	Each
409	Tool Cart	920 lbs.	On appl.

#### TRACK DOLLY

With the use of one rail, two men can move poles to any desired place. The wheels are iron and fit standard rails. tool can also be used in pairs to move a load of poles, by laying two across and piling any amount desired.

List			"List Price
No.		Wt.	Each
408	Track Dolly 4 v 2 ft v 15 in	225 the	On appl

#### JUMPER WIRE REEL

The Jumper Wire Reel was especially designed for use in telephone exchanges.

List			*List Price
No.		Wt.	Each
403	Jumper Wire Reel	40 lbs.	\$39.30

\*Delivery F. O. B. Factory, Downers Grove, Ill. For warehouse deliveries write nearest house.



No. 403 Jumper Wire Reel



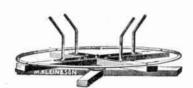
No. 4602-1 Double Deck Pay-out Ree



No. 4601-1. For Telephone Work. Wood, Select Maple No. 4601-2. For Electric Light, Telegraph Work, etc. A Heavier Reel than No. 385A. Wood, Seasoned Oak



No. 5306 Shoulder Strap for Carrying Pay-out Reel



No. 4600-1 Common Pay-out Reel

### Pay-out Reels

List	·	Weight	*List Price
No.		Lbs.	Each
4602-1	Klein Double Deck Pay-out Reel on barrow		\$50.40
4601-1	Klein Pay-out Recl on barrow for telephone work	90	23.80
4601-2	Klein Pay-out Reel on barrow for electric light work	80	28.00
5306	Leather Shoulder Straps for carrying pay-out reel(per set)	43/4	14.55
4600-1	Klein Common Pay-out Reel without barrow for wagon reels	40	14.00
		FT71	

Above reels are substantially built of hard wood, disk reinforced with steel plates. The guard pins are adjustable for standard 12 inch, 18 inch or 24 inch coils. Built to stand hard usage,



No. 4608-1 Improved Take-up Reel



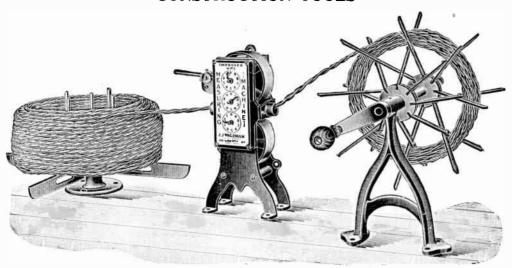
No. 4608-2

## Klein's Improved Take-up Reels

Take-up Reel, seasoned oak. All braces bolted. Removable side piece on spool to allow the coiled wire to be unloaded. The turned axle makes the reel light running. The unloading feature makes it economical in time. And in addition to being so well constructed, the improved take-up reel has a separate guard piece slipped on shaft and fastened with a flat key, allowing wire to be removed quickly and easily.

List		Weight	*List Price
No.		Lbs.	Each
	Improved, for 18 in. coil	62	\$33.60
4608-2	Improved, for 21 in. coil	6 <b>5</b>	33.60
		_	

\*Delivery F. O. B. Factory, Chicago, Ill. For warehouse deliveries write nearest house.



Folding Reel

Measuring Machine

Wire Winder

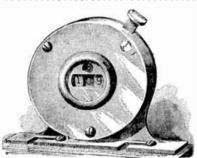
#### Wire Measuring Outfit

This measuring outfit measures quickly and accurately all wires from No. 0 to No. 40, inclusive. It can also be used for measuring lamp cord, rope, tape, etc. It is made so that it may be fastened to either the counter or side wall and occupies but little space. It is indestructible and very neat in appearance, the winder and reel are so arranged that they may be closed when not in use, therefore occupying but little space.

List	•	*List Price
No.		Each
761806	Folding reel	\$8.00
761807	Measuring machine	24.00
761808	Wire winder	13.35



Hand Tally Counter



No. 1 Tally Register

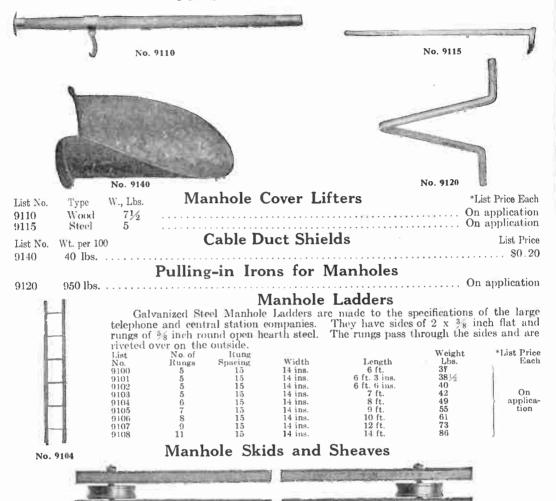


Pole Counter

### Veeder Set Back Hand Tally Counter

This counter is useful for many purposes. The case is small in size, with rounded corners so as not to irritate the hand of the user.

List No. 762016	Set Back Hand Tally Counter	List Price Each \$6.00
List No.	No. 1 Tally Register	List Price Each
0	With bracket	\$6.00
0	With bracket	8.00 6.00
ĭ	With safety pin. With safety pin.	8.00
List No.	Pole Counter	List Price Each
0	Pole counter, records 1 to 1000.	\$5.00
*D	Pole counter, records 1 to 10,000elivery F. O. B. Factory, New York City. For warehouse deliveries write nearest house.	7.00



A tool for leading the pulling line from the mouth of the duct to the capstan. The skids have pin holes every three inches from top to bottom so that the sheaves can be moved any place desired in the skid. Nine foot sets furnished unless otherwise ordered.

††List Price Each
Nine-foot skids, per set. \$75.60
Price for additional lengths, per foot. 3.80

## Empire Duct Rods



Empire Duct Rods

These rods are constructed of malleable iron machined to a perfect fit so that side or end play is avoided. The wooden rod is of the best selected straight-grained well-seasoned hickory, and is expanded in the end of the iron coupling by means of a wedge which makes it impossible to pull out.

The rods are made in two styles, without wheels and with wheels. In the wheel type the wheels are so staggered that if one axle should come in contact with an obstruction on one side of the duct the other side will remain free.

With	Wheels	Without	Wheels
	&List Price		§List Price
Length	per Rod	List No.	per Rod
3 ft.	\$2.00	760178	\$1.60
4 ft.	2.15	760179	1.75

\* Delivery F. O. B. New York City. † Delivery F. O. B. Factory, Chicago, Ill. †† Delivery F. O. B. Factory, Harvey, Ill. § Delivery F. O. B. Factory, Garwood, N. J. For warehouse deliveries write nearest house.



Closed



Showing Jaws Locked Open

## Western Electric

Buffalo Grips

Made in the Following Types and Sizes

The jaws may be clamped open at any width, the grip held in one hand and the wire inserted, no matter in what position the lineman may be.

The harder the pull the firmer it grips, yet it does not injure the wire or insulation.

List No.	Description	Grip Only
1	Extreme opening of .22 inch, holding wire from smallest size to No. 6, inclusive.	\$5.00
$\tilde{2}$	Extreme opening of .35 inch, holding wire from smallest size to No. 0, inclusive	7.50
3	Extreme opening of .48 inch, holding all sizes of wire from smallest size to No. 0000, inclusive.	11.00
4	Extreme opening of .52 inch, holding weatherproof wire, sizes No. 6 to No. 1, inclusive.	7.50
5	Extreme opening of .68 inch, holding weatherproof wire, sizes No. 4 to No. 0000, inclusive.	9.00
6	Extreme opening of .27 inch, holding weatherproof wire, sizes No. 14 to No. 8, inclusive.	4.70



With Pulley



Lineman's Tool

## Buffalo Grips with Pulleys

Made in the Following Types and Sizes

I.ist No.	Description	Grip with Pulley
1	Extreme opening of .22 inch, holding wire from smallest size to No. 6, inclusive. Will accommodate sash cord 1/4 inch in diameter.	\$6.60
2	Extreme opening of .35 inch, holding wire from smallest size to No. 0, inclusive. Will accommodate rope <sup>3</sup> s inch in diameter.	8.50
3	Extreme opening of .48 inch, holding all sizes of wire from smallest size up to No. 0000, inclusive.  Will accommodate sash cord 3% inch in diameter.	12.00
4	Extreme opening of .52 inch, holding weatherproof wire, sizes No. 6 to No. 1, inclusive.	
5	Will accommodate sash cord $\frac{3}{8}$ inch in diameter. Extreme opening of .68 inch, holding weatherproof wire, sizes No. 4 to No. 0000, inclusive.	8.50
6	Will accommodate sash cord 3 inch in diameter.  Extreme opening of .27 inch, holding weatherproof wire, sizes No. 14 to No. 8, inclusive.	9.50
The state of the s	Will accommodate sash cord ¼ inch in diameter.	6.20

#### Buffalo Lineman's Tool

List No.	Description	Complete   Tool
1	Extreme opening of .22 inch, holding wire from smallest size to No. 6, inclusive.	\$12.50
2 4	Extreme opening of .35 inch, holding wire from smallest size to No. 0, inclusive. Extreme opening of .52 inch, holding weatherproof wire sizes No. 6 to No. 1,	13,70
J	inclusive.	11.00



No. 1602-10

### Klein's American Grip

The American Grip Wire Clamp is made of steel. It is light and compact and takes up but little space between the blocks and wire, thus allowing the greatest amount of slack within lineman's reach to be brought up. It is operated with one hand, is easily placed on the wire and is self locking by spring pressure and readily released.

This grip is equally efficient on iron or copper wire. The jaws are parallel and perfectly smooth and will positively not injure the wire. The draft being close on the center, it will pull straight and not kink the wire. Galvanized finish.

List		Weight	List Price
No.		Lbs. Each	Each
1602-10	For No. 6 wire and smaller	11/4	\$4.50
1602-20	For No. 0 wire and smaller	2	8.50



Come Along Grip



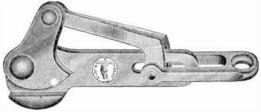
Common Eccentric Grip



Havens Grip

# Klein's Eccentric Wire Grips KLEIN'S COME ALONG GRIP

List	Galvanized	Weight	List Price
No.		Lbs.	Each
1609-20	For No. 8 wire and smaller	1	\$1.60
1609-30	For No. 6 wire and smaller	2	1.95
1609-40	For No. 0 wire and smaller	$2\frac{1}{4}$	2.40
	KLEIN'S COMMON ECCENTRIC GRIP		
	Arranged for Attaching Strap		
1607-20	For No. 8 and finer wire, with clevis for jack straps. Galvanized finish		. \$2.10
	KLEIN'S HAVENS STEEL GRIP		
1604-10	For No. 8 wire and finer, galvanized finish	1	<b>\$</b> 4.65
1604-20	For ½ inch wire and finer, galvanized finish	$2\frac{1}{2}$	6.05
1625-20 This	Improved Havens grip	• • •	14.56



Compound Eccentric Grip, Style "A"-Brass



Compound Eccentric Grip, Style "A"-Steel

## Klein's Eccentric Wire Grip, Style A

List		Weight	List Price
No.		Lbs.	Each
1605-10	Polished brass, for No. 8 and finer wire	13/8	\$7.00
1605-20	Steel, for ½ inch and finer wire, galvanized finish	2	7.85
	World Radio History		

#### Western Electric

#### CONSTRUCTION TOOLS



Quick Samson Grip

## Quick Samson Trolley Messenger Wire Grip

For Messenger or Strand						
List No.		Weight, Lbs. Each	List Price Each			
1618-20	For $\frac{3}{16}$ to $\frac{3}{8}$ in. strand, gripping surface 7 in	8	\$22.85			
1618-30	For ½ to ½ in. strand, gripping surface 7 in	$9\frac{3}{4}$	25.90			
1618-40	For $\frac{5}{16}$ to $\frac{5}{8}$ in. strand, gripping surface 9 in		29.00			

#### For Trolley Wire

A modification of the Quick Samson Grip is available for trolley wire. The jaws are not serrated, but only roughened.

Dut omy	rougheneu.		
List		Weight Lbs.	List Price
No.		Each	Each
1619-20	For No. 6 to 2-0 B&S wire, gripping surface 7 in	8	\$22.85
1619-30	For No. 2 to 4-0 B&S wire, gripping surface 7 in	$9\frac{3}{4}$ $14\frac{1}{2}$	25.90
1619-40	For $\frac{5}{16}$ to $\frac{5}{8}$ in. B&S wire, gripping surface 9 in	$14\frac{1}{2}$	29.00



Wire Grip



Lineman's Block with Strap

# Klein's Parallel Screw Wire Grip

List	Tot Honey whe	Weight Lbs.	List Price Each
No. 1608-10	Two grooves for Nos. 0 and 00	7	\$6.60
1608-20 1608-30	Two grooves for Nos. 00 and 000.		$\substack{7.45\\8.25}$
	American groove wire, or any other sizes special to order.	- / 4	

## Lineman's Block with Strap

	Lillettiati o Dioon with Strap		
List	-	Weight	*List Price
Ma		Lbs.	per Set
4904-12	Lineman's block with 12 ft. of strap	$2\frac{3}{4}$	<b>\$</b> 11. <b>7</b> 5



Howe's Wire Tool Single Purchase



Howe's Wire Tool Double Purchase

### Howe's Wire Tools

The frames are malleable, castings galvanized finish, roller made of steel. The swivel hook is steel with an opening large enough to go over an insulator pin or other convenient object to anchor to. The forward end has a locking device to hold the load at any distance. It is arranged so it can be used with a vise or with a grip.

List		Weight	List Price
		Lbs.	per Set
No.	Single purchase strap 11/4 in. wide, 9 ft. long	2	\$9.80
	Single purchase strap 1 % in. wide, 5 to long.	236	11.05
1702–30	Double purchase strap 11/8 in. wide, 10 ft. long	473	11.00



Wood Pulley Block with Becket







Single Shell Double Shell Hook and Eye Double Eye





Single Shell One Eye



**Double Shell** One Eye

## Steel and Wooden Pulley Blocks

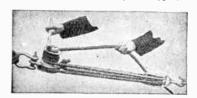
### WOOD PULLEY BLOCKS

#### Wood Pulley Block with Hook

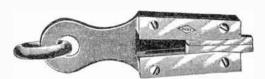
Size Sheave, Inches	Length Shell	No. of Sheaves	Sizr †I. of Rope	ist Price   Each	Size Sheave, Inches	Length	No. of	Size List Price	
1 3/4 x 1/2 x 3/8 1 3/4 x 1/2 x 3/8 1 3/4 x 1/2 x 3/8 2 x 1/2 x 3/8 2 x 1/2 x 3/8 2 x 1/2 x 3/8 2 x 1/2 x 3/8 2 1/4 x 5/8 x 3/8	3 ins. 3 ins. 3 ins. 3 ins. 3½ ins. 3½ ins. 3½ ins. 4 ins.	Single Double Triple - Single Double Triple Single	38 in. 38 in. 38 in. 38 ir.	on appl.	3 x 34 x 38 3 x 34 x 38 3 x 34 x 38 3 3/2 x 1 x 1/2 3 3/2 x 1 x 1/2	Shell 5 ins. 5 ins. 6 ins. 6 ins. 6 ins. 6 ins.	Sheaves Single Double Triple Single Double Triple	of Rope Each  % in.  % in.  % in.  % in.  4 in.  4 in.  on appl.	
2½ x ½ x ½ 2¼ x ½ x ½ Note: State	4 ins. 4 ins.	Double Triple	½ in. ½ in.		434 x 118 x 58 434 x 118 x 58 434 x 118 x 58	8 ins. 8 ins. 8 ins.	Single Double Triple	1 in. 1 in. 1 in.	

## Japanned and Hollow Shell Steel Tackle Block

Shell   Shel	Sheaves She 3½ ins. 6 in 3½ ins. 6 in 3½ ins. 6 in 4½ ins. 7 in 4½ ins. 7 in 4½ ins. 7 in 4½ ins. 8 in 8 ins. 8 in 8 ins.	ength No. of Size of Rope ins. Single ins. Triple ins. Single ins. Double ins. Double ins. Double ins. Double ins. Triple ins. Single ins. Single ins. Single ins. Double ins. Triple ins. Triple ins. Triple ins. Triple ins. Triple ins. Triple ins. Triple ins. Triple ins. Triple ins. Triple ins. Triple ins. Triple ins. Triple ins. Triple ins.	List Price Each Japanned Hollow Steel Steel  on appl.
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Laurent Cherry Block

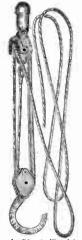


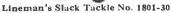
No. 300 Dicke Messenger Clamp

List	Laurent Cherry Pulley Block		
No.	Laurent Cherry Pulley Block	Wt. Lbs.	List Price Each
4	Laurent Cherry Pulley Block.		\$8.40
6	Laurent Cherry Pulley Block		16.80
	Laurent Cherry Pulley Block		25.20
	D. 1 32		

Dicke Messenger Clamp 

\$30,60







Self-locking Block Set No. 1802-30



Self-locking Block Set No 1803-30

## Self-Locking Lineman's Slack Tackle

Light steel shell blocks fitted with snubbing hook to lock in any position, also in handling a vertical oad. To lock the load, simply pull the luff rope under the hook. To release, simply pull the rope. The forward block is arranged with a snap hook with spring guard.

List No. 1801-30	Self-locking lineman's slack tackle, galvanized, furnished with 25 ft. of rope	Weight Lbs. 2½	List Price per Set \$7.15
	Self-locking Blocks		
1802-30	Self-locking troubleman's blocks, galvanized, with snap at end for attaching grip, furnished with 25 ft. 3 s in. rope.	$2\frac{1}{2}$	\$7.15
1803-30	Self-locking lineman's eye blocks, galvanized, with eye at each end for attaching grips, furnished with 25 ft. 38 in. rope	2	6.45



Lineman's Wood Block

## Lineman's Wood Eye Blocks

With Eye at Ends for Fastening Grips List Weight List Price No. per Pair per Pair 3 in: block for 1/6 in. rope.
4 in. block for 1/2 in. rope.
5 in. block for 5/8 in. rope. 4900-3 2 lbs. \$5.75 3 lbs. 4900 - 46.454900 - 57 lbs. We can furnish rope, but none is included in the prices listed.



Pulley Block With Eccentric Grip

## Klein's Pulley Blocks with Eccentric Grips

	Klein's pulley block with eccentric grip	 List Price per Pair \$9.95	
Rope e	xtra.		











Klein's Pole Climbers

List			Weight	List Price
No.		Length	per Pair	per Pair
1900	Eastern—without straps, riveted strap loops	15 to 18 in.	3¾ lbs.	\$6.30
1903	Special light weight Eastern riveted loops—without straps	15 to 16½ in.	23/4 lbs.	6.30
1901	Eastern—without straps, punched strap loops	15 to 18 in.	35 s lbs.	5.70
1902	Western—without straps	15 to 18 in.	25% lbs.	4.60
2.2	The state of the s		7 .00	

Note: When ordering climbers, always specify length wanted by half inch variation.

The steel in Linemen's Eastern Pattern Climbers is made to special order of a springy, durable quality, forged to the right thicknesses for safety and lightness. The gaffs are of tool steel set into the shank and never loosen. When worn down, however, they can be removed and new gaffs set in place.

The lines of form make them well fitting and comfortable.

Quality and workmanship is the best in either. The only difference is in the loop through which the straps pass. The No. 381 and No. 381L have the loops riveted into the shank, while in the No. 382 they are punched out of the metal of the shank. No. 381L is the pattern of No. 381, but made lighter than the standard weight.

If straps are wanted with climbers, mention it in the order. We never send straps unless it is mentioned.

## Climber Straps

List		Weight	List Price
No.		per Doz. Sets	per Pair
5301-1	Straps for Eastern Climbers, with plain leather pads	15 lbs.	\$5.70
5301-2	Straps for Eastern Climbers, with sheep-lined pads	16 lbs.	6.40
5301-3	Straps for Eastern Climbers with felt-lined pads	16 lbs.	6.40
5300-1	Straps for Western Climbers, with plain leather pads		5.70
5300-4	Straps for Western Climbers, plain bottom	8 lbs.	2.90
5300-5	Straps for Western Climbers, top with leather pad		2.90
Eastern	Climber straps set consists of two upper straps with 4 x 4 leather pads		

Climber straps set consists of two upper straps with 4 x 4 leather pads and two lower straps as

Western Climber straps set consists of two upper straps with oval plain leather pads and two lower straps as shown in cut.



Soft Pads



Plain Leather Pads

## Strap Pads

List		Weight	List Price
No.		DOP DOT Sate	per Pair
8200	Strap Pads, sheep lined, 4 x 4 inches	3 lbg	\$1.75
8201	Strap Pags, left lined, 4 x 4 inches	2 lbg	1.75
8202	Strap Pads, plain leather, 4 x 4 inches.	3 lbs.	1.20



Plain Tool Belt



Belt and Safety Strap



Double Tool Belt, With Rings



Single Tool Belt, With Rings

List	Belt and Safety Strap	Weight	List Price
No.		Lbs.	Each
5206-1A 21 The safet	4 in. belt, including safety strap	$3\frac{1}{2}$ end.	\$14.40

## Safety Tool Belt With Rings

5202		2 0/0 100	\$7.60
5204	314 in. belt, with rings for attaching safety strap	1.5/6  lbs.	9.40
5205	214 in. double belt, with rings for attaching safety strap	2 lbs.	8.40



Leather Pouch



Safety Strap



Jack or Vise Strap



Combined Safety and Jack Strap

List	Combined Safety and Jack Strap	Weight Lbs.	List Price Each
5308	1¾ in. strap, fixed snap on one end, roller snap at other	$2\frac{1}{4}$	<b>\$7.80</b>
	Jack or Vise Strap		
5303-1	Regular Jack Strap, for vise, 1¼ in. x 5½ ft	¾ lbs.	\$4.00
	Safety Strap		
5250 5251 5252 5253	1¾ in. x 6 ft. Safety Strap, with japanned snaps. 1¾ in. x 6½ ft. Safety Strap, with roller snaps. 1¾ in. x 6½ ft. Safety Strap, with swivel roller snaps. 2 in. x 6 ft. Safety Strap, with roller snaps.	$2\frac{1}{2}$ lbs.	$8.20 \\ 9.60$

### Leather Pouch

# Western Electric SMALL TOOLS



No. 5108. Leather Tool Bag

### Inspector's Leather Tool Bag, Harness Leather

This bag is a combination of all the good features of the various common leather bags. It is made of harness leather and will stand rough and hard usage and still always look well. It has a shoulder strap combined with a pad and hand strap; saw and bit. The bottom is three ply and is studded with steel studs. Retaining straps pass clear around the bag so that it may be loaded to the limit of its capacity and be securely held intact. All seams are sewed with hot waxed linen thread, lock stitched. The leather used does not absorb moisture.

List No.		Wgt. Lbs. Each	List Price Each
5108-14	14 x 8 in. harness leather	3	\$14.25
5108-16	16 x 8 in. harness leather		15.65
5108-18	18 x 8 in. harness leather.	41/2	17.10
5108-20	20 x 8 in. harness leather.	51/8	18.85
5108-22	22 x 8 in. harness leather		19.90
5108-24	24 x 8 in. harness leather.	$7\frac{1}{4}$	21.25



Canvas Tool Bag



No. 5101-15

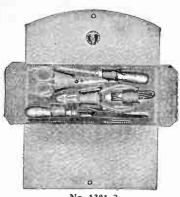
## Lineman's Canvas Tool Bag, Leather Bottom

No.         Inches         Each         Each         No.         Inches           5102-24         24 in.         4½         \$11.20         5102-16         16 in.         10 in.         16 in.         16 in.         16 in.         16 in.         16 in.         10 in.         10 in.         10 in.         10 in.         10 in.	3	Each \$8.40 7.90 7.15
--	---	--------------------------------

## Inspector's Black Leather Tool Bag

This bag is made with shoulder straps entirely of leather, tongue and buckle fastenings, convenient for inspector, wireman or lineman.

Tot mapeeu	or, whethan or manner.		
List		Wgt. Lbs.	List Price
No.		Each	Each
5101-15	15 ins. long, 12 ins. high	3	\$15.00
5101-20	20 ins. long, 12 ins. high	3 3/4	18.50





No.	1301	1-2

No. 1304-2 These tool kits are recommended especially [for every electrician, mechanic, repairman, inspector, limeman, signal man

and sur	pervisor.	,	and market and the same
No.		Wt.	List Price
1304-2	Genuinc leather case, 8 ins. long, 3½ ins. in width and 2 ins. high when closed. Furnished in either russet or black leather. The kit contains seven tools. They are 7 in. special side cutting pliers, 5 in. nickel-plated scissors; double-bladed kniftc screw driver and wire scraper combined; 3 in. half-round mill file and handle; 2½ in. screw driver, 3½ in. nickel-plated	1,00.	13001
1304-1	tweezer and 2 ft. 4 fold boxwood rule.	1,4	\$16.50
1301-2	Genuine leather case. It is 4 x 9 ins. It contains: One single blade "Xela" electrician's knife, one 5 in. special side cutting pliers, one 5 in. oblique diagonal pliers, one 6 in. longnose side cutting pliers, one 3 in. blade nickel-plated serve driver and one pair 5 it in	.*2	5.60
1301-1	electrician's scissors, 4½ in. nickel-plated tweezers, one 3½ in. file and handle	134	21.00
1001-1	Case only.	12	5.60



Electrician's Scissors





No. 1550-2-Double Blade

No. 2201-312-Blunt Point

List No. 1550-1 1550-2	Electrician's Knife and Screw Double blade electrician's knife.  Double blade electrician's knife.		Weight In oz. 25 oz.	List Price Each \$2.00 2.50
I ist No. 2200-412 2201-3) <sub>2</sub>	Electrician's Wire Tweezers Wire tweezers, needle point. Wire tweezers, blunt point.  Electrician's Scissors	Finish Nickel Nickel	I ength 412 ins. 312 ins.	List Price Each \$0.75 1.00
T	Dicetifician 3 Delisons			
List No. 2100-5	Finish Electrician's seissors	Weight Each 22% oz.	Size 5 ins.	List Price Each \$2.50

	~ 0100010			
Electrician's scissors	Finish Nickel 1 lated	Weight Each 224 oz.	Size 5 ins.	List Price Each \$2.50





## Bolt and Wire Cutters

	Bott and Wife Cutters			
List No. 0 1 2 3 List	Porter New Easy Bolt Cutter.  Porter New Easy Bolt Cutter.  Porter New Easy Bolt Cutter.  Porter New Easy Bolt Cutter.  Porter New Easy Bolt Cutter.  11	Length To Inches 18 241 2 30 36	Cut Bolts Inches	*List Price Each On application
No.	O. K. Cutters	Length	11 +	List Price
10 14	O. K. Cutter (capacity with clipper cut jaws, ¾ in.). O. K. Cutter (capacity with clipper cut jaws, ¼ in.).	10	1 1 <sub>2</sub> lbs. 2 lbs., 5 oz.	On appli-



Steel Lag Screw Wrench

Combination Lag Screw Wrench

## Klein's Steel Lag Screw Wrench

This wrench is forged from select bar steel. The jaw is made tapering, allowing it to take any ordinary size machine bolts, nuts, or lag screws, from 3% inch to 5% inch. The hook is a means of attaching the wrench to the tool belt, and it serves to keep the heads of bolts within the jaws of the wrench when in use.

00 0110 000				
List			Weight	*List Price
No.		Length	per Doz.	Each
3110-20	Steel Lag Screw Wrench, full polished		20 lbs.	\$4.00
			20 lbs.	3.00
3112-20	Combination Steel Lag Screw Wrench	10 /2 IIIS.	20 108.	0.00

### Klein's Combination Lag Screw Wrench

This wrench is forged from select bar steel. The slot in this wrench is formed in a cross shape, and will fit machine bolts, nuts or lag screws, from \(^3\)\% inch to \(^5\)\% inch. The small end of the wrench is arranged for 5 inch machine bolts or lag screws, the round hole allowing the end of a bolt to come through as the nut is run on. 3109-20





No. 14 Black Finish Twin Wrench

#### Terminal Wrench

This wrench is especially adapted for use on terminal nuts, receivers, transmitters, binding posts, etc. There are three different side openings, with dimensions as follows:  $\frac{3}{8}$  inch,  $\frac{5}{8}$  inch, and  $\frac{1}{16}$  inch, which will engage either square or hexagonal nuts. One end is bent at an angle of 45 degrees, to allow its use in confined places.

List	Oliman Process			*List Price
No.			per Doz.	
3111-20	Terminal Wrench	$2\frac{13}{16}$ in.	¾ lb.	<b>\$</b> 0.50
	TWIN WRENCH			

Weight List Price Holds Holds List per Doz. \$12.00 Round Iron Per Doz. Length No. 14 Pipe 1/2 to 3/4 in. 14 lbs. 14 to 1 in. 10 ins.



Wire Peeler



No. 4





No. 600

‡List Price per Doz. \$25,80

	****		
List No.	Perry Wire Peeler	Weight Each	List Price Each
2301-10	Perry Wire Peeler	1¼ lbs.	\$1.20

	Hollow Handle Tool	Sets	
List		Length	Length
No.		of Handle	of Tool
° 4	Cocobolo wood, jaws and shell nickeled 10 tools	$6\frac{1}{4}$ in.	$2\frac{1}{2}$ in.

30.90 house deliveries write nearest house.

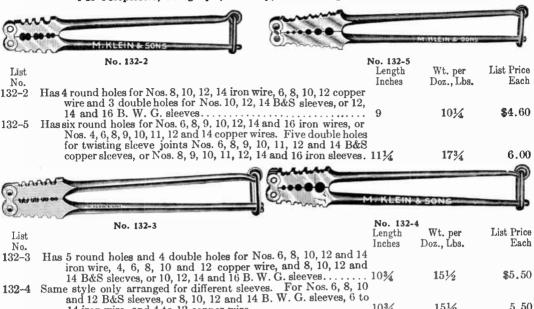
151/2

5.50

\$4.60

#### SMALL TOOLS

For Telephone, Telegraph, Railway, Electric Light and Power Work



Klein's Splicing Clamp

14 iron wire, and 4 to 12 copper wire.....

The splicing clamp is one of the most important tools in the lineman's kit, and as electrically and mechanically good joints are of the most importance in a line, it is evident that the tools selected to do this work should have careful consideration. The following illustrations show our different styles and the sizes of wire for which they are fitted. The handles have a spring temper and will not bend out of shape after being closed on the wire.



No. 102-1

Baby Pattern for Telephone Work

Wt. per List Price Length List Inches Doz., Lbs. Each No. 4½ 14¾ \$3.50 For Nos. 10, 12, 14, and 16 copper wire; 12, 14, 16, 18 iron wire... 102 - 1For Nos. 6, 8, 10, 12 and 14 iron wire, 4, 6, 8, 10 and 12 copper wire 101/2 4.60 102 - 3



No. 102-4 Nos. 105-6 and 105-7

For Electric Light, Telegraph and Railroad Work

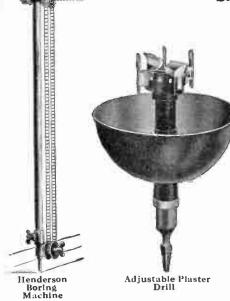
102-4 For Nos. 0, 2 and 4 copper wire.... For Telephone, Telegraph, Railway, Light and Power Work 105-6 For sleeves Nos. 8, 10, 12 and 14 B&S gauge or 10, 12, 14, 16 B. W. G. 10½ 105-7 For sleeves Nos. 6, 8, 10 and 12 B&S gauge or 8, 10, 12, 14 B. W. G. 10½ \$4.60 14 4.60

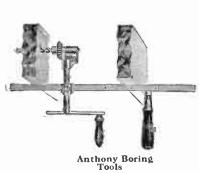


"Die Stock" Sleeve Twister

"Die Stock" Sleeve Twister

On application 107-1 For bare wire..... On application 107-2 For sleeves...







No. 718 Chain Drill

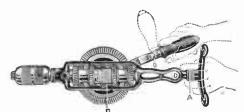
List	List
No.	Price
760567	Henderson Boring Machine. For boring joists for electric light wiring. Nickel plated, with ball bearing shaft universal bit holder. Extends to 12 feet and telescopes
	to 5 feet *\$37.50
760570	Anthony Boring Tool. Takes standard ½ in. round shank machine bit. Kegway cut
	Anthony Boring Tool. Takes standard ½ in. round shank machine bit. Kegway cut in shank
762063	Adjustable Plaster Drill. Can be used over \( \frac{3}{2} \) in. or \( \frac{1}{2} \) in. gas pipe. For cutting
	away plaster or wood on ceiling or wall of finished houses or anywhere a concealed
	job is required
718	Chain Drill. Length 11½ ins., weight 4½ lbs**6.00



No. 5



Breast Drill No. 13



Breast Drill No. 87

#### Breast and Hand Drill

	Dieast and Hand Dim		
List No.		Weight Lbs., Each	**List Price Each
13	Breast drill, double gear, 6 in. drive wheel		\$ 9.50
87	Breast drill, 2 speed 234 to 1 and even	8	14.80
5	Hand drill, cut gears, ball thrust bearing		4.60
	*Delivery F. O. B. Factory, Charlotte, N. C. ‡Delivery F. O. B. Factory, New	York City.	
	to The Day of the Man Day would be deliveries would		

\*\*Delivery F. O. B. Factory, Millers Falls, Mass. For warehouse deliveries write nearest house.



Klein's "World Special" Side Cutting Pliers



With Sleeve Twister

## KLEIN'S "WORLD SPECIAL" SIDE CUTTING PLIERS

No. 200-5 200-7	Size 5 in. 6 in. 7 in.	per Doz. 3 lbs. 5 lbs. 7½ lbs.	Each No. 82.90 200-8 3.50 200-9 4.00 200-10	Size 8 in. 9 in. 10 in.	per Doz. 12 lbs. 13 lbs. 18 lbs.	Each \$4.60 6.00 7.00
List No.			With Sleeve Twister		Wt. per Doz.	List Price Each
213-6	Gin D & S alcove twi-	tos fos No. 17	wire or No. 16 iron wire.			84.00
213-7			wire or 11 B. W. G. iron			4.60
213-8			wire or 12 B. W. G. iron			5.50
213-9			wire or 12 B. W. G. iron			6.50



#### RIMCO RUBBER INSULATED PLIERS

	ch pair tested for 10,000 volts by electrica	
ratory	of N. Y. Rubber banded to handle by	"Elchemeo"
proces		
List	Size	List Price
No.	Inches	per Doz.
	6 Rimeo Rubber Insulated Pliers	\$27.00
	8 Rimco Rubber Insulated Pliers	33.00

#### KLEIN'S EXTRA LONG DUCK BILL PLIERS

List	Size		W.E.	List Price
No.	Inche		per Doz.	Each
205-5		With Side Cutter	234 lbs.	\$2.60
205-6	6	With Side Cutter	3 lbs.	2.90
205-7	7	With Side Cutter	31/2 lbs.	3.20



#### KLEIN'S EXTRA LONG OVAL NOSE **PLIERS**

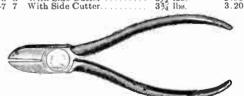


	PLIER'S—SIDE CUT	TERS	
\$2.60   206-5 5	With Side Cutter. With Side Cutter. With Side Cutter.	314 lbs.	\$2.60
2.90   206-6 6		312 lbs.	2.90
3.20   206-7 7		334 lbs.	3.20



203-5 5

Klein's Extra Long Curved Nose Pliers



Klein's Oblique Diagonal Cutting Plier

KLEIN'S	EXTRA	LONG	CURVED	NOSE.	PLIERS

List No. 302-6	6 in. extra long curved nose pliers.	Wt. per Doz. 234 lbs.	List Price Each \$3.00
	KLEIN'S OBLIQUE DIAGONAL CUTTING PLIERS		
202-5	5 in. diagonal cutting pliers.		\$2.90 3.10



#### **BUTTON PLIERS**

Our 1600 Series P	liers have	knurled has	ndles and stop
feature. List No 1604	12 16	506 160	8 1610
Length, ins 41		6 8	10
Wt., lbs., per doz. 41	2	5 9	13
Per doz \$17. Packed one in a car		).50 \$21. eartons in a c	65 \$24.55 eardboard box.



#### STAPLE PULLER

STALLE LOLLER	
This tool has a longitudinal groove in the top which	allows
clearance for wire when pulling staples.	
List No	200
Length, ins	1015
Wt., lbs., per doz	24
Per doz	\$48.00
Packed 1/3 dozen in a cardboard box.	



Nos. 769 to 774

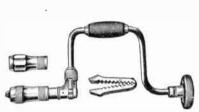


Nos. 30 to 34 and 30 A to 34 A

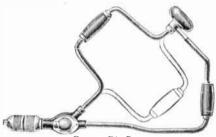
Ratc	het	<b>Braces</b>
------	-----	---------------

Improved Ratchet Br				
List price, each	37.40	\$7.10	\$6.90	\$6.70
Weight per dozen	31/4 lbs.	48 lbs.		42 lbs.
	14 ins.	12 ins.	10 ins.	8 ins.
	770	771	772	773
Polished and nickeled.				

Polished and nickeled forged steel alligator jaws	3.				
List Nos	30	31	32	33	34
Size sweep		12 ins.	10 ins.	8 ins.	6 ins.
Weight per dozen		39 lbs.	$36\frac{3}{4}$ lbs.	323/4 lbs.	30 lbs.
List price, each	\$5.90	\$5.60	\$5.30	\$5.10	\$5.10
Packed 1/2 dozen in a pasteboard box.					



Nos. 1320 to 1324 Ratchet Brace

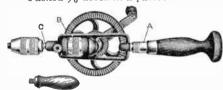


Corner Bit Brace

Improved	Ratchet	Braces			
List Nos.			1321	1322	1323
Size sweep				10 ins.	
Weight per dozen		42 lbs.		$33\frac{1}{2}$ lbs.	
List price, each		\$4.60	\$4.40	\$4.20	\$4.00
Packed 1/2 dozen in a pasteboard box and 3	dozen in a cas	se.			

## Corner Bit Brace

With Master Chuck		
List Nos.		503
Size sweep		8 ins.
Weight per dozen		
Length	$17\frac{1}{2}$ ins.	$17\frac{1}{2}$ ins.
List price, each	\$8.80	\$8.30
Packed 1/2 dozen in a pasteboard box.		



No. 980 Hand Drill



No. 108 Universal Angular Bit Stock

	***************************************		- 1 - 411			
List		No. 980 F	Hand Drill		Weight	List Price
No.		11 10 1	111 151/1 1		per Doz.	Each
980	Hand drill; length without Packed 1 in a pasteboard box.		with 151/4 inches	• • • • • • • • • • • • • • • • • • • •	$37\frac{1}{2}$ lbs.	\$8.10
	I WORKER I III & PROTOCOURTE SOIT					

## Universal Angular Bit Stock

	With Master Chuc			
108	Angular bit stock; length when at 180°, 12½ inches		26 lbs.	\$4.20
	Packed 1 in a pasteboard box.			
	Delivery F. O. B. Factory, Millers Falls, Mass. For war	ehouse deliveries write ner	arest house.	



## Wireman's and Telephone Installer's Special KNOWN AS NO. 8A AND No. 9A

Length of twist on both No. 8A and No. 9A, 4½ inches. Length over all, 18 inches. Style of crimp and screw on No. 8A and No. 9A same as No. 8 and No. 9.

#### COARSE THREAD, POLISHED

This bit is designed especially for electricians' use, is a self feeder, pulls itself right into the work, and will bore about twice as fast as the ordinary bit.

Size, ins	5/8	$\frac{11}{16}$
*List price, each		
Weight per doz. lbs	$5\frac{3}{8}$	$5\frac{7}{8}$



#### Electrician's Bit No. 9

Size, ins., packed 6 in box	5/8	11 16	3/4
*List price, each	\$1.00	\$1.20	\$1.20
Weight per dozen, lbs	21/8	3	31/4



This bit is designed especially for electricians, using boring machines where work is to be performed in limited space.

#### Electrician's Bit No. 5

Size, ins., packed 6 in box	1/4	<u>.5</u>	3/8	7	1/2	9	5/8	11 16	3/4	13 16
*List price, each					\$0.90	\$1.00	\$1.00	\$1.20	\$1.20	\$1.40
Weight per dozen, lbs								13/4	2	$2\frac{1}{4}$
Size, ins., packed 6										
in a box	15 16	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$	$1\frac{7}{8}$	2	$2\frac{1}{16}$
*List price, each \$1.40	\$1.60	\$1.60	\$2.00	\$2.30	\$2.70	\$3.00	\$3.20	\$4.50	\$5.00	\$5.30
Weight per doz., lbs. 23/8	$2\frac{1}{2}$	$2\frac{3}{4}$	35/8	4	41/2	5	65/8	$7\frac{1}{2}$	71/2	$7\frac{7}{8}$



Extension Bit Holder No. 5

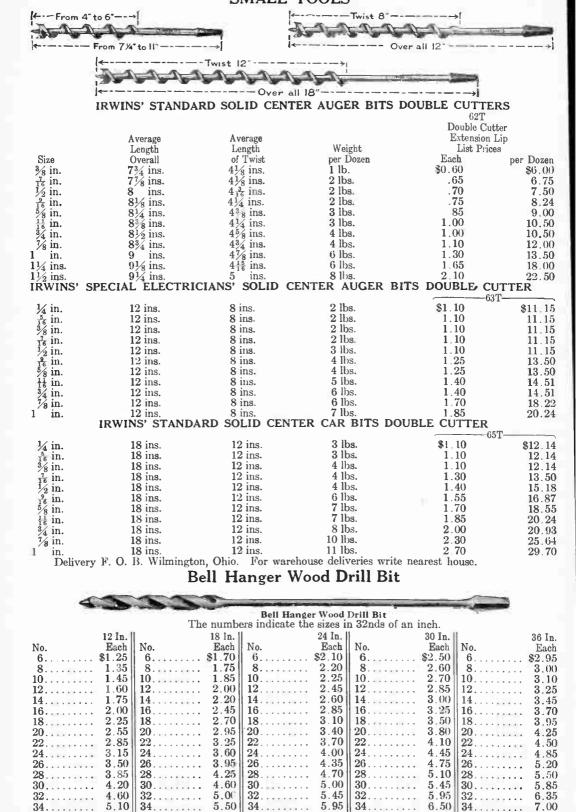
#### Extension Bit Holder No. 5

Four reliably strong, steel jaws, made in one piece, grip firmly over shoulder of bit stock shanks. Bit inserted or released instantly when desired. Polished and nickel-plated steel. Follows bits 5% inch and larger into their bores.

Length	12 ins.	15 ins.	18 ins.	21 ins.	24 ins.	30 ins
Weight, per dozen	7 lbs.	8 lbs.	9 lbs.	10 lbs.	11 lbs.	13 lbs.
*List price each	\$2.36	\$2.40	\$2.44	\$2.54	<b>\$2</b> .60	\$2.80

<sup>\*</sup>Delivery F. O. B. Factory, Wallingford, Conn. For warehouse deliveries write nearest house.

## Western Electric SMALL TOOLS



6.50

36

7.10

6.00 | 36

5.50

36......





## The Solid Handle Wrench

The head, bar shoulder and handle frame are forged solid of one piece case hardened. The wrench is finely finished.

Inches. Will open, inches. Weight per dozen. Weight per case. List No. 100. Black, *per doz.	7/8 10 lbs. 70 lbs	110 11.0	10 134 28 lbs. 180 lbs. \$42.00	12 21/8 40 lbs. 260 lbs. \$54.00	15 2 <sup>9</sup> / <sub>16</sub> 57 lbs. 190 lbs. \$72.00	18 3½ 84 lbs. 180 lbs. \$96.00	21 4 120 lbs. 150 lbs. \$117.00
--	--------------------------	----------	---	--	--	--	---



## Pipe Wrenches

The wrenches are made from entirely new patterns, and the highest grade material is used in making them. They are finely finished.

Inches Capacity, inches. Weight, *per doz Each	1/8 to 3/4 8 lbs	10 ½ to 1 17 lbs. \$3.45	14 14 to 1½ 33 lbs. \$4.50	18 14 to 2 55 lbs. \$6.00	24 ½ to 2½ 96 lbs. \$9.00
--	---------------------	-----------------------------------	-------------------------------------	------------------------------------	------------------------------------



T 42 013 3 1 1			
Length of blade, inches	12	List No.	1.4
List No	760706	List No	14
List per doz.	\$40.00	Liet now don	760707
1	\$10.00 j	List No. List per doz.	\$59.50

## Framing Chisels



#### Bevel Back Framing Chisel

Width of blade, inches	1	11/4	2
DISC IVO	FOORIO	760714	760717
List per doz.	\$21.50	\$23.50	\$31.50

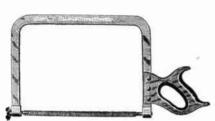
## Western Electric

#### SMALL TOOLS



#### Hand Saws

111	at Litee
	Each
18 in. panel saw.	\$4.00
20 III. IIgilu Saw	0.00
28 in hand saw.	6.00



Hack Saw Frame No. 14



Hack Saw Frame No. 26

#### Hack Saw Frames

List No.	_	ist Price Each
14	12 in, inside frame to tooth edge	
15	Polished and nickeled	
26	Steel frame, nickel reversible frame.	2.95



No. 45 Extra Refined Steel. Regular Taper



Cape Chisels



Diamond Point Chisels

CAPE CHISELS

#### DIAMOND POINT CHISELS

When ordering specify size of Point and number of Chisel desired. Packed one-half dozen in a cardboard box.

 Point.
 14
 3
 1/2

 Diameter of steel, ins.
 3
 5
 5
 1/2

 Length, ins.
 71/4
 71/4
 71/4
 71/4
 71/4
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## NO. 45—EXTRA REFINED OCTAGON STEEL—POLISHED AND GUN METALED HEAD AND TAPER—NATURAL FINISH BODY

This Chisel is the Standard Pattern First Quality



No. 14. Carpenters' Wrecking Chisel

## CARPENTERS' WRECKING CHISEL

Black	Finish	Body-1% inch	Bit-Oil	lempered		
List	Length	Disc Oil Steel	Wgt.	List Price	List	t
No.	Ins.	Ins.	Per Doz.	Per Doz. \$27.00	No.	
14	14	3/4	20 lbs.	\$27.00	12	



No. 12. Light Gooseneck Pattern Nail Puller

#### LIGHT GOOSENECK PATTERNS Painted Black-Polished Ends

Lam	ted Diack-For	isned Ends	
Length	Disc Oil Steel	Wgt.	List Price
Ins.	Ins.	Per Doz.	Per Doz.
12	1/2	9 lbs	\$27.00

### "YANKEETOOTHED" HACK SAW BLADES



## "Yankeetoothed" Hack Saw Blades

#### All Hard-For General Machine and Structural Iron Work

#### Flexible Back-For Steamfitters and Electricians

Made with 14, 16, 18, 24 and 32 teeth to the inch.

Use 14 or 16 teeth for general work.

Use 18 or 20 teeth for pipe and light stock.

Unless otherwise stated we furnish 8 or 9 inch blades with 16 teeth and larger blades with 14 teeth to the inch.

Hack Saw Blades are packed one dozen to a bundle and 6 bundles to a carton and two cartons to a standard package.

ALL HARD AND FLEXIBLE BACK BLADES	List
Description	per Doz.
8 x $\frac{7}{16}$ in., .025 or 23 gauge	\$1.28
$9 \times \frac{1}{16}$ in., .025 or 23 gauge	1.42
$10 \times \frac{1}{2}$ in., 025 or 23 gauge	1.60
11 x $\frac{1}{2}$ in., .025 or 23 gauge	1.74
12 x ½ in., .025 or 23 gauge	.90
I amount a minimum and form a many of the control o	

Lengths given are from center to center of hole.

"Yankeetoothed" Flexible Back Blades are hardened on the teeth only: the back is flexible, making it impossible to break the blade while it is in the frame.

#### High Speed Power Blades

#### Semi-high Speed Power Blades

Length   Width   Thickness   per lnch   per Doz.				Teeth	List Price				Teeth I	ist Price
10 in.	Length	Width	Thickness	per lnch	per Doz.	Length	Width	Thickness		
10 in. 1 in049 or 18 ga. 10, 14 3.90 8 in028 or 22 ga. 14, 18, 24 1.52 12 in. 1 in049 or 18 ga. 10, 14 4.28 9 in028 or 22 ga. 14, 18, 24 1.52 12 in. 34 in049 or 18 ga. 10, 14 4.28 9 in028 or 22 ga. 14, 18, 24 1.52 12 in. 34 in049 or 18 ga. 10, 14 4.28 10 in. ½ in028 or 22 ga. 14, 18, 24 1.62 12 in. 1 in049 or 18 ga. 10, 14 4.34 10 in. ½ in065 or 16 ga. 10 5.98 10 in. ½ in032 or 21 ga. 14, 18, 24 1.62 14 in. 1 in065 or 16 ga. 10 5.98 10 in. ½ in032 or 21 ga. 14, 18, 24 1.62 14 in. 1 in049 or 18 ga. 10, 14 5.46 11 in. 1 in049 or 18 ga. 10, 14 5.46 11 in. ½ in032 or 21 ga. 14, 18, 24 1.80 14 in. 34 in049 or 18 ga. 10, 14 5.46 11 in. ½ in032 or 21 ga. 14, 18, 24 1.80 14 in. 34 in065 or 16 ga. 10 6.60 11 in. ½ in032 or 21 ga. 14, 18, 24 2.12 14 in. 1 in049 or 18 ga. 10, 14 5.46 11 in. ½ in032 or 21 ga. 14, 18, 24 2.12 14 in. 1 in065 or 16 ga. 10 6.72 12 in. ½ in032 or 21 ga. 14, 18, 24 2.12 14 in. 1 in065 or 16 ga. 10 6.72 12 in. ½ in032 or 21 ga. 14, 18, 24 2.12 14 in. 1 in065 or 16 ga. 10 7.98 12 in. ½ in032 or 21 ga. 14, 18, 24 2.00 14 in. 34 in065 or 16 ga. 10 7.98 12 in. ½ in032 or 21 ga. 14, 18, 24 2.00 14 in. 34 in065 or 16 ga. 10 7.98 12 in. ½ in032 or 21 ga. 14, 18, 24 2.00 14 in. 34 in065 or 16 ga. 10 7.98 12 in. ½ in032 or 21 ga. 14, 18, 24 2.00 14 in. 34 in065 or 16 ga. 10 7.98 12 in. ½ in032 or 21 ga. 14, 18, 24 2.00 14 in. 34 in049 or 18 ga. 10, 14 5.28 12 in. ½ in032 or 21 ga. 14, 18, 24 2.00 14 in. 1 in065 or 16 ga. 10 7.96 12 in. ½ in032 or 21 ga. 14, 18, 24 2.00 14 in. 1 in065 or 16 ga. 10 7.96 12 in. ½ in032 or 21 ga. 14, 18, 24 2.00 14 in. 1 in065 or 16 ga. 10 7.96 12 in. ½ in032 or 21 ga. 14, 18, 24 2.00 14 in. 1 in065 or 16 ga. 10 7.96 12 in. 1 in032 or 21 ga. 14, 18, 24 2.00 14 in. 1 in065 or 16 ga. 10 8.48 11 in. 34 in032 or 21 ga. 14, 18, 24 2.00 14 in. 1 in049 or 18 ga. 10, 14 7.78 16 in. ½ in032 or 21 ga. 14, 18 2.280 12 in. 1 in049 or 18	10 in.	3/4 in.	.049 or 18 ga.	10, 14	\$3.08	8 in.	🦫 in.	.028 or 22 on		-
11 in. 34 in. 0.49 or 18 ga. 10, 14 3.40 9 in. 36 in. 0.28 or 22 ga. 14, 18, 24 1.52 12 in. 34 in. 0.49 or 18 ga. 10, 14 4.28 9 in. 36 in. 0.28 or 22 ga. 14, 18, 24 1.52 12 in. 1 in. 0.49 or 18 ga. 10, 14 4.66 10 in. 36 in. 0.28 or 22 ga. 14, 18, 24 1.62 12 in. 1 in. 0.65 or 16 ga. 10 5.98 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.62 14 in. 34 in. 0.49 or 18 ga. 10, 14 4.34 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.60 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.60 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.60 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.60 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.60 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.60 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.60 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.60 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.60 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.60 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.80 10 in. 36 in. 0.32 or 21 ga. 14, 18, 24 1.80 11 in. 36 in. 0.32 or 21 ga. 14, 18, 24 2.30 11 in. 0.49 or 18 ga. 10, 14 4.94 11 in. 36 in. 0.32 or 21 ga. 14, 18, 24 2.30 16 in. 1 in. 0.49 or 18 ga. 10, 14 5.28 12 in. 36 in. 0.32 or 21 ga. 14, 18, 24 2.30 16 in. 1 in. 0.49 or 18 ga. 10, 14 5.28 12 in. 36 in. 0.32 or 21 ga. 14, 18, 24 2.30 17 in. 36 in. 0.65 or 16 ga. 10 7.98 12 in. 37 in. 38 in. 36 in. 36 in. 36 in. 37 in. 38 in. 36 in. 36 in. 36 in. 37 in. 0.49 or 18 ga. 10, 14 5.56 13 in. 36 in. 0.32 or 21 ga. 14, 18, 24 2.30 13 in. 36 in. 37 in. 0.49 or 18 ga. 10, 14 5.56 13 in. 36 in. 0.32 or 21 ga. 14, 18, 24 2.30 13 in. 36 in. 36 in. 36 in. 36 in. 37 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 in. 0.49 or 18 ga. 10, 14 7.38 11 i	10 in.	ĺÎ in.						.028 or 22 ga		
11 in. 1 in. 0.49 or 18 ga. 10, 14	11 in.	3/4 in.					9 in.			
12 in. 34 in. 0.49 or 18 ga. 10, 14	11 in.	Î in.						028 or 22 ga.		
12 in. 1 in049 or 18 ga. 10, 14	12 in.	$\frac{3}{4}$ in.						.028 or 22 ga		
12 in. 1 in. 0.65 or 16 ga. 10 5.98 10 in. \$\frac{5}{8}\$ in. 0.32 or 21 ga. 14, 18, 24 2.14 14 in. \$\frac{3}{4}\$ in. 0.65 or 16 ga. 10 5.90 11 in. 0.65 or 16 ga. 10 6.60 11 in. \$\frac{5}{6}\$ in. 0.32 or 21 ga. 14, 18, 24 2.14 180 14 in. \$\frac{1}{1}\$ in. 0.65 or 16 ga. 10 6.60 11 in. \$\frac{5}{6}\$ in. 0.32 or 21 ga. 14, 18, 24 2.12 16 in. \$\frac{3}{4}\$ in. 0.65 or 16 ga. 10 6.60 11 in. \$\frac{5}{6}\$ in. 0.32 or 21 ga. 14, 18, 24 2.36 16 in. \$\frac{3}{4}\$ in. 0.65 or 16 ga. 10 6.72 12 in. \$\frac{1}{6}\$ in. 0.32 or 21 ga. 14, 18, 24 2.36 16 in. \$\frac{3}{4}\$ in. 0.65 or 16 ga. 10 7.98 12 in. \$\frac{5}{6}\$ in. 0.32 or 21 ga. 14, 18, 24 2.00 16 in. 1 in. 0.65 or 16 ga. 10 7.98 12 in. \$\frac{5}{6}\$ in. 0.32 or 21 ga. 14, 18, 24 2.00 16 in. 1 in. 0.65 or 16 ga. 10 7.98 12 in. \$\frac{5}{6}\$ in. 0.32 or 21 ga. 14, 18, 24 2.36 17 in. \$\frac{3}{4}\$ in. 0.65 or 16 ga. 10 7.98 12 in. \$\frac{5}{6}\$ in. 0.32 or 21 ga. 14, 18, 24 2.36 13 in. \$\frac{1}{6}\$ in. 0.49 or 18 ga. 10, 14 5.56 18 in. 1 in. 0.49 or 18 ga. 10, 14 7.00 14 in. \$\frac{1}{6}\$ in. 0.32 or 21 ga. 14, 18, 24 2.56 13 in. \$\frac{3}{4}\$ in. 0.65 or 16 ga. 10 7.56 18 in. 1 in. 0.65 or 16 ga. 10 7.56 18 in. 1 in. 0.49 or 18 ga. 10, 14 7.38 14 in. 0.32 or 21 ga. 14, 18 2.86 19 in. 1 in. 0.65 or 16 ga. 10 8.98 14 in. 1 in. 0.32 or 21 ga. 14, 18 2.86 19 in. 1 in. 0.49 or 18 ga. 10, 14 7.38 14 in. 0.32 or 21 ga. 14, 18 2.86 19 in. 1 in. 0.65 or 16 ga. 10 9.46 13 in. \$\frac{5}{6}\$ in. 0.32 or 21 ga. 14, 18 2.86 19 in. 1 in. 0.49 or 18 ga. 10, 14 7.38 14 in. 0.32 or 21 ga. 14, 18 2.86 19 in. 1 in. 0.49 or 18 ga. 10, 14 7.38 14 in. 0.32 or 21 ga. 14, 18 2.86 14 in. 1 in. 0.49 or 18 ga. 10, 14 7.38 14 in. 0.32 or 21 ga. 14, 18 3.04 14 in. 1 in. 0.49 or 18 ga. 10 9.48 17 in. 1 in. 0.32 or 21 ga. 14, 18 3.04 14 in. 1 in. 0.49 or 18 ga. 10 9.48 14 in. 1 in. 0.32 or 21 ga. 14, 18 3.04 14 in. 1 in. 0.49 or 18 ga. 10 9.48 14 in. 1 in. 0.32 or 21 ga. 14, 18 3.04 14 in. 1 in. 0.49 or 18 ga. 10 10 9.48 14 in. 1 in. 0.32 or 21 ga. 14, 18 3.04 14 in. 1 in. 0.49 or 18 ga. 10 10 10 98	12 in.	ĺÎ in.					5% in.	.028 or 22 ga		
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16 in. 34 in. 049 or 18 ga. 10, 14	14 in.	1 in.	.065 or 16 ga.							
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19 in. 1 in. 049 or 18 ga. 10, 14 7.38 14 in. 1 in. 032 or 21 ga. 14, 18 3.20 20 in. 1 in. 065 or 16 ga. 10 9.46 21 in. 1 in. 065 or 16 ga. 10 9.98 16 in. 34 in. 032 or 21 ga. 14, 18 3.04 16 in. 34 in. 032 or 21 ga. 14, 18 3.04 16 in. 34 in. 032 or 21 ga. 14, 18 3.04 16 in. 34 in. 032 or 21 ga. 14, 18 3.04 16 in. 34 in. 032 or 21 ga. 14, 18 3.22 in. 1 in. 049 or 18 ga. 10 8.16 16 in. 1 in. 032 or 21 ga. 14, 18 3.24 17 in. 1 in. 032 or 21 ga. 14, 18 3.24 17 in. 1 in. 032 or 21 ga. 14, 18 3.24 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 17 in. 1 in. 032 or 21 ga. 14, 18 3.64 18 in. 1 in. 032 or 21 ga. 14, 18 3.66 18 in. 1 in. 032 or 21 ga. 14, 18 3.66 18 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 032 or 21 ga. 14, 18 3.60 18 in. 1 in. 1 in. 032 or							$\frac{3}{4}$ in.			
19 in. 1 in065 or 16 ga. 10 9.46 20 in. 1 in049 or 18 ga. 10, 14 7.78 21 in. 1 in065 or 16 ga. 10 9.98 21 in. 1 in065 or 16 ga. 10 8.16 16 in. 1 in032 or 21 ga. 14, 18 3.24 21 in. 1 in065 or 16 ga. 10 10.48 22 in. 1 in065 or 16 ga. 10 10.48 22 in. 1 in065 or 16 ga. 10 10.48 22 in. 1 in065 or 16 ga. 10 10.98 23 in. 1 in049 or 18 ga. 10 8.94 23 in. 1 in049 or 18 ga. 10 8.94 23 in. 1 in049 or 18 ga. 10 8.94 23 in. 1 in049 or 18 ga. 10 8.94 24 in. 1 in065 or 16 ga. 10 11.48 23 in. 1 in049 or 18 ga. 10 9.32 20 in. 1 in032 or 21 ga. 14, 18 3.64 24 in. 1 in049 or 18 ga. 10 9.32 20 in. 1 in032 or 21 ga. 14, 18 3.86 23 in. 1 in049 or 18 ga. 10 9.32 20 in. 1 in032 or 21 ga. 14, 18 3.40 24 in. 1 in049 or 18 ga. 10 9.32 20 in. 1 in032 or 21 ga. 14, 18 3.60					7.38					
20 in. 1 in049 or 18 ga. 10, 14 7.78   16 in. 5% in032 or 21 ga. 14, 18 3.04 22 in. 1 in065 or 16 ga. 10 8.16 in. 1 in032 or 21 ga. 14, 18 3.42 22 in. 1 in065 or 16 ga. 10 8.56 22 in. 1 in065 or 16 ga. 10 8.56 22 in. 1 in065 or 16 ga. 10 8.56 23 in. 1 in049 or 18 ga. 10 8.56 23 in. 1 in049 or 18 ga. 10 8.94 22 in. 1 in049 or 18 ga. 10 8.94 22 in. 1 in065 or 16 ga. 10 10.98 23 in. 1 in049 or 18 ga. 10 8.94 24 in. 1 in049 or 18 ga. 10 9.32 20 in. 1 in032 or 21 ga. 14, 18 3.86 24 in. 1 in049 or 18 ga. 10 9.32 20 in. 1 in032 or 21 ga. 14, 18 3.40 24 in. 1 in049 or 18 ga. 10 9.32 20 in. 1 in032 or 21 ga. 14, 18 3.40 24 in. 1 in049 or 18 ga. 10 9.32 20 in. 1 in032 or 21 ga. 14, 18 3.40						15 in.	$\frac{3}{4}$ in.			
20 in.     1 in.     .065 or 16 ga.     10     9.98     16 in.     ¾ in.     .032 or 21 ga.     14, 18     3.42       21 in.     1 in.     .065 or 16 ga.     10     10.48       21 in.     1 in.     .065 or 16 ga.     10     10.48       22 in.     1 in.     .049 or 18 ga.     10     8.56       22 in.     1 in.     .065 or 16 ga.     10     10.98       23 in.     1 in.     .049 or 18 ga.     10     8.94       23 in.     1 in.     .065 or 16 ga.     10     11.48       23 in.     1 in.     .065 or 16 ga.     10     11.48       23 in.     1 in.     .065 or 16 ga.     10     11.48       23 in.     1 in.     .065 or 16 ga.     10     11.48       23 in.     1 in.     .065 or 16 ga.     10     11.48       24 in.     1 in.     .049 or 18 ga.     10     9.32       20 in.     1 in.     .032 or 21 ga.     14, 18     3.40       24 in.     1 in.     .049 or 18 ga.     10     9.32     20 in.     1 in.     .032 or 21 ga.     14, 18     3.40						16 in.	5/8 in.	.032 or 21 ga.		
21 in.     1 in.     .049 or 18 ga.     10     8.16     16 in.     1 in.     .032 or 21 ga.     14, 18     4.82       21 in.     1 in.     .065 or 16 ga.     10     10.48     17 in.     ½ in.     .032 or 21 ga.     14, 18     3.24       22 in.     1 in.     .049 or 18 ga.     10     8.56     17 in.     ½ in.     .032 or 21 ga.     14, 18     3.64       23 in.     1 in.     .049 or 18 ga.     10     8.94     18 in.     1 in.     .032 or 21 ga.     14, 18     5.14       23 in.     1 in.     .065 or 16 ga.     10     11.48     18 in.     3 in.     1 in.     .032 or 21 ga.     14, 18     3.86       23 in.     1 in.     .065 or 16 ga.     10     11.48     18 in.     1 in.     .032 or 21 ga.     14, 18     3.40       24 in.     1 in.     .049 or 18 ga.     10     9.32     20 in.     1 in.     .032 or 21 ga.     14, 18     3.40										
21 in.     1 in.     .065 or 16 ga.     10     10.48     17 in.     .58 in.     .032 or 21 ga.     14, 18     3.24       22 in.     1 in.     .049 or 18 ga.     10     8.56     17 in.     .34 in.     .032 or 21 ga.     14, 18     3.64       23 in.     1 in.     .049 or 18 ga.     10     8.94     17 in.     1in.     .032 or 21 ga.     14, 18     3.64       23 in.     1 in.     .049 or 18 ga.     10     8.94     18 in.     1 in.     .032 or 21 ga.     14, 18     3.86       23 in.     1 in.     .065 or 16 ga.     10     11.48     18 in.     1 in.     .032 or 21 ga.     14, 18     3.40       24 in.     1 in.     .049 or 18 ga.     10     9.32     20 in.     1 in.     .032 or 21 ga.     14, 18     3.40       6 00							1 in.	.032 or 21 ga.	14, 18	
22 in.     1 in.     .049 or 18 ga.     10     8.56     17 in.     34 in.     .032 or 21 ga.     14, 18     3.64       22 in.     1 in.     .065 or 16 ga.     10     10.98     17 in.     1 in.     .032 or 21 ga.     14, 18     5.14       23 in.     1 in.     .049 or 18 ga.     10     8.94     18 in.     34 in.     .032 or 21 ga.     14, 18     5.14       23 in.     1 in.     .065 or 16 ga.     10     11.48     18 in.     1 in.     .032 or 21 ga.     14, 18     3.86       24 in.     1 in.     .049 or 18 ga.     10     9.32     20 in.     1 in.     .032 or 21 ga.     14, 18     3.40       24 in.     1 in.     .049 or 18 ga.     10     9.32     20 in.     1 in.     .032 or 21 ga.     14, 18     6.00						17 in.	5∕8 in.		14, 18	
22 in. 1 in065 or 16 ga. 10 10.98   17 in. 1 in032 or 21 ga. 14, 18 5.14 23 in. 1 in049 or 18 ga. 10 8.94   18 in. 34 in032 or 21 ga. 14, 18 3.86 23 in. 1 in065 or 16 ga. 10 11.48   18 in. 1 in032 or 21 ga. 14, 18 3.40 24 in. 1 in049 or 18 ga. 10 9.32   20 in. 1 in032 or 21 ga. 14, 18 6.00	22 in.						3/4 in.	.032 or 21 ga.	14, 18	
23 in. 1 in049 or 18 ga. 10 8.94 18 in032 or 21 ga. 14, 18 3.86 23 in. 1 in065 or 16 ga. 10 11.48 18 in. 1 in032 or 21 ga. 14, 18 3.40 24 in. 1 in049 or 18 ga. 10 9.32 20 in. 1 in032 or 21 ga. 14, 18 6.00	22 in.						1 in.			
23 in. 1 in065 or 16 ga. 10 11.48 18 in. 1 in032 or 21 ga. 14, 18 3.40 24 in. 1 in049 or 18 ga. 10 9.32 20 in. 1 in032 or 21 ga. 14, 18 6.00							$\frac{3}{4}$ in.	.032 or 21 ga.		
24 in. 1 in049 or 18 ga. 10 9.32    20 in. 1 in032 or 21 ga. 14, 18 6.00							1 in.	.032 or 21 ga.		
								.032 or 21 ga.		
7 (1 (11 1				10	11.98	24 in.	1 in.	.032 or 21 ga.	14, 18	7.22

Length of blades measure from center to center of holes, excepting 14 and 17 inch lengths. These measure 131/2 and 161/2 inches.

Length of blades measure from center to center of holes excepting 14 and 17 inch lengths. These measure 13½ and 16½ inches.

Delivery F. O. B. New York, N. Y. For warehouse deliveries write nearest house.





Nos. 6/9 to 8. Straight Pein Hammer

#### BALL PEIN HAMMERS

Polished-White Hickory Handles

			Polisnet	J ALLINGS ALLON	or y a consumeror			
No. 7 0 6 0 5 0 4 0 3 0 2 0	Wgt. Oz. 2 3 4 6 8 12	Length Over All, Ins. 10 10 11 12 13	Wet. Lbs. p r Doz.  33 41 51 71 101 2 14	Per Dozen No \$28.80 0 28.80 1 30.20 2 35.60 3 36.00 38.40	Wat.	Length Over All, Ins. 14 15 16 17	Wgt. Lbs. per Doz. 16 21 24 28 30	Per Dozen \$20.40 43.20 45.60 48.00 50.40



Nos. 1 to 3. Adze Eye Nail Hammer

ADZE EYE NAIL HAMMERS

Polished-	-White	Hickory	Handles	
Number	1	11/2	2	3
	20	16	13	7
	14	13	13	12
	21 1 5	18/4	14 <sup>1</sup> 4	914
	227 20	36.00	34, 85	33.75



Nos. 1 and 11. Ripping Hammer

RIPPING HAMMERS Polished--White Hickory Handles

l	Number	1 11/2
Ì	Weight, oz	20 16 14 13
l	Length, ins. Weight, los per doz.	2114 1814
	Per dozen	\$29.16 27.50



Nos. 1 to 4. Double Face Engineers' Hammer

DOUBLE FACE ENGINEERS' HAMMERS Polished-White Hickory Handles

Polished—White Hickory Handies	
Number 1 2 3	
Weight, oz 24 38 48 58	
Length, ins	
Weight, ibs. per doz.	
Per dozen \$45.10 48.50 50.95 55.  Packed 16 dozen in a cardboard box. Six dozen	in

a case.



Nos. 0 to 7. Machinists' Riveting Hammer

MACHINISTS' RIVETING HAMMERS

		PolishedV	Vhite Hicl	kory Handles	
		Weight,	Length,	Weight	Per
	No.	Oz.	ins.	Lbs. per Doz.	Dozen
	0	4	I 1	612	817 55
	1	7	12	716	18 35
	2	9	13	91/2	19.14
	2	12	13	12	19 95
	4	15	14	16	20 70
	5	18	14	1814	22 35
	6	22	15	2015	23 95
-	7	26	15	231/2	25 55

Packed 16 dozen in a cardboard box. Six dozen in a case.

## Western Electric

## SMALL TOOLS





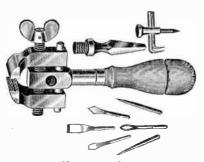
Hand Axe

#### Lineman's Axe

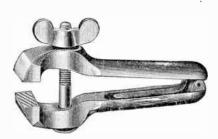
$\operatorname{List}$		]	List Price
No.			Each
760719	3½ to 5 lbs. with handle		\$3.50

### Hand Axe

List			List Price
No.	Weight	Bit	Each
640	1 lb. 8 oz.	4 ins.	\$3.40
641	1 lb. 12 oz.	$4\frac{1}{2}$ ins.	3.70
642	2 lbs. 2 oz.	5 ins.	4.20
643	2 lbs. 8 oz.	$5\frac{1}{2}$ ins.	4.70
644	2 lbs. 14 oz.	6 ins,	5.30
645	3 lbs. 4 oz.	6½ ins.	6.00
646	3 lbs. 12 oz.	7 ins.	6.35
647	4 lbs. 4 oz.	$7\frac{1}{2}$ ins.	7.00



No. 1 Hand Vise

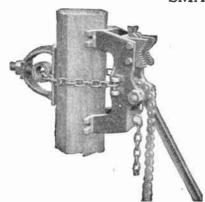


No. 3 Hand Vise

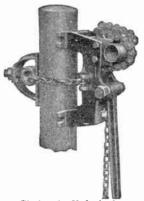
#### Hand Vices

			Width,	Jaw	Weight	List
List		Length	Jaw	Open	per Doz.	Price
No.		Inches	Inches	Inches	Lbs.	Each
*1	Hand vise	63/4	11/4	,11/8	12	\$5.60
*3	Hand vise	5	11/2	$1\frac{1}{2}$	131/2	1.90

<sup>\*</sup>Delivery F. O. B. Factory, Millers Falls, Mass. For warehouse deliveries write nearest house. Delivery F. O. B. New York. For warehouse deliveries write nearest house.







Chaingrip Unlocked

## Chaingrip Pipe Vise

The chaingrip pipe vise fastens to any support. A moment's work to wrap the supporting chain around the pipe, joist or column—no matter whether vertical, inclined or horizontal. The support chain, one end of which fastens to the base of the vise, passes through the tightening eye bolt of the clamp support placed at the back of the column, and a link drops into a recess on the opposite side of the vise base.

List No. *1 *2	Pipe 1/8 in.—21/2 in. 1/4 in.—41/2 in.	Weight 14 lbs. 17 lbs.	List Price Each \$15.00 20.00
		S S S S S S S S S S S S S S S S S S S	
Auto VISE.	THE PART OF THE PA	A KERPO	
	Nos. 87-288½	No. 29	
ald l		Handy Pipe Vise	
The Handy	List No.  1 Handy pipe vise		List Price Each

# Combination Pipe Vises SWIVEL BOTTOM

The steel faces of Nos. 87-2881/2 are milled and fitted to the jaws, and are renewable.

List	Weight	Jaw	Vise Opens	Holds Pipe	List Price
No.	Lbs.	Inches	Inches	Inches	Each
†87	41	$3\frac{5}{8}$	43/4	2	\$32.00
†88	59	41/8	6	3	44.00
*2881/2	105	$4\frac{3}{4}$	$6\frac{1}{2}$	4	64.00

#### Neverbreak Vises

#### REINFORCED SLIDE SOLID JAW STATIONARY VISE

	KEINFORCED SLID	E SOLID JAW	STATIONART VISE	
Lis	st Width of Jaw	Vise Opens,	Weight	List Price
No	. Inches	Inches	Lbs.	Each
†29	$3\frac{1}{4}$	4	31	\$17.50
†39	33/4	$6\frac{1}{4}$	47	19.60
†49	$\frac{41}{4}$	7	66	25.20
†59	434	8	81	32.90
†69	51/4	9	123	45.50
†79	C1/4	51/2	150	67.20
	*Delivery F. O. B. Factory, Chicago, Ill	<ul> <li>For warehous</li> </ul>	se deliveries write nearest house.	

†Delivery F. O. B. Factory, Cheago, in: For warehouse deliveries write nearest house.



Beaver Square-end Pipe Cutter

List No.	Size	Weight	†List Price Each
1 Complete, with two sets of extra knives. 5 Complete, with two sets of extra knives. 10 Complete, with two sets of extra knives. 1 Extra set knives. 5 Extra set knives. 10 Extra set knives.	1/2 in. to 2 ins. 2/2 ins. to 4 ins.	8 lbs. 12 lbs. 53 lbs.	On application On application On application On application On application On application On application

#### Trio Die Stock



Trio Die Stock

Three dies in one stock. Self-contained. Always ready, always right. Clean, smooth threads.





Pipe Vises



Pipe Threader

List		*List Price
No.		Each
200A	Cutting 18 in., 14 in., 38 in.	\$23.80
200B	Cutting 17 in 3% in 1% in	22 80

## Wells Pipe Vises

They are made of malleable iron. Frame and hook can be reversed to open either side. Jaws made of tool steel carefully hardened and tempered.

List		*List	Price
No.	Capac	· ·	Each
0			7.00
1	1/8 in. to 21/2		1.00
2	18 in. to 312		5.80
3	18 in. to 419	ins 28	8.00

## Greenfield Receding Pipe Threader

A new pipe threader which "leads on" easily, works still easier as the die advances, and pulls straight off the pipe when threa! has been finished.

There is no unwinding, on the pipe or off. Die opens and closes instantly. Chasers quic'ly removed. Chasers interchangeable. If one chaser is lost it is unnecessary to buy a complete set. One single chaser can be replaced at slight cost.

List No.		*List Price Each	
250	Cutting 1, 11/4, 11/2 and 2 ins.		
$P_{r}$	ces on ratchet receder on request.		

DELIVERY: F. O. B. Factory, †Warren, Ohio. \*F. O. B. Factory, Bridgeport, Conn. For warehouse deliveries write nearest house.



Wire Measuring Machine



Wire Meter



High Speed Indicator

#### Reels and Meters'

A most efficient device for measuring and reeling wire and cordage of various sizes.

	*	List Price	-			*List Price
761000	Description Wire meter with reel Meter only	Each \$48,00		761002	Description Counter meter	Each \$31.60 48.00

High Speed Indicator

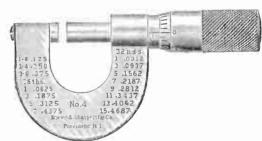
This indicator may be run at highest speed required without heating, and this on account of the frictionless bearing against which the inner end of the spindle revolves. The dial plate has two rows of figures, reading right or left, as the shaft may run.

	47:-41	Dulas Each
List No	LISU	Price Each
		\$3.00
104	Complete with rubber tips	
IUI	Complete with those was a second to the second to	4.00
106	Improved indicator, same as 104, with rubber handle and tips complete	7.00
100	1: 1:	1.50
109	Surface speed attachments for speed indicators	
100		1.50
109-A	Leather case for speed indicator	3.00



B&S Wire Gauge

4



Micrometer Caliper

#### Wire Gauge

These gauges are manufactured from the best steel, and are tempered, adjusted, and warranted accurate. Size 314 inches in diameter and 18 inch thick. In order to be familiar with the usage of these gauges with the decimal equivalents of the gauge numbers, we furnish both sizes with these decimal equivalents expressed

In b	housandons on the back, opposite to the regular gauge numbers.	 
List	No.	Price Each
688		 . \$6.00
	Disc wite Date. gatego, or out the contract of	5.00
688	Size wire B.&S. gauge, 5 to 36, American standard	 . 0.00
690		 6.00
690		 . 5.00

#### Micrometer Caliper No. 4

English or Metric Measure Measures all sizes less than one-half inch by one-thousandth of an inch. It is also made to measure all sizes less than 13 millimeters by hundredths of a millimeter. When so made the table of decimal equivalents is omitted. \$11.00

Range 0 to ½ inch, or 0 to 13 mm. with ratchet stop..... 1.60 \*Delivery F. O. B. Factory, Minneapolis, Minn. †Delivery F. O. B. Factory, Athol, Mass. †Delivery F. O. B. Factory, Providence, R. I. For warehouse deliveries write nearest house.

### SOLDERING AND BRAZING OUTFITS

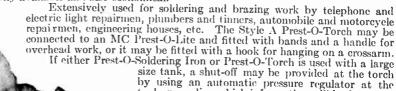
In the electrical trade, the uses for the Prest-O-Soldering Iron and the Prest-O-Torch are almost with-

For soldering wire connections on switchboards, all kinds of shop work, overhead wire work, etc., the Prest-O-Soldering Iron saves valuable time, labor and operating costs as well. The heating flame burns inside the copper head of the iron, maintaining an even temperature, and will not blow out in high winds. Ideal for work in cramped quarters.

The Prest-O-Torch (Style A, B and C) is a blow torch, providing an intense heat in a concentrated

Very handy, instantly available and also economical.

Prest-O-Soldering Iron



by using an automatic pressure regulator at the tank, regarding which information will be furnished on request. Prest-O-Lite is a system furnishing pure, ready-

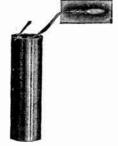
made acetylene gas in steel cylinders of convenient size. A Prest-O-Lite, when empty, may be taken to any Prest-O-Lite dealer and exchanged for a full

Prest-O-Lites are manufactured under a special formula of The Prest-O-Lite Co., Inc., and are backed by a universal exchange system which includes practically all large cities and towns and most villages throughout the country.

Prest-O-Soldering Iron

Prest-O-Soldering Iron as ordered is fitted with a 1 lb. soldering head of highest quality drop forged copper. Each outfit includes 6 feet of rubber hose and a union for attaching to either Style MC or to Style B and E Prest-O-Lites, as specified.

List No. List Price Each 330935 Prest-O-Lite Soldering Iron, 1 lb. size.....



Prest-O-Torch, Style A, With MC Cylinder



Prest-O-Torch, Style C. With E, B, or A Cylinder

#### Prest-O-Torch

Style A torch has a heat sufficient for brazing steel up to 3% inch diameter. Style B torch gives a flame with an intense heat ideal for work of jewelers, dentists, etc. Style C provides a flame about three times as large as Style A and successfully brazes solid steel bars up to 2 inches diameter.

Style	List P	Price Each    Sty	·le	List Price Each
A	Torch	\$2.95 C		List Price Each
В	Torch	6 45		••••••••••••••••••••••••••••••••••••••



Style MC



Styles A, B, E

## Prest-O-Lites

В	Motorcycle size	30 cubic ft. gas 40 cubic ft. gas	Dimensions  13½ ins. long, 4 ins. diam. 16 ins. long, 6 ins. diam. 20 ins. long, 6 ins. diam. 22 ins. long, 7¼ ins. diam.	List Price Complete \$24.36 37.80 45.50 60.90	List Price Less Band \$21.00 34.30 42.00 57.40
		9		00.00	01.10

### SOLDERING TORCHES



List No. 32	Gasoline torch with hook and support for soldering copper  Same as above without hook	Size Quart Quart	Weight Lbs.	List Price Each \$12.80 12.16
30	The burner is of special generator metal which holds the heat longer.  Gasoline torch with hook and support for soldering copper	Quart	4	\$12.16
29	Same as above without hook	Quart	4	11.52
	Has automatic pump in handle. Burner of open type and the gas is sup	perheated b	efore it is b	urned.
108	Gasoline torch with hook and support for soldering copper	Quart	4	\$12.16
107	Same as above without hook	Quart	4	11.52
	Burner mounted in center of tank.	-		











110.	AUT	101011	
List No.			

No. 95 Torch	No. 112 Torch	No.	No. 114 Torch		
	Size	Weight Lbs.	List Price Each		
	()	4.7	011 70		

Quart Gasoline torch with hook and support for soldering copper..... \$11.52 Patented automatic pump with double spring automatic check valve fitted in tank.

Torch for kerosene without soldering copper attachment..... Quart 6½ \$14.08

The improved construction of the burner and perfect combination of the fuel practically eliminates

	the improved constituenou of the parties and perfect commission	0. (1	introduction.	
carbo	n deposits.	TD:4	91	\$11.52
95	Kerosene torch without soldering copper attachment	rint	$3^{1}_{4}$	w · ·
112	Gasoline torch with detachable soldering copper holder	Quart	414	11.52
114	Gasoline torch with detachable soldering copper holder	Pint	3	10.24







No. 120 Torch





No. 28

List No.	Size	Weight Lbs.	List Price Each
28 Gasoline torch with book and support for soldering copper	Pint	2	\$11.52
Heavy gauge seamless drawn tank is fitted with automatic brass p	ump with	automatic	check valve
insuring ample air pressure.		4	
120 Gasoline torch, with detachable copper holder	Quart	4	\$10.88
14 Alcohol or gasoline torch, size 134 x 6 ½ ins. Finish, brass nickeled.		1	<b>\$</b> 6.40
A torch or blow pipe for electricians for producing a fine concentrated	flame.		
28 Alcohol torch	Pint	1	\$4.50
Fitted with a single spring automatic check valve and forms the har	idle of the	torch.	



No. 203



No. 20



No. 21



No. 202

	No. 203 No. 20 No. 21	No.	202
'List	Quart Torches Polished Brass	Shipping	List Price
No.		Wt. Lbs.	Each
203	Equipped with latest burner with automatic pump in handle	512	\$10.80
20	Powerful and very hot flame produced by patent coil burner.	6	12.60
21	Efficient and exceptionally serviceable. Very hot	516	12.00
202	Furnished with hook and strap for holding soldering copper.	51/2	12.00
	•		



	No. 224	No. 215	No. 223	No	. 425
224	Equipped for heating solderi	ng coppers	• • • • • • • • • • • • • • • • • • • •	5	\$11.40
215	Strictly high grade, low price	ed torch. Autom	atic pump in handle	5	10.20
223	Closed generator type for ou	tdoor or indoor ii	80.	5	10.80
425	Kerosene torch producing a	powerful blue flan	10	51.9	13.20
			The State of Control o	- 4	







Soldering copper attach-ments included without extra charge. Packed loose with all torches except No. 20 and Double Jet Torches

No. 97

No. 96 Double Jet Torches, Quart Sizes

92	Double jet Produces nearly double the heat of single jet torches	5	\$15.38
96	Double jet burner on swivel for brazing heavy electrical cables	$5\frac{1}{9}$	18.00
97	Double jet. Large burner is protected for outdoor work by wind shield	$6\frac{3}{4}$	20,70









	No. 324 No. 315	No. 302	No. 41	18
	Pint Torch	nes, Polished Brass		
324	Equipped with burner having soldering ir	on attachments	21/2	\$10.20
315	Same type as No. 215. Meeting demand	for a low-priced tool	31/2	9.00
302	Equipped with improved burner with hol	lder and pump	4	10.80
418	Auto type. Will fit in tool box		81/8	13.20

Shipping List Price

Each

Weight

#### FIRE POTS

No.



No. 1 Fire Pot



No. 5 Fire Pot





## Nos. 71 and 72 Fire Pots for Gasoline

FOR GASOLINE AND KEROSENE Nos. 1 and 5 Fire Pots for Gasoline

Five pints capacity...... 101/4 lbs.

Tank is made of heavy gauge steel with bottom and fittings welded in, making it extra strong and durable: fitted with large funnel and filler plug. The burner represents the highest development of generating power and heat efficiency, quickly producing an ideal blue flame easily regulated, giving satisfaction in windy or zero

weather. The burner is attached to a swivel joint which



The hottest fire pot made for electricians and metal workers. It is smokeless, odorless and noiseless. Heavy gauge welted steel tank. A pot of lead can be melted and a pair of heavy soldering coppers heated at the same time. The burner has two heating surfaces. The gas is superheated before it is burned and gives an intensely hot flame, burning from each side to the center. A sub-flame for the generator permits the heating flame to be turned low, saving fuel expense.



No. 71 Fire Pot



No. 72 Fire Pot

No. 20 Fire Pot



No. 21 Fire Pot

## Nos. 20 and 10 Fire Pots for Gasoline

Capacity

permits moving up or down.

Fitted with galvanized east iron top plate and bottom ring. All small or light eastings are malleable iron or brass. The coil and burner are steel. The needle point valves are fitted with stuffing boxes and are always tight and give perfect control of the fire.

## Nos. 21 and 11 Fire Pots for Gasoline

21 One gallon with automatic pump.....934 lbs. \$16.96 11 One gallon with rul ber bulb......93/4 lbs. 15.68

The latest improved up-to-date coil fire pot made, with seamless drawn steel tank, large funnel and filler plug, heavy uprights, large valve, heavy malleable top plate and one-piece steel shield.



No. 221 Fire Pot No. 222 Fire Pot No. 223 Fire Pot

For Kerosene

## Nos. 221, 222 and 223 Fire Pots for Kerosene

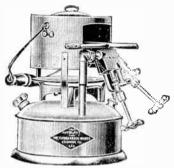
- Seven pints eapacity with shield for holding metal 221
- 222
- 223 bale handle. Electricians' style. . 13 lbs. \$30.08

These tanks are made of seamless drawn steel, with bottom and fittings welded in. The burner produces a powerful heat and is free from smoke; an excellent fire pot for outside work, or where insurance restrictions forbid the use of gasoline. Give good service under severe weather conditions.

#### **FIRE POTS**



No. 83 For Kerosene

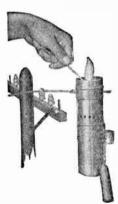


Nos. 34 and 36



No. 66 For Gascline

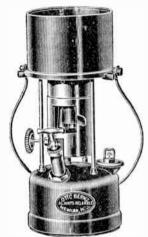
List	Turner Fire Pots	Shipping	List Price
No.	Description	Wt., Lba.	Each
83	Seven Pints, "Hot Blast," with improved burner for kerosene	161/2	<b>\$2</b> 5.20
34	Seven Pints, "Hot Blast," galvanized steel tank	17	20.40
36	Five Pints, "Hot Blast," galvanized steel tank	14	18 60
66	Seven Pints, drawn steel tank with automatic pump	$14^3$ í	15.90



Lineman's Torch



Torch and Shield Detacher



"B" Telephone kerosene Furnace

## Staysalite Lineman's Torch

This lineman's torch stays lit in a wind. It is light and small. It is lit and extinguished in a moment as wanted. It has no adjusting parts, therefore it cannot get out of order. It is hung directly on the wire under the joint to be soldered and is provided with a cup for holding soldering paste.

List				Weight	*List Price
No.					Each
3420	Staysalite Lineman's Torch	 	• • • • • • • • • • • •	 $1\frac{1}{4}$ lbs.	\$9.10

## "B" Telephone Kerosene Furnace

This furnace is especially adapted to the use of telephone and telegraph companies. It is economical because 2 quarts of kerosene will burn as long and do as much work as 4 quarts of gasoline, a saving of one half. It is safe, because kerosene can be carried with much less danger of being ignited and causing damage by fire. It is durable because the reservoir (or body) is made entirely of heavy metal, and all joints are autogenously welded by the oxy-acetylene process. The burner is so constructed that it can be easily taken apart and cleaned of any carbon deposit.

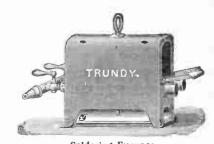
11 List Price Each 825,000

\*Delivery F. O. B. Factory, Chicago, Ill. ‡Delivery F. O. B. Factory, Newark, N. J. For warehouse deliveries write nearest house.

## SOLDERING ACCESSORIES







No. 3550-6

3325-8

Soldering Furnace TRUNDY SOLDERING FURNACE

CHARCOAL SOLDERING FURNACE Galvanized Iron Opening at top admits 6-inch melting pot.

15 inches long, 9 inches high and 73/4 inches wide.

List	e is provided with a grate.  Wt. List Price   List Wt.	List Price
No. 3550-6	Lbs. Each   No. Lbs. Removable Cast Iron Top   12   \$10.50     7609-16     19 lbs.	Each \$38.00
0000	MELTING POTS	
List No.		List Price Each
3325-5 3325-6	5-inch Cast-iron Pot. 6-inch Cast-iron Pot.	\$1.30 1.60



8-inch Cast-iron Pot.....



3.00

	Pouring Ladie		Wiping Cloth	
	Wipir	g Cloths		
	For Wiping	Lead Joints, Etc.		
8301	Moleskin	30    8300 Tick	king	\$0.60
	Pouri	ng Ladles		
3300-21/2	2½ in. bowl	5   3300-3 3	in. bowl	\$1,45
	Pony Sold	ering Coppe	ers	
	Fitted with Blac	k Lacquered Har	ndles	
Specia	ally adapted for electrical work. Made	of pure copper, ti	nned.	
	Length of		Length of	
List	Handle, List Pr	ce List	Handle,	List Price
No	Inches Weight Es	ch No	Inches Weight	Fach

No. 3200- 8½	Copper	81/2	Weight 1 lb.	\$0.60	No. 3200-11½	Copper	11½ 11½	Weight	\$1.45
3200- 9	Copper	9	118 lbs.	.70	3200-12	Copper	12	2 lbs.	1.75
$3200-10\frac{1}{2}$	Copper	10/2	1 1/4 IDS.	1, 19 ]]					
Standard Soldering Coppers									
3 lbs. to pair and heavier, without handles									
21/2 lbs. to 1	pair, without ha	ndles							Prices

2 lbs. to pair, without handles on Application
1 lb. to pair, without handles Application
1 lb. to pair, without handles Pointed soldering coppers with handles 7 inches long by 1 and 3 inch diameter, weighing 2 lbs. to 6 lbs. to pair inclusive, can also be furnished.

#### RUBBER GLOVES

#### Pure Rubber Gloves



Seamless Glove-Unlined

List	Size	Length
No.	No.	Inches
760542	10	12
760548	11	12
760545	10	15
760551	11	1.5
760543	10	12
760550	11	12
760546	10	15
762025	11	15

752025	11	15
A		
1/		110

Without Gauntlet

The seamless type gloves are made of red rubber. Only the best selected pure fine Para rubber is used in their manufacture. Being seamless, they have no imperfection on account of laps or joints. They are easily cleaned or dried by turning, as they have no fabric or lining to interfere. They are flexible and serviceable, while the safety is measured by the tests to which each pair is subjected before leaving the factory.

The sizes are standard rubber glove sizes and compare with Nos. 14 and 15 of the coated seam glove. The standard weights are tested for about 4,000 volts, heavy weights about 10,000 volts. The heavy palm have the standard weight gauntlet, but palm of this glove is tested for about 10,000 volts. Length, 11 to 15 inches.

	List Price
Style	Each Pair
Standard	\$1.25
Standard	4.55
Standard	5.45
Standard	5.75
Ex. Heavy Finger & Palm	4.95
Ex. Heavy Finger & Palm	5.15
Ex. Heavy Finger & Palm	5.75
Ex. Heavy Finger & Palm	6.40



With Gauntlet

## Rubber Gloves, Cloth Lined

To determine size required, measure hand around knuckles, and then add 6 inches to measurement; i.e., if hand should measure 8 inches, order size No. 14 for close fit, or No. 15 for loose fit.

MEN'S	LIGHT	<b>ELECTRICIAN'S</b>	GLOVES
-------	-------	----------------------	--------

Size Inches 10, 11, 12 13, 14, 15	Light electrician's. Light electrician's.	Short \$2.75 3.30	4½ Inch Gauntlet \$3.35 3.83	9 Inch Gauntlet \$3.85 4.40
	LINEMAN'S HEAVY REINFORCE	D .		
19 19 14 15	Tinamenta haver solutoused	62 00	00.00	<b>AT</b> 00

Lineman's heavy reinforced...... 12, 13, 14, 15 \$3.00 86.00Lineman's heavy reinforced..... 16 5.406.50 7.50Lineman's heavy reinforced..... 17 6.00 7.008.00 Lineman's heavy reinforced..... 18 6.508.50

**World Radio History** 

## Western Electric

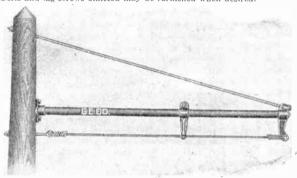
## LINE MATERIAL Pole Brackets, Flexible

The following pole brackets represent the various forms called for in modern railway line construction and include the three styles of tube, the use of which has been approved in the best practice. The wrought iron pipe referred to in the table is standard welded gas and water pipe, and the structural tubing is a special high carbon steel tube with butt joint, which, because of the great stuffness of the material, does not require a welded seam. All diameters given are the nominal inside diameters of standard wrought iron pipe. All parts of these brackets are finished in black japan.

The following trable gives dimensions and weights of the various tubes employed.

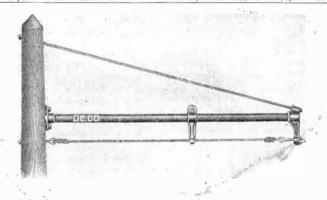
Nominal Inside Actual Outside Thickness of Wt. in Lbs. Material Diam, in Ins. Diam, in Ins. Wall in Ins. per Ft.	monowin; table gives dimensions and weight	The following		es empioyea.		
Material Diam, in Ins. Diam, in Ins. Wall in Ins. per Ft.			Nominal Inside	Actual Outside		Wt. in Lbs.
	Material		Diam. in Ins.	Diam. in Ins.	Wall in Ins.	per Ft.
Wrought iron pipe $\begin{cases} 1\frac{1}{2} & 1.66 & 0.140 & 2.2 \\ 1\frac{1}{2} & 1.90 & 0.145 & 2.6 \end{cases}$			(11/4			2.2
	iron pipe	ught iron pipe	. {11/2			2.6
(2, 2.375, 0.154, 3.6)			(2			3.6
"A" tubing			(11/4	1.66		1.5
"A" tubing	ing	'tubing	. 11/2	1.90	0.095	1.87
(2   2.375   0.167   2.5			(2	2.375	0.167	
(1)4 1.66 0.140 2.2			(11/4	1.66	0.140	
"C" tubing	ing	'tubing	. 11/2	1.90	0.145	
(2   2.375   0.154   3.5)			(2	2.375		

Iron poles, such as are used in line construction, have actual outside diameters somewhat larger than their nominal listed diameters



Form A1 Bracket FORM AT BRACKETS FOR WOOD POLES

List No.	Description	Length	Approx. Net Wt. per 100	List Price per 100	List No.	Description	Length	Net Wt.	List Price oer 100
10009 10010 10011	112 in. "A" tubing	9 ft. 9 ft. 9 ft.	2	\$170.00 803.00 803.00	156169 156170 156171	1½ in. "A" tubing 1½ in. "C" tubing 1½ in. wrought iron pipe. 2 in. "A" tubing	10 it. 10 ft. 10 it.	5500 lbs. \$. 4125 lbs. \$. 4225 lbs. \$	47.00 880.00 880.00
40013	2 in. "C" tubing	9 ft.	4000 lbs.	990 00	156173	2 in. "C" tubing 2 in. wrought iron pipe	10 ft.	4425 lbs. 11	00.001



Form A2 Bracket

FORM A2 BRACKETS FOR WOOD POLES This bracket differs from the Form A1 only in that it has additional adjustment for tension of span wire.

40015	15g in. "A" tubing	9 it.	3300 lbs.				3550 lbs. \$591.00
100±6	1 1/2 in. "C" tubing	9 ft.	3850 lbs.				4175 lbs.   924.00
40017	1½ in. wrought iron pipe.	9 ft.	39.50 lbs.	847,00 156177	11/2 in, wrought iron pipe.	10 ft.	4275 lbs.   924,00
40018	2 in. "A" tubing	9 ft.	3500 lbs.	[1001.00][156178]	2 in. "A" tubing	10 ft.	3825 lbs. 1100.00
40019	2 in. "C" tubing	9 fr.	4050 lbs.	1034.00 156179	2 in. "C" tubing	10 ft.	4475 lbs. 1133.00
40020	2 in. wrought iron pipe	9 fr.	4150 lbs.	1034.00 15619	2 in. wrought iron pipe	10 ft.	4575 lbs.  1133.00

Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on shipments amounting to \$50,00 list and over to points east of Mississippi River. Suitable allowance made for shipments west thereof.

## LINE MATERIAL Trolley Wire Suspensions



Form II-3 Straight Line Suspension



Section Form II-3 Suspension

### Straight Line, Form H-3, 600 Volt

The Form H-3 Straight Line Suspension is of the crimped cup type, having the stud mechanically fastened nto the hell and insulated by sheet mica under compression.

Approx, Wt. List Price per 100 Size Description per 100 No. Form H-3 Straight Line Suspension, 5/8 in. Stud, malleable iron 112200 170 lbs. sherardized . . . \$120.00



Form H Suspension Body With Pins

For 1200 Volt Straight Line and 600 and 1200 Volt Double Curve Form H Suspensions

List	Length between Centers	Diam.	Diam.	Diam.	Approx. Wt.	List Price
No.	of Clevis Holes	of Shell	of Stud	of Pin	per 100	per 100
66330	4 % ins.	314 ins.	5% ins.	1/2 ins.	285 lbs.	\$144.00
66326	4 % ins.	314 ins.	3% ins.	1/2 ins.	290 lbs	156.00
128424	Removable suspension arm				75 lbs.	36.00
Suspe	nsion arm for Form II Curve :	Suspension. Has	tie inch eye.			

## Straight Line, 600 Volt

Each of these suspensions, being in one piece, is held against turning by the span wire, and cannot therefore, become unscrewed as a result of vibration in service. Special leather washers can be provided to permit adjustment in seating the car boss against the suspension. Overall length, 6½ inches; arm yokes accommodate % inch span wire.

List	Diameter	Height	Diameter	Approx. Net Wt.	List Price
No.	of Shell	of Shell	of Stud	per 100	per 100
2.5980	31/4 ins.	2 ins.	5 s ins.	210 lbs.	\$126.00
39690	314 ins.	21/4 ins.	's ins.	265 lbs.	144.00
25979	314 ins.	2¼ ins.	4⊊ins.	270 lbs.	156,00
143559		eather washer for 📆 in. s		5 lbs.	4,80
143560	I	eather washer for 14 in. s	stud	o lbs.	4.80



Single Curve Suspension-600 Volt



Double Curve Suspension-600 Volt

#### SINGLE CURVE-600 VOLT

Form 11-3 single curve suspension has the same interior construction as the straight line. The shell, however, is provided with a clevis into which the removable arm is fastened by a pin.

The length between center line of stud and center line of pull-off eye 4½ inches; height above center of pull-off eye 2½ inches; diameter of pull-off eye ½ inches; thickness of arm at eye ½ inch; diameter of shell 3 inches.

Approx. List

List		Wt.	Price
No.	Description	per 100	per 100
128651	Form H-3 single curve suspension, 5% in. stud malleable iron sherardized	230 lbs.	\$162.00

#### DOUBLE CURVE SUSPENSION-600 VOLT

# LINE MATERIAL Trolley Wire Suspensions



FORM H DOUBLE CURVE

The Form II double curve suspensions are like the single curve suspensions, except that there are two clevises and arms. Length between centers of pull off eyes, 9 inches; height above center of pull off eyes, 3½ inches; diameter of shell, 3½ inches; diameter of pull off eyes, 2 inches; diameter of pull off eyes, 2 inches; diameter of pull off eyes, 2 inches; diameter of pull of

List N	o.
6895	7
68959	)

Diameter of Stud % ins.

Approx. Net Wt. per 100 395 lbs. 400 lbs.

List Price per 100 \$216.00 228.00

### FORM H BRIDGE OR CEILING-600 VOLT

These suspensions have a total height of 2 inches above the ear seat. The supporting ears are slotted for 1/2 inch law screws or bolts Distance between centers of screw slots, 11, inches; thickness of slotted ears, 3, inch; diameter of shell, 31, inches.

List		Approx. Wt.	List Price
No.	Description	ner 100	per 100
19044	Form II ceiling suspension, 5g in. stud, japanned	230 lbs	\$132.00
	Form II ceiling suspension, ", in. stud, sherardized	230 lbs.	132.00
10961	Form H ceiling suspension, 🚉 in. stud, sherardized	245 ll ~.	144,00
27370	Form II ceiling suspension, % in. stud, japanned Form II ceiling suspension, % in. stud, sherardized Form II ceiling suspension, % in. stud, sherardized	230 His	132.



Combination Clamp



Low Combination Mining Suspension



Combination Mine Suspension

## Low Combination Mining

This suspension is similar to the flat top suspension, but it is only 17, inches high from car sent to top of flunge



114 Inch Pipe Clamp



Expansion Case



Pipe Clamp

List No. 165188	Description Form H mining suspension, \$\frac{3}{2}\$ in. stud, jupanned	Approx. Net Wt. per 100 275 lbs.	List Price per 100
165189	Form II mining suspension, 54 in. stud. shearedized Form II low combination mine suspension, japanned	275 lbs. 275 lbs. 175 lbs.	\$132.00 132.00 132.00

## Combination Mine Suspension and Clamp

This suspension differs from the standard Form H mine suspension in the climination of the boss above the flange.

This suspension is  $2\frac{18}{15}$  inches in height and  $3\frac{14}{15}$  inches in diameter; diameter of top

210 lbs. \$132.00 132.00 102.00 210 lbs. 225 lbs. 225 lbs. 102 00

Extension Pipe Clamp Pipe clamp, 1¼ in. pipe, sherardized.

Pipe clamp, 1¼ in. pipe, plain 135756 125 lbs.

\$86.40 86.40 Expansion Case and Pipe Clamp for Extension Suspensions

125328	Expansion case, 34 in. pipe, sherardized	250 lbs.	\$57.60
125329	Expansion case, 34 in. pipe, japanned	250 lbs.	57.60
125332	Pipe clamp, 3, in. pipe, sherardized	200 lbs.	78 00
Dol	Pipe clamp, 3 in. pipe, japanned	200 lbs.	78 00
to \$50 li	ivery F. O. B. Pactory, Schenectady, N. Y. Freight allow	ed on orders	amounting
Cor alina	st and over to points east of the Mississippi River. Suit	able allowan	ce is made

for shipments west thereof.

## Western Electric

### LINE MATERIAL







No. 484790

	NO. 484/84	LOW STANDARD MINE SUSPENSION	. 1017 /1	
The s	hell portion o	this suspension is only 11% inches high and 3 inches in diameter. The	stud and top bo	es have 58
inch, 11 th	read.			List Price
No.			Wt. per 100	per 100
184789	Form H, low	std. mine suspension, sherardized.	125	\$100.80

1131700	Form II, low std. mine suspension, japanned	125	100.80
	LOW STANDARD CEILING SUSPENSION		
This	suspension has a 3 inch diameter shell and is only 11% inches high from the ear seat to the	top of the lu	gs. It is
for man in	mines since it has limited head room and uses the smaller sizes of trolley wire. The stud	is ag inch in	diameter.
The luge t	will accommodate be inch lag serews, and the distance between centers of the holes in the lug	is is 1 inches.	
TITL THEO .	THE CONTROL OF THE CO	NT 4 135.	

Net Wt. in Lbs. List Price List per 100 \$100.80 100.80 per 100 110 No. 484790 Form H low standard ceiling suspension, sherardized.
Form H low standard ceiling suspension, japanned. 110 1431701



No. 105705



Low Mining Suspension

## Suspensions, Form H3

	LOW BRIDGE OR CEILING-600 VOLT		Approx.	List
List No.	Description	Diam.	Net Wt. per 100	Price per 100
116061 64560	Low bridge ceiling suspension Form H3, % in. stud with arms at bottom, sherardized	3 ins.	140 lbs. 140 lbs.	\$108.00 108.00
105705 116078	Low bridge eeiling suspension Form H3, 58 in. stud with arms at top, japanned	3 ins. 3 ins.	140 lbs. 140 lbs.	108.00 108.00
	LOW MINING			

| Height from our seat to top of shell, 1½ inches; diameter of shell at top, 3 inches; height of boss above shell, ½ inches; diameter of shell at top, 3 inches; height of boss above shell, ½ inch.
| 150 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | 100 lbs. | \$108.00 108.00 114735



1200 Volt Single Curve Suspension



600 Volt Single Curve Suspension

#### SINGLE CURVE

The Form H single curve suspension consists of a 3½ inch body easting, into which the insulation holding the stud is molded, with a clevis on one side to which the pull-off arm is attached by means of a ½ inch steel pin and cotter.

Length between center line of stud and center of pull-off eye, 4½ inches: height above center of pull-off eye, 3½ inches; diameter of pull-off eye, 4½ inches: height above center of pull-off eye, 3½ inches; diameter of shell, 3½ inches.

List No. Of Stud Of Stu List No. 68953 68955 % in. 315 lbs 186.00

#### SUSPENSION BODY-WITH PIN

For 600 and 1200 Volt Single Curve Form H Suspensions
Distance between center line of stud and center of clevis hole 23/2 inches; diameter of shell 31/2 inches; height of shell 33/2 inches; die

iameter of pin 1/2 inch.			
68961	5/8 in.	255 lbs.	\$138.00
68963	3/4 in.	260 lbs.	150 00
	Removable arm (only)	75 lbs.	36.00
128421	Removante arm (omy)	1.7 103.	00.00

Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on orders amounting to \$50 list and over to points east ne Mississippi River. Suitable allowance is made for shipments west thereof.

## Trolley Wire Suspensions, Form S

FORM S SUPPORTS



No. 66648 with 2 inch Giant Strain Insulators, List No. 64425



List Nos. 66640 and 89483 with 1 and 1¼ inch Strain Insulators, List Nos. 16727 and 37488

### Single Trolley, Straight Line, 600 Volt WITH 2 INCH GIANT STRAIN INSULATOR, LIST NO. 64425

List Diameter Length Petween Center of Outer Eye Approx. Wt. per 100 410 lbs. List Price No. 66648 per 100 On application 5/g ins. 3/1 in. 155% ins. 155% ins. 66646 415 lbs. On application WITH 1 INCH WOOD STRAIN INSULATORS, LIST NO. 16727 5% in. 34 in. 66640 515 lbs. 27 ins. On application 66638 520 lbs. ins. On application WITH 11/4 INCH WOOD STRAIN INSULATORS, LIST NO. 37488 % in. 27 80 183 585 lbs. ins. On application 89481 27 590 lbs. ins. On application WITH 2 INCH GIANT STRAIN INSULATORS, LIST NOS. 64425 AND 64417 100120 5 e in. ins. 620 lbs. 2.1 1200 volts On application 4, in. 10011 1200 volts 625 lbs ins.



Single Curve Suspension with Giant Strain Insulator



Double Curve Suspension with Giant Strain Insulators

## Single Curve Suspension

The Form S single curve suspension is adapted for use on curves in yards, and on haulage tracks on the surface.

T 1 1		Approx.	
List		Net Wt.	List Price
No.	Description	per 100	per 100
25987	Form S single curve suspension with Giant strain insulator, $\frac{1}{2}$ s in, stud	240 lbs.	On application
25983	Form S single curve suspension with Giant strain insulator, 34 in. stud	245 lbs.	On application

## Double Curve Suspensions

Length Between Approx. Net Wt. List Centers of List Price No. 25988  $\begin{array}{c} {\rm Description} \\ {\rm Form}\, S\, {\rm double}\, {\rm curve}\, {\rm suspension}\, {\rm with}\, 2\, {\rm in},\, {\rm Giant}\, {\rm strain}\, {\rm insulator},\, {\tilde\gamma}_8\, {\rm in},\, {\rm stud}\\ {\rm Form}\, S\, {\rm double}\, {\rm curve}\, {\rm suspension}\, {\rm with}\, 2\, {\rm in},\, {\rm Giant}\, {\rm strain}\, {\rm insulator},\, {\tilde\gamma}_4\, {\rm in},\, {\rm stud} \end{array}$ per 100 410 lbs. per 100 On application Outer Eyes 18 ins. 25986 18 ins. On application



No. 64252, 600 Volt Single Curve Suspension



Straight Line Suspension Body

On application

#### WITH 114 INCH WOOD STRAIN INSULATOR, LIST NO. 37488

List No. 64252	Diameter of Stud % in.	Center Line of Stud to Center Outer Eye 14% ins.	Approx. Wt. per 100 330 lbs.	List Price per 100 On application
64251	34 in.	147 <sub>8</sub> ins.	335 lbs.	On application
	WITH 2 INCH GIANT	STRAIN INSULATORS, LIST	NOS. 64425 AND 64417	
68166 68165	% in.		volts 345 lbs.	On application

	DODIEG HOD	COURS A FOREST PERSON	OTIONSTALORS	
165 ¾ in.!	1	13½ ins.	1200 volts 350 lbs.	
28 10.		1.5 % Ins.	1200 volts 345 lbs.	

		DODIES FOR SIE	CAIGHT LINE	2 SUSPENSIONS		
List	Diameter	Length Between	Clevis	Diameter	Approx. Wt.	List Price
No.	of Stud	Pin Centers	Opening	of Pins		per 100
6663 <b>2</b>	5⁄8 in.	9 ins.	ி in.	16 in.	235 lbs.	\$132.00
66630	3∕4 in.	9 ins.	மீ in.	15 in.	240 lbs.	150.00
0 11 1	21 4 7	* 1 12	1 1	11		

On the above all metal parts, including stud, have standard sherardized finish. Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on orders amoust of the Mississippi River. Suitable allowance is made for shipments west thereof. Freight allowed on orders amounting to 850 list and over to points

## LINE MATERIAL TROLLEY WIRE SUSPENSIONS Form D

In the Form D suspensions the cap and cone dovetail together in such a way as to prevent the formation of a film of moisture between them. The stud bolt head is made considerably larger than the opening in the body casting so that accidental breakage of the insulation will not allow the trolley wire to fall. A dead load of over 5 tons is required to crush the

dental breakage of the institution with not allow the troitey whe to lain. A dead load of over 5 cons is required to class the insulation between the stud cap and body.

A metal washer model, into the cone provides a positive bearing for the ear boss.

The lock washer, which is supplied only when specially ordered, engages directly with the screw cap and the body and effectively prevents any tendency to unscrew from vibration.

All metal parts including studs have standard sherar lized finish.





Single Curve Suspension

Straight Line Suspension

	FORM D SINGLE TROLLEY	Approx.	
List No.	Description	Net Wt. per 100	List Price per 100
37983	Single curve suspension, % in, stud	245	\$168.00
37984	Single curve suspension, 34 in. stud	250	177.60
39701	Single curve body.	150	67.20
37979	Straight line suspension, 5% in. stud.	195	158.40
37981	Straight line suspension, ¾ in. stud.	200	168.00
39700	Straight line body	100	57.60
37986	Double curve suspension, 5% in. stud	295	201.60
37988	Double curve suspension, 34 in. stud	300	211.20
39702	Double curve body	200	100.80





Ceiling Suspension

Strain Suspension

pprox. Net List			Approx. Net	t
t. in Lbs. Price			Wt. in Lbs.	
per 100 per 100	List No.	Description	per 100	pe

Price er 100 List No. Description Ceiling suspension, 3% in, stud.... Ceiling suspension, 3% in, stud.... Ceiling body, sherardized.... Ceiling body, japanned.... \$220.80 230.40 120.00 Strain suspension, 5% in. stud.... Strain suspension, 3% in. stud.... Strain body... 37991 \$184.80 37993  $\frac{355}{250}$ 60015 250 194.40 84.00 39703 15819 250 120.00

FORM D SINGLE TROLLEY







List

Cap

Cone

Lock Washer

	INSULATING PARTS FOR FORM D SUSPENSION	Approx. No	et
		Wt. in Lbs.	List Price
List No	Description	per 100	per 100
16925	Screw cap insulator, 1/2 in. stud	70	\$37.20
16926	Cone for No. 16925	25	33.60
26143	Screw cap insulator, ¾ in. stud		76.80
26144	Cone for No. 26143		33.60
19480	Lock washer for all Form D suspensions	3	9.00
113978	Screw cap insulator, 5% in. stud with extra high heat resisting compound		On applic'n
113979	Cone for List No. 113978	25	On applie n

Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on orders amounting to \$50 list and over to points east of the Mississippi River. Suitable allowance is made for shipments west thereof.

# Trolley Wire Suspensions-Form G



Single Curve Suspension



Double	Curve	Suspension
--------	-------	------------

	SIN	GLE CURV Length	E SUSPE	NSION		L	DOU	BLE CURV	E SUSPE	NSION
List No. 25981 66022 25982 25978	32 in. Body	Center Stud to Center Pulloff Eye 4 ins. 4 ins.	Height 3 % ins. 3 % ins.	Approx. Weight per 100 270 275 145 35	List Price per 100 \$187.20 189.60 96.00 24.00	List No. 25984 66025 25985 25978		Center Stud to Center Pull Eye 8 ins. 8 ins.	Height 37% ins. 37% ins.	Approx. Weight per 100 310 315 185

Size	Center Stud		Approx.	List	
	to Center		Weight	Price	
Stud	Pulloff Eye	Height	per 100	per 100	
3 in.	4 ins.	3 's ins.	270	\$187.20	
	4 ins.	3 % ins.	275	189.60	
ody.			145	96.00	
ар			35	21.00	



Straight Line Suspension



Socket Ceiling Suspension



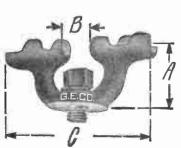
35

List Price per 100 \$206,40 208,80 115,20 24,00

Ceiling Suspension

No. Stud Arm Height per 100 per 100 No. Stud Height H 25976 % in. 6 ins. 3% ins. 245 \$177.60 38690 54 in 3.4 ins.	mile conficuotott	
66019 % in 6 ins 37/2 ins 250 100 00 00000 12: 000 ins	m. Approx. Li ew Weight Pri ele per 100 per 10 in. 170 \$117.6	00 30 00
CEILING SUSPENSION  25998 Ceiling suspension 5g in. 3 ins.	in 225 \$100 ·	

			LING SOSEEM	21011			
25998 66034 25991	Ceiling suspension			5 g in. 3 34 in. 3	ins. 16	in. 225 in. 230	\$199.20 201.60
25999	Body. Cap				• • • • • • • • • • • • •	75 60	90.0042.00
				FEEDER	TAP		
	0	List No. 11294	Des Straight line feet	eription ler suspension.	l.engtl	Approx. Wt.	List Price per 100
500	TOF	150313	stud, comp Straight line feet	er suspension.	in. 6 ins.	85 lbs.	\$99.00



Feeder	Clamp	Susne	nsion

	FEED	ER 1	'AP			
List No. 11294	Description Straight line feeder suspension	nn. 56	in.	l.ength	Approx. Wt. per 100	List Price per 100
150313	stud, eomp			6 ins.	85 lbs.	\$99.00
11296	stud, mal. iron, sherardize Straight line feeder suspension	ed	in.	6 ins.	85 lbs.	110.00
List No. 16380	stud, comp		nsions	6 ins.	90 lbs. s.Approx. Wt. per 100	50.40 List Price per 100
48807	in. stud comp. for 1 0 feeder wire	115	11/8	514	90 lbs.	\$154.00
61567	in. stud. comp. for 1/0 feeder wire Feeder clamp suspension, 56	115	11/8	515	9 <b>5</b> lbs.	165.00
48808	in. stud comp. for 4/0 feeder wire	$2\sqrt{3}$	135	534	225 lbs.	158.40
N V	in. stud comp. for 4,0 feeder wire		13,			169.40

Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on orders amounting to \$50 list or over, to points east of the Mississippi River. Suitable allowance is made for shipments west thereof.







Straight Line Suspension

Straight Line Suspension

List	Form P Suspension	Approx. Wt.	Tint Daine
No.	Description	nor 100	per 100
106824	Form P suspension, 16 in. stud, complete	500 lbs	\$187.20
106825	Form P suspension, % in, stud, complete	505 lbs	193.20
106526	Form P suspension, 5 in. stud, without guard.	375 lbs.	139.20
106827	Form P suspension, 34 in. stud, without guard	380 lbs.	145.20
106822	Porcelain body only, with 34 in stud	300 lbs.	120.00
106823	Porcelain body only, with 58 in. stud	305 lbs.	114.00
106828	Suspension voke only	125 lbs.	25.20
106829 106830	Wheel guard only, for 5g in. stud.	75 lbs.	48.00
100830	Wheel guard only, for ¾ in. stud	75 lbs.	48.00

Form P2 Suspension, 600 Volts

The Form P2 porcelain suspension for city span construction consists of two porcelain insulators clamped to a malleable iron span yoke by a stud bolt and washers. A split washer on the stud bolt holds the various parts together during shipment and installation. The simple operation of turning the stud bolt draws the car boss against the suspension with the car aligned in any desired position. The insulating parts can be renewed at small cost. All metal parts are sherardized.

Approx. Net Wt. List Price List No. Description per 100 Form P2 straight line suspension, 5g inch stud, complete..... 209019 320 \$126 00



Expansion Bolt



For Forms H

and H3 Suspensions



For Form D Suspensions





Roof Plug and Lag

# Roof Fastenings

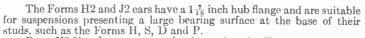
			EXPANSION B	OLIS	Approx.	List
List				Suspensions	Net Wt.	Price
No.	Fig. No.	Length	Finish	Used With	per 100	per 100
116079	1	4 ins.	Japanned	Forms II and H3	100 lbs.	\$50.40
66334	1	4 ins.	Sherardized	Forms H and H3	100 lbs.	50.40
116081	2	4 ins.	Japanned	Form D	105 lbs.	57.60
68397	2	4 ins.	Sherardized	Form D	105 lbs.	57.60
116082	3	4 ins.	Japanned	Forms H and H3	105 lbs.	
100409	3	4 ins.	Sherardized	Forms H and H3		75.00
116080	ĭ	6 ins.	Japanned		105 lbs.	75.00
66336	1	6 ins.		Forms II and II3	110 lbs.	66.00
	1		Sherardized	Forms H and H3	110 lbs.	66.00
116071	2	6 ins.	Japanned	Form D	115 lbs.	73.20
116070	Z	6 ins.	Sherardized	Form D	115 lbs.	73.20
116083	3	6 ins.	Japanned	Forms H and II3	115 lbs.	90 00
100410	3	6 ins.	Sherardized	Forms II and H3	115 lbs.	90.00
			ROOF WED	GE	Approx.	List
List					Net Wt.	Price
No		Descriptio	n		per 100	per 100
114862	Upper roof wedge	e, japanned			4.5 lbs	\$19.20
35690	Upper roof wedge	e, sherardized			45 lbs.	19 20
114863	Lower root wedge	e. iapannea		and the second s	35 lbe	16.80
35691	Lower roof wedge	sherardized			35 lbs.	16.80
35689	Roof holt (% in	11. 5 in special)	sherardized		40 lbs.	
41069	Roof holt (% in	11 5 in special)	with nut sherordized		45 15	13.20
=1000	2000 1000 (78 111.				45 lbs.	16.80
			ROOF PLUG AND L.	AC SCREW		

The Forms H and H3 suspensions may be attached to the mine roof by means of the wooden plug and gimlet point lag

Sectional View

### LINE MATERIAL

## Ears for Round Wire



Form H2 Ears have a groove depth equal to the diameter of the wire so that when the lips are peened down and soldered the bottom of the wire

is exposed, allowing unobstructed passage of the trolley wheel.

Form J2 Ears have an extra deep groove so that the lips approximately meet beneath the wire and are generally used without solder.

In the design of these ears all angles are filled with generous fillets, and in their manufacture extreme care is exercised to maintain accurate dimensions of the milled grooves and of the lips, which are tapered to a knife edge.

Grooves are milled to exact dimensions and, unless specially ordered, Form H2 Ears are tinned for soldering and Form J2 Ears are furnished untinned.



Plain Clinch For

	C	LINCH EARS, FORM J	Approx. Net	
List			Wt. in Lbs.	List Price
No.	Descript	ion	per 100	per 100
32575	Form J-2, for No. 0 wire, 5	in, tap, complete, 9 ins. long, comp	69	\$83.60
32577	Form J-2, for No. 00 wire, 5	in. tap, complete, 9 ins. long, comp		90.20
32571	Form J-2, for No. 0 wire, 5	in tap, complete, 12 ins. long, comp		96.80
32573	Form J-2, for No. 00 wire, 5	in. tap, complete, 12 ins. long, comp		105.60
32568	Form J-2, for No. 0 wire, 5	in. tap, complete, 15 ins. long, comp	88	112.20
32569	Form J-2, for No. 00 wire, 5	8 in. tap, complete, 15 ins. long, comp	97	121.00
34113	Form J-2, for No. 000 wire, 5	in. tap, complete, 15 ins. long, comp	124	132.00
32566	Form J-2, for No. 000 wire, 3	in. tap, complete, 15 ins. long, comp	124	132.00
34114	Form J-2, for No. 0000 wire, 5	in. tap, complete, 15 ins. long, comp	140	143.00
32567	Form J-2, for No. 0000 wire. <sup>3</sup>	in, tap, complete, 15 ins, long, comp		143.00



Plain Soldered Ear

#### SOLDERED EARS

32563	Form H-2, for No. 0	wire, $\frac{5}{8}$ in. tap, 12 ins. long, comp	66	\$96.80
32565	Form H-2, for No. 00	wire, $\frac{5}{8}$ in. tap, 12 ins. long, comp	85	105.60
316 <b>6</b> 6	Form H-2, for No. 0	wire, $\frac{5}{8}$ in. tap, 9 ins. long, comp	57	83.60
31668	Form H-2, for No. 00	wire, $\frac{5}{8}$ in. tap, 9 ins. long, comp	68	90.20
31665	Form H-2, for No. 0	wire, $\frac{5}{8}$ in. tap, 15 ins. long, comp	88	112.20
31667	Form H-2, for No. 00	wire, $\frac{5}{8}$ in. tap, 15 ins. long, comp	104	121.00
34111	Form 11-2, for No. 000	wire, $\frac{5}{8}$ in. tap, 15 ins. long, comp	122	132.00
26151	Form H-2, for No. 000	wire, <sup>3</sup> / <sub>4</sub> in. tap, 15 ins. long, comp	122	132.00
34112	Form H-2, for No. 0000	wire, 5/8 in. tap, 15 ins. long, comp	128	143.00
19492	Form H-2, for No. 0000	wire, 34 in. tap, 15 ins. long, comp	128	143.00



Single End Strain

#### SINGLE END STRAIN

30459	8 in., for No. 0	wire, comp	40	\$105.60
30460	8 in., for No. 00	wire, comp	50	110.00
34121		wire, comp	60	114.40
34122	9 in., for No. 0000	wire, comp	70	118.80

Delivery F. O. B. Factory, Schenectady, N. Y. Free delivery F. O. B. destination on orders amounting to \$50 list and over to points east of the Mississippi River. Suitable allowance is made for shipments week thereof.

## LINE MATERIAL Ears for Round Wire



#### Form C-Plain CLINCH EARS

Form C cars differ from the Form J cars in that the sides of the boss are flat, tapering up to the top of the hub without to and the extreme ends of the car are reinforced on the top. These cars are furnished with lips untinned. flange and the extreme ends of the ear are reinforced on the top.





### 15 Inch Feeder Ear

SOLDERED CLINCH EARS

All feeder, strain and splicing cars for use on round wire are of the deep groove form. The 0 and 00 sizes have hub flange 1% inches in diameter and the 000 and 0000 sizes have 1% inches flanges.

All tacse cars are designed for soldering and, unless specially ordered, are furnished with tinned lips.

15120	Form J, for No. 0 wire, 1/8 in. tap, comp.	95	\$171.60
15121	Form J, for No. 03 wire, 36 in tap, comp	100	180.40
34115	Form J-2, for No. 000 wire, $\frac{\pi}{2}$ in, tap, comp	145	198.00
26152	Form J-2, for No. 000 wire, 34 in. tap, comp.	115	198.00
31116	Form J-2, for No. 0000 wire, 5 in. tap, comp	155	209.00
26153	Form J-2, for No. 0000 wire, \$4 in. tap, comp.	155	209.00
39896	Set screw for above feeder ears, 14-24, ½ in. long, square head, mall	4	6.72



#### 15 Inch Splicing Ear

#### SOLDERED CLINCHED EARS FOR ROUND WIRE

15138	Form J. for No. 0 wire, 5% in. tap, comp.	125	\$192.50
12900	Form J, for No. 00 wire, 16 in. tap, comp	130	198.00
34119	Form J-2, for No. 090 wire, % in. tap, comp	210	236.50
26151	Form J-2, for No. 000 wire, 34 in. tap, comp	210	236.50
31120	Form J-2, for No. 0000 vire, 5 in, tap, comp.	250	234.00
26155	Form J-2 for No 0000 wire, 3/ in, tab, comp.	250	264.00



#### 15 Inch Splicing Ear

#### 15 INCH SPLICING EAR, FORM Q

Prov	ided with cup set serews for holding the trolley wire. For use without solder		
141334	For No. 0 round or groove I wire, 1/2 in, tap, comp.	175	\$291.50
141335	For No. 00 round or grooved wire, % in. tap, comp	185	302.50
141336	For No. 000 round or grooved wire, 5% in. tap, comp	225	313.50
145825	For No. 000 round or grooved wire, 34 in. tap, comp	240	13.50
141337	For No. 0000 round or grooved wire, 1/2 in. tap, comp	235	330.00
145896	For No 0000 round or grooved wire, % in tan comp.	250	330,00



## Form R-2 Splicing Ear

This splicing ear is installed by driving the large steel wedge into the sleeve on top of the trolley wire. 



Splicing Ear

Ears	for	Grooved Wire
CDIIC	TNIC	EADS SOLDEDED

	SPLICING EARS, SOLDERED	Approx.		
Des	igned for soldering in the same manner as soldered splicing sleeves.	Net Wt.	List	
List		in Lbs.	Price	
No.	Description	per 100	per 100	
19436	19½ inch splicing ear, for No. 00 wire, ½ inch tap, comp	225	\$291.50	
21487	19½ inch spheing ear, for No. 00 wire, ¾ inch tap, comp	225	291.50	
19437	21½ inch splicing ear, for No. 000 wire, ½ inch tap, comp	250	341.00	
21488	21 2 inch splicing ear, for No. 000 wire, 34 inch tap, comp	250	341.00	
19438	23 <sup>1</sup> <sub>2</sub> inch splicing ear, for No. 0000 wire, $\frac{5}{6}$ inch tap, comp	285	396.00	
21454	23½ inch splicing ear, for No. 0000 wire, ¾ inch tap, comp	285	396.00	



19 Inch Splicing Ear Cap Equipped with Large Clamping Nuts for Holding Trolley Wire. No Solder Needed.

	MECHANICAL EARS FOR ROUND WIRE		
41189	For Nos. 0 and 00 wire, 5% inch tap, comp.	400	\$495.00
4 1 1 1///	TVI AVS. V and OU WIFE 24 Inch Ian comp	11111	495.00
17/12/10	FOLDOS, VOU and URRO WIFE. % Inch ten comp	13.7.3	506.00
11186	For Nos. 000 and 0000 wire, 34 inch tap, comp.	585	506.00



12 Inch Strain

#### SCREW CLAMP EARS-FORM A

34127	For Nos. 00, 000 and 0000 wire. 5% inch tap, comp., grooved or Fig. 8	165	\$247.50
21485	For Nos. 00, 000 and 0000 wire. 34 inch tap, comp., grooved or Fig. 8	165	247.50





7 Inch Feeder Ear 7 Inch Half Strain

48455 This	For Nos. 00, 000 and 0000 wire, comp.  ear will accommodate feeder wire up and including 4 0.	100	8132.00
	7 INCH HALF STRAIN		
61232	For Nos. 00, 000 and 0000 grooved wire comp	90	\$110.00
114907	For Nos. 00, 000 and 0000 Fig. 8 wire, comp	90	88.00



7 INCH FEEDER

SPLICING SLEEVES-SOLDERED



### Splicing Sleeve-Standard

	Brass Sleeves (Standard)		
List		Approx. Wt.	List Price
No.		per 100	per 100
64431	For No. 0 round wire 10 in. by 1/8 in	. 50	\$121.00
64432	For No. 0 round wire, 15 in. by 38 in.	. 75	165,00
64433	For No. 00 round or groove wire, 10 in. by 1/3 in.		121.00
64434	for No. 00 round or grooved wire, 16 in. by %in		165.00
155937	For No. 00 round or grooved wire, 18 in. by 14 in.		242.00
64435	For No. 000 round or grooved wire, 11 in. by 34 in.	. 90	176.00
64436	for No. 000 round or grooved wire, 18 in. by 34 in.		286.09
64437	for No. 0000 round or grooved wire, 12 in. by % in.		264.00
64438	For No. 0000 round or grooved wire, 20 in. by $\frac{7}{8}$		396.00
04438	for No. 0000 round or grooved wife, 20 in. by 78.	. 210	00.00
	Pure Copper Sleeves	20	
88641	For No. 0 round wire, 15 in. by 56 in	. 80	\$154.00
88651	For No. 00 round or grooved wire, 16 in. by 5% in.	. 80	181.50
88672	For No. 000 round or grooved wire, 18 in. by 4 in.	. 130	192.50
88785	For No. 0000 round or grooved wire, 20 in. by 1/8 in.		440.00
00100	Bronze Sleeves		
88786		. 75	\$154.00
	For No. 0 round wire, 15 in. by % in  For No. 00 round and grooved wire, 16 in. by % in	75	
88787	For No. 00 round and grooved wire, 10 in. by % in	. 10	154.00
88842	For No. 000 round and grooved wire, 18 in. by 34 in.	. 130	236.50
88893	For No. 0000 round and grooved wire, 20 in, by 1/4 in	. 200	396.00



#### MECHANICAL SPLICING SLEEVE-FORM E

	For Use Without Solder—Made With Tempered Steel Wedge		
64441	For No. 0 round wire, 10 in long	75	\$143.00
64442	For No. 00 round or grooved wire, 11 in. long.	90	154.00
64443	For No. 000 round or grooved wire, 11 in. long.	115	176.00
64444	For No 0000 round or grooved wire, 12 in. long.	125	220.00
42448	For No. 00 figure 8 wire, 10 in. long.	90	154.00
42449	For No. 000 figure 8 wire, 10 in. long		176.00
42450	for No. 0000 figure 8 wire, 12 in long.	130	280.80
140073	Extra wedges for 0 and 00 round or grooved and 000 figure 8 sleeves		6.60
140074	Extra wedges for 000 and 0000 round or grooved and 0000 figure 8 sleeves		6.60



#### FORM Q MECHANICAL SPLICING SLEEVE

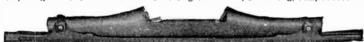
133343 133344	For No. 0 round or grooved wire, 9 in. long.	125 160	\$165.00 187.00
133345	For No. 000 round or grooved wire, 12 in. long.		209.00
133346	For No. 0000 round or grooved wire, 12 in. long.		231 00
151678	For No 0 figure 8 wire, 9 in. long	130	181.50
151679	For No. 00 figure 8 wire, 9 in, long.	170	205.70
151680	For No. 000 figure 8 wire. 12 in. long.	240	237.60
151681	For No. 0000 figure 8 wire, 12 in long.	200	253.00

Form Q mechanical splicing sleeves are made of composition metal and provided with cup set screws for clamping the wire. For use without solder.



#### FORM R-2 SPLICING SLEEVES

155943 Form R-2 splicing sleeve for 0 and 00 round or grooved wire, 10 in. long, comp	\$330,00 440.00
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#### SPLICING SLEEVE FORM R FOR PANTAGRAPH TROLLEY

Form R splicing sleeves have a sheet iron tube formed to hold the ends of the trolley wire by long tapered wedges driven in on top of the wire. Approx. Wt. List Price per 100 per 100 450 \$480.00 List No. 141184 Form R mechanical solicing sleeves for 4/0 round or grooved wire, sherardized . . . . . . .

141201 Renewable shoe for List No. 141184. 84.00 Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on orders at of the Mississippi River. Suitable allowance is made for shipments west thereof. Freight allowed on orders amounting to \$50 list and over to points east

200







Turnbuckle

No. 64426

Maximum

No. 64420

### Insulated Turnbuckles

List No. 27382 17223 40802 40803	Description % inch bolt, malleable iron, sh % inch bolt, comp % inch bolt, malleable iron, sh % inch bolt, comp	erardized	Test Load in Lbs. 4000 2500 7000 4500	Average Breaking Load in Lbs. 8000 5000 14000 9000	Length Between Eyes in Inches 1134 1134 12	Diameter of Eyes in Inches	Approx. Net Wt. in Lbs. per 100 325 350 350 375	W. E. List Price per 100 \$300.00 484.00 432.00 770.00
			STREN	GTH				
	Mechanical Strength in	Pounds			ectrical Str	ength in Vo	olts	
Test load . Average b	reaking load	2500	1000 8000	Test voltage . Average brea	kdown volta	ge	2 Ins. 5000 12000	2 5/8 Ins. 5000 15000
			DIMENS					
Large eye Standard		nside s Diani. Di	out- ide iam. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Standard elev Standard elev Large elevis	vis for 25 g in	nsulator	Spread	Diam. of Through Bolt

#### GIANT STRAIN INSULATOR

	GIANT STRAIN INSU	LAIUK			
			Distance Between	Approx.	
			Centers o Eves	Net Wat.	List
List			or Clevis Bolt	in Lbs.	Price
No.	Description	Size	Holes	per 100	per 100
64417	With standard eye and clevis.	2 ins.	4 A ins.	105	\$129.60
			4 14 ins.	115	141,60
64418	With 2 standard elevises	2 ins.			
64119	With large eye and standard clevis	2 ins.	4 2 ins.	110	141.60
64425	With 2 standard eyes	2 ins.	3 12 ins.	87	117.60
64427	With large eye and standard eye		3 ! ins.	92	129.60
64428	With 2 large eyes		3 lk ins.	9.5	141.60
64420	With standard eye and clevis	20 s ins.	4 % ins.	165	184.80
64421	With standard eye and large clevis	25 g ins.	4 % ins.	173	197.80
64422	With large eye and large clevis.	25 g ins.	4 56 ins.	182	208.80
64423	With 2 standard clevises	25 g ins.	476 ins.	180	184.80
64121	With 2 large clevises		478 ins.	200	220.80
				155	172.80
64126	With 2 standard eyes	2 s ins.	4 1Ds.		
64429	With large eye and standard eye	20g ins.	4 3, ins.	165	181.80
64430	With 2 large eyes	2 % ins.	4ª4 ins.	200	197.80
108054	With large eye and standard clevis	2 sins.	47 s ins	200	197.80



No. 27378

No. 27380

No. 27379

No. 27381

Diam. of

### SPHERICAL STRAIN INSULATORS

The spherical strain insulators are made in two sizes having diameters 2½ ins. and 2¾ ins. They are designed especially for use in span and guy wires in relatively light construction. The smaller size is suitable for a working load of 1000 lbs; the average tensile strength is 3000 lbs. The 2¾ ins. size has an average tensile strength of 5000 lbs., and is suitable for a working load up to 2000 lbs. Both sizes are subjected to a potential test of 5000 volts. Both sizes are Dimensions of Eyes Inside Dimensions of Clevises

Outside

		Di	am. Dian	1		Spread ?	Through Bolt
		in	Ins. in In	·.		in Ins.	in Ins.
Eve for 21	in insulator		11 11/3		insulator	17	1/2
	in. insulator		17 113	Clevis for 2 in. i		11	16
<b>-</b> -,	•				Distance Between	1	
					C niers of Eyes		List
List					or Clevis Bolt	Weight	
No.	1.6		Description		Holes	lbs. per 10	00 per 100
27378	214 in. in ulator, v			erardized	. 3 % ins.	85	\$84.00
16399						85	99.00
27380				erardized		125	108.00
17221	234 in insulator, v	with composit	ion eyes		. 4 ins.	125	110.00
27379	21/4 in insulator, v	with malleabl	e iron eye and	clevis, sherardized	. 4 ins.	130	102.00
16400				levis	. 4 ins.	130	121.00
27381	2% in insulator, v	ith malleabl	e iron eve and	elevis, sherardized	. ins.	155	126.00

17222 Delivery F. O.B. Factory, Schenectady, N. Y. Freight allowed on orders amounting to \$50 list and over to points east of the Mississippi River. Suitable allowance is made for shipments west thereof.

# Wood Strain Insulators



With Two Eyes



With Eye and Clevis



With Two Clevises



With Eye and Tapped Boss

## WOOD STRAIN INSULATOR WITH TWO EYES

With Standard Eyes, 600 Volts

					lard Lyes,	600 Voits			
List No. 16727 37488 61563		A 912 912 12	Dimensions i B 5 5 5	n Inches C 1 1 <sup>1</sup> / <sub>4</sub> 1 <sup>3</sup> / <sub>4</sub>	D 16 16	Test Load in Lbs. 3500 5000 7500	Average Breaking Load in Lbs. 7000 10000 15000	Approx. Net Wt. per 100 140 175 440	List Price per 100 \$90.00 102.00 240.00
				1	200 Volts				
148353 148354 148355		143/8 143/8 16	10 10 10	1 1½ 1¾ 1¾	116	3500 5000 7500	7000 10000 15000	160 205 5 <b>75</b>	\$96,00 114,00 234,00
				:	2400 Volts				
37489 3631 <b>3</b> 1483 <b>5</b> 6		20 20 21	15 15 15	1 1 ¼ 1 ¾	1 1 6 1 6	3500 5000 7500	7000 10000 15000	180 235 700	\$126.00 144.00 270.00
				Semi-sta	ndard Ins	ulators			
48432 48431 119272		16½ 16½ 18	12 12 12	$1 \\ 1 \\ 1 \\ 3 \\ 4$	1 1 1 6 1 1 6 1 1 1 1 1 1 1 1 1 1 1 1 1	3500 5000 7500	7000 10006 15000	160 200 600	\$108.00 126.00 288.00
48433 48434		$\frac{2814}{5214}$	$\frac{24}{48}$	11/4 11/4	16 16	5000 5000	10000 10000	300 450	$174.00 \\ 444.00$
				Wit	h Long Eye	es .			
124863 114138		$10\frac{5}{8}$ $10\frac{5}{8}$	5 5	$\frac{1}{1\frac{1}{4}}$	34	3500 5000	7000 10000	150 185	\$90.00 $102.00$
					YE AND C	LEVIS			
List No.	Α	B Di	mensions in I	iches	E	Test Load in Lbs.	Average Breaking Load in Lbs.	Approx. Net Wt. per 100	List Price per 100
43229 43230 126140	$9\frac{3}{4}$ $9\frac{3}{4}$ $12\frac{5}{8}$	5 5 634 5	1 1 ½ 1 ¾ 1 ¼ 1 ¼	1 16	17 17 17 17 11 10	3500 5000	7000 10000	160 185	\$108,00 120,00
	0.2	634	112	a	1.6	7500	15000	500	228 00 120 00
135660	934	634 5	11/4	16	21		15000 10000	240	$\frac{228}{120.00}$
	934			າ ເ	200 Volts	7500 5000	10000	240	120.00
135660 148378 148379 148380	934 1434 1434 1616	634 5 10 10 10	1 1 1 1 1 1 1 3 1	16 16 16	200 Volts	7500			
148378 148379	934 1434 1434 16 <sub>16</sub>	10 10	1	16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	200 Volts	7500 5900 3500 5000 7500	7000 7000 10000 15000	240 190 250 640	\$114.00 \$12.00 \$132.00 \$258.00
148378 148379	9¾ 14¾ 14¾	10 10	1	16 16 16	200 Volts	7500 5000 3500 5000	7000 10000	240 190 250	\$114.00 132.00
148378 148379 148380 43231 43232	934 1434 1434 16 15	10 10 10 10	1 1 1/4 1 3/4 1 1 1 1 4	16 16 16 16 16 16 16 16 16 16 16 16 16 1	200 Volts	7500 5000 3500 5000 7500 3500 5000 7500	7000 10000 15000 7000 15000	240 190 250 640 225 295	\$114.00 \$114.00 132.00 258.00 \$144.00 162.00
148378 148379 148380 43231 43232	934 1434 1434 16 15	10 10 10 10	1 1 1/4 1 3/4 1 1 1 1 4	16 1 16 1 16 1 16 1 16 1 16 1 16 1 16	200 Volts  17 17 17 17 17 17 18 2400 Volts 17 17 17 17 17 17 17 17 17 17 17 17 17	7500 5000 3500 5000 7500 3500 5000 7500	7000 10000 15000 7000 15000	240 190 250 640 225 295	\$114.00 \$114.00 132.00 258.00 \$144.00 162.00
148378 148379 148380 43231 43232 148383	9¾ 14¾ 14¾ 16 is 20 is 20 is 21 is	10 10 10 15 15 15	1 114 134 1 114 134	16 16 16 16 16 16 16 16 16 16 16 16 16 1	200 Volts    12	7500 5000 3500 5000 7500 3500 5000 7500 75	7000 7000 10000 15000 7000 10000 15000	240 190 250 640 225 295 780	\$114.00 \$114.00 132.00 258.00 \$144.00 162.00 294.00
148378 148379 148380 43231 43232	934 1434 1434 16 15	10 10 10 10	1 1 1/4 1 3/4 1 1 1 1 4	16 1 16 1 16 1 16 1 16 1 16 1 16 1 16	200 Volts    1	7500 5000 3500 5000 7500 3500 5000 7500 75	7000 7000 10000 15000 7000 10000 15000	240 190 250 640 225 295 780	\$114.00 \$114.00 132.00 258.00 \$144.00 162.00 294.00
148378 148379 148380 43231 43232 148383	934 1434 1434 16 is 20 is 20 is 21 is	10 10 10 15 15 15 15	1 114 134 114 134	16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	200 Volts  17 17 17 17 17 17 17 17 17 17 17 17 17 1	7500 5000 3500 5000 7500 3500 5000 7500 71SES 3500 5000 7500 7500 PED BOSS	7000 7000 10000 15000 7000 10000 15000 7000 15000	240 190 250 640 225 295 780 180 210 560	\$114.00 \$114.00 132.00 258.00 \$144.00 162.00 294.00 \$126.00 138.00 288.00
148378 148379 148380 43231 43232 148383 105349 105348 105348 105350	934 1434 1434 16 or 20 or 20 or 21 or 10 16 10 16 10 18 13	10 10 10 15 15 15 15 15	1 1 1 4 1 1 3 4 1 1 1 1 4 1 1 2 4 1 1 2 4 1 1 3 4 1 1 3 4 1 1 3 4 1 1 3 4 1 3	16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	200 Volts  17 17 17 17 17 17 17 17 17 17 17 17 17 1	7500 5000 3500 5000 7500 3500 5000 7500 75	7000 7000 10000 15000 7000 10000 15000	240 190 250 640 225 295 780 180 210 560	\$114.00 \$114.00 132.00 258.00 \$144.00 162.00 294.00 \$126.00 138.00 288.00 \$114.00 126.00 264.00

103784

1300

780.00

## LINE MATERIAL

## Trolley Wire Frogs

For Round, Grooved or Figure 8 Wire



#### 20 DEGREE FROGS

	20 DEGREE PROGS			A	
		Overall	Overall	Approx. Net Wt.	List
List		Length	Width	Lbs.	Price
No.	Description	Inches	Inches	per 100	per 100
29133	Right-hand frog, for Nos. 0 and 00 wire, comp	17	61/2	710	\$924.00
29134	Left-hand frog, for Nos. 0 and 00 wire, comp	17	61/2	710	924.00
29132	V frog, for Nos. 0 and 00 wire, comp.	17	61/2	725	924.00
29135	Three-way frog, for Nos. 0 and 00 wire comp	17	73/8	1000	1376.00
46645	Right-hand frog, for Nos. 000 and 0000 wire, comp	17	61/2	710	990.00
46646	Left-hand frog, for Nos. 000 and 0000 wire, comp	17	61/2	710	990.00
46644	V frog, for Nos. 000 and 0000 wire, comp	17	61/2	725	990.00
46647	Three-way frog, for Nos. 000 and 0000 wire, comp	17	73/8	1000	1650.00
114166	Left-hand frog, for Nos. 0 and 00 wire, mal. iron, sherardized	17	61/2	710	504.00
114167	Right-hand frog, for Nos. 0 and 00 wire, mal. iron, sherardized	17	61/2	710	504.00
103779	V frog, for Nos. 0 and 00 wire, mal. iron, sherardized	17	61/2	725	504.00
114168	Left-hand frog, for Nos. 000 and 0000 wire, mal. iron, sherardized	17	61/2	710	510.00
114169	Right-hand frog, for Nos. 000 and 0000 wire, mal. iron, sherardized	17	61/2	710	540.00
103780	V frog, for Nos. 000 and 0000 wire, mal. iron, sherardized	17	61/2	725	540.00
	15 DEGREE FROGS				
29130	Right-hand frog, for Nos. 00, 000 and 0000 wire, comp	18	5.0	875	\$1155.00
29131	Left-hand frog, for Nos. 00, 000 and 0000 wire, comp	18	5 26	875	1155.00
29129	V frog, for Nos. 00, 000 and 0000 wire, comp	18	5 %	890	1155.00
37487	Three-way frog. for Nos. 00, 000 and 0000 wire, comp	18	73/8	1150	1760.00
114154	Left-hand frog, for Nos. 00, 000 and 0000 wire, mal. iron, sherardized	18	5 16	875	624.00
114165	Right-hand frog, for Nos. 00, 000 and 0000 wire, mal. iron, sherardized	18	5 <del>16</del>	875	621.00
103781	V frog, for Nos. 00, 000 and 0000 wire, mal. iron, sherardized	18	516	890	624.00
	8 DEGREE FROGS				
29127	Right-hand frog, for Nos. 00, 000 and 0000 wire, comp	217/8	6	1300	\$1430.00
29128	Left-hand frog, for Nos. 00, 000 and 0000 wire, comp	21 7/8	6	1300	1430.00
29126	V frog, for Nos. 00, 000 and 0000 wire, comp	21 1/8	6	1350	1430.00
103782	Right-hand frog, for Nos. 00, 000 and 0000 wire, mal. iron, sherardized	217/8	6	1300	780.00
103783	Left-hand frog, for Nos. 00, 000 and 0000 wire, mal. iron, sherardized	21 1/8	6	1300	780.00
109704	Without for Non 00, 000 and 0000 mire mali you aboundized	217/	ß	1200	700 00

All pull-off eyes are 1/2 inch in diameter. Frogs similar to the above but for 1/0 wire can be furnished.

V frog, for Nos. 00, 000 and 0000 wire, mal. iron, sherardized......

Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on orders amounting to \$50 list and over to points east of the Mississippi River. Suitable allowed is made for an impments west thereof.

## Trolley Wire Frogs

For Round or Grooved Wire



12 Degree Frog Form K

#### FORM K FROGS

This frog has extra long approaches with renewable end tongues. The body is malleable iron sherardized and the end tongues composition. The bolts for fastening the wire into the frog are ½ inch in diameter and have square heads.

		Approx. Net	List
List		Wt. in Lbs.	Price
No.	Description	per 100	per 100
140109	Left-hand frog, for Nos. 0 and 00 wire, mal. iron, sherardized	2000	\$1320.00
140110	Right-hand frog, for Nos. 0 and 00 wire, mal. iron, sherardized	2000	1320.00
140107	Left-hand frog, for Nos. 000 and 0000 wire, mal. iron, sherardized	2000	1320.00
140108	Right-hand frog, for Nos. 000 and 0000 wire, mal. iron, sherardized	2000	1320.00
129977	V frog, for Nos. 0 and 00 wire, mal. iron, sherardized	2100	1320.00
136004	V frog, for Nos. 000 and 0000 wire, mal. iron, sherardized	2100	1320.00
150562	Renewable end tongue, for 0 and 00 wire, comp	80	110.00
150563	Renewable end tongue, for 000 and 0000 wire, comp	100	110.00



List No. 200291



Bottom View Showing Branch Wire Run Through the Frog



Body Showing Branch Wire Dead Ended in the Frog



Renewable Pan

#### 15 DEGREE FROGS-FORM N

Form N frogs are a new departure in the design of trolley frogs. The body portion to which the wires are attached is subjected to no wear in service and therefore may be permanently wired into the overhead construction. The pan or wearing part being separate and in one piece can be quickly and cheaply renewed as often as worn out. These frogs are furnished with malleable iron bodies and either malleable iron or composition pans.

		Approx. Net	List
List		Wt. in Lbs.	Price
No.	Description	Per 100	Per 100
200291	Left-hand frog, Nos. 00, 000, 0000 wires, malleable iron, sherardized		\$576.00
200292	Left-hand frog, Nos. 00, 000, 0000 wires, composition.	775	770.00
200293	Right-hand frog, Nos. 00, 000, 0000 wires, malleable iron, sherardized	775	576.00
200294	Right-hand frog, Nos. 00, 000, 0000 wires, composition	775	770.00
200295	V frog, Nos. 00, 000, 0000 wires, malleable iron, sherardized	800	576.00
200296	V frog, Nos. 00, 000, 0000 wires, composition	800	770.00
200297	Left-hand renewable pan for List No. 200291	400	240.00
200298	Right-hand renewable pan for List No. 200293	400	240.00
200299	V renewable pan for List No. 200295	400	240.00
200300	Left-hand renewable pan for List No. 200292	400	504.00
200301	Right-hand renewable pan for List No. 200294	400	504.00
200302	Right-hand renewable pan for List No. 200294 V renewable pan for List No. 200296	400	504.00

Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on orders amounting to \$50 list or over to points east of the Mississippi River. Suitable allowance is made for shipments west thereof.





15 Degree Right-hand Frog

35 Degree Crossing-Form G

## Trolley Frogs-Special

15 DEGREE FROGS

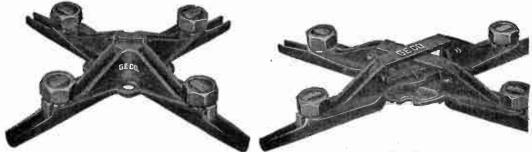
Sui	table for yard work where sliding collectors only are used.			Approx.		
		Qverall	Overall	Net Wt.	List	
List		Length	Width	in Lbs.	Price	
No.	Description	in Ins.	in Ins.	per 100	per 100	
66673	Right-hand frog, for Nos. 00, 000 and 0000 wires, comp	175/8	61/8	1375	\$1058.00	
66674	Left-hand frog, for Nos. 00, 000 and 0000 wires, comp	175/8	61/8	1375	1058.00	
66675	V frog, for Nos. 00, 000 and 0000 wires, comp	175/8	61/8	1375	1058.00	
All	pull-off eyes are 1/2 inch in diameter.					

## Crossings, Form G, Uninsulated

The principle of the inclined plane to insure smooth transition of the trolley wheel between tongue and pan has been embodied in the design of all Form G crossings, and the maximum speed at which the trolley will operate at crossing points has been greatly increased thereby. They will accommodate round or grooved wire of the size indicated in the tables.

The Form G adjustable crossing can be set at any angle between 30 and 90 degrees.

	35 DEGREE CROSSINGS Crossing for Nos. 00, 000 and 0000 wire, comp Crossing for Nos. 00, 000 and 0000 wire, mal. iron, sher	16 16	$\frac{51}{2}$ $\frac{51}{2}$	86 <b>5</b> 865	\$1276.00 720.00
	15 DEGREE CROSSINGS				
19490 103975	Crossing for Nos. 00, 000 and 0000 wire, comp	$\frac{21\frac{1}{4}}{21\frac{1}{4}}$	$\frac{5\frac{3}{8}}{5\frac{3}{8}}$	$1025 \\ 1025$	\$1452.00 870.00
	8 DEGREE CROSSING				
	Crossing for Nos. 00, 000 and 0000 wire, mal. iron, sher	$24\frac{1}{4}$	$6\frac{1}{4}$	1400	\$1224.00
No'	TE: The 8 degree crossing has renewable end tongues.				



Rigid Crossing

Adjustable Crossing

RIGHT ANGLE CROSSING Approx.						
	4	Overall	Overall	Net Wt.	List	
List		Length	Width	in Lbs.	Price	
No.	Description	in Ins.	in Ins.	per 100	Each	
11297	For Nos. 00, 000 and 0000 wire, comp	1538	1538	910	\$1100.00	
103972	For Nos. 00, 000 and 0000 wire, mal. iron, sherardized	$15^{3}_{8}$	1538	910	720.00	
ADJUSTABLE CROSSING						
16393	For Nos. 0 and 00 wire, comp			1075	\$1232.00	
11298	For Nos. 00, 000 and 0000 wire, comp			1075	1540.00	
103973	For Nos. 00, 000 and 0000 wire, mal. iron, sherardized			1075	1050.00	
104588	Cross tongue for List No. 11298, comp			365	660.00	
115814				365	360.00	
Crossings similar to the above, but for 1/0 wire, will be furnished at the same price.						

Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on orders amounting to \$50 list and over to points east of the Mississippi River. Suitable allowance is made for shipments west thereof.

## Crossings, Form L, Insulated

The Form L insulated crossing consists of a beam of selected second growth hickory thoroughly impregnated with preservative oils to exclude moisture, finished with black japan, and castings of standard composition metal, with a replaceable white fiber runway. Attachment to the trolley wires is effected by mechanical clamps so that the crossing may be installed quickly without soldering and without cutting either wire.

The fiber runways as listed include fiber plates with screws. The crossings will accommodate round or

grooved wire of the size indicated in the tables.



Right Angle Crossing

#### SINGLE TROLLEY CROSSINGS

100939	Description Right angle crossing for Nos. 00, 000 and 0000 wire White fiber runway for List No. 46184 ossings similar to above, but for 1/0 wire will be furnished	35½ ins. 35½ ins.	Width 18½ ins. 18½ ins.	18 lbs	List Price per 100 \$2640.00 240.00
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Adjustable Crossing

#### ADJUSTABLE CROSSINGS

The Form L adjustable crossings can be set at any angle between 45 and 90 degrees.

19406 19407 104589	Adjustable crossing for Nos. 0 and 00 wire, comp. White fiber runway for List Nos. 19406, 26150 and 115815.  Cross tongue, complete, with nuts and elamping shoes for List No.	<b>3</b> 6	ins.	16½ ins. 16½ ins.	1275 lbs. 18 lbs.	\$2640.00 240.00
26150 115815 104590	Adjustable crossing, for Nos. 00, 000 and 0000 wires, composition. Adjustable crossing, for Nos. 00, 000 and 0000 wires, malleable fron. Cross tongue, complete, with nuts and clamping shoes, for List No.	$\frac{36}{35\frac{1}{2}}$	ins. ins. ins.	$16\frac{1}{2}$ ins. $16\frac{1}{2}$ ins. $16\frac{1}{2}$ ins.	310 lbs. 1400 lbs. 1400 lbs.	$\begin{array}{c} 528.00 \\ 2640.00 \\ 2160.00 \end{array}$
	Cross tongue, complete, with nuts and clamping shoes, for List No.	$35\frac{1}{2}$		161/2 ins.	365 lbs.	616.00
	115815	351/2	ins.	1616 ins	365 lbe	108 00

## Crossings, Form M, Insulated



Single Trolley—Adjustable Crossing

### ADJUSTABLE INSULATED CROSSINGS

Form M insulated adjustable crossings have the end tongues fastened by ½ inch holts. The body castings are malleable iron and the end tongues are composition.

150562	Description Adjustable crossing for Nos. 0 and 00 wire, malleable iron, sherardized	. 1400 lbs.	List Price per 100 \$3600.00 3600.00 110.00
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Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on orders amounting to \$50 list and over to points east of the Mississippi River. Suitable allowance is made for shipments west thereof.



Right Angle Crossing, Form M

## Single Trolley Crossings, Form M

		Approx. Wt.	List
List		in Lbs	Price
No.	Description	per 100	per 100
155022	Form M crossing for 0-00 round and grooved wire, mal. iron, sherardized	1500	\$3600.00
155023	Form M crossing for 000-0000 round and grooved wire, mal. iron, sherardized	1575	3600.00
150562	Renewable end tongue for List No. 155022, composition	80	110.00
150563	Renewable end tongue for List No. 155023, composition	100	110.00



List No. 40307 Section Switch



List No. 40321 Section Switch and Fuse

## Section Switches

### POLE TYPE

In these switch boxes, the hinge clip of the switch is connected to the trolley line, and the box is so constructed that the cover can be closed and locked whether the switch is open or closed, thus preventing any interference with the line by unauthorized persons.

	—List No.———		-Approx. Wt.	, Each. in Lbs	List Pric	e Each
With	Without	Ampere	With	Without	With	Without
Box	Box	Capacity	Box	Box	Box	Box
40305	40313	200	12	5	\$13.44	\$9.36
40307	40315	400	$17\frac{1}{2}$	8	17.76	12.96
*40321		400	32		33.60	
40309	40317	600	23	11	25.20	20,16
40311	40319	1200	46	28	44.40	37.92

<sup>\*</sup>Has fuse block.

Delivery F.O.B. Factory, Schenectady, N.Y. Freight allowed on orders amounting to \$50 list and over to points east of the Mississippi River. Suitable allowance is made for shipments west thereof.

### Form L Section Insulator

The Form L section insulator consists of a beam of selected second-growth hickory well seasoned and treated with preservative oils to exclude moisture, finished with black japan, and castings of the standard composition metal, with a replaceable runway of hickory. Attachment to the trolley wires is made by double mechanical clamps at each end. The wood runway in conjunction with the accurately aligned castings offers a straight under-run, insuring a smooth passage for the trolley wheel. For 600 volt service the wood runway provides a 7 inch break in the trolley circuit; for 1200 volt service the break is 12 inches.

The insulators will accommodate round or grooved wires of the sizes indicated in the tables.



#### Section Insulator

_ 20	600-1200 VOLTS	Overall	Approximate	List
List		Length	Weight	Price
No.	Description	in Inches	per 100	per 100
19410 19491	Section insulator, for Nos. 0 and 00 wires, 600 volts	$31\frac{1}{2}$ ins.	975 lbs.	\$1408.00
115817	Section insulator, for Nos. 00, 000, and 0000 wires, 600 volts. Section insulator, for Nos. 00, 000, and 0000 wires, 600 volts,		1010 lbs.	1408.00
	malleable iron	211/ ina	1010 lbs.	1056.00
46190	Section insulator, for Nos. 00, 000, and 0000 wires, 1200 volts.	$36\frac{1}{2}$ ins.	1200 lbs.	1430.00



#### Section Insulator

Ov	erall length 31½ inches. 600 VOLTS	Approximate	List
List No.	Description	Weight per 100	Price per 100
46740	Section insulator, for Nos. 0 and 00 wires, 5% in. tap, 7 in. break	1025 lbs.	\$1540.00
60434 46741	Section insulator, for Nos. 00, 000, and 0000 wires, % in. tap, 7 in. break Section insulator, for Nos. 0 and 00 wires. ¾ in. tap, 7 in. break	1060 lbs. 1025 lbs.	$1540.00 \\ 1540.00$
60435	Section insulator, for Nos. 00, 000, and 0000 wires, 34 in. tap, 7 in. break	1060 lbs.	1540.00
21456	Wooden runway, for List Nos. 46740, 60434, 46741 and 60435	15 lbs.	144.00



### Section Insulator

## Automatic Section Insulator-600 Volts

This device is a combined section insulator and automatic section switch, and, while it is designed especially for use in mine tramway work, may often be used to advantage on spur tracks in surface work, where it is desirable to cut out the spur section after the car has run back on to the main line.

The switch blade is operated by the trolley wheel, and is permanently connected to the feeder or to the main line trolley wire.

Over all length 30½ inches; height 5½ inches.

Approximate

List

main ii	ne trolley wire. Over all length 30½ inches; height 5½ inches.	Approximate	List .
List		Weight	Price
No.	Description	per 100	per 100
34870	Automatic section insulator, for Nos. 00, 000 and 0000 wires	1650 lbs.	\$1201.20
34871	Switch clips with screws	12 lbs.	28.80
34872	Locking spring	5 lbs.	6.72
-	The state of the s		7.77.7

Section insulators similar to the above but for 1/0 wire will be furnished at the same price.

Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed on orders amounting to \$50 list and over to points east of the Mississippi River. Suitable allowance is made for shipments west thereof.

### RAIL BOND PRICES

Stud Terminal Bonds with Solid Copper Terminals and Soldered Bonds with Either Ribbon, Cable or Solid Wire Conductors \*- except Bevel Head Foot Bonds and Bonds with Tinned Studs

#### MFR'S. LIST. SPECIAL DISCOUNTS FOR VARIOUS TYPE BONDS ON APPLICATION

	Diam.		C.1		ARIOUS				AIION	
	Terminal	4 In.	5 In. 6 In.	nedule Len 71n.	gtns and 1 8 In.	9 In.	10 In.	3onds—— 11 In.	12 In.	13 In.
Conductor	in Ins.		Bonds Bonds	Bonds	Bonds	Bonds	Bonds	Bonds	Bonds	Bonds
0	16	\$40.00 \$	41.50 \$43.00	\$44.50	\$46.00	\$47.50	\$49.00	\$50.60	\$52.20	\$53.80
0	5 7	42.50	44.00 45.50	47.00	48.50	50.00	51.50	53.10	54.70	56.30
00	28		46.60 48.20 52.10 53.70	49.80	51.40	53.00	54.60	56.30	58.00	56.30 59.70
00	34	50.50	52.10 53.70	55.30	56.90	58.50	60.10	61.80	63.50	65.20
000 000	<b>29</b>		56.60 59.00 58.60 61.00	61.40 63.40	63.80 65.80	66.20 68.20	68.60	71.10	73.60	76.10
0000	1,13,18,18,18,18,18,18,18,18,18,18,18,18,18,		59.00 61.50	61.00	66.50	69.50	$70.60 \\ 72.50$	73.10 75.60	75.60 78.70	78.10 81.80
0000	7/8		61.50 64.00	66.50	69.00	72.00	75.00	78.10	81.20	84.30
250,000	38	62.00	65.00 68.00	71.00	74.00	77.50	81.00	84.50	88.00	91.50
250,000	1		70.00 73.00	76.00	79.00	82.50	86.00	89.50	93.00	96.50
275,000	7/8		68.80 72.50 73.80 77.50	76.30	80.00	84.00	88.00	92.00	96.00	100.00
275,000 300,000	38		73.80 77.50 72.80 76.80	81.30 80.80	85.00 84.80	89.00	93.00	97.00	101.00	105.00
300,000	1 8	73.80	77.80 81.80	85.80	89.80	89.00 94.00	93.50 98.50	$98.00 \\ 103.00$	102.50 107.50	107.00 $112.00$
325,000	7/8		77.00 81.50	86.00	90.50	95.00	100.00	105.00	110.00	115.00
325,000	1		82.00 86.50	91.00	95.50	100.00	105.00	110.00	115.00	120.00
350,000	78		80.00 85.00	90.00	95.00	100.00	105.50	111.00	116.50	122.00
350,000 375,000	1 7/		85.00 90.00 88.60 93.80	95.00 99.00	100.00	105.00	110.50	116.00	121.50	127.00
375,000	1 78		93.60 98.80	104.00	104.30 109.30	109.50 114.50	115.30 120.30	121.00 126.00	126.80 131.80	132.50
400,000	1/8		97.00	103.00	109.00	115.00	121.00	127.50	134.00	137.50 140.50
400,000	1		102.00	108.00	114.00	120 00	126.00	132.50	139.00	145.50
425,000	7/8		101.00	107.00	113.00	119 00	125.00	131.50	138.00	144.50
425,000	1		106.00	112.00	118.00	124.00	130.00	136.50	143.00	149.50
450,000 450,000	7/8		105.00 110.00	111.00 116.00	117.00	123.00	129.00	136.00	143.00	150.00
500,000	i		120.00	127.50	122.00 135.00	128.00 142.50	134.00 150.00	141.00 157.50	$148.00 \\ 165.00$	155.00 $172.50$
500,000	$\hat{1}_{16}$		120.00 123.00	130.50	138.00	145.50	153.00	160.50	168.00	175.50
1,000,000	114			200,00	215.00	230.00	245.00	260.00	275.00	290.00
	Diam.							For Each	Additiona	l Inch
	Terminal	14 In.	15 In.	16 In.	_17 Ir		18 In.	Over 18 I	nches Add	to List of
Conductor	in 1ns.	Bonds	Bonds	Bonds	Bond		Bonds	1	8 In. Bond	3
0	1/5/5 3 3 37/8/4/8/8	\$55.40 57.90	\$57.00	\$58.70 61.20	\$60.4	10 \$	62.10		\$1.50	
0	8	57.90 61.40	59.50 63.10	61.20 64.90	62 .9 66 . 7	70	64.60		1.50	
00	3 3	66.90	68.60	70.40	72.2	20	68.50 74.00		1.80	
000	3,1	78.60	81.10	83.70	86.3	30	88.90		2.30	
000	7.8	80.60	83.10	85.70	88.3	30	90.90		2.30	
0000	84	84.90	88.00	91.50	95.0	00	98.50		2.70	
0000 250,000	58	87.40 95.00	90.50 99.00	94.00 103.00	97.3 107.0	50 1	01.00		2.70 3.20	
250,000	1 28	100.00	104.00	108.00	112 (	00 1	16.00		3.20	
275,000	7/8	104.00	108.50	113.00	112.0 117.	50 1	22.00		3.40	
275,000	1	109.00	113.50	118.00	122.3	50 1	27.00		3.40	
300,000	7/8	111.50	116.50	121.50	126.		31.50		3.80	
300,000 325,000	7/8	116.50 120.00	121.50 125.50	126.50 131.00	131.1 136.		36.50		3.80	
325,000	1 28	125.00	130.50	136.00	141.		42.00 47.00		4.40	
350,000	78	127.50	133.50	139.50	145		51.50		4.60	
350,000	1	132.50	138.50	144.50	150.3	50 1	56.50		4.60	
375,000	7/8	138.30	144.50	150.80	157.0	00 1	63.30		4.90	
375,000 400,000	7 8	143.30 147.00	149.50	155.80 $160.00$	162.0	00 1	68.30		4.90	
400,000	1 8	152 00	153.50 158.50	165.00	166.3 171.3	50 1	73.00 78.00		5.30 5.30	
425,000	3,6	152.00 151.00	158.00	165.00	172.0	00 1	79.00		5.70	
425,000	1	156.00	163.00	170.00	177.6	00 1	84,00		5.70	
450,000	7/8	157.00	164.50	172.00	179.3	50 1	87.00		6.00	
450,000 500,000	$\frac{1}{1}$	162.00 180.00	169.50 187.50	177.00	184.		92.00		6.00	
500,000	1 18	183.00	190.50	195.00 198.00	202.1 205.5		10.00 13.00		7.00 7.00	
1,000,000	i 14	305.00	320.00	335.00	350.0		65.00		14.00	

#### TWIN STUD TERMINAL BONDS

Twin terminal bonds are measured from a point in the center of a line drawn through the center of the two studs to the same point in the other terminal when bond is straight and extended.

The list price of twin terminal bonds is based on the largest size terminal scheduled for bond of equivalent cross section and length.

Conductor Section	Length in Inches	Net Wt. in Lbs. per 100	List Price per 100
00	7	61	\$55.30
0000	7	85	66.50
0000	71/2	871/2	67.75
0000	8	90	69.00
0000	91/2	971/2	73.50
250,000	8	118	79.00
300,000	8	128	89.80
350,000	714	1381/2	97.50
350 000	8	1.43	100.00

#### Form C Foot Bonds

Add to schedule list price the following: Up to and including 350,000 cir. mils. \$20 list per 100. Over 350,000 cir. mils. including 500,000 cir. mils. \$25 list per 100. Over 500,000 cir. mils. \$30 list per 100.

#### Bonds with Tinned Studs

For tinning any standard type stud terminal bond, including twin stud, add \$3 list per 100 bonds.

#### Bonds with Extra Large Terminal Cap

Providing for soldering in addition to compression, add \$7 list per 100 bonds for stud of ½ inch diameter and smaller; for those having terminal diameters larger than ½ inch, add \$10 list.

Delivery F. O. B. Factory, Schenectady, N. Y. Freight allowed for orders amounting to \$50 list or over to points east of Mississippi River. Suitable allowance is made for shipments west thereof.

### Western Electric

## LINE MATERIAL

# Kalamazoo Trolley Harps and Wheels

NOS. 1, 2, 3, 4 AND 8 HARPS



	Width		Maximum		List
List	Between	Diameter of	Diameter	Approximate	Price
No.	Washers	Axle Pin	of Wheel	Weight	Each
1	$1\frac{1}{2}$ ins.	5/8 in.	6 ins.	2½ lbs.	\$2.40
$^2$	$1\frac{1}{2}$ ins.	5/8 in.	6 ins.	3 lbs. 9 oz.	2.40
3	$1\frac{1}{2}$ ins.	5/8 in.	6 ins.	3½ lbs.	2.40
4	2 ins.	5/8 in.	6 ins.	3 lbs.	2.60
:	34 inch pins for 1, 2	2 and 4 harps can	be furnished o	n special order.	
8	$1\frac{1}{2}$ ins.	½ in.	4 ins.	$2\frac{1}{2}$ lbs.	2.10
	5/8 inch pins for 8 h	arps can be furnis	shed on special	order.	



No. 3-Deep Groove





No. 2-"U" Groove

## Kalamazoo Trolley Wheels

List	Outside	Width	Length of	Diameter	Depth of	Style of	Wt. Each	List Price
No.	Diameter	Flange	Hub	of Pin	Groove	Groove	Lbs.	Each
$\frac{3}{2}$	6 ins.	1½ ins. 1¾ ins.	$\frac{1\frac{1}{2}}{1\frac{1}{2}}$ ins. $\frac{1\frac{1}{2}}{1}$ ins.	5/8 in. 5/8 in.	1 in. 3⁄4 in.	$_{ m U}^{ m Deep}$	3¾ 3¾	\$5.00 5.00







No. 9-Deep Groove



No. 15-"U" Groove

List No.	Outside Diameter	Width Flange	Length of Hub	Diameter of Pin	Depth of Groove	Style of Groove	Wt. Each Lbs.	List Price Each
8	4 ins.	13% ins.	1½ ins.	½ in.	3/4 in.	V	2	\$3.00
9	4 ins.	13/8 ins.	$1\frac{1}{2}$ ins.	$\frac{1}{2}$ in.	₹% in.	Extra Deep	$2\frac{1}{4}$	3.00
15	5 ins.	$1\frac{3}{8}$ ins.	$1\frac{1}{2}$ ins.	½ in.	3/4 in.	U	$2\frac{3}{4}$	3.70

Any of the above wheels can be furnished with 5% inch bushings if desired.

Delivery F. O. B. Factory, Kalamazoo, Mich. For warehouse deliveries write nearest house.

### CROUSE-HINDS PANELS

#### GENERAL PANEL BOARD SPECIFICATIONS

Branches arranged for N. E. C. cartridge fuses, with or without knife switches.

Type DD. Branches arranged for Edison plug fuses, no switches.

Type DE. Branches arranged for Edison plug fuses, with knife switches.

Type DP. Branches arranged for Edison plug fuses, with push button switches.

Type DR. Branches arranged for Edison plug fuses, with rotary snap switches.

Type F. Branches arranged for N. E. C. cartridge fuses, with rotary snap switches.

Type O. Branches arranged for N. E. C. cartridge fuses, with push button switches.

Material.—The base is highest grade black Monson slate, free from flaws or metallic veins. All current-carrying parts are best grade hard-drawn copper of 98 per cent conductivity.

Finish.—The slate is furnished with a rubbed oil finish. All exposed metal parts are finished in polished copper, carefully lacquered, except on contact surfaces.

Spacings.—All current-carrying parts are spaced in accordance with the latest requirements of the National Board of Fire Underwriters.

Current Density.—All current-carrying parts are based upon a maximum current density of 1000 amperes per square inch cross section.

Circuit Connections.—All two to two-wire panel boards are connected in the regular manner, adjacent poles of adjoining circuits being of the same polarity, but fed by separate strips. All three to two-wire panel boards are connected for the Edison three-wire system; that is, each branch circuit has one pole connected to the neutral bus-bar and the other pole connected to one of the two outside bus-bars. All three to two-wire panel boards are so connected that adjacent poles of adjoining circuits are of the same polarity, but fed by separate strips.

Capacities.—Fuse terminal branch circuits and branch circuits with knife switches are of 30 amperes capacity. Snap switch circuits are of 10 amperes capacity. Mains on all two to two-wire panel boards are figured at 6 amperes per circuit, and on three to two-wire panel boards at 3 amperes per circuit.

Circuit Strips.—Branch circuit strips are made of 1/2-inch by 1/4-inch copper, formed up in such a manner as to make direct connections to the main bus-bars without the use of pillars, thus reducing the number of parts and contact joints to a minimum.

Circuit Switches.-Knife switches are of 30 amperes capacity and 30 amperes spacing, equipped with substantial composition handles into which the blades are molded. Contact clips and hinge standards are each formed from one piece of ½-inch by No. 16-gauge copper. The contact clips are flared at the top to insure proper entrance of the blades. The blades are of substantial design and made of ½-inch by No. 12-gauge copper. Hinge joints are held under compression by spring washers, insuring perfect contact. Snap switches are of the indicating type, 10 amperes capacity, designed especially for these panel boards, and present a neat and attractive appearance. The outer case is made of black composition and covers the entire mechanism and connections.

Main Switches.-Main switches are of substantial design and construction and are regularly mounted at the bottom of the panel board, but will be mounted at the top, if specifically ordered. This change in arrangement does not alter the size or price of the panel board. The capacities of the main connections for various panel hoards are given in the schedule where panel boards are listed.

Slate Frames.—Slate frames are made of oiled Monson slate 1/2 inch thick, and telescope the panel board; therefore, the outside dimensions of a slate frame are 1 inch greater than those of the panel board with which it is used. Slate frames are drilled for circuit wires and slotted for main wires, and are held in position by adjustable corner irons.

Special Finishes and Arrangements.—Black enamel slate panel boards will be furnished at an advance of 5 per cent, if specifically ordered. White Italian or Blue Vermont marble panel boards will be furnished at an advance of 25 per cent, if specifically ordered.

Type A panel boards will be furnished with branch circuit strips and switch bases made of 2-inch by 52-inch copper, and switches made with contact and standard clips driven and sweated into base blocks at an advance of 30 per cent, if specifically ordered.

Marble frames, drilled for branches and slotted for mains, will be furnished at an advance of 100 per cent, if specifically ordered.

Slate frames will be furnished slotted for both main and branch wires at an advance of 50 per cent, if specifically ordered.

2 TO 2-WIRE, 125 VOLTS

Mains-2-wire. Branches-Double, Arranged for N.E.C. Cartridge Fuses

Mains—2-				Panel			LbEU.	TOT IN	E.C. Ca			F G 1:	
tions at top, if se ordered, without	No.	Cat.	List		ZE IN		Cap	).   Bo	FRAM	k	anel wi	1	
extra charge.	Cir	No.	Price	W.	H	.   I	). Mair	ıs Re	f. List	Type	Type	Types BM-Bl	Type
A STATE OF THE STA	2	150001	\$4.10	1111	6   8	2 1 /			LUGS	110.0.2			
	6 8	150002 150003	6.30 8.40	111/	2   14	2 4	E 30	) C1 C1	4 3.60	15.00 17.50	19,00	23.8	0 28.
	10 12	150004 150005 150006	12.30 14.90	111	2 22	4	60 100	C1 C2	$\begin{bmatrix} 8 & 4.00 \\ 2 & 4.40 \end{bmatrix}$	22.20	26.50	29.30 32.10 36.30	37.
	14 16 18 20	150007 150008 150009	17.20 19.50 22.90	111/2	$\frac{28}{2}$ 30	4	100 200	C2 C3	4 4.60 8 5.00 5.20	28.30 31.50 35.20	36.30	39.30 43.10 47.30	48.
E 2 / E 3	22 24 26	150010 150011 150012	25.00 27.10 29.50	11½ 11½ 11½	34 38	4	200 200	C34		37.80 40.30 43.70	45.50	49.90 52.70 56.70	58
	28 30 32	150013 150014 150015 150016	31.70 33.80 35.80 38.10	11½ 11½ 11½ 11½	42	4	200 200	C42 C44	6.40	48.80 51.60 54.30	57.10 59.80	62.40 65.10 68.00	65.: 68.: 71.:
NAME OF TAXABLE PARTY.				1 / 2	,		00		MAINS	57.80	63.40	72.10	75.9
	2 4	150081 150082	5.60	111/2	10	4	30	C10	1 3.20	13.90	17.80	22.30	27 6
SEFEE	6 8	150082 150083 150084	7.80 10.20 12.10	111/2	14 18 20	4 4	30 60 60	C14 C18 C20	3.60 4.00	16.90 20.10	21.10 24.40	26.10 30.00	31.0 35.0
	10 12 14	150085 150086 150087	14.10 17.60 19.90	$11\frac{1}{2}$ $11\frac{1}{2}$	22 28 30	4 4	60 100	C22 C28	4.40 5.00	22.40 24.70 29.60	26.80 29.20 34.40	32.60 35.50 41.20	37.6 40.8 46.4
BETPE	16 18 20	150088 150089 150090	22.20 27.20	11½ 11½ 11½	34 38	4 4	100 100 200	C30 C34 C38	5.50 5.90	32.20 35.40 41.40	37.20 40.60 46.80	44.30 47.80 54.40	49.6 53.3 59.8
	22 24 26	150091 150092	29.30 31.40 33.80	11½ 11½ 11½ 11½	40 42 44	4 4 4	200 200 200	C40 C42 C44	6.10 6.20 6.40	46.40 49.20 52.30	51.80 54.70 57.80	60.00 62.70 66.00	62.8 65.8 69.2
of of	28 30 32	150093 150094 150095 150096	36.00 38.10 40.10 42.40	11½ 11½ 11½ 11½	48 50 52 54	4 4 4	200 200 200 200	C48 C50 C52 C54	6.80 7.00 7.20 7.40	55.70 58.40 61.00 63.90	61.30 64.00 66.60 69.60	70.00 72.90 75.80	73.8 77.1 80.4
					FU	SEL	ESS	MAI			09.00	78.90	83.9
SELE	2 4 6	150161 150162 150163	8.40 10.60 13.60	$11\frac{1}{2}$ $11\frac{1}{2}$ $11\frac{1}{2}$	14 18 22	4 4 4	30 30 60	C14 C18 C22	3.60 4.00 4.40	17.50 20.50 24.20	21.70 24.80 28.70	26.70 30.40 35.00	31.66 35.40 40.00
	8 10 12	150164 150165 150166	15.50 17.50 22.90	$11\frac{1}{2}$ $11\frac{1}{2}$ $11\frac{1}{2}$	24 26 32	4 4 4	60 60 100	C24 C26 C32	4.60 4.80 5.30	26.60 29.00 35.70	31.20 33.70 40.80	37.60 40.40 47.80	42.70 45.60 53.20
	14 16 18	150167 150168 150169	25.20 27.50 34.10	$11\frac{1}{2}$ $11\frac{1}{2}$ $11\frac{1}{2}$	34 36 40	4 4 6	100 100 200	C34 C36 C40	5.50 5.70 7.80	38.40 41.20 52.70	43.60 46.50 58.10	50.80 54.00	56.30 59.40
	20 22 24	150170 150171 150172	36.20 38.30 40.70	$11\frac{1}{2}$ $11\frac{1}{2}$ $11\frac{1}{2}$	44 46 48	6 6 6	200 200 200	C44 C46 C48	8.30 8.60 8.80	56.20 58.90 61.90	61.70 64.40 67.50	68.10 72.00 75.00 78.30	70.90 75.10 78.50
W. F. G.	26 28 30 32	150173 150174 150175	42.90 45.00 47.00	$\begin{array}{c} 11\frac{1}{2} \\ 11\frac{1}{2} \\ 11\frac{1}{2} \\ 11\frac{1}{2} \end{array}$	50 54 56	6 6 6	200 200 200	C50 C54 C56	9.10 9.60 9.80	64.70 68.10. 70.70	70.30 73.80 76.40	81.40 85.40 88.30	82.10 85.60 90.40
	02	150176	49.30	111/2	58	SIE	200	U58	10.10	73.50	79.20	91.60	93.60 97.40
	2	150241	9.80	111/2	14	4	30	MAIN C14	SWIT(		02 10	00 10	
Bale	6	150242 150243 150244	12.00 15.00 16.00	11½ 11½ 11½ 11½ 11½	18 22 24	4	30 60	C14 C18 C22	4.00 4.40	18.90 21.90 25.60	23.10 26.20 30.10	28.10 31.80 36.40	33.00 36.80 41.40
	10	150245 150246 150247	18.90 26.10	111/2	26 34	4 4 4	60 60 100	C24 C26 C34	4.60 4.80 5.50	28.00 30.40 39.30	32.60 35.10 44.50	39.00 41.80 51.70	44.10 47.00 57.20
	8	150248 150249	38.60	11½ 11½ 11½	- 1	- 1		C36 C40 C44	5.70 6.10 8.30	42.10 47.80 58.60	47.40 53.20 64.10	54.90 61.40 74.40	60.30 64.20 77.50
	22   124   1	50251 50252	42.80 45.20	11½ 11½ 11½ 11½	50 52	6	200 200 200	C46 C50 C52	9.10	61.30 64.60 67.70	66.80 70.20 73.30	77.40 81.30 84.70	80.90 85.50 89.30
	8 1	50255	49.50 51.50	11½ 11½ 11½ 11½	56 60	6	200	C54 C56 C60 C62	9.80 10.30	70.50 73.20 76.20 79.20	76.20 78.90 81.90	87.80 90.80 94.60	92.80 96.10 100.80

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used.

\*Prices under heading "Panel with Cabinet" include panel complete with Prices for single-branch panels, 125 or 250 volts, and for double-branch panels, 250 volts, also for through-feed panels, will be quoted upon request. Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

3 TO 2-WIRE, 125 VOLTS

Mains-3-Wire. Branches-Double, Arranged for N.E.C. Cartridge Fuses

Mains-3-Wire. Branches-Double, Arranged for N.E.C. Cartridge Fuses													
Panels furnished with main connec-			Par	iel On					SLATE FRAME			1	
tions at top, if so ordered, without extra charge.	No.	Cat. No.	List Price	SIZE W.			Cap. Mains	Box Ref.	List	Туре	Type AL	Types BM-BN	Туре ВТ
extra margo.	Cir.	_ 10. 1	11100	т	ш. Т	D.	MAI		GS				
SELLES	2 4 6	150641 150642 150643	7.10 9.10	13½ 13½ 13½ 13½	8 12 14	4 4 4	30 30 30	D 8 D12 D14	\$3.10 3.50 3.70	\$13.10 16.30 18.70	\$16.90 20.30 22.80	\$21.50 25.40 28.10	\$25.90 30.00 32.80
	8	150644 150645	11.10 13.50	13½ 13½ 13½ 13½	16 18 22	4 4 4	30 30 60	D16 D18 D22	3.90 4.10 4.50	21.10 24.00 27.60	25.30 28.30 32,10	30.80 33.90 38.20	35.60 38.80 43.20
31141	12 14 16	150646 150647 150648	16.30 18.40 20.60	$13\frac{1}{2}$ $13\frac{1}{2}$	24 26	4 4 4	60 60 60	D24 D26 D28	4.70 4.90 5.10	30.20 32.90 35.50	34.80 37.60 40.30	41.10 44.10 47.00	46.20 49.40 52.40
	18 20 22	150649 150650 150651	22.70 25.10 28.60	$13\frac{1}{2}$ $13\frac{1}{2}$ $13\frac{1}{2}$	28 32 34	4	60 100	D32 D34	5.40 5.60	38.90 42.90 46.30	44.00 48.10 51.70	51.00 55.30 59.30	56.50 60.80 64.70
<b>国际事业额</b> 的	24 26	150652 150653	31.00	$13\frac{1}{2}$ $13\frac{1}{2}$	38 40	4	100 100	D38 D40	6.00	51.60	56.90	64.90	67.90
The A. W. W.	28 30 32	150654 150655 150656	35.50 37.70 40.10	13½ 13½ 13½ 13½	42 44 48	4 4	100 100 100	D42 D44 D48	6.30 6.50 6.90	54.50 57.30 60.90	59.90 62.70 66.40	67.70 71.00 75.10	71.00 74.40 79.20
Charles and the same of the sa	Į.					F	USIB		AINS		1 10 50	04.00	90.10
551,463	2 4 6	150721 150722 150723	7.10 9.40 11.40	13½ 13½ 13½ 13½	10 14 16	4 4 4	30 30 30	D10 D14 D16	3.70	15.80 19.00 21.40	19.70 23.10 25.60	24.60 28.40 31.10	29.10 33.10 35.90
	8 10 12	150724 150725 150726	13.40 15.80 19.00	13½ 13½ 13½ 13½	18 22 24	4 4 4	30 30 60	D18 D22 D24	4.50	23.90 27.10 30.80	28.20 31.60 35.40	33.80 37.70 41.70	38.70 42.70 46.80
套门码	14 16	150727 150728	21.10 23.30 25.40	13½ 13½ 13½ 13½	28 30 32	4 4 4	60 60 60	D28 D30 D32	5.30	33.90 36.60 39.20	38.70 41.50 44.30	45.40 48.50 51.30	50.80 53.90 56.80
到过	18 20 22	150729 150730 150731	27.80 32.70	13½ 13½	34 40	4 4 4	60 100 100	D34 D40 D44	5.60 6.20	42.10 51.00 54.70	47.30 56.30 60.10	54.50 64.30 68.40	60.00 67.30 71.80
	24 26	150732 150733	35.10 37.40	131/2	44	4	100 100 100	D46 D48	6.70	57.60 60.40	63.10 65.90	71.50 74.60	75.30 78.70
4 4 4	28 30 32	150734 150735 150736	39.60 41.80 44.20	13½ 13½ 13½ 13½	48 50 54	4 4	100 100	D50 D54	7.10	66.80	68.70 72.40	77.60 81.80	82.10 86.90
manufacture of the			11.00	1.1017	FU	JSE 4	LESS 30	MA D14		TCH   20.90	25.00	30.30	35.00
s 1 3	2 4 6	150801 150802 150803	11.30 13.60 15.60	$13\frac{1}{2}$ $13\frac{1}{2}$ $13\frac{1}{2}$	18 20	4	30 30	D18	4.10	24.10	28.40	34.00 36.80	38.90 41.80
<b>泰北湖</b>	8	150804 150805	17.60 20.00	13½ 13½ 13½ 13½	22 24 30	4 4 4	30 30 60	D25 D26 D36	4.70	31.80	36.40	39.50 42.70 49.30	44.50 47.80 54.70
	12 14 16	150806 150807 150808	24.10 26.20 28.40	13½ 13½	32 34	4 4	60 60 60	D3: D3: D3:	5.40 5.60	40.00 42.70	47.90	52.10 55.10 57.90	57.60 60.60 63.40
	18 20 22	150809 150810 150811	30.50 32.90 40.60	13½ 13½ 13½	40	4 4	60 100	D4 D4	6.20 4 6.50	51.20 60.20	56.50 65.60	64.50 73.90	67.50 77.30 80.90
4.311	24 26	150812 150813	43.00	131/6	48			D4 D4	8 6.90	66.10	71.60	80.30	84.40
	28 30	150814 150815	47.50 49.70	$13\frac{1}{2}$ $13\frac{1}{2}$	52 54	4	100		4 7.50	)   72.30	77.90	87.30	89.10 92.40 96.20
	32	150816	52.10	131/2	90		BLE	MAI			01.10	00.10	1 00.20
I NUMBER	2	150881	13.40	131/2	14	4	30	D1	4   3.70	23.00	27.10	32.40 36.10	37.10 41.00
STOLK STO	4 6	150882 150883	15.70 17.70	131/2	18 20	4	30	D2	0   4.30	28.60	33.00	38.90	43.90
	8 10 12	150884 150885 150886	19.70 22.10 26.20	131/	30	4	30	D2 D3	4   4.70 0   5.30	33.90	38.50 44.40	44.80 51.40	49.90 56.80
	14 16 18	150887 150888	28.30 30.50	131/	32 34	4	60	D3	4 5.6	0   44.80	50.00	57.20	65.50
	20 22	150890 150891	35.00 45.40	131/	40	3 4	1 60 1 100	D4	6 6.7	0     65.60	) 71.10	79.50	83.30
4 4 3	24 26	150893	50.10	131	2 52	2 4	100	) D5	2 7.3	0 72.10	77.70	86.80	91.70 95.00
	28 30 32	150895	54.5	)   13½	$\frac{2}{5}   \frac{56}{60}$	3 4	1 100 1 100	D D	66 7.7 80 8.1	0   77.86	0 83.50	97.30	103.70

Catalogue number is for panel only.

If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used.

\*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for single-branch panels, 125 or 250 volts, and for double-branch panels, 250 volts, also for through-feed panels. will be quoted upon request.

Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

2 TO 2-WIRE, 125 VOLTS

Mains-2-wire. Branches-Double, with 30-amp. Knife Switches, Arranged for N.E.C. Cartridge Fuses

Panels furnished with main connections at top, if so ordered, without extra charge.		ubie, w	Pa	nel O				_000 424	SLATE			rtriage h Cabin	et*
	No. Cir.	Cat. No.	List Price		IN I		Cap.	Box	FRAME	Type	Type AL	Types	Type BT
	our.	l no.	1 LLICO	J W.	н.	ν.	Mains MA		List	AL	AL	BM-BN	1 81
5:21.8=2	2 4 6	150321 150322 150323	\$5.40 8.40 11.40	15½ 15½ 15½ 15½	8 12 14	4 4	30 30 60	E 8 E12 E14	\$3.30 3.70 3.90	\$14.10 18.00 21.50	\$18.00 22.00 25.60	\$22.90 27.40 31.10	\$27.20 31.90 35.80
	8 10 12	150324 150325 150326	14.40 17.30 20.80	15½ 15½ 15½ 15½	16 18 22	4 4 4	60 60 100	E16 E18 E22	4.10 4.30 4.70	24.90 28.30 32.90	29.00 32.50 37.20	34.80 38.50 43.50	39.60 43.40 48.60
	14 16 18 20	150327 150328 150329	24.20 27.50 31.90	15½ 15½ 15½	24 28 30	4 4	100 100 200	E24 E28 E30	4.90 5.20 5.40	36.70 41.00 45.90	41.10 45.70 50.70	47.70 52.60 57.80	53 00 58.00 63.30
AFT. VALUE	22 24 26	150330 150331 150332 150333	35.00 38.00 41.40 44.50	15½ 15½ 15½	32 .34 38 40	4 4	200 200 200 200	E32 E34 E38	5.60 5.80 6.10 6.30	49.60 53.20 57.60	54.50 58.20 62.90	61.80 65.70 70.70	67.30 71.20 76.10
11 15	28 30 32	150334 150335 150336	47.60 50.50 53.80	15½ 15½ 15½ 15½ 15½	42 44 48	4 4 4	200 200 200 200	E40 E42 E44 E48	6.50 6.70 7.10	63.80 67.50 71.00 75.40	69.10 72.80 76.50 81.20	77.00 81.00 84.90 90.20	80.20 84.50 88.70 94.60
Total State of the	2	150401					FUSII		IAINS				
gir, will	6	150401 150402 150403	6.90 9.90 13.20	15½ 15½ 15½ 15½	10 14 18	4 4	30 30 60	E10 E14 E18	3.50 3.90 4.30	16.10 20.00 24.20	20.00 24.10 28.40	25.20 29.60 34.40	29.60 34.30 39.30
	8 10 12	150404 150405 150406	16.20 19.10 23.50	15½ 15½ 15½	20 22 28	4 4	60 60 100	E20 E22 E28	4.50 4.70 5.20	27.70 31.20 37.00	32.00 35.50 41.70	38.20 42.00 48.60	43.20 47.10 54.00
	14 16 18	150407 150408 150409	26.90 30.20 36.20	15½ 15½ 15½	30 34 38	4 4	100 100 200	E30 E34 E38	5.40 5.80 6.10	40.90 45.40 52.40	45.70 50.40 57.70	52.80 57.90 65.50	58.30 63.40 70.90
× 41	20 22 24	150410 150411 150412	39.30 42.30 45.70	15½ 15½ 15½	40 42 44	4 4	200 200 200	E40 E42 E44	6.30 6.50 6.70	58.60 62.20 66.20	63.90 67.50 71.70	71.80 75.70 80.10	75.00 79.20 83.90
77	26 28 30 32	150413 150414 150415 150416	48.80 51.90 54.80 58.10	15½ 15½ 15½ 15½	48 50 52 54	4 4 4	200 200 200 200	E48 E50 E52 E54	7.10 7.30 7.50 7.70	70.40 74.20 77.70 81.60	76.20 80.10 83.60 87.50	85.20 89.20 93.10 97.40	89.60 93.90 98.10 102.80
						•	ESS	MAIN		-	01.00	00.10	102.00
5 23 2 4 2 5	2 4 6	150481 150482 150483	9.70 12.70 16.60	15½ 15½ 15½ 15½	14 · 18 22	4 4	30 30 60	E14 E18 E22	3.90 4.30 4.70	19.80 23.70 28.70	23.90 27.90 33.00	29.40 33.90 39.30	34.10 38.80 44.40
	8 10 12	150484 150485 150486	19.60 22.50 28.80	15½ 15½ 15½	24 26 32	4 4	60 60 100	E24 E26 E32	4.90 5.10 5.60	32.10 35.50 43.40	36.50 40.00 48.30	43.10 46.80 55.60	48.40 52.20 61.10
7	14 16 18 20	150487 150488 150489	32.20 35.50 43.10	15½ 15½ 15½	34 36 40	4 6	100 100 200	E34 E36 E40	5.80 6.00 8.20	47.40 51.20 64.00	52.40 56.30 69.30	59.90 64.10 79.20	65.40 69.50 82.40
	20 22 24 26	150490 150491 150492 150493	46.20 49.20 52.60	15½ 15½ 15½ 15½	44 46 48 50	6 6	200 200 200	E44 E46 E48	8.80 9.00 9.30	68.30 71.90 75.80	73.80 77.50 81.60	84.40 88.40 92.90	88.20 92.50 97.30
* !	28 30 32	150494 150494 150495 150496	55.70 58.80 61.70 65.00	15½ 15½ 15½ 15½	54 56 58	6 6	200 200 200 200	E50 E54 E56 E58	9.60 10.10 10.40 10.70	79.60 84.00 87.60 91.50	85.50 89.90 93.60 97.60	97.00 102.30 106.30 110.50	101.70 107.70 112.00 116.60
						SIE		MAIN	SWITC	H			
	2 4 6	150561 150562 150563	11.10 14.10 18.00	$15\frac{1}{2}$ $15\frac{1}{2}$ $15\frac{1}{2}$	14 18 22	4 4	30 30 60	E14 E18 E22	3.90 4.30 4.70	21.20 25.10 30.10	25.30 29.30 34.40	30.80 35.30 40.70	35.50 40.20 45.80
	8 10 12	150564 150565 150566	21.00 23.90 32.00	$15\frac{1}{2}$ $15\frac{1}{2}$ $15\frac{1}{2}$	24 26 34	4 4 4	60 60 100	E24 E26 E34	4.90 5.10 5.80	33.50 36.90 47.20	37.90 41.40 52.20	44.50 48.20 59.70	49.80 53.60 65.20
	14 16 18	150567 150568 150569	35.40 38.70 47.60	$15\frac{1}{2}$ $15\frac{1}{2}$ $15\frac{1}{2}$	36 40 44	4 4 6	100 100 200	E36 E40 E44	6.00 6.30 8.80	51.10 58.00 69.70	56.20 63.30 75.20	64.00 71.20 85.80	69.40 74.40 89.60
	20 22 24	150570 150571 150572	50.70 53.70 57.10	15½ 15½ 15½	46 50 52	6 6	200 200 200	E46 E50 E52	9.00 9.60 9.80	73.40 77.60 81.70	79.00 83.50 87.60	89.90 95.00 99.50	94.00 99.70 104.50
	26 28 30 32	150573 150574 150575 150576	60.20 63.30 66.20 69.50	15½ 15½ 15½ 15½	54 56 60 62	6 6 6	200 200 200 200	E54 E56 E60 E62	10.10 10.40 10.90 11.20	85.40 89.20 93.30 97.30	91.30 95.20 99.50 103.50	103.70 107.90 112.70 117.30	109.10 113.60 119.10 124.20
Catalogue number is for no	nel	only. I	f slate f	rame o	r cal	ine	ie ro	nnired	order e		o stato a	nd airea	

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for single-branch panels, 125 or 250 volts, and for double-branch panels, 250 volts, also for through-feed panels, will be quoted upon request. Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

3 TO 2-WIRE, 125 VOLTS

Mains-3-wire. Branches-Double, with 30-amp. Knife Switches, Arranged for N.E.C. Cartridge Fuses

Panels furnished with main cornec-			Par	iel On	ly				SLATE	Par	el with	Cabine	et*
tions at too, if so ordered, without	No.	Cat.	List Price	Size W.	IN I		Cap Mains	Box Ref.	FRAME	Type	Type	Types BM BN	Type BT
Watta Charles	Cir.	Mo.	11100	". [	ш. [	ν.		N LU					
	2	150961	\$6.00	$\begin{bmatrix} 17^1_{&2} \\ 17^1_{&2} \end{bmatrix}$	8	4	30	1 8	\$3.50	\$15.10	\$19.00	\$24.30	\$28.60
自己 非非地名斯	6	150962 150963	9.30	17 <sup>1</sup> <sub>2</sub> 17 <sup>1</sup> <sub>2</sub>	12 14	4 4	30 30	F12 F14	3.90 4.10	19.50 23.00	23.60 27.20	29.20 33.10	33.60 37.50
新型家 N 引 4 2 3 1 1 1	8	150964	15.30	1756	16	4	30	F16	4.30	26.60	30.90	36.80	41.30
1 2	10 12	150965 150966	18.40 22.10	$\begin{bmatrix} 17^1_{2} \\ 17^1_{2} \end{bmatrix}$	18 22	4	30 60	F18 F22	4.50 4.90	30.20	34.60 39.50	40.80	45.30 50.70
	14	150967	25.30	171 2	21	4	60	F24	5.10	a8.60 42.10	43.20	50.10	54.80
	16 18	150968 150969	28.30 31.40	$\frac{17^{1}}{17^{1}}$	26 28	4	60	I-26 F28	5.20	42.10 45.70	46 (0) 50.50	53.80 57.80	58.60 62.60
<b>推查数据 从</b>	20	150970	34.80	171 2	32	4	60	F32	5.80	50.30	55.20	62.90	67.80
<b>经复数工作提供证</b>	22 24	150971 150972	39.20 42.70	171 2 171 2	34	4	100 100	1· 54 1· 38	6.00	55.20 59.90	60.20 65.10	68.10 73.10	73.10 78.20
	26	150973	45.90	171.	40	4	100	F40	6.50	65.90	71.40	79.70 83.90	82.80
7 10 g	28 30	150974 150975	49.10 52.20	$\frac{17^{12}}{17^{12}}$	43	4 4	100	I-42 I-44	6.70	69.90 73.60	75.30 79.10	88.00	87.30 91.80
L LANGE TO L COMMENT	32	150976	55.70	1712	48	4	100	F48	7.30 AINS	78.50	84.10	93.50	98.00
	2	151041	8.30	171 2	10	4	USIB 30	F-10	3.70	18.00	22.00	27.40	31.80
3=11 10 31	4	151042 151043	11.60 14.60	171 2 171 2	14 16	4	30 30	F 14 F 16	4.10	22.30 25.90	26.50 30.20	32.40 36.10	36.80 40.60
	8	151044	17.60	1712	18	4	30	F18	4.50	29.40	33.80	40.00	44.50
	10 12	151045 151046	20.70 24.80	$\frac{17^{1}}{17^{1}}$	22 24	4	30 60	l· 22 l· 24	4.90 5.10	33.50 38.10	38.10 42.70	44.70 49.60	49.30 54.30
	14	151047	28.00	$17^{1}\frac{7}{2}$	28	4	60	1.58	5.40	42.30 45.90	47.10 50.80	54.40 58.20	59.20 63.10
	16 18	151048 151049	31.00 34.10	$\frac{17^{1}}{17^{1}}$	30 32	4	60 60	F32	5.60 5.80	49.60	54.50	62.20	67.10
	20	151050	37.50	171 2	34 4)	4	60 100	F34 I-40	6.00	53.50 63.30	58.50 68.80	66.40 77.10	71.40 80.20
	22 24	151051 151052	43.30 46.80	$\frac{17^{1}}{17^{1}}$ 2	44	4	100	1.44	6.90	68.20	73.70	82.60	86.40
	26	151053 151054	50.00 53.20	$\frac{17^{1}}{17^{1}}$	46 48	4	100 100	F46 F48	7.10	72.20	77.70 81.60	86.80 91.00	90.90 95.50
	30	151055	56.30	$\frac{17^{1}}{2}$ $17^{1}$	50 54	4	100	F50 F54	7.30 7.50 7.90	79.90 84.80	85.50 90.50	95.10 100.80	99.90 106.10
	32	151056	59.80	111.3			ESS	MAIN	_		30 00	100.00	100.10
THE SALE IS	2	151121	12.50	171 2	14	4	30	F 14	4 10	23.20 27.60	27 40 32.00	33.30 38.20	37.70 42.70
	6	151122 151123	15.80 18.80	$\frac{17^{1}}{17^{1}}$	18 20	4	30 30	F18 F20	4.50	31.10	35.60	42.10	46.60
医直发 医复数医透	8	151124	21.80 24.90	$\frac{17^{1}}{17^{1}}$	22 24	4	30 30	F22 1:24	4.90 5.10	34.60 38.20	39.20 42.80	45.80 49.70	50.40 54.40
居在生 3 年 20 三 2	10 12	151125 151126	29.90	1712	30	4	60	I 30	5.60	44.80	49.70	57.10	62.00
医医疗 生产的复数	14	151127 151128	33.10 36.10	171 <u>2</u> 171 <u>2</u>	32 34	4	60 60	F32	5.80	48.60 52.10	53.50 57.10	61.20 65.60	66.10 70.00
	16 18	151129	39.20	172	36	4	60	1.36	6.10	55.90	61.00	68.80	73.90
	20 22	151130 151131	42.60 51.20	$\frac{17^{1}}{17^{1}}$	40	4	100	F40 I 44	6.50	62.60 72.60	68.10 78.10	76.40 87.00	79.50 90.80
1 L	24	151132	54.70	1712	46	4	100	I-46	7.10	76.90	82.40	91.50	95.60
	26 28	151133 151134	57.90 61.10	1712 1712	48 52	4 4	100	F48	7.30	80.70 85.30	86.30 91.00	95.70	100.20 106.10
HI TO FILE SE	30	151135 151136	64.20 67.70	171 2 171 2	54 56	4	100	1·54 1·56	7.90	89.20 93.40	94.90	105.20 109.80	110.50 115.40
	04	101100	, 0					MAIN		CH			
	2 4	151201 151202	14.60 17.90	171 2 171 2	14 18	4	30 30	F14 F18	4.10	25.30	29.50 34.10	35.40 40.30	39.80
	6	151202	20.90	17/2	20	4	30	I-20	4.70	33.20	37.70	44.20	48.70
	8	151204 151205	23.90 27.00	1716 1712	22 24	4	30 30	F22	4.90 5.10	36.70 40.30	41.30	47.90 51.80	52.50 56.50
	12	151206	32.00	1712	30	4	60	I.30	5.60	46.90	51.80	59.20	64.10
	14 16	151207 151208	35.20 38.20	$\frac{1712}{1712}$	32	4	60	F32 F34	5.80 6.00	50.70 54.20	55.60 59.20	63.30 67.10	68.20 72.10
	18	151209	41.30	1772	36	4	60	F36	6.10	58.00	63.10	70.90	76.00
F - F - F	20 22	151210 151211	44.70 56.00	$\frac{1712}{1712}$	40	4	100	I-40 I-46	6.50 7.10	64.70 78.20	70.20 83.70	78.50 92.80	81.60 96.90
2= 10 4 11	24	151212	59.50	1712	50	4	100	F50	7.50	83.10 86.90	88.70 92.60	98.30	103.10 107.70
一个 化 图 数 一	26 28	151213 151214	62.70 65.90	1712 1712	52 54	4	100	F52 F54	7.70 7.90	90.90	96.60	106.90	112.20
Live Miles	30	151215 151216	69.00 72.50	171 <sub>2</sub> 171 <sub>2</sub> 171 <sub>3</sub>	56 60	4	100	F60	8.10 8.50	94.70 99.60	100.40 103.40	111.10	116.70 122.90
Chalanus numbrais for r		only I					is rec		order sl	nould so	state an	d give nu	mberof

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

'Prices for single-branch panels, 125 or 250 volts, and for double-branch panels, 250 volts, also for through-feed panels, will be quoted upon request. Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

2 TO 2-WIRE, 125 VOLTS

-Double, with 10-amp, Rotary Snap Switches, for N.E.C. Cartridge Fuses Mains-2-wire

anels furnished with main connec-			Pa	nel O	nly				SLATE	Par	nel witl	ı Cabin	et*
tions at top, if so ordered, without extra charge.	No. Cir.	Cat.	List	Size W.	IN I		Cap.	Box	FRAME	Type	Type	Types BM-BN	Туре
CALL W CARRES CO.	l ur.	No.	Price	W	H.	D.	Mains M A	Ref.	List	AK	AL	FM-RM	BT
SEN IN DISPLACEMENT	2	151921	\$6.90	151/2	8	4	30	E 8	\$3.30	\$15.60 21.00	\$19.50 25.00	\$24.40	\$28.7
A 150 L 165 W	6	151922 151923	11.60 16.10	151/2	12 14	4	30 60	E12 E14	3.70	21.00 26.20	25.00 30.30	30.40 35.80	34.9
は は は は は は	8	151924	20.60	151/6	16	4	60	E16	4.10	31.10	35.20	41.00	45.8
3 HE   18 H	10 12	151925 151926	25.40 30.30	15½ 15½	18 22	4	60 100	E18 E22	4.30 4.70	36.40 42.40	40.60 46.70	46.60 53.00	51.8 58.1
日 海 日 日 日 日 日	14	151927	35.40	151/2	24	4	100	E24	4.90	47.90	52.30	58,90	64.2
BEE BE	16 18	151928 151929	40.00	1512	28 30	4	100 200	E30	5.20	53.50 60.00	58.20 64.80	65.10 71.90	70.3
	20	151930	50.90	151/9	32	4	200	E32	5.60	65.50	70.40	77.70	83.3
- C. F C.	22 24	151931 151932	55.60 60.20	15 <sup>1</sup> <sub>2</sub> 15 <sup>1</sup> <sub>2</sub>	34 38	4	200 200	E34 E38	5.80 6.10	70.80 76.40	75.80 81.70	83.30 89.50	88.8 94.9
1 2 2 12	26	151933	64.90	151/6	40	4	200	E40	6.30	84.20	89.50	97.40	100.6
Million Block Colon Bullion	28 30	151934 151935	69.80 74.30	15½ 15½	42	4	200 200	E42 E44	6.50 6.70	89.70 94.80	95.00 100.30	103.20 108.70	106.7 112.5
	32	151936	78.90	151/2	48	4	200	E48	7.10	100.50	106.30	115.30	119.7
	2	152001	8.40	1512	16)	1 4	30	E10	3.50	17.60	21.50	26,70	31.1
A USB THESE W	6	152002 152003	12.90 17.90	15 <sup>1</sup> <sub>2</sub> 15 <sup>1</sup> <sub>2</sub>	14 18	4	30 60	E14 E18	3.90 4.30	23.00 28.90	27.10 33.10	32.60 39.10	37.3 44.0
1 满上满土	8	152004	22.30	151/6	20	4	60	E20	4.50	33.80	38.10	44.30	49.3
	10 12	152005 152006	27,20 33,00	15 <sup>1</sup> <sub>2</sub> 15 <sup>1</sup> <sub>2</sub>	22 28	4	60 100	E22 E28	4.70 5.20	39.30 46.50	43.60 51.20	49.90 58.10	55.0 63.5
9番1番	14	152007	38.10	151/2	30	4	100	E30	5.40	52.10	56.90	64.00	69.5
	16 18	152008 152009	42.70 50.30	15 <sup>1</sup> <sub>2</sub> 15 <sup>1</sup> <sub>2</sub>	34	4	100 200	E34 E38	5.80 6.10	57.90 66.50	62.90 71.80	70.40 79.60	75.9 85.0
<b>多种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种</b>	20	152010	55.20	151/2	40	4	200	E40	6.30	74.50	79.80	87.70	90.9
The sale of	22 24	152011 152012	59.90 64.50	$15\frac{1}{2}$ $15\frac{1}{2}$	42	4	200	E42 E44	6.50	79.80 85.00	85.10 90.50	93.30 98.90	96.8 102.7
1 1	26	152013	69.20	151/2	48	4	200	E48	7.10	90.80	96.60	105.60	110.0
<b>网络一种一种一种</b>	28 30	$\frac{152014}{152015}$	74.10 78.60	$\frac{15^{1}}{15^{1}}$	50 52	4	200 200	E50 E52	7.30 7.50	96.40 101.50	102.30 107.40	111.40 116.90	116.1 121.9
	32	152016	83.20	15½	54 FU	SE	LESS	E54 MAIN	7.70	106.70	112.60	122.50	127.9
<b>国际的</b>	2	152081	11.20	1512	14	4	30	E14	3.90	21.30	25.40	30.90	35.6
of the same of the same	6	152082 152083	15.70 21.30	15 <sup>1</sup> / <sub>2</sub> 15 <sup>1</sup> / <sub>2</sub>	18 22	4	30 60	E18 E22	4.30	26.70 33.40	30.90 37.70	36.90 44.00	41.8 49.1
	8	152084	25.70	1516	24	4	60	E24	4.90	38.20	42.60	49.20	54.5
	10 12	152085 152086	30.60 38,30	15 <sup>1</sup> <sub>2</sub> 15 <sup>1</sup> <sub>2</sub>	26 32	4	60 100	E26 E32	5.10 5.60	43.60 52.90	48.10 57.80	54.90 65.10	60.3 70.6
	14	152087	43 40 .	151/2	34	4	100	E34	5.80	58.60	63.60	71.10	76.6
	16 18	152088 152089	48.00 57.20	15½ 15½	36 40	6	100 200	E36 E40	6.00 8.20	63.70 78.10	68.80 83.40	76.60 93.30	82.0 96.5
المال معاد	20 22	152090 152091	62.10 66.80	15½ 15½	44	6	200	E44 E46	8.80	84.20	89.70	100.30	104.1
<b>新发展性</b>	24	152092	71.40	151/2	46	6	200 200	E48	9.00	89.50 94.60	95.10 100.40	106.00 111.70	110.1 116.1
	26 28	152093 152094	76.10 81.00	151/2	50 54	6	200 200	E50 E54	9.60 10.10	100.00 106.20	105.90 112.10	117.40 124.40	122.1 129.9
The Street Wall William Street	30 32	152095 152096	85.50 90.10	15 <sup>1</sup> / <sub>2</sub> 15 <sup>1</sup> / <sub>2</sub> 15 <sup>1</sup> / <sub>2</sub>	56 58	6	200 200 200	E56	10.40	111.40	117.40	130.00	135.8
	02	102080	90.10	1.072	_	_		E58   IAIN	SWITC	116.60    H	122.70	135.50	141.7
William Street	2	152161	12.60	151/2	14	4	30	E14	3,90	22.70	26.80	32.30	37.0
The least of	6	152162 152163	17.10 22.70	15½ 15½	18 22	4	30 60	E18 E22	4.30	28.10 34.80	32.30 39.10	38.30 45.40	43.2 50.5
	8	152164 152165	27.10 32.00	15½ 15½	24 26	4	60 60	E24 E26	4.90	39.60	44.00	50.60	55.9
	12	152166	41.50	151/2	34	4	100	E34	5.10 5.80	45.00 56.70	49.50 61.70	56.30 69.20	61.7 74.7
	14 16	152167 152168	46.60 51.20	15½ 15½	36 40	4 4	100 100	E36 E40	6.00 6.30	62.30 70.50	67.40 75.80	75.20	80.6 86.9
	18	152169	61.70	151/2	44	6	200	E44	8.80	83.80	89.30	83.70 99.90	103.7
	20 22	152170 152171	66.60 71.30	15½ 15½	46 50	6	200 200	E46 E50	9.00 9.60	89.30 95.20	94.90 101.10	105.80 112.60	109.9 117.3
	24	152172	75.90	151/2	52	6	200	E52	9.80	100.50	106.40	118.30	123.3
CONTRACTOR AND PARTY OF STREET OF STREET		110170	00 00	1514	54	6	200	E54	10.10	105.80	111.70	124.00	129.5
11	26 28	152173 152174	80.60 85.50	15½ 15½ 15½	56	6	200	E56	10.40	111.40	117.40	130.00	135.8

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for single-branch panels, 125 or 250 volts, and for double-branch panels, 250 volts, also for through-feed panels, will be quoted upon request. Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

3 TO 2-WIRE, 125 VOLTS

Mains—3-wire. Branches—Double, with 10-amp. Rotary Snap Switches, Arranged for N.E.C. Cartridge Fuses

	Jou	ore, with		ip. Ko inel C		Sna	LD SW	itches	TI.			Cartridg	
Panels furnished with main connec- tions at top, if so ordered, without	No.	Cat.	List		E IN ]	In.	Cap.	Box	SLATE FRAME	_		h Cabir	
extra charge.	Cir.	No.	Price	W.	H.	D.	Mains	Ref.	List	Type	Туре	Types BM-BN	Type BT
	2	152241	1 67 50	1 471/				IN LU					
	4	152242	\$7.50 12.40	$\begin{vmatrix} 17\frac{1}{2} \\ 17\frac{1}{2} \end{vmatrix}$	12	4	30	F 8	\$3.50 3.90	\$16.60 22.60	\$20.50 26.70	\$25.80 32.30	\$30.10 36.70
	8	152243 152244	17.00	171/2	14	4	30	F14	4.10	27.70	31.90	37.80	42.20
	10	152245	21.50 26.20	$17\frac{1}{2}$ $17\frac{1}{2}$	16 18	4	30	F16 F18	4.30	32.80	37.10 42.40	43.00 48.60	47.50 53.10
	12 14	152246 152247	31.60	171/2	22	4	60	F22	4.90	44.40	49.00	55.60	60.20
	16	152248	36.20 40.90	17½ 17½	24 26	4	60	F24 F26	5.10 5.20	49.50 54.70	54.10 59.50	61.00 66.40	65.70 71.20
	18 20	152249 152250	45.60 50.50	17½ 17½	28 32	4	60	F28	5.40	59.90	64.70	72.00	76.80
<b>南海</b> 里里里里	22	152251	56.50	17½ 17½ 17½	34	4	60 100	F32 F34	5.80 6.00	66.00 72.50	70.90 77.50	78.60 85.40	83.50 90.40
<b>医复数性阻止激酶</b> (3	24 26	152252 152253	61.60	171/2	38	4	100	F38 F40	6.30	78.80	84.00	92.00	97.10
no it is	28 30	152254 152255	71.00	1716	42	4	100	F42	6.50	86.30 91.80	91.80 97.20	100.10 105.80	103.20 109.20
	32	152256	75.80 80.80	$17\frac{1}{2}$ $17\frac{1}{2}$	44 48	4	100 100	F44 F48	6.90 7.30	97.20 103.60	102.70 109.20	111.60 118.60	115.40 123.10
<b>美国的网络国际国际</b>	-	150001	1 0 00					LE M					
PARTY IN	2 4	152321 152322	9.80 14.70	$17\frac{1}{2}$ $17\frac{1}{2}$	10	4	30	F10 F14	3.70	19.50 25.40	23.50 29.60	28.90 35.50	33.30
	6 8	152323 152324	19.30	17½ 17½	16 18	4	30	F16	4.30	30.60	34.90	40.80	45.30
	10	152325	28.50	171/2	22	4	30 30	F18 F22	4.50 4.90	35.60 41.30	40.00 45.90 52.20	46.20 52.50	50.70 57.10 63.80
	12	152326 152327	34.30 38.90	17½ 17½	24 28	4	60	F24 F28	5.10	47.60 53.20	1	59.10	1
	16 18	152328 152329	43.60 48.30	17½ 17½	30 32	4	60	F30	5.60	58.50	58.00 63.40	65.30 70.80	70.10 75.70
	20	152330	53.20		34	4	60 60	F32 F34	6.00	63.80	68.70 74.20	76.40 82.10	81.30 87.10
	22 24	152331 142332	60.60 65.70	$17\frac{1}{2}$ $17\frac{1}{2}$ $17\frac{1}{2}$	40 44	4	100 100	F40 F44	6.50	80.60 87.10	86.10 92.60	94.40	97.50
7 2	26	152333	70.40	1714	46	4	100	F46	7.10	92.60	98.10	101.50	105.30
	28 30	152334 152335	75.10 79.90	$17\frac{1}{2}$ $17\frac{1}{2}$ $17\frac{1}{2}$ $17\frac{1}{2}$	48 50	4	100	F48 F50	7.30 7.50	97.90 103.50	103.50 109.10	112.90 118.70	117.40 123.50
	32	152336	84.90	171/2	54	4	100	F54	7.90	109.90	115.60	125.90	131.20
	2	152401	14.00	171/2	14	SEI 4	LESS	MAIN F14	SWIT	24.70	28.90	34.80	39.20
	6	152402 152403	18.90 23.50	17½ 17½	18 20	4	30 30	F18 F20	4.50 4.70	30.70 35.80	35.10	41.30	45.80
<b>阿斯斯斯斯斯斯</b>	8	152404	28.00	1714	22	4	30	F22	4.90	40.80	40.30 45.40	46.80 52.00	51.30 56.60
	10 12	152405 152406	32.70 39.40	17½ 17½	24 30	4	30 60	F24 F30	5.10 5.60	46.00 54.30	50.60 59.20	57.50 66.60	62.20 71.50
	14 16	152407 152408	44.00 48.70	171/2	32	4	. 60	F32	5.80	59.50	64.40	72.10	77.00
	18	152409	53.40	17½ 17½	34 36	4	60 60	F34 F36	6.00 6.10	64.70 70.10	69.70 75.20	77.60 83.00	82.60 88.10
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	20 22	152410 152411	58.30 68.50	17½ 17½	40 44	4	60	F40	6.50	78.30	83.80	92.10	95.20
100	24	152412	73.60	$17\frac{1}{2}$	46	4	100 100	F44 F46	6.90 7.10	89.90 95.80	95.40 101.30	104.30 110.40	108.10 114.50
	26 28	152413 152414	78.30 83.00	17½ 17½	48 52	4	100 100	F48 F52	7.30 7.70	101.10 107.20	106.70 112.90	116.10 122.90	120.60
	30 32	152415 152416	87.80 92.80	$17\frac{1}{2}$ $17\frac{1}{2}$ $17\frac{1}{2}$	54 56	4	100 100	F54 F56	7.90	112.80	118.50	128.80	128.00 134.10
STATE OF STA								MAIN	SWIT	118.50   C <b>H</b>	124.20	134.90	140.50
2	2	152481 152482	16.10 21.00	$\frac{17\frac{1}{2}}{17\frac{1}{2}}$	14 18	4	30	F14   F18	4.10 4.50	26.80 32.80	31.00 37.20	36.90 43.40	41.30 47.90
	6	152483	25.60	$17\frac{1}{2}$	20	4	30	F20	4.70	37.90	42.40	48.90	53.40
	8 10	152484 152485	30.10 34.80	$17\frac{1}{2}$ $17\frac{1}{2}$	22 24	4	30 30	F22 F24	4.90 5.10	42.90 48.10	47.50 52.70	54.10 59.60	58.70 64.30
	12 14	152486 152487	41.50 46.10	17/2	30	4	60	F30	5.60	56.40	61.30	68.70	73.60
	16	152488	50.80	17½ 17½	32 34	4	60 60	F32 F34	5.80 6.00	61.60	66.50 71.80	74.20 79.70	79.10 84.70
	18	152489 152490	55.50 60.40	17½ 17½	36 40	4	60	F36 F40	6.10 6.50	72.20 80.40	77.30 85.90	,85.10	90.20
	22 24	152491 152492	73.30 78.40	$17\frac{1}{2}$ $17\frac{1}{2}$	46 50	4	100 100	F46 F50	7.10	95.50	101.00	94.20 110.10	97.30 114.20
	26	152493	83.10	171/6	52	4	100	F52		102.00 107.30	107.60 113.00	117.20 123.00	122.00 128.10
f i i	28 30	152494 152495	87.80 92.60	17½ 17½	54 56	4	100	F54 F56	7.90	112.80 118.30	118.50 124.00	128.80 134.70	134.10 140.30
	32	152496	97.60	171/2	60	4	100	F60	8.50	124.70	130.50	141.80	148.00

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for single-branch panels, 125 or 250 volts, and for double-branch panels, 250 volts, also for through-feed panels, will be quoted upon request. Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

2 TO 2-WIRE, 125 VOLTS

Mains—2-wire. Branches—Double, with 10-amp. Push Button Switches, Arranged for N.E.C. Cartridge Fuses

Mains—2-wire. Branches—	Doub	le, with				ıtto	n Swi	tches	nes, Arranged for N.E.C. Cartridge Fuses   SLATE   Panel with Cabinet*				
Panels furnished with main connec-	-			iel Or		37	La		FRAME	-	,		
tions at top, if so ordered, without extra charge.	No. Cir.	Cat. No.	List Price	W.	H.		Cap. Mains	Box Ref.	List	Type	Type AL	Types BM-BN	Type BT
								IN LU					
Carlotte Commission	2 4	165001 165002	\$7.30 12.40	15½ 15½	8 12	4 4	30 30	E 8 E12	\$3.30 3.70	\$16.00 21.80	\$19.90 25.80	\$24.80 31.20	\$29.10 35.70
	6	165003	17.30	151/2	14	4	60	E14	3.90	27.40	31.50	37.00	41.70
F 320 1 1 1 20 7	10	165004 165005	22.20 27.40	$15\frac{1}{2}$ $15\frac{1}{2}$	16 18	4	60 60	E16 E18	4.10	32.70 38.40	36.80 42.60	42.60 48.60	47.40 53.50
京福 6 医日	12	165006	32.70	151/2	22	4	100	E22	4.70	44.80	49.10	55.40	60.50
2	14	165007 165008	38.20 43.20	15½ 15½	24 28	4	100 100	E24 E28	4.90 5.20	50.70 56.70	55.10 61.40	61.70 68.30	67.00 73.70
	18	165009	49.60	151/2	30	4	200	E30	5.40	63.60	68.40	75.50	81.00
5 TE 8	20	165010 165011	54.90 60.00	15½ 15½	32 34	4	200 200	E32 E34	5.60 5.80	69.50 75.20	74.40 80.20	81.70 87.70	87.20 93.20
The state of	24	165012	65.00	151/2	38	4	200	E38	6.10	81.20	86.50	94.30	99.70
the distribution	26 28	165013 165014	70.10 75.40	151/2 151/6	40 42	4	200 200	E40 E42	6.30	89.40 95.30	94.70 100.60	102.60 108.80	105.80 112.30
	30 32	165015 165016	80.30 85.30	1512 1512 1512	44 48	4	200 200	E44 E48	6.70 7.10	100,80 106,90	106.30 112.70	114.70 121.70	118.50 126.10
	172	100010	00.00	10.2	10	_		BLE M		((00),00	112.10	121.10	120.10
	2	165081 165082	8.80 13.70	$15\frac{1}{2}$ $15\frac{1}{2}$	10	4	30	E10 E14	3.50	18.00 23.80	21.90 27.90	27.10 33.40	31.50 38.10
< 420 - MEDI 19	6	165083	19.10	151/2	18	4	60	E18	4.30	30.10	34.30	40.30	45.20
<b>克克斯</b> 三面 五	10	165084 165085	23.90 29.20	15 <sup>1</sup> / <sub>2</sub> 15 <sup>1</sup> / <sub>2</sub>	20 22	4	60 60	E20 E22	4.50 4.70	35.40 41.30	39.70 45.60	45.90 51.90	50.90 57.00
27 - 125 m 1455	12	165086	35.40	151/2	28	4	100	E28	5.20	48.90	53.60	60.50	65.00
2 100 年 100 日	14 16	165087 165088	40.90 45.90	151 2 151 2	30 34	4	100	E30 E34	5.40 5.80	54.90 61.10	59.70 66.10	66.80 73.60	72.30 79.10
	18	165089	53.90	15 <sup>1</sup> 2 15 <sup>1</sup> / <sub>2</sub>	38	4	200	E38	6.10	70.10	75.40	83.20	88.60
3 2 7 2 3	20 22	165090 165091	59.20 64.30	15½ 15½	40	4	200	E40 E42	6.30	78.50 84.20	83.80 89.50	91.70 97.70	94.90 101.20
	24	165092	69.30	151/2	44	4	200	E44	6.70	89.80	95.30	103.70	107.50
水 子	26 28	165093 165094	74.40	15½ 15½	48 50	4	200 200	E48 E50	7.10 7.30	96.00 102.00	101.80 107.90	110.80 117.00	115.20 121.70
The same of the sa	30	165095 165096	84.60	15½ 15½ 15½ 15½	52 54	4	200	E52 E54	7.50	167.50 113.10	113.40 119.00	122.90 128.90	127.90 134.30
					FU	JSE:	LESS	MAI	riwa	CH			
	2	165161 165162	11.60 16.50	$15\frac{1}{2}$ $15\frac{1}{2}$	14	4	30 30	E14   E18	3.90 4.30	22.70	25.80 31.70	31.30 37.70	36.00 42.60
	6	165163	22.50	151/2	22	4	60	E22	4.70	34.60	38.90	45.20	50.30
TO THE PERSON OF	8	165164 165165	27.30 32.60	15 <sup>1</sup> / <sub>2</sub> 15 <sup>1</sup> / <sub>2</sub>	24 23	4	60 60	E24 E26	4.90 5.10	39.80 45.60	44.20 50.10	50.80 56.90	56.10 62.30
5 Sept 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12	165166	40.70	151/2	32	4	100	E32 E34	5.60	55.30 61.40	60.20	67.50	73.00 79.40
	14 16	165167 165168	46.20 51.20	15½ 15½	34 36	4	100	E36	5.80 6.00	66,90	66.40 72.00	73.90 79.80	85.20
	18 20	165169 165170	60.80	151/2	40	6	200	E40 E44	8.20	81.70 88.20	87.00 93.70	96.90 104.30	100.10 108.10
- 1113	22 24	165171	71.20 76.20	1516	46	6	200 200 200	E46	9.00	93.90	99.50	110.40	114.50
	26	165172 165173	81.50	$15\frac{1}{2}$ $15\frac{1}{2}$	48 50	6	200	E48 E50	9.30	99.40 105.20	105.20	116.50 122.60	120.90 127.30
	28 30	165174 165175	86.60 91.50	15 <sup>1</sup> / <sub>2</sub> 15 <sup>1</sup> / <sub>2</sub> 15 <sup>1</sup> / <sub>2</sub>	54 56	6	200 200	E54 E56	10.10 10.40	$\frac{111.80}{117.40}$	117.70 123.40	130.00 136.00	135.50 141.80
TESTINAN TANDA STREET	32	165176	96.59	151/2	58	6	200	E58	10.70	123.00	129.10	141.90	148.10
	2	165241	13.00	15½	FU	JSI:	BLE 1	MAIN E14	SWIT(	CH    23.10	27.20	32.70	37.40
3000 1000	4	165242	17.90	151/2	18	4	30 60	E18 E22	4.30	28.90	33.10 40.30	39.10 46.60	44.00
	8	165243 165244	23.90	15½ 15½	22 24	4	60	E24	4.70	36.00 41.20	45.60	52.50	51.70 57.50
	10 12	165245 165246	34.00 43.90	15 <sup>1</sup> / <sub>2</sub> 15 <sup>1</sup> / <sub>2</sub>	26 34	4	60	E26 E34	5.10 5.80	47.00 59.10	51.50 64.10	58.30 71.60	63.70 77.10
F 30 H 155	14	165247	49.40	151/2	36	4	100	E36	6,00	65.10	70.20	78.00	83.40
4 100 0	16 18	165248 165249	54.40 65.30	15½ 15½	40	4	100	E40 E44	6.30	73.70 87.40	79.00 92.90	86.90 103.50	90.10 107.30
	20	165250	70.60	151/2	46	6	200	E46 E50	9.00	93.30	98.90	109.80	113.90
	22 24	165251 165252	75.70 80.70	15 <sup>1</sup> / <sub>2</sub> 15 <sup>1</sup> / <sub>2</sub>	50 52	6	200 200	E50 E52	9.60 9.80	99.60	105.50 111.20	117.00 123.10	121.70 128.10
	26	165253	85.80	151/6	54	6	200	E54	10.10	111.00	116.90	129.20	134.70
	28 30	165254 165255	91.10 96.00	15½ 15½ 15½	56 60	6	200	E56 E60	10.40	117.00 123.10	123.00 129.30	135.60 142.40	141.40 148.90
	32	165256	101.00	151/2	62	6	200	E62		128.80	135.00	148.80	155.70

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under herding "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for single-branch panels, 125 or 250 volts, and for double-branch panels, 250 volts, also for through-feed panels, will be quoted upon request. Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

3 TO 2-WIRE, 125 VOLTS

Mains-3-wire. Branches-Double, with 10-amp. Push Button Switches, Arranged for N.E.C. Cartridge Fuses

Panels furnished with main connec-		510, 410		nel O					SLATE	Pa	nel wit		
tions at top, if so ordered, without extra charge.	No. Cir.	Cat. No.	List Price	SIZI W.	H.		Cap. Mains	Box Ref.	FRAME	Type	Type	Types BM BN	Type BT
MORNING STORY	1	1.01	71.100		ј н.	Ι ν.		IN LU		[] WV	AL	NA MA	11
	2 4 6	165321 165322 165323	\$ 7.90 13.20 18.20	$\begin{array}{ c c }\hline 17^1_{\ 2}\\ 17^1_{\ 2}\\ 17^1_{\ 2}\end{array}$	8 12 14	4 4	30 30 30	F12 F14	\$3.50 3.90 4.10	\$17.00 23.40 28.90	\$20.90 27.50 33.10	\$26.20 33.10 39.00	\$30.50 37.50 43.40
50- 15 - 15	8 10 12	165324 165325 165326	23.10 28.20 34.00	17 <sup>1</sup> / <sub>2</sub> 17 <sup>1</sup> / <sub>2</sub> 17 <sup>1</sup> / <sub>2</sub>	16 18 12	4 4	30 30 60	F16 F18 F22	4.30 4.50 4.90	34.40 40.00 46.80	38.70 44.40 51.40	44.60 50.60 58.00	49.10 55.10 62.60
	14 16 18 20	165327 165328 165329	39.00 44.00 49.20	17 <sup>1</sup> 2 17 <sup>1</sup> 2 17 <sup>1</sup> 2	24 26 28	4 4 4	60 60 60	F24 F26 F28	5.10 5.20 5.40	52.30 57.99 63.50	56.90 62.70 68.30	63.80 69.60 75.60	68.50 74.40 80.40
	22 24 26	165330 165331 165332	54.50 60.90 66.40	171 2 171 2 171 2	32 34 38	4 4	100 100	F32 F34 F38	5.80 6.00 6.30	70.00 76.90 83.60	74.90 81.90 88.80	82.60 89.80 96.80	87.50 94.80 101.90
- LE (0 - 0)	28 30 32	165333 165334 165335 165336	71.50 76.60 81.80 87.20	1712 1712 1712 1712	40 42 44 48	4 4 4	100 100 100	F40 F42 F44 F48	6.50 6.70 6.90 7.30	91.50 97.40 103.20 110.00	97.00 102.80 108.70 115.60	105.30 111.40 117.60 125.00	108.40 114.80 121.40 129.50
						_		LE M			110.00	1 120.00	120.00
3 # be # 3	2 4 6	165401 165402 165403	10.20 15.50 20.50	17 <sup>1</sup> 2 17 <sup>1</sup> 2 17 <sup>1</sup> 2	10 14 16	4 4 4	30 30 30	F10 F14 F16	3.70 4.10 4.30	19.90 26.20 31.80	23.90 30.40 36.10	29.30 36.30 42.00	33.70 40.70 46.50
	8 10 12	165404 165405 165406	25.40 30.50 36.70	$\begin{array}{c} 17^{1}_{\ 2} \\ 17^{1}_{\ 2} \\ 17^{1}_{\ 2} \end{array}$	18 22 24	4 4	30 30 60	F18 F22 F24	4.50 4.90 5.10	37.20 43.30 50.00	41.60 47.90 54.60	47.80 54.50 61.50	52.30 59.10 66.20
	14 16 18	165407 165408 165409	41.70 46.80 51.90	17½ 17½ 17½ 17½	28 30 32	4 4	60 60	F28 F30 F32	5.40 5.60 5.80	56.00 61.70 67.40	60.80 66.60 72.30	68.10 74.00 80.00	72.90 78.90 84.90
	20 22 24	165410 165411 165412	57.20 65.00 70.50	17 <sup>1</sup> / <sub>2</sub> 17 <sup>1</sup> / <sub>2</sub> 17 <sup>1</sup> / <sub>2</sub>	34 40 44	4 4	100 100	F34 F40 F44	6.00 6.50 6.90	73.20 85.00 91.90	78.20 90.50 97.40	86.10 98.80 106.30	91.10 101.90 110.10
3 4 7	26 28 30 32	165413 165414 165415 165416	75.60 80.70 85.90 91.30	17 <sup>1</sup> / <sub>2</sub> 17 <sup>1</sup> / <sub>2</sub> 17 <sup>1</sup> / <sub>2</sub>	46 48 50 54	4 4 4	100 100 100 100	F46 F48 F50 F54	7.10 7.30 7.50 7.90	97.80 103.50 109.50 116.30	103.30 109.10 115.10 122.00	112.40 118.50 124.70 132.30	116.50 123.00 129.50 137.60
Section 2017									SWIT		122.00	102.00	107.00
	2 4 6	165481 165482 165483	14.40 19.70 24.70	$17^{1}_{2}$ $17^{1}_{2}$ $17^{1}_{2}$	14 18 20	4 4	30 30 30	F14 F18 F20	4.10 4.50 4.70	25.10 31.50 37.00	29.30 35.90 41.50	35.20 42.10 48.00	39.60 46.60 52.50
	8 10 12	165484 165485 165486	29.60 34.70 41.80	17 <sup>1</sup> / <sub>2</sub> 17 <sup>1</sup> / <sub>2</sub> 17 <sup>1</sup> / <sub>2</sub>	22 24 30	4 4 4	30 30 60	F22 F24 F30	4.90 5.10 5.60	42.40 48.00 56.70	47.00 52.60 61.60	53.60 59.50 69.00	58.20 64.20 73.90
<b>1.3</b> 11	14 16 18 20	165487 165488 165489	46.80 51.90 57.00	171 5 171 5 171 2	32 34 36	4 4	60 60 60	F32 F34 F36	5.80 6.00 6.10	62.30 67.90 73.70	67.20 72.90 78.80	74.90 80.80 86.60	79.80 85.80 91.70
	20 22 24 26	165490 165491 165492 165493	62.30 72.90 78.40	171 ½ 171 ½ 171 ½	40 44 46	4 4	60 100 100	F40 F44 F46	1	82.30 94.30 100.60	87.80 99.80 106.10	96.10 108.70 115.20	99.20 112.50 119.30
	28 30 32	165494 165495 165496	83.50 88.60 93.80 99.20	1712 1712 1712 1712	48 52 54 56	4 4 4	100 100 100 100	F48 F52 F54 F56	7.70 7.90	106.30 112.80 118.80 124.90	111.90 118.50 124.50 130.60	121.30 128.50 134.80 141.30	125.80 133.60 140.10 146.90
Massacratical Contraction					FU	SI	_		SWITC				
199	2 4 6	165561 165562 165563	16.50 21.80 26.80	$17\frac{1}{2}$ $17\frac{1}{2}$ $17\frac{1}{2}$	14 18 20	4 4	30 30 30	F14 F18 F20	4.10 4.50 4.70	27.20 33.60 39.10	31.40 38.00 43.60	37.30 44.20 50.10	41.70 48.70 54.60
	8 10 12	165564 165565 165566	31.70 36.80 43.90	$17\frac{1}{2}$ $17\frac{1}{2}$ $17\frac{1}{2}$	22 24 30	4 4 4	30 30 60	F22 F24 F30	4.90 5.10 5.60	44.50 50.10 58.80	49.10 54.70 63.70	55.70 61.60 71.10	60.30 66.30 76.00
	14 16 18	165567 165568 165569	48.90 54.00 59.10	171 § 171 § 171 ½ 171 ½	32 34 36	4 4 4	60 60 60	F30 F34 F36	5.80 6.00 6.10	64.40 70.00 75.80	69.30 75.00 80.90	77.00 82.90 88.70	81.90 87.90 93.80
1	20 22 24	165570 165571 165572	64.40 77.70 83.20	1713 1713 1713	40 46 50	4 4	60 100 100	F40 F46 F50	- 1	84.40 99.90 106.80	89.90 105.40 112.40	98.20 114.50 122.00	101.30 118.60 126.80
	26 28 30 32	165573 165574 165575 165576	88.30 93.40 98.60 104.00	17½ 17½ 17½ 17½ 17½	52 54 56 60	4 4 4 4	100 100 100 100	F52 F54 F56 F60	7.90 8.10	112.50 118.40 124.30 131.10	118.20 124.10 130.00 136.90	128.20 134.40 140.70 148.20	133.30 139.70 146.30 154.40

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cubinet, and slate frame if one is required.

Prices tor single-branch panels, 125 or 250 volts, and for double branch panels, 250 volts, also for through-feed panels, will be quoted upon request. Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

2 TO 2-WIRE, 125 VOLTS

Mains-2-Wire. Branches-Double. Arranged for Edison Plug Fuses

Panels furnished with main connec-			Pa	nel O					SLATE	Pa	nel witl	el with Cabinet*										
tions at top, if so ordered, without extra charge.	No. Cir	Cat.	List	Sizi	EINI		Cap.	Box	FRAME	Type	Type	Types BM-BN	Туре									
	UIT.	No.	Price	W.	[ н.	D.	Mains	Ref.	List	Ah	AL	RM-RM	BI									
	2 4 6	170001 170002 170003	\$4.20 6.40 8.60	8 8 8	8 10 14	4 4 4	30 30 60	H 8 H10 H14	\$2.70 2.90 3.30	\$11.50 14.10 17.00	\$15.30 17.90 21.00	\$19.10 21.90 25.40	\$23.60 26.50 30.30									
· · · · · · · · · · · · · · · · · · ·	8 10 12	170004 170005 170006	10.70 12.70 15.40	8 8	18 20 24	4 4	60 60 100	H18 H20 H24	3.70 3.90 4.30	19.60 22.00 25.20	23.90 26.30 29.80	28.80 31.50 35.50	33.90 36.70 40.90									
<b>=</b> :	14 16 18	170007 170008 170009	17.90 19.90 23.60	8 8	28 30 34	4 4 4	100 100 200	H28 H30 H34	4.70 4.90 5.20	28.40 30.80 35.10	33.20 35.60 40.10	39.40 42.10 47.00	45.00 47.80 52.90									
1-1	20 22 24	170010 170011 170012	25.80 28.20 30.30	8 8 8	36 40 42	4 4	200 200 200	H36 H40 H42	5.40 5.80 5.90	37.70 43.30 46.00	42.70 48.60 51.20	49.90 57.00 59.70	55.8 59.8 62.7									
Amend Science Science	26 28 30	170013 170014 170015	32.70 34.90 37.10	8 8 8	46 48 52	4 4	200 200 200	H46 H48 H52	6.30 6.50 6.90	49.40 52.10 55.30	54.70 57.50 60.80	63.70 66.70 70.50	66.9 70.1 74.5									
	32	170016	39.30	8	54	4	USIE	H54	7.10 IAINS	58.10	63.60   73.40   77.80											
	2	170021	5.70	8	1 10	4	30	H10	2.90	13.40	17.20	21.20	25.8									
***	6 8	170022 170023 170024	7.90 10.40 12.50	8 8	12 18 22	4 4	30 60 60	H12 H18 H22	3.10 3.70 4.10	15.90 19.30 22.00	19.90 23.60 26.40	24.10 28.50 31.90	28.8 33.6 37.2									
10 - 20 - 200 - 10 - 10 - 10 - 10 - 10 -	10 12 14	170025 170026 170027	14.50 18.10 20.60	8 8	24 30 34	4	60 100	H30 H34	4.30 4.90	24.30 29.00	28.90 33.80	34.60 40.30	40.0									
- <b> </b>	16 18	170028 170029	22.60 27.90	8	36 40	4	100 200	H36 H40	5.20 5.40 5.80	32.10 34.50 43.00	37.10 39.50 48.30	44.00 46.70 56.70	49.9 52.6 59.5									
	20 22 24	170030 170031 170032	30.10 32.50 34.60	8 8 8	44 46 50	4 4	200 200 200	H44 H46 H50	6.10 6.30 6.70	46.20 49.20 52.40	51.50 54.50 57.80	60.30 63.50 67.20	63.4 66.7 70.8									
<b>新京山 建汽车水 茅京山</b>	26 28 30 32	170033 170034 170035 170036	37.00 39.20 41.40 43.60	8 8 8	52 56 58 62	4 4 4	200 200 200 200	H52 H56 H58 H62	6.90 7.30 7.50 7.90	55.20 58.50 61.20 64.40	60.70 64.10 66.80 70.10	70.40 74.00 76.90 80.60	74.4 78.9 82.3 86.9									
Medice 1524	102	110000	20.00	1 0	-	_	LESS	MAIN			10.10	00.00	00.0									
	2 4 6	170041 170042 170043	8.50 10.70 13.80	8 8 8	16 18 24	4 4	30 30 60	H 16 H 18 H 24	3.50 3.70 4.30	17.10 19.60 23.60	21.20 23.90 28.20	26.00 28.80 33.90	31.0 33.9 39.3									
: <b>=</b> 5	8 10 12	170044 170045 170046	15.90 17.90 23.40	8 8 8	26 30 34	4 4 4	60 60 100	H26 H30 H34	4.50 4.90 5.20	26.10 28.80 34.90	30.70 33.60 39.90	36.70 40.10 46.80	42.2 45.8 51.7									
	14 16 18	170047 170048 170049	25.90 27.90 34.80	8 8 8	38 40 48	4 4 6	100 100 200	H38 H40 H48	5.60 5.80 8.50	38.20 43.00 53.50	43.40 48.30 58.90	50.80 56.70 70.40	56.6 59.5 73.8									
	20 22 24	170050 170051 170052	37.00 39.40 41.50	8 8 8	50 54 56	6 6 6	200 200 200	H50 H54 H56	8.70 9.20 9.50	56.40 59.80 62.50	61.80 65.30 68.10	73.50 77.60 81.90	77.1 82.0 87.4									
	26 28 30 32	170053 170054 170055 170056	43.90 46.10 48.30 50.50	8 8 8	60 62 66 68	6 6 6	200 200 200 200	H60 H62 H66 H68	10.00 10.20 10.80 11.00	65.90 68.80 71.90 74.60	71.60 74.50 77.70 84.50	86.20 89.50 93.80 96.90	92.6 96.3 101.7 105.4									
SECONOMIC DE	02	110000	00.00		<u> </u>	_		MAIN			04.00	00.00	100.4									
10 mm (67 cz.	2 4	170061 170062	9.90 12.10	8 8	16 18	4	30 30	H16 H18	3.50	18.50 21.00	22.60 25.30	27.40 30.20	32.40 35.30									
10 (21 mm 42 45 10 (21 mm 42 45	8 10	170063 170064 170065	15.20 17.30 19.30	8 8 8	24 26 30	4 4 4	60 60 60	H24 H26 H30	4.30 4.50 4.90	25.00 27.50 30.20	29.60 32.10 35.00	35.30 38.10 41.50	40.70 43.60 47.20									
	12 14 16	170066 170067 170068	26.60 29.10 31.10	8 8	38 40 44	4 4	100 100 100	H38 H40 H44	5.60 5.80 6.10	38.90 44.20 47.20	44.10 49.50 52.50	51.50 57.90 61.30	57.30 60.70									
₩ W	18 20	170069 170070	39.30 41.50	8	50 52	6	200 200	H50 H52	8.70 9.00	58.70 61.30	64.10 66.80	75.80 79.00	64.40 79.40 83.00									
F & K	22 24 26	170071 170072 170073	43.90 46.00 48.40	8 8 8	56 58 62	6 6	200 200 200	H56 H58 H62	9.50 9.70 10.20	64.90 67.60 71.10	70.50 73.20 76.80	84.30 87.30 91.80	89.80 93.30 98.60									
. 77 .	30 32	170074 170075 170076	50.60 52.80 55.00	8 8 8	64 68 70	6 6 6	200 200 200	H64 H68 H70	10.50 11.00 11.30	73.70 76.90 79.70	79.50 82.80 85.60	95.00 99.20 102.40	102.40 107.70 111.50									

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for single-branch and through-feed panels will be quoted upon request.

Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

3 TO 2-WIRE, 125 VOLTS

Mains-3-wire. Branches-Double, Arranged for Edison Plug Fuses

4   170102   7.20   8   10   4   30   1110   2.90   14.93     6   170103   9.20   8   14   4   30   1114   3.30   17.60     8   170104   11.60   8   16   4   30   1116   3.50   20.20     10   170105   14.00   8   20   4   30   1120   3.90   23.30     12   170106   16.80   8   24   4   60   1124   4.30   26.60     14   170107   18.90   8   26   4   60   1124   4.50   29.10     16   170108   21.30   8   30   4   60   1130   4.90   32.20     18   170109   23.50   8   32   4   60   1130   4.90   32.20     18   170110   25.90   8   36   4   60   1436   5.40   37.80     22   170111   29.70   8   40   4   100   1149   5.80   44.80     24   170112   32.10   8   42   4   100   1446   5.90   47.80     26   170113   34.50   8   46   4   100   1446   6.50   53.90     30   170115   39.00   8   52   4   100   1154   7.10   60.20     32   170116   41.40   8   54   4   100   1154   7.10   60.20     32   170116   41.40   8   54   4   100   1154   7.10   60.20     33   170116   41.40   8   54   4   100   1154   7.10   60.20     34   35   36   36   36   36   36   36   46   30   37.80     30   170116   41.40   8   54   4   100   1154   7.10   60.20     35   36   37   38   38   38   38   38   38   38	18.70 21.60 24.30 27.60 31.20 33.70 37.00 39.60 42.80 50.10 53.00 56.50	\$19.80 22.70 26.00 29.10 32.80 36.90 39.70 43.50 46.40 50.50 58.50 61.50	\$24.30 27.30 30.90 34.10 38.00 42.30 45.20 49.20 52.20 55.90 61.30
Name	\$16.00 18.70 21.60 24.30 27.60 31.20 33.70 37.00 39.60 42.80 50.10 53.00 56.50	\$19.80 22.70 26.00 29.10 32.80 36.90 39.70 43.50 46.40 50.00 58.50	\$24.30 27.30 30.90 34.10 38.00 42.30 45.20 49.20 52.20 55.90 61.30
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	18.70 21.60 24.30 27.60 31.20 33.70 37.00 39.60 42.80 50.10 53.00 56.50	22.70 26.00 29.10 32.80 36.90 39.70 43.50 46.40 50.00 58.50	27.30 30.90 34.10 38.00 42.30 45.20 49.20 52.20 55.90 61.30
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	27.60 31.20 33.70 37.00 39.60 42.80 50.10 53.00 56.50	29.10 32.80 36.90 39.70 43.50 46.40 50.00 58.50	38.00 42.30 45.20 49.20 52.20 55.90 61.30
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	33.70 37.00 39.60 42.80 50.10 53.00 56.50	39.70 43.50 46.40 50.00 58.50	45.20 49.20 52.20 55.90 61.30
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	50.10 53.00 56.50	58.50	61.30
28   170114   36.70   8   48   4   100   1148   6.50   53.90     30   170115   39.00   8   52   4   100   1152   6.90   57.20     32   170116   41.40   8   54   4   100   1154   7.10   60.20	56.50 59.30		64.50
	59.30 62.70 65.70	65.50 68.50 72.40 75.50	68.70 71.90 76.40 79.90
FUSIBLE MAINS	00.10	10.00	10.00
2   170121   7.20   8   10   4   30   H10   2.90   14.90   4   170122   9.50   8   12   4   30   H12   3.10   17.50	18.70	22.70	27.20
	21.50	25.70	30.40
6 170123 11.50 8 16 4 30 H16 3.50 20.10	24.20	29.00	34.00
8     170124     13.90     8     18     4     30     H18     3.70     22.80       10     170125     16.30     8     22     4     30     H122     4.10     25.80       12     170126     19.50     8     28     4     60     H28     4.70     30.00	27.10	32.00	37.10
	30.20	35.70	41.00
	34.80	41.00	46.60
14 170127 21.60 8 30 4 60 H30 4.90 32.50	37.30	43.80	49.50
16 170128 24.00 8 34 4 60 H34 5.20 35.50	49.50	47.40	53.30
18 170129 26.20 8 36 4 60 H36 5.40 38.10	43.10	50.30	56.20
20 170130 28.60 8 40 4 60 1140 5.80 43.70	49.00	57.40	60.20
22 170131 33.80 8 46 4 100 1146 6.30 50.50	55.80	64.80	68.00
24 170132 36.20 8 48 4 100 1146 6.50 53.40	58.80	68.00	71.40
26   170133   38.60   8   52   4   100   H52   6.90   56.80   28   170134   40.80   8   54   4   100   H54   7.10   59.60   30   170135   43.10   8   58   4   100   H58   7.50   62.90   32   170136   45.50   8   60   4   100   H69   7.70   65.70	62.30	72,00	76.00
	65.10	74,90	79.30
	68.50	78,60	84.00
	71.40	81,70	87.60
FUSELESS MAIN SWITCH			
2   170141   11.40   8   16   4   30   1116   3.50   20.00   4   170142   13.70   8   18   4   30   1118   3.70   22.60   6   170143   15.70   8   22   4   30   H22   4.10   25.20	24.10	28.90	33.90
	26.90	31.80	36.90
	29.60	35.10	40.40
8 170144 18.10 8 24 4 30 1124 4.30 27.90	32.50	38.20	43.60
10 170145 20.50 8 28 4 30 1128 4.70 31.00	35.80	42.00	47.60
12 170146 24.60 8 32 4 60 132 5.10 35.80	40.70	47.50	53.30
14 170147 26.70 8 36 4 60 H36 5.40 38.60	43.60	50.80	56.70
16 170148 29.10 8 38 4 60 H38 5.60 41.40	46.60	54.00	59.80
18 170149 31.30 8 42 4 60 H32 5.50 47.00	52.20	60.70	63.70
20 170150 33.70 8 44 4 60 H44 6.10 49.80	55.10	63.90	67.00
22 170151 41.70 8 50 4 100 H50 6.70 59.50	64.90	74.30	77.90
24 170152 44.10 8 52 4 100 H52 6.90 62.30	67.80	77.50	81.50
26 170153 46.50 8 56 4 100 H56 7.30 65.80	71.40	81.30	86.20
28 170154 48.70 8 58 4 100 H58 7.50 68.50	74.10	84.20	89.60
30 170155 51.00 8 62 4 100 H62 7.90 71.80	77.50	88.00	94.30
32 170156 53.40 8 64 4 100 H64 8.10 74.60	80.40	91.10	97.80
FUSIBLE MAIN SWITCH	00.10	01.10	31.00
2   170161   13.50   8   16   4   30   1116   3.50   22.10   4   170162   15.80   8   18   4   30   1118   3.70   24.70	26.20	31.00	36.00
	29.00	33.90	39.00
6   170163   17.80   8   22   4   30   H22   4.10   27.30	32.70	37.20	42.50
10 170165 22.60 8 28 4 30 1128 4.70 33.10 12 170166 26.70 8 32 4 60 H32 5.10 37.90	34.60 37.90 42.80	40.30 44.10 49.60	45.70 49.70 55.40
14 170167 28.80 8 36 4 60 H36 5.40 40.70	45.70	52.90	58.80
16 170168 31.20 8 38 4 60 H38 5.60 43.50	48.70	56.10	61.90
18 170169 33.40 8 42 4 60 H42 5.90 49.10	54.30	62.80	65.80
20 170170 35.80 8 44 4 60 H44 6.10 51.90	57.20	66.00	69.10
22 170171 46.50 8 52 4 100 H55 152 6.90 64.70	70.20	79.90	83.90
24 170172 48.90 8 56 4 100 H56 7.30 68.20	73.80	83.70	88.60
26 170173 51.30 8 58 4 100 H58 7.50 71.10	76.70	86.80	92.20
28 170174 53.50 8 62 4 100 H62 7.90 74.30	80.00	90.50	96.80
30 170175 55.80 8 64 4 100 H64 8.10 77.00	82.80	93.50	100.20
32 170176 58.20 8 68 4 100 H68 8.50 80.30	86.20	97.40	105.20

Catalogue number is for panel only. If slate frame or cabinct is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for through-feed panels will be quoted upon request.

Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

2 TO 2-WIRE, 125 VOLTS
Mains-2-wire. Branches-Double, with 30-Ampere Knife Switches, Arranged for Edison Plug Fuses

| SLATE | Panel with Cabinet\* P

Panels furnished with main connec-	1		Par	iel on	ly			Cabine					
tions at top, if so ordered, without extra charge.	No.	Cat.	List Price	SIZE I			Cap. Mains	Box Ref.	FRAME	Type	Type AL	Types BM-BN	Type Bl
	1				-			N LU	US	-			
	2	170201	\$5.50	121/2	8	4	30	J 8	\$3.10	\$13.80	\$17.60	\$22.20 26.00	\$26.60 30.50
	6	170202 170203	8.50 11.60	$12\frac{1}{2}$ $12\frac{1}{2}$	10 14	4 4	30 60	J10 J14	3.30	17.20 21.20	21.10 25.30	30.60	35.30
William who have Marketing	8	170204	14.80	121/2	18	4	60	J18	4.10	25.30	29.60	35.20	40.10
S	10	170205	17.70	121/9	20	4	60	J20	4.30	28.60	33.00	38.90 44.00	43.90 49.10
	12	170206	21.30	121/2	24	4	100	J24 J28	4.70 5.10	33.10	37.70 42.50	49.20	54.60
10000000000000000000000000000000000000	14	170207 170208	24.90 27.90	$12\frac{1}{2}$ $12\frac{1}{2}$	28 30	4 4	100 100	J28 J30	5.30	41.20	46.10	53.10	58.50
(4) 2 - HA (14) 1 mart (4) 100 - 412	18	170209	32.60	$12\frac{1}{2}$	34	4	200	J34	5.60	46.90	52.10	59.30	64.80
	20	170210	35.80	$12\frac{1}{2}$ $12\frac{1}{2}$	36 40	4 4	200 200	J36 J40	5.80 6.20	50.60 57.40	55.90 62.70	63.20 70.70	68.70 73.70
	22 24	170211 170212	39.10 42.20	121/2	42	4	200	J42	6.30	61.20	66.60	74.40	77.70
Lacontact III I have a first the second	26	170213	45.50	121/2	46	4	200	J46	6.70	65.70	71.20	79.60	83.40
	28	170214 170215	48.70 51.80	$\frac{12\frac{1}{2}}{12\frac{1}{2}}$	48 52	4	200	J48 J52	6.90 7.30	69.59 73.80	75.00 79.40	83.70 88.50	87.80 93.40
	32	170216	55,00	1212	54	4	200	J54	7,50	77.60	83,20	92.60	97.70
								LE M			40.40	04 70	00.00
	2 4	170221 170222	7.00	12½ 12½	10 12	4	30 30	J10 J12	3.30	15.70 19.20	19.10 23.20	24.50 28.30	29.00 32.90
THE RESIDENCE OF THE PROPERTY AND ADDRESS OF THE	6	170223	13.40	121/2	18	4	60	J18	4.10	23.90	28.20	33.80	38.70
	8	170224	16.60	121/2	22	4	60 60	J22 J24	4.50 4.70	27.90 31.30	32.40 35.90	38.50 42.20	43.50 47.30
Complete results. Rev. and All Co. A. Co. Company of the Co.	10 12	170025 170226	19.50 24.00	12½ 12½	24 30	4	100	J30	5.30	37.30	42.20	49.20	54.60
	14	170227	27.60	121/2	34	4	100	J34	5.60	41.90	47.10	54.30	59.80
St. 1. Junioro W. A. Princero VIII. Highway	16 18	170228 170229	30.60 36.90	12½ 12½	36 40	4	100 200	J36 J40	5.80 6.20	45.40 55.20	50.70 60.50	58.00 68.50	63.50 71.50
Mark Town	20	170230	40.10	121/6	44	4	200	J44	6.50	59.70	65.10	73.40	76.80
	22	170231	43.40	1212	46 50	4	200 200	J46 J50	6.70 7.10	63.60	69.10 73.40	77.50 82.30	81.30 86.80
	24 26	170232 170233	46.50	121/2	52	4	200	J52	7.30	71.80	77.40	86.50	91.40
Process of the Contract of the	28	170234	53.00	1916	56	4	200	J56	7.70	76.30	82.00	91.60	97.10 101.60
	30	170235 170236	56.10 59.30	12½ 12½	58 62	4	200 200	J58 J62	7.90 8.30	80.00 84.40	85.80 90.30	95.60 100.80	107.60
the manufacture of the state of	1	2111200		/2			LESS	MAI	N SWI	TCH			
Committee of the committee of the	2	170241	9.80	121/2	16	4	30	J16	3.90	19.80	24.00 27.60	29.50 33.20	34.30 38.10
2 - W (m - mm ) m 110-11	6	170242 170243	12.80 16.80	121/2	18 24	4	30 60	J18 J24	4.10	23.30	33.20	39.50	44.60
	8	170244	20.00	121/6	26	4	60	J26	4.90	32.30	37.00	43.50	48.80
	10 12	170245 170246	22.90 29.30	12 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub>	30	4	100	J30 J34	5.30 5.60	36.20 43.60	41.10 48.80	48.10 56.00	53.50 61.50
	14	170247	32.90	1216	38	4	100	J38	6.00	48.20	53,60	61.20	66.60
	16	170248	35.90	1213	40	4	100	J40	6.20	54.20	59.50 72.00	67.50 82.40	70.50 86.50
1000 B 6	18	170249 170250	43.80	121/2	48 50	6	200	J48 J50	9.10	66.50	75.80	86.50	91.00
	22	170250	50.30	121/2	54	6	200	J54	9,90	75.00	80.60	91.89	96.90
The second	24	170252	53.40	121/2	56	6	200	J56	10.20	78.80	84.50	95.90	101.40
	26 28	170253 170254	56.70 59.90	121/2	60	6	200 200	J60 J62	10.70	83.50 87.30	89.30 93.20	101.10 105.60	107 50 112.40
	30	170255 170256	63.00 66.20	$\begin{array}{c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	68	6	200	J66 J68	11.50	91.70	97.70	110.70 114.80	118.60 123.30
	1 02	170200	00.20	1272	<u> </u>	-	,	MAIN			1 101.10	111.00	120.00
4-1000-000-00	2	170261	11.20	12½ 12½	16	4	30	J16	3.90	21.20	25.40	30.90	35.70
	6	170262 170263	14.20 18.20	121/2	13	4	30 60	J18 J24	4.10	24.70	29.00 34.60	34.60 40.90	39.50 46.00
Grand State of the	8	170264	21.40	121/2	26	4	60	J26	4.90	33.70	38.40	44.90	50.20
	10	170265	24.30 32.50	$12\frac{1}{2}$ $12\frac{1}{2}$	30	4	100	J30 J38	5.30	37.60 47.80	42.50 53.20	49.50 60.80	54.90 66.20
	12 14	170266 170267	36.10	121/2	40	4	100	J40	6.20	54.40	59.70	67.70	70.70
	16	170268	39.10	1216	44	4	100	J44	6.50	58.70	64.10	72.40	75.80
	18	170269	48.30	121/2	50	6	200	J50	9.40 9.70	71.60	77.10 81.10	87.80 92.00	92.30
	20 22	170270 170271	51.50 54.80	12½ 12½	52 56	6	200	J52 J56	10.20	80.20	85.90	97.30	102.80
	24	170272	57.90	121/2	58	6	200	J58	10.40	84.00	89.80	101.40	107.40
	26 28	170273 170274	61.20	12½ 12½	62	6	200	J62 J64	11.00	88.60 92.50	94.50 98.40	106.90 111.10	113.70 118.50
	30	170275	67.50	121/2	68	6	200	J68	11.70	96.90	103.00	116.10	124.60 129.40
	32	170276	70.70	121/2	70	6	200	J70	12.00	100.80	106.90	120.30	120.30

Catalogue number is for panel only. If slate frame or eabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for single-branch and through-feed panels will be quoted upon request.

Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

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3 TO 2-WIRE, 125 VOLTS

Mains-3-wire. Branches-Double, with 30-Ampere Knife Switches, Arranged for Edison Plug Fuses

nels furnished with main connec-			Pa	nel O					SLATE	Pan	el witl	ı Cabin	et*
tions at top, if so ordered, without extra charge.	No. Cir.	Cat.	List Price	Size	IN I	N.	Cap.	Box Ref.	FRAME	Type	Type	Types BLI-BN	Type
1		2.00	24100			44.		N LU		- 44	Au	DM-DM	21
	2 4 6	170301 170302 170303	\$6.20 9.30 12.20	12½ 12½ 12½ 12½	8 10 14	4 4	30 30 30	J 8 J10 J14	\$3.10 3.30 3.70	\$14.50 18.60 21.80	\$18.30 21.90 25.90	\$22.90 26.80 31.20	\$27.3 31.3 35.9
ics 18- i	8 10 12	170304 170305 170306	15.70 19.00 22.70	12½ 12½ 12½ 12½	16 20 24	4 4 4	30 30 60	J16 J20 J24	3.90 4.30 4.70	25.70 29.93 34.50	29.90 34.30 39.10	35.40 40.20 45.40	40.2 45.2 50.5
	14 16 18	170307 170308 170309	25.90 29.30 32.50	12½ 12½ 12½ 12½	26 30 32	4 4	60 60 60	J26 J20 J32	4.90 5.30 5.40	38.20 42.03 46.30	42.90 47.50 51.40	49.40 54.53 58.40	54.7 59.9 63.9
	20 22 24	170310 170311 170312	35.90 40.60 44.00	12½ 12½ 12½ 12½	36 40 42	4 4	60 100 100	J36 J40 J42	5.80 6.20 6.30	50.70 58.93 63.00	56.00 64.20 68.40	63.30 72.20 76.20	68.8 75.2 79.5
	26 28 30	170313 170314 170315	47.30 50.50 53.70	12½ 12½ 12½	46 48 52	4 4	100 100 100	J46 J48 J52	6.70 6.90 7.30 7.50	67.50 71.30 75.70	73.00 76.80 81.30	81.40 85.50 90.40	85.2 89.6 95.3
	32	170316	57.10	121/2	54	4	100	J54   LEM.		79.70	85.30	94.70	99.8
	2	170321	8.50	12½ 12½	10	4	30	J10	3.30	17.20	21.10	26.00	30.5
ge er mage in a eg.	6 8	170322 170323 170324	10.60	12½ 12½ 12½	12 16 18	4	30 30 30	J12 J16 J18	3.50	19.80 23.50	23.80 27.70	28.93 33.20	33.5 38.0
	10 12	170325 170326	18.00 21.30 25.40	$12\frac{1}{2}$ $12\frac{1}{2}$	22 28	4 4	30 60	J22 J28	4.10 4.50 5.10	28.50 32.60 38.20	32.80 37.10 43.00	38.40 43.20 49.70	43.3 48.2 55.1
	14 16 18	170327 170328 170329	28.60 32.00 35.20	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	30 34 36	4 4 4	60 60 60	J30 J24 J36	5.30 5.60 5.80	41.90 46.30 50.00	46.80 51.50 55.30	53.80 58.70 62.60	59.2 64.2 68.1
	20 22 24	170330 170331 170332	38.60 44.70 48.10	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	40 46 48	4 4 4	60 100 100	J40 J46 J48	6.20 6.70 6.90	56.90 64.93 68.90	62.20 70.40 74.40	70.20 78.80 83.10	73.2 82.6 87.2
	26 28 30 32	170333 170334 170335	51.40 54.60 57.80 61.20	12½ 12½ 12½ 12½ 12½	52 54 58 60	4 4 4	100 100 100 100	J52 J54 J58 J60	7.30 7.50 7.90	73.40 77.20 81.70 85.70	79.00 82.80 87.50	88.10 92.20 97.30	93.0 97.3 103.3
	32	170336	01.20	1272		_		MAIN	8.10   SWITC		91.50	101.60	108.0
j - 2 - 1	2 4 6	170341 170342 170343	12.70 15.80 18.70	12½ 12½ 12½ 12½	16 18 22	4 4	30 30 30	J16 J18 J22	3.90 4.10 4.50	22.70 26.30 30.00	26.90 30.60 34.50	32.40 36.20 40.60	37.2 40.1 45.6
	8 10 12	170344 170345 170346	22.20 25.50 30.50	12½ 12½ 12½ 12½	24 28 32	4 4	30 30 60	J24 J28 J32	4.70 5.10 5.40	34.00 38.30 44.30	38.60 43.10 49.40	44.90 49.80 56.40	50.00 55.20 61.90
	14 16 18	170347 170348 170349	33.70 37.10 40.30	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	36 38 42	4 4	60 60 <b>60</b>	J36 J38 J42	5.80 6.00 6.30	48.50 52.40 59.30	53.80 57.80 64.70	61.10 65.40 72.50	66.6 70.8 75.8
	20 22 24	170350 170051 170352	43.70 52.60 56.00	12½ 12½ 12½ 12½	44 50 52	4 4 4	60 100 100	J44 J50 J52	6.50 7.10 7.30	63.30 74.00 78.00	68.70 79.50 83.60	77.00 88.40 92.70	80.4 92.9 97.6
	26 28 30	170353 170354 170355	59.30 62.50 65.70	12½ 12½ 12½	56 58 62	4 4 4	100 100 100	J56 J58 J62	7.70 7.90 8.30	82.60 86.40 90.80	88.30 92.20 96.70	97.90 102.00 107.20	103.4 108.0 114.0
	32	170356	69.10	121/2	64	4	100   LE I	J64 ( MAIN	SWITC	94.80	100.70	111.50	118.9
Contract to the second	2	170361	14.80	121/2	16	4	30	J16	3.90	24.80	29.00	34.50	39.30
	6 8	170362 170363 170364	17.90 20.80	12½ 12½	18 22 24	4 4	30 30 30	J18 J22	4.10 4.50	28.40 32.10	32.70 36.60	38.30 42.70	43.20 47.70
	10 12	170365 170366	24.30 27.60 32.60	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	28 32	4	30 60	J24 J28 J32	4.70 5.10 5.40	36.10 40.40 46.40	40.70 45.20 51.50	47.00 51.90 58.50	52.10 57.30 64.00
	14 16 18	170367 170368 170369	35.80 39.20 42.40	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	36 38 42	4 4	60 60 60	J36 J38 J42	5.80 6.00 6.30	50.60 54.50 61.40	55.90 59.90 66.80	63.20 67.50 74.60	68.70 72.90 77.90
TIT	20 22 24	170370 170371 170372	45.80 57.40 60.80	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	44 52 56	4 4 4	60 100 100	J44 J52 J56	6.50 7.30 7.70	65.40 79.40 84.10	70.80 85.00 89.80	79.10 94.10 99.40	82.50 99.00 104.90
	26 28 30	170373 170374 170375	64.10 67.30 70.50	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	58 62 64	4 4 4	100 100 100	J58 J62 J64	7.90 8.30 8.50	88.00 92.40 96.20	93.80 98.30 102.10	103.60 108.80 112.90	109.60 115.60 120.30

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for through-feed panels will be quoted upon request.

Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

2 TO 2-WIRE, 125 VOLTS
Mains-2-wire. Branches-Double, with 10-Amp. Rotary Snap Switches, Arranged for Edison Plug Fuses

anels furnished with main connec- tions at top, if so ordered, without			-	nel O					SLATE		nel wit	h. Cabin	et*
extra charge.	No. Cir.	Cat. No.	Price	Sizi	H.	IN.	Cap. Mains	Box. Ref.	FRAM E	Type	Type	Types BM-BN	Type BT
			1		J 4.	1 4/.	1	IN LU	18	II AA	I MA	DM-DN	DI
	2 4	170401 170402	\$7.10	1214	8	4	30 30	J 8	\$3.10	\$15.40	\$19.20	\$23.80	\$28.2
	6	170402	11.70 16.40	123-5 123-5	10	4	60	J10 J14	3.30	20.40 26.00	24.30 30.10	29.20 35.40	33.7 40.1
A CONTRACTOR	8 10	170404 170405	21.20	1216	18	4	60	J18	4.10	31.70	36.00	41.60	46.5
	12	170406	25.70 30.90	121-5 123-5	20 24	4	60 100	J20 J24	4.30 4.70	36.60 42.70	41.00 47.30	46.90 53.60	51.9 58.7
	14 16	170407 170408	36_10 40.70	121/2 121/2	28 30	4	100 100	J28 J30	5.10 5.30	48.90 54.00	53.70 58.90	60.40	65.8
	18	170409	47.00	121/2	34	4	200	J34	5.60	61.30	66.60	65.90 73.70	71.3 79.2
	20 22	170410 170411	51.80 56.70	12½ 12½	36	4	200 200	J36 J40	5.80 6.20	66.60 75.00	71.90 80.30	79.20 88.30	84.7 91.3
	24	170412	61.40	121/2	42	4	200	J42	6.30	80.40	85 80	93.60	96.9
	26 28	170413 170414	66.30	121/2	46	4	200 200	J46 J48	6.70	86.50 91.90	92.00 97.40	100.40 106.10	104.2 110.2
	30 32	170415 170416	75.80 80.60	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	52	4	200 200	J52 J54	7.30 7.50	97.80 103.20	103.40	112.50 118.20	117.4
	02	110110	1 00 00	14/8	1.09	_			AINS	100.20	100.00	110.20	120.0
	2 4	170421 170422	8.60 13.20	12½ 12½	10	4 4	30 30	J10 J12	3.30	17.30 22.40	21.20 26.40	26.10 31.50	30.60
6 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	6	170423	18.20	121/2	18	4	60	J18	4.10	28.70	33.00	38.60	43.5
000	8 10	170424 170425	23.00 27.50	$12\frac{1}{2}$ $12\frac{1}{2}$	22 24	4	60 60	J22 J24	4.50 4.70	34.30 39.30	38.80 43.90	44.90 50.20	49.90 55.30
	12	170426	33.60	121/2	30	4	100	J30	5.30	46.90	51.80	58.80	64.20
	14 16	170427 170428	38.80 43.40	12½ 12½	34 36	4	100 100	J34 J36	5.60 5.80	53.10 58.20	58.30 63.50	65.50 70.80	71.00 76.30
	18	170429	51.30	121/2	40	4	200	J40	6.20	69.60	74.90	82.90	85.9
	20 22	170430 170431	56.10 61.00	$12\frac{1}{2}$ $12\frac{1}{2}$	44 46	4	200 200	J44 J46	6.50	75.70 81.20	81.10 86.70	89.40 95.10	92.8 98.9
	24 26	170432 170433	65.70 70.60	12½ 12½	50 52	4	200	J50 J52	7.10	87.10	92.60	101.50	106.0
	28	170434	75.40	121/6	56	4	200 200	J56	7.30	92.60 98.70	98.20 104.40	107.30 114.00	112.20 119.50
	30 32	170435 170436	80.10 84.90	12½ 12½	58 62	4	200	J58 J62	7.90 8.30	104.00 110.00	109.80 115.90	119.60 126.40	125.60 133.20
THE RESERVE OF THE PARTY OF THE					FU			MAIN					
- DE	2 4	170441 170442	11.40 16.00	$\frac{12\frac{1}{2}}{12\frac{1}{2}}$	16 18	4	30	J16 J18	3.90 4.10	21.40 26.50	25.60 30.80	31.10 36.40	35.90 41.30
	6 8	170443 170444	21.60 26.40	12½ 12½	24 26	4	60	J24 J26	4.70	33.40 38.70	38.00 43.40	44.30 49.90	49.4
	10 12	170445	30.90 38.90	121/2	30	4	60	J30	5.30	44.20	49.10	56.10	55.20 61.50
argin and argument	14	170446 170447	44.10	$12\frac{1}{2}$ $12\frac{1}{2}$	34	4	100	J34 J38	5.60 6.00	53.20 59.40	58.40 64.80	65.60 72.40	71.10
	16 18	170448 170449	48.70 58.20	12½ 12½	40 48	6	100 200	J40 J48	6.20 9.10	67.00 80.90	72.30 86.40	80.30 96.80	83.3
H H	20	170450	63.00	121/6	50	6	200	J50	9.40	86.30	91.80	102.50	100.90
	22 24	170451 170452	67.90 72.60	$12\frac{1}{2}$ $12\frac{1}{2}$	54 56	6	200 200	J54 J56	9.90	92.60 98.00	98.20 103.70	109.40 115.10	114.50 120.60
	26	170453	77.50	1916	60	6	200	J60	10.70	104.30	110.10	121.90	128.30
	28 30	170454 170455	82.30 87.00	$12\frac{1}{2}$ $12\frac{1}{2}$	62 66	6 6	200 200	J62 J66		109.70 115.70	115.60 121.70	128.00 134.70	134.80 142.60
	32	170456	91.80	121/2	68	6	200   BLE 1	J68 MAIN		121.20	127.30	140.40	148.90
TO THE REAL PROPERTY.	2	170461	12.80	121/2	16	4	30	J16	3.90	22.80	27.00	32.50	37.30
	6	170462 170463	17.40 23.00	$12\frac{1}{2}$ $12\frac{1}{2}$	18 24	4	30 60	J18 J24	4.10 4.70	27.90 34.80	32.20. 39.40	37.80 45.70	42.70 50.80
Distriction	8	170464	27.80	1914	26	4	60	J26	4.90	40.10	44.80	51.30	56.60
	10 12	170465 170466	32.30 42.10	121/2	30 38	4	60 100	J30 J38	5.30 6.00	45.60 57.40	50.50 62.80	57.50 70.40	62.90 75.80
THE PARTY OF THE P	14 16	170467	47.30	$12\frac{1}{2}$ $12\frac{1}{2}$	40	4	100	J40	6.20	65.60	70.90	78.90	81.90
	18	170468 170469	51.90 62.70	121/2	44 50	6	100 200	J44 J50	6.50 9.40	71.50 86.00	76.90 91.50	85.20 102.20	88.60 106.70
7 4	20 22	170470 170471	67.50 72.40	$12\frac{1}{2}$ $12\frac{1}{2}$	52 56	6	200 200	J52 J56	9.70 10.20	91.50 97.80	97.10 103.50	108.00 114.90	112.90 120.40
	24	170472	77.10	121/2	58	6	200	J58		103.20	103.50	120.60	126.60
CONTRACTOR OF THE PARTY OF THE													
	26 28 30	170473 170474	82.00 86.80	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	62 64	6	200 200	J62 J64		109.40 114.90	115.30 120.80	127.70 133.50	134.50 140.90

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for single-branch and through-feed panels will be quoted upon request.

Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

3 TO 2-WIRE, 125 VOLTS

Mains-3-wire. Branches-Double, with 10-Amp. Rotary Snap Switches, Arranged for Edison Plug Fuses

anels furnished with main connec- tions at top, if so ordered, without			- 1	el On					SLATE FRAME			Cabin	
extra charge	No. Cir.	Cat. No.	List Price	Size W.	H. I	D.	Cap.	Box Ref.	List	Type AK	Type AL	Types BM-BN	Type BT
					- 1		MAI	N LU	GS				
Gas Halland	2 4 6	170501 170502 170503	\$ 7.80 12.50 17.00	$\begin{array}{c c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	8 10 14	4 4 4	30 30 30	J 8 J10 J14	\$3.10 3.30 3.70	\$16.10 21.20 26.60	\$19.90 25.10 30.70	\$24.50 30.00 36.00	\$28.90 34.50 40.70
DE SD.	8 10 12	170504 170505 170506	22.10 27.00 32.30	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	16 20 24	4 4	30 30 60	J16 J20 J24	3.90 4.30 4.70	32.10 37.90 44.10	36.30 42.30 48.70	41.80 48.20 55.00	46.6 53.2 60.1
D - D	14 16 18	170507 170508 170509	37.10 42.10 46.90	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	26 30 32	4 4	60 60 60	J26 J30 J32	4.90 5.30 5.40	49.40 55.40 60.70	54.10 60.30 65.80	60.60 67.30 72.80	65.9 72.7 78.3
	20 22 24	170510 170511 170512	51.90 58.20 63.20	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	36 40 42	4 4 4	60 100 100	J36 J40 J42	5.80 6.20 6.30	66.70 76.50 82.20	72.00 81.80 87.60	79.30 89.80 95.40	84.8 92.8 98.7
	26 28 30	170513 170514 170515	68.10 72.90 77.70	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	46 48 52	4 4	100 100 100	J46 J48 J52	6.70 6.90 7.30 7.50	88.30 93.70 99.70	93.80 99.20 105.30	102.20 107.90 114.40	106.0 112.0 119.3
	32	170516	82.70	12½	54	4	100	J54	IAINS	105.30	110.90	120.30	125.4
	2 4	170521 170522	10.10	12½ 12½	10	4	30	J10 J12	3.30	18.80	22.70	27.60 33.10	32.1
	6 8	170522 170523 170524	14.80 19.30 24.40	121/2	12 16 18	4 4	30 30 30	J12 J16 J18	3.50 3.90 4.10	24.00 29.30 34.90	28.00 33.50 39.20	33.10 39.00 44.80	37.7 43.8 49.7
	10 12	170525 170526 170527	29.30 35.00	12½ 12½	22 28 30	4	30 60	J22 J28	4.50 5.10	40.60 47.80	45.10 52.60	51.20 59.30	56.2 64.7
	14 16 18	170528 170529	39.80 44.80 49.60	12½ 12½ 12½ 12½	34 36	4 4	60 60 60	J30 J34 J36	5.30 5.60 5.80	53.10 59.10 64.40	58.00 64.30 69.70	65.00 71.50 77.00	70.4 77.0 82.5
	20 22 24	170530 170531 170532	54.60 62.30 67.30	$\begin{array}{c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	40 46 48	4 4	100 100	J40 J46 J48	6.20 6.70 6.90	72.90 82.50 88.10	78.20 88.00 93.60	86.20 96.40 102.30	89.2 100.2 106.4
	26 28 30	170533 170534 170535	72.20 77.00 81.80	$\begin{array}{c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	52 54 58	4 4	100 100 100	J52 J54 J58	7.30 7.50 7.90	94.20 99.60 105.70	99.80 105.20 111.50	108.90 114.60 121.30	113.8 119.7 127.3
	FUSELESS MAIN SWITCH												
SENGIT STOP	2 4 6	170541 170542 170543	14.30 19.00 23.50	12½ 12½ 12½ 12½	16 18 22	4 4 4	30 30 30	J16 J18 J22	3.90 4.10 4.50	24.30 29.50 34.80	28.50 33.80 39.30	34.00 39.40 45.40	38.8 44.3 50.4
	8 10 12	170544 170545 170546	28.60 33.50 40.10	12½ 12½ 12½ 12½	24 28 32	4 4 4	30 30 60	J24 J28 J32	4.70 5.10 5.40	40.40 46.30 53.90	45.00 51.10 59.00	51.30 57.80 66.00	56.4 63.2 71.5
De S	14 16 18	170547 170548 170549	44.90 49.90 54.70	$\begin{array}{c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	36 38 42	4 4	60 60 60	J36 J38 J42	5.80 6.00 6.30	59.70 65.20 73.70	65.00 70.60 79.10	72.30 78.20 86.90	77.8 83.6 90.2
	20 22 24	170550 170551 170552	59.70 70.20 75.20	$\begin{array}{c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	44 50 52	4 4	60 100 100	J44 J50 J52	6.50 7.10 7.30	79.30 91.60 97.20	84.70 97.10 102.80	93.00 106.00 111.90	96.4 110.5 116.8
	26 28 30	170553 170554 170555	80.10 84.90 89.70	12½ 12½	56 58 62	4 4 4	100 100 100	J56 J58 J62	7.70 7.90 8.30	103.40 108.80 114.80	109.10 114.60 120.70	118.70 124.40 131.20	124.2 130.4 138.0
	32	170556	94.70	$12\frac{1}{2}$ $12\frac{1}{2}$	64	4	100	J64	8.50	120.40	126.30	137.10	144.5
		170561	16.40	121/2	16	JS1.	BLE 1	J16	SWITC	26.40	30.60	36.10	40.9
45/3 (\$10)	6	170562 170563	21.10 25.60	12½ 12½ 12½ 12½	18 22	4	30 30	J18 J22	4.10 4.50	31.60 36.90	35.90 41.40	41.50 47.50	46.4 52.5
· <b>D</b> (4   3 <b>D</b>	10 12	170564 170565 170566	30.70 35.60 42.20	$\begin{array}{c c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	24 28 32	4 4 4	30 30 60	J24 J28 J32	4.70 5.10 5.40	42.50 48.40 56.00	47.10 53.20 61.10	53.40 59.90 68.10	58.5 65.3 73.6
DE ISO	14 16 18	170567 170568 170569	47.00 52.00 56.80	$\begin{array}{c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	36 38 42	4 4 4	60 60	J36 J38 J42	5.80 6.00 6.30	61.80 67.30 75.80	67.10 72.70 81.20	74.40 80.30 89.00	79.9 85.7 92.3
TI	20 22 24	170570 170571 170572	61.80 75.00 80.00	$\begin{array}{c c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	44 52 56	4 4	60 100 100	J44 J52 J56	6.50 7.30 7.70	81.40 97.00 103.30	86.80 102.60 109.00	95.10 111.70 118.60	98.5 116.6 124.1
	26 28 30	170573 170574 170575	84.90 89.70 94.50	12½ 12½ 12½ 12½	58 62 64	4 4 4	100 100 100	J58 J62 J64	7.90 8.30 8.50	108.80 114.80 120.20	114.60 120.70 126.10	124.40 131.20 136.90	130.4 138.0 144.3

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for through-feed panels will be quoted upon request.

Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

### CROUSE-HINDS TYPE DP PANELS

2 TO 2-WIRE, 125 VOLTS

Mains-2-wire. Branches-Double, with 10-Amp. Push Button Switches, Arranged for Edison Plug Fuses

Panels furnished with main connec-			Pa	nel C					SLATE	Pa	nel wit	h Cabir	
tions at top, if so ordered, without extra charge.	No. Cir.	Cat. No.	List Price	Sizi	IN I	N.	Cap.	Box Ref.	List	Type	Type	Types BM-BN	Type BT
		3100	11100		1 ***	1 2.		IN LU		[] AL	1 20	, pm D1	1 11
	2 4 6	170601 170602 170603	\$ 7.50 12.50 17.60	$ \begin{array}{c c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array} $	8 10 14	4 4	30 30 <b>60</b>	J 8 J10 J14	\$3.10 3.30 3.70	\$15.80 21.20 27.20	\$19.60 25.10 31.30	\$24.20 30.00 36.60	\$28.60 34.50 41.30
1.08.2.8(%)	8 10 12	170604 170605 170606	22.80 27.70 33.30	12½ 12½ 12½ 12½	18 20 24	4 4 4	60 60 100	J18 J20 J24	4.10 4.30 4.70	33.30 38.60 45.10	37.60 43.00 49.70	43.20 48.90 56.00	48.10 53.90 61.10
	14 16 18	170607 170608 170609	38.90 43.90 50.60	12½ 12½ 12½ 12½	28 30 34	4 4 4	100 100 200	J28 J30 J34	5.10 5.30 5.60	51.70 57.20 64.90	56.50 62.10 70.20	63.20 69.10 77.30	68.66 74.56 82.8
	20 22 24	170610 170611 170612	55.80 61.10 66.20	12½ 12½ 12½ 12½	36 40 42	4 4 4	200 200 200 200	J36 J40 J42	5.80 6.20 6.30	70.60 79.40 85.20	75.90 84.70 90.60	83.20 92.70 98.40	88.7 95.7 101.7
	26 28 30	170613 170614 170615	71.50 76.70 81.80	121/2	46 48 52	4 4 4	200 200 200 200	J46 J48 J52	6.70 6.90 7.30	91.70 97.50 103.80	97.20 103.00 109.40	106.60 111.70 118.50	109.4 115.8 123.4
	32	170616	87.00	$12\frac{1}{2}$ $12\frac{1}{2}$	54	4	200	J54	7.50	109.60	115.20	124.60	129.7
	2	170621	9.00	121/2	10	1 4	30	J10	IAINS    3.30	17.70	21.60	26.50	31.0
A COLUMN DE	4 6 8	170622 170623 170624	9.00 14.00 19.40	12½ 12½ 12½ 12½	12 18 22	4	30 60 60	J 12 J 18	3.50 4.10	23.20	21.60 27.20 34.20	32.30 39.80	36.90 44.70
542 253	10 12	170625 170626	24.60 29.50 36.00	$\begin{vmatrix} 12\frac{1}{2} \\ 12\frac{1}{2} \end{vmatrix}$	24 30	4 4 4	60 100	J22 J24 J30	4.50 4.70 5.30	35.90 41.30 49.30	40.40 45.90 54.20	46.50 52,50 61,20	51.56 57.36 66.66
S ( S)	14 16 18	170627 170628 170629	41.60 46.60 54.90	$\begin{array}{c c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	34 36 40	4 4	100 100 200	J34 J36 J40	5.60 5.80 6.20	55.90 61.40 73.20	61.10 66.70 78.50	68.30 74.00 86.50	73.86 79.56 89.56
1 1	20 22 24	170630 170631 170632	60.10 65.40 70.50	$\begin{array}{c c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	44 46 50	4 4 4	200 200 200	J44 J46 J50	6.50 6.70 7.10	79.70 85.60 91.90	85.10 91.10 97.40	93.40 99.50 106.30	96.8 103.7 110.8
	26 28 30	170633 170634 170635	75.80 81.00 86.10	12½ 12½ 12½ 12½	52 56 58	4 4	200 200 200	J52 J56 J58	7.30 7.70 7.90	97.80 104.30 110.00	103.40 110.00 115.80	112.50 119.60 125.60	117.40 125.10 131.60
land and the same of the same of	32	170636	91.30	121/2	62 FU	SEI	ESS	J62 MAIN	8.30   SWI7	116.40 CH	122.30	132.80	139.60
	2 4 6	170641 170642 170643	11.80 16.80 22.80	$\begin{array}{c c} 12\frac{1}{2} \\ 12\frac{1}{2} \\ 12\frac{1}{2} \end{array}$	16 18 24	4 4	30 30 60	J 16 J 18 J 24	3.90 4.10 4.70	21.80 27.30 34.60	26.00 31.60 39.20	31.50 37.20 45.50	36.30 42.10 50.60
150	8 10 12	170644 170645 170646	28.00 32.90 41.30	12½ 12½ 12½ 12½	26 30 34	4 4	60 60 100	J26 J30 J34	4.90 5.30 5.60	40.30 46.20 55.60	45.00 51.10 60.80	51.50 58.10 68.00	56.80 63.50 73.50
	14 16 18	170647 170648 170649	46.90 51.90 61.80	12½ 12½ 12½ 12½	38 40 48	4 4 6	100 100 200	J38 J40 J48	6.00 6.20 9.10	62.20 70.20 84.50	67.60 75.50 90.00	75.20 83.50 100.40	80.6 86.5 104.5
	20 22 24	170650 170651 170652	67.00 72.30 77.40	12½ 12½ 12½ 12½	50 54 56	6 6	200 200 200	J50 J54 J56	9.40 9.90 10.20	90.30 97.00 102.80	95.80 102.60 108.50	106.50 113.40 119.90	111.00 118.90 125.40
	26 28 30	170653 170654 170655	82.70 87.90 93.00	121/2	60 62 66	6	200 200 200	J60 J62 J66	10.70 11.00 11.50	109.50 115.30 121.70	115.30 121.20 127.70	127.10 133.60 140.70	133.50 140.40 148.60
	32	170656	98.20	12½ 12½	68	6	200	J68	11.70	127.60	133.70	146.80	155.30
Residence S	2	170661	13.20	121/2	16	4	30 I	MAIN J16	SWIT		27.40	32.90	37.70
	6	170662 170663	18.20 24.20	12½ 12½ 12½ 12½	18 24	4	30 60	J 18 J 24	4.10 4.70	23.20 28.70 36.00	33.00 40.60	38.60 46.90	43.50 52.00
150	8 10 12	170664 170665 170666	29.40 34.30 44.50	12½ 12½ 12½ 12½	26 30 38	4 4	60 60 100	J26 J30 J38	4.90 5.30 6.00	41.70 47.60 59.80	46.40 52.50 65.20	52.90 59.50 72.80	58.20 64.90 78.20
	14 16 18	170667 170668 170669	50.10 55.10 66.30	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	40 44 50	4 6	100 100 200	J40 J44 J50	6.20 6.50 9.40	68.40 74.70 89.60	73.70 80.10 95.10	76.70 88.40 105.80	81.70 91.80 110.30
	20 22 24	170670 170671 170672	71.50 76.80 81.90	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	52 56 58	6 6	200 200 200	J52 J56 J58	9.70 10.20 10.40	95.50 102.20 108.00	101.10 107.90 113.80	112.00 119.30 125.40	116.90 124.80 131.40
. 99	26 28 30 32	170673 170674 170675 170676	87.20 92.40 97.50 102.70	$12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$ $12\frac{1}{2}$	62 64 68 70	6 6	200 200 200 200	J62 J64 J68 J70		114.60 120.50 126.90 132.80	120.50 126.40 133.00 138.90	132.90 139.10 146.10 152.30	139.70 146.60 154.60 161.40

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

Prices for single-branch and through-feed panels will be quoted upon request.

Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages.

# CROUSE-HINDS TYPE DP PANELS

3 TO 2-WIRE, 125 VOLTS

Mains-3-wire. Branches-Double, with 10-Amp. Push Button Switches, Arranged for Edison Plug Fuses

anels furnished with main connec-			Par	iel on	_				SLATE			Cabine	
tions at top, if so ordered, without extra charge.	No. Cir.	Cat. No.	List Price	Size W.	IN I		Cap Mains	Box Ref.	List	Type	Type	Types BM BN	Type BT
	UIF.	140.	11100	π.	ш.	ν.		N LU		1 44			
	2	170701	\$ 8.20	121/2	8	4	30	J 8	\$3.10	\$16 50	\$20.30	\$24.90	\$29.3
	6	170702 170703	13.30 18.20	12 <sup>1</sup> 2 12 <sup>1</sup> 2	10 14	4	30	J10 J14	3.30	22 00 27.80	25.90 31.90	30.80 37.20	35.3 41.9
	8	170704	23.70	1216	16	4	30	J16	3.90	33.70	37.90	43.40	48.2
	10	170705 170706	29.00 34.70	$12^{1\frac{7}{2}}$ $12\frac{1}{2}$	20 24	4	30 60	J20 J24	4.30	39.90 46.50	44.30 51.10	50.20 57.40	55.2 62.5
	14	170707	39.90	1916	26	4	60	J26	4.90	52.20	56.90	63.40	68.7
-6	16 18	170708 170709	45.30 50.50	121 <sub>2</sub> 121 <sub>2</sub>	30	4 4	60 60	J30 J32	5.30 5.40	58.60 64.30	63.50 69.40	70.50 76.40	75.9 81.9
	20	170710	55.90	1216	36	4	60	J36	5,80	70.70	76.00	83.30	88.8
	22	170711 170712	62.60 68.00	121 <sub>2</sub> 121 <sub>2</sub>	40	4 4	100	J40 J42	6.20	80.90 87.00	86.20 92.40	94.20 100.20	97.2 103.5
	26	170712	73.30	1216	46	4	100	J46	6.70	93.50	99.00	107.40	111.2
	28	170714	78 50 83.70	12 <sup>1</sup> 2 12 <sup>1</sup> 2	48 52	4	100 100	J48 J52	6.90 7.30	99.30 105.70	104.80 111.30	113.50 120.40	117.6 125.3
	32	170715 170716	89.10	1212	54	4	100	J54	7.50	111.70	117.30	126.70	131.8
	1					_	_	LE M		1.40.00	00.10	00.00	20. 5
	2 4	170721 170722	10 50 15.60	12 <sup>1</sup> <sub>2</sub> 12 <sup>1</sup> <sub>2</sub>	10 12	4 4	30 30	J10 J12	3.30	19.20 24.80	23.10 28.80	28.00 33.90	32.5 38.5
A CHEST CO.	6	170723	20.50	1212	16	4	30	J16	3.90	30.50	34.70	40.20	45.0
54 (er	10	170724 170725	26.00 31.30	12 <sup>1</sup> / <sub>2</sub> 12 <sup>1</sup> / <sub>2</sub>	18 22	4	30 30	J18 J22	4.10	36.50 42.60	40.80 47.10	46.40 53.20	51.3 58.3
1 Vy 1 1 1 1 1 1	12	170726	37.40	12/2	28	4	60	J28	5.10	50.20	55.00	61.70	67.
	14 16	170727 170728	42.60 48.00	121 g 121 g	30 34	4	60 60	J30 J34	5.30 5.60	55.90 62 30	60.80 67.50	67 80 74.70	73.1 80.1
0 25 °	18	170729	53.20	1212	36	4	60	J36	5.80	68.00	73.30	80.60	86.
	20 22	170730 170731	58.60 66.70	12 <sup>1</sup> 2 12 <sup>1</sup> 2	40 46	4	100	J40 J46	6.20	76.90 86.90	82.20 92.40	90.20	93.1 104.
0 0	24	170732	72.10	1212	48	4	100	J48	6.90	92.90	98.40	107.10	111.5
	26 28	170733 170734	77.40 82.60	121/2 121/2	52 54	4	100	J52 J54	7.30 7.50	99.40	105.00 110.80	114.10 120.20	119.0 125.3
	30 32	170735 170736	87.80 93.20	121 <sub>2</sub> 121 <sub>2</sub>	58 60	4	100 100	J58 J60	7.90 8.10	111.70 117.70	117.50 123.50	127.30 133.60	133.3
	1 32	110130	83.20	12/2			ESS	MAIN	-		1 120100	1 130100	
RETURN OF THE PARTY OF	2	170741	14 70	121 2	16	4	30	J16	3.90	24 70 30.30	28.90 34.60	34.40 40.20	39.1 45.
3 S S S S S S S S S S S S S S S S S S S	6	170742 170743	19.80 24.70	1212 1212	18 22	4	30 30	J18 J22	4.10 4.50	36.00	40.50	46.60	51.0
47	8	170744	30.20	121 2	24	4	30	J24	4.70	42.00 48.30	46.60 53.10	52.90 59.80	58.6 65.
2	10	170745 170746	35.50 42.50	12 <sup>1</sup> 2 12 <sup>1</sup> 2	28 32	4	30 60	J28 J32	5.10 5.40	56.30	61.40	68.40	73.9
No. 100 1	14	170747	47.70	1212	36	4	60	J36	5.80	62.50	67.80	75.10	80.
	16	170748 170749	53.10	12 <sup>1</sup> 3 12 <sup>1</sup> 2	38 42	4	60 60	J38 J42	6.00	68.40 77.30	73.80 82.70	81.40 90.50	93.
	20	170750	63.70	121 2	44	4	60	J44	6.50	83.30	88.70	97.00 110.40	100 . 114
	22 24	170751 170752	74.60 80.00	12 <sup>1</sup> 2 12 <sup>1</sup> 2	50 52	4	100	J50 J52	7.10	96.00 102.00	101.50 107.60	116.70	121.
DESCRIPTION OF THE PERSON NAMED IN	26	170753	85.30	1216	56	4	100	J56	7.70	108.60	114.30	123.90 130.00	129.4 136.0
	28 30	170754 170755	90.50 95.70	121 2 121 2	58 62	4	100	J58 J62	7.90 8.30	114,40 120,80	120.20 126.70	137.20	144.1
	32	170756	101.10	1212	64	4	BLE	J64 MAIN	8.50   SWIT	126.80	133.30	143.50	150.9
State of the later	2	170761	16.80	121 2	16	4	30	J16	3.90	26.80	31.00	36.50	41.3
a remarks	4 6	170762 170763	21.90 26.80	121 2 121 2 123 2	18 22	4	30 30	J18 J22	4.10	32.40 38.10	36.70 42.60	42.30 48.70	47 .: 53 .:
· 'S   B	8	170764	32.30	1212	24	4	30	J24	4.70	44.10	48.70	55.00	60.
1 2 4 m m m m 2 m 2 m 3	10	170765	37.60	12 <sup>1</sup> 2 12 <sup>1</sup> 3	28 32	4	30 60	J28 J32	5.10 5.40	50.40 58.40	55.20 63.50	61.90 70.50	67. 76.
w ray of English	12	170766 170767	44.60	121 2	36	4	60	J36	5.80	64.60	69.90	77.20	82.
A	16	170768	55.20 60.40	12½ 12½	38 42	4	60	J38 J42	6.00	70.50	75.90 84.80	83.50 92.60	88. 95.
	18	170769 170770	65.80	121/6	44	4	60	J44	6.50	85.40	90.80	99.10	102.
	22 24	170771	79.40	12 <sup>1</sup> 2 12 <sup>1</sup> 2	52 56	4	100	J52 J56	7.30 7.70	101.40 108.10	107.00	116.10 123.40	121. 128.
	26	170772 170773	84.80 90.10	1212	58	4	100	J58	7.90	114.00	119.80	129.60	135.
	28	170774	95.30	1916	62	4	100	J62 J64	8.30 8.50	120.40 126.20	126.30 132.10	136.80 142.90	143 . 150 .
A STATE OF THE PARTY OF THE PAR	30	170775 170776	100.50 105.90	121 2 121 2	68	4	100 100	J68	8.90	132 80	132.10	150.20	158.

Catalogue number is for panel only. If slate frame or cabinet is required, order should so state and give number of panel with which they are to be used. \*Prices under heading "Panel with Cabinet" include panel complete with cabinet, and slate frame if one is required.

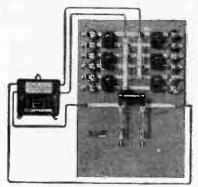
Prices for through-feed panels will be quoted upon request.

Prices do not include fuses. Order by catalogue number.

For description of cabinets listed above, see one of the following pages,

# CROUSE-HINDS METER LOOP PANELS METER LOOPS FOR STANDARD PANEL BOARDS

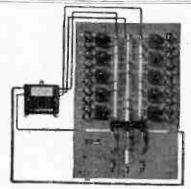
Frequently it is desirable to have a panel board arranged with meter loop. We therefore give below a schedule of the extra list prices to be added to the list prices of standard panel boards when they are to be equipped with meter loops. The addition of meter loop does not change size of standard panel board.



A 2 TO 2-wire Double-branch Panel with Meter Loops

# LIST PRICES OF METER LOOPS FOR ALL 2 TO 2-WIRE DOUBLE-BRANCH STANDARD PANEL BOARDS, 125 VOLTS The Following List Prices are to be Added to the List Prices of Standard Panel Boards

No. of Circuits on Panel Board	Extra List Price	No. of Circuits on Panel Board	Extra List Price	No. of Circuits on Panel Board	Extra List Price	No. of Circuits on Panel Board	Extra List Price
2 to 4	\$2.00	6 to 10	\$2.20	12 to 16	82.60	18 to 32	\$3.00



A 3 TO 2-wire Double-branch Panel with Meter Loops

# LIST PRICES OF METER LOOPS FOR ALL 3 TO 2-WIRE DOUBLE-BRANCH STANDARD PANEL BOARDS, 125 VOLTS The Following List Prices are to be Added to the List Prices of Standard Panel Boards

No. of Circuits	Extra	No. of Circuits	Extra	No. of Circuits	Extra
on Panel Board	List Price	on Panel Board	List Price	on Panel Board	List Price
2 to 10	\$2.10	12 to 20	\$2.30	22 to 32	\$2.70

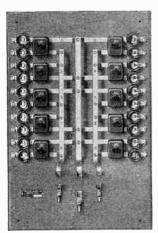
# LIST PRICES OF METER LOOPS FOR ALL 3 TO 2-WIRE DOUBLE-BRANCH CONVERTIBLE PANEL BOARDS, 125 VOLTS The Following List Prices are to be Added to the List Prices of Convertible Panel

No. of Circuits on Panel Board	Extra List Price	No. of Circuits on Panel Board	Extra List Price	No. of Circu ts on Panel Board	Extra List Price	No. of Circuits on Panel Board	Extra List Price
2 to 4	\$2.10	6 to 10	\$2.30	12 to 16	\$2.70	18 to 32	\$3.10

When ordering a panel board with meter loop give catalogue number of standard panel board and state that it is to have a meter loop. List prices for meter loops do not include the wire connections between panel board and meter.

### CROUSE-HINDS CONVERTIBLE PANELS

THREE-WIRE, ALL TYPES



A 3 to 2-Wire Panel with Convertible Mains

If specifically ordered, three to two-wire panel boards of any type will be furnished with convertible mains having a capacity of 6 amperes per branch on the neutral pole and 3 amperes per branch on the positive and negative poles.

General specifications of various types of panel boards apply to convertible panel boards, except in capacity of mains.

PANEL BOARDS WITH CONVERTIBLE MAINS
Schedule of Extra Heights and List Prices to be Added to 3 to 2-wire Standard Panel Boards
Widths Remain the Same

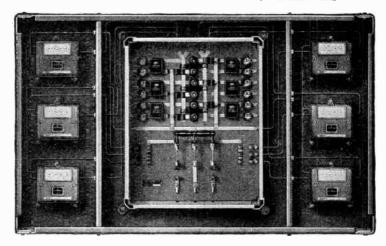
Description	No. of		OF MAINS	Additional Height	Additional List Price	Additional List Price of
of Mains	Circuits	Outsides	Neutral	(width same as Standard)	of Panel	Slate Frame
	2 to 4	30	30	0	\$0.00	\$0.00
	6 to 10	30	60	0	.70	.00
Lugs only	12 to 16	60	100	2	1.00	. 20
•	18 and 20	60	200	2	1.80	. 20
	22 to 32	100	200	2	2.00	. 20
	2 to 4	30	30	0	.00	.00
Warned	6 to 10	30	60	2	1.00	. 20
Fused Mains	12 to 16	60	100	4	2.00	.40
Mams	18 and 20	60	200	4	3.00	.40
	22 to 32	100	200	2	2.80	. 20
	2 to 4	30	30	0	.00	.00
171	6 to 10	30	60	2	2.00	.20
Fuseless	12 to 16	60	100	2	5.20	.20
Switch	18 and 20	60	200	4*	10.80	3.20
	22 to 32	100	200	2*	6.80	2.90
	2 to 4	30	30	0	.00	.00
17 11	6 to 10	30	60	2	2.20	.20
Fusible	12 to 16	60	100	6	8.00	.50
Switch	18 and 20	60	200	8*	15.50	3.60
	22 to 32	100	200	2*	8.80	2.90

<sup>\*</sup>These panel boards will require slate frames and boxes 6 inches deep.

To obtain box reference, use the same reference letter as for standard panel board and the total height of panel board as reference numeral.

Use catalogue number of standard panel board when ordering and specify that it is to be convertible.

### CROUSE-HINDS METERING PANELS





Six-circuit, 3 to 2-wire, Multimeter Panel with Type H Circuits, Mounted in Cabinet Arranged for Six Meters Meter Compartment Cabinet not Furnished unless Specified

#### MULTIMETER PANELS

The Crouse-Hinds Multimeter is the latest and most improved type of metering panel board yet designed. The general specifications as regards material, workmanship, finish, etc., conform to the general specifications of standard panel boards.

The terminals feeding to the meters are arranged on each side of the mains at the bottom of the panel board and are arranged for N. E. C. cartridge or Edison plug fuses, as specified. On each side of the panel board above the meter leads is placed a binding nut for potential wire

connections.

The individual meter bars are arranged in two vertical laminated sets placed in the center of the panel board and are supported and separated by insulating pillars and spacers. The upper ends of the meter bars are equipped with terminals for receiving the return wires from the meters. One pole of each circuit on the panel board connects directly to a common bus bar which is divided after leaving the main connection and extends vertically at each side of the meter bars. The other pole of each circuit extends to a pillar placed in the center of the Panel Board between the two sets of meter bars. These pillars are built up with spacers in such a manner that connections with the meter bars can be made by connection clips. One end of each clip engages a meter bar and the other end is clamped between the spacers of a pillar. The connection pillar is surrounded by an insulating sleeve with openings for the connection clip on only one side of the pillar. This arrangement permits connection to be made to only one meter bar at a time. The insulating sleeve is arranged so that it can easily be turned to allow connections to any one meter bar of either set. The spacers of the pillar are arranged so that the separation between any two spacers is only large enough to allow the insertion of one connection clip, thus making it impossible to make connection to any connecting pillar from more than one meter bar. The connection clip is equipped with an insulating handle, and the entire construction of the panel board is such that it is unnecessary to use tools of any kind when making changes in connections between circuits and meter bars, thus eliminating the possibility of a short circuit by accident, as frequently happens when using a screwdriver or other tool about the live parts of a panel board. These panel boards are of uniform width regardless of the number of meter connections required.

Prices for metering panel boards and cabinets will be quoted upon request. Inquiry must give complete information as to requirements, stating number of circuits, number of meter bars, system, voltage, style of main connections, style of fuses, and whether with or without switches (knife or snap) in branches, also complete description of cabinet.

Cabinets: Multimeter Panel Boards can be installed in cabinets of standard design, illustrated elsewhere in this catalogue, when it is intended to mount meters outside of cabinet, or in cabinets with compartments for meters, as illustrated above.

### CROUSE-HINDS CABINETS

#### CABINET SPECIFICATIONS

Crouse-Hinds Standard cabinets include types AK, AL, BM, BN and BT, all of which are illustrated on the following page.

Each cabinet is made up of two main parts, a steel box and a steel or wooden trim.

#### BOXES, TYPES A AND B

Construction.—Each box is formed from one piece of No. 10 U. S. standard gauge sheet

steel, overlapped and riveted at corners.

Type A boxes, for types AK and AL cabinets, are made in sizes to allow a 2-inch space between the sides of the box and the panels for which they are intended. As this space makes it

unnecessary to line the box, no lining is furnished.

Type B boxes, for types BM, BN and BT cabinets, are made to allow a 3-inch wiring compartment or gutter between the sides of the box and the slate frame surrounding the panel. These

boxes are unlined, as no lining is necessary.

Finish.—Boxes are painted both inside and outside with a dead black lacquer. finished in baked black enamel will be furnished at an advance of 20 per cent in the list price,

if specifically ordered.

Drilling.—Boxes will be drilled for conduit without extra charge, if complete drilling information accompanies order. Boxes will be drilled and porcelain bushings furnished for open work at an advance in the list price of 15 cents per hole. Blank drilling forms will be furnished upon request, without charge.

#### STEEL TRIMS, TYPES K, L, M AND N

Construction.—Steel trims are made from single pieces of No. 10 U.S. standard gauge sheet steel and are intended for mounting in vertical position.

Lock.—Doors are fitted with combination locks and spring catches, and where door is over

40 inches high, it is equipped with vault handle and shoot-bolts.

Finish.—Trims are painted both inside and outside with a dead black lacquer. black enamel finish will be furnished at an advance of 20 per cent in the list price, if specifi-

cally ordered.

Type K door, for type AK (surface) cabinet, has a ¾-inch flange around all four edges, overlapping the box. This form of construction makes the box dust-proof and provides a rigid door. The door is hinged directly to the box and, for this reason, should always be ordered with

the box.

Type L trim, for type AL (flush) cabinet, has a 3½-inch mat on all four sides. cut from one piece of sheet steel, with door opening the same size as panel board. The door is in one piece and secured to the mat by flush butt hinges. An ornamental molding is welded around the edge of the door and overlaps the mat, thereby forming a rabbet.

Type M trim, for type BM (surface) cabinet, has a 4-inch mat on all four sides.

The door is in one piece of sheet steel, with the door opening the same size as panel board. The door is in one piece and secured to the mat by flush butt hinges. An ornamental molding is welded around the edge of the door and overlaps the mat, thereby forming a rabbet.

Type N trim, for type BN (flush) cabinet, has a 5½-inch mat on all four sides. This mat is cut from one piece of sheet steel with the door opening the same size as panel board. The door is in one piece and secured to the mat by flush butt hinges. An ornamental molding is realled a round the edge of the door and overlaps the mat, thereby forming a rebbet is welded around the edge of the door and overlaps the mat, thereby forming a rabbet.

### TYPE T WOODEN TRIM, FOR TYPE BT (FLUSH) CABINETS

Construction.—Wooden trims are made of kiln-dried white oak, 1/2 inch thick. The mat is 5% inches wide, made with square mortised joints, with door opening the same size as panel board. The door is made with square mortised joints at the corners and has wooden panel. The door sets flush with the mat and closes against a rabbet.

Lock.—Doors are fitted with combination locks with spring catches.

Finish.—Trims are painted on unfinished surfaces with dead black lacquer, and filled and varnished on the outside. A polished finish will be furnished at an advance of 15 per cent in the list price, if specifically ordered. Door knobs and escutcheons are finished in polished brass.

Lining.—Standard wooden trims, both mat and door, are lined with No. 16 gauge sheet

steel, the door lining being finished in black enamel, the mat lining in dead black lacquer.

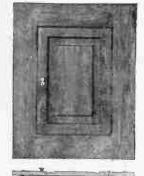
Glass Panel.—The use of a glass panel in door is not recommended, but, if specifically ordered, this trim will be furnished with a double-thick glass panel in door at an advance of 10 per cent; with plain plate glass, at an advance of 15 per cent; or with beveled plate glass, at an advance of 20 per cent.

### CROUSE-HINDS CABINETS

STEEL BOXFS AND STEEL OR WOODEN TRIMS



Type AK Cabinet Combination of Type A Steel Box and Type K Steel Door For Surface Mounting



Type BT Cabinet. Combination of Type B Steel Box and Type T Wooden Trim For Flush Mounting



Type AL Cabinet Combination of Type A Steel Box and Type L Steel Trim For Flush Mounting



Type EN Cabinet Combination of Type B Steel Box and Type N Steel Trim For Flush Mounting

Type BM Cabinet Combination of Type B Steel Box and Type M Steel Trim

For Surface Mounting

Specify that cabinet is to be 6 inches in depth, if for use with a panel listed as 6 inches deep.

If slate frame is required, order should so state and give number of panel with which it is to be used.

In listings of panels, prices under heading "Panel with Cabinet" include panel complete with box and trim and slate frame, if one is required. Therefore, the price of a cabinet complete with slate frame is derived by deducting the price of the panel from the price of the panel with cabinet.

Example: Panel No. 50001 (list price \$4.10), deducted from panel with (type BM) cabinet (list price, \$20.10), leaves the list price of type BM cabinet, which is \$16.00 including slate frame. The price of a cabinet without slate frame, where one is ordinarily supplied, is derived by deducting the price of the panel and price of slate frame from the price of the panel with cabinet.

Example: Panel No. 50001 (list price, \$4.10) plus slate frame (list price, \$3.00), deducted from panel with (type BM) cabinet (list price, \$20.10), leaves list price of type BM cabinet without slate frame, which is \$13.00.

The box reference (Box Ref.) appearing opposite every panel board listed is a key for ordering the proper cabinet, box or trim for use with that particular panel board.

Examples: To order a complete type BM cabinet for panel No. 50001, add to the panel's box reference, C8, the cabinet's type letters, BM, making C8BM.

To order a B box only, for panel No. 50001, add to the panel's box reference, C8, the box's type letter, B, making C8B.

To order an M trim only, for panel No. 5000, add to the panel's box reference, C8, the trim's type letter M, making C8M.

Prices for back gutter cabinets will be furnished upon request. Prices for boxes and trims separately will be furnished upon request.

### CROUSE-HINDS RESIDENCE PANELS

For One and Two-family Houses



2-wire, Single Service Panel in Cabinet



3-wire, Single or Double Service Panel in Cabinet

		2-WI		GLE S	ERVI(	CE			3-WI	RE, SII	NGLE (	OR DOU NELS	JBLE	SERVIC	E
		Pane	lOnly				nel Sabinet			Pane	el Only			Pa with C	nel abinet
No. Cir.	Cat. No.	List Price	SIZE IN	INCHES H.	Box* Ref.	List Surface	PRICE Flush	No. Cir.	Cat. No.	List Price		INCHES H.		List :	
3	165975	\$5.20	9	10	A10	\$8.60	\$11.80	6	165978	\$9.20	151/2	10	E10	\$13.20	\$17.20
4	165976	6.10	9	14	A14	9.90	13.40	8	165979	10.90	151/2	14	E14	15.30	19.50
5	165977	7.00	9	16	A16	11.20	15.00	10	165980	12.60	1512	16	E16	17.40	21.80

\*Box reference is the key to the proper combination of panel and cabinet.

The Crouse-Hinds Residence Panel Board equipment combines the main service switch, meter loop and circuit fuses in a single steel cabinet. The meter loop is provided with a sealing arrangement which prevents theft of current and makes it unnecessary to remove the meter with each change of occupancy.

The satisfactory results, in safety, efficiency and durability, obtained by the use of this type of installation, at only a slight, if any, additional cost, should receive favorable consideration.

Residence panel boards have a capacity of 30 amperes at 125 volts, and conform to the general panel board specifications given on another page.

Cabinets are provided with knock-outs, opposite wire terminals on panels, which can be used for either bushings or conduit. Doors are hinged at top, so as to close by gravity, and are held shut by a snap catch.

Boxes are formed from one piece of No. 14 U. S. gauge steel, overlapped and riveted at the corners. They are made to allow a 1-inch space between the sides of panel and box, and are provided with all necessary knock-outs, which can be used for conduit or bushings.

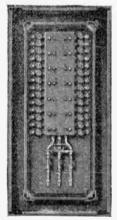
Trims are made from one piece of No. 14 U. S. gauge steel. Doors for surface boxes are flanged on all four edges to overlap the box, and have the hinges welded to both door and box. Trims for flush boxes have mats  $2\frac{1}{2}$  inches wide and door openings of the same size as panel. Doors for flush cabinets have a strip welded around the edges to overlap the mat, and hinges that are welded to both door and mat. Mats are fastened to boxes by screws that thread into flanges on the boxes.

. Cabinets are regularly furnished as illustrated above, with knock-outs opposite terminals on panels. If it is desired to mount panel in any other position and the necessary information is given on the order, the cabinet will be furnished with the hinging of door and the knock-outs arranged accordingly, all without extra charge.

# SAFETY PANELS AND CABINETS



Type EPS 3 to 2-wire Panel Board with Main Lugs, Branch Switch Cover Removed



Type B Steel Box, showing Panel and Slate Frame Installed

Crouse-Hinds safety panels and cabinets allow unrestricted use of the circuit switches without the possibility of the operator touching any live part of the panel. Fuses and live parts are accessible only to persons holding the key to the separate compartment in which they are located.

Two types of panel boards are listed on following pages—type DPS arranged for Edison plug fuses in the branches, and type EPS panels, arranged for N. E. C. cartridge fuses in the branches. Both types of panels and cabinets conform in all respects to Crouse-Hinds high standards of construction, described on preceding pages.

Circuits are controlled by 10-ampere, 250-volt, indicating push button switches enclosed in porcelain cases. These switches are arranged in pairs horizontally, each pair being connected by a twin yoke which holds the switches the proper distance apart. A steel spacer bar runs vertically between the switches and is attached to the center of each yoke, thus spacing and aligning the switches so that the switch plate or cover may be easily placed in position and held by screws threading into the spacer bar at each end. The switch cover is made of No. 14 U. S. gauge steel and finished in oxidized copper. The number of each circuit is stamped on the switch cover, under the push buttons.

Mains on all 3 to 2-wire, 125-volt, and 2 to 2-wire, 250-volt panels are figured at 3 amperes per circuit. On 2 to 2-wire, 125-volt panels they are figured at 6 amperes per circuit. Panels can be furnished with main switches at top, but this necessitates increases in both price and size of panels.

Type B steel boxes may be used for either flush or surface mounting. They are of proper size to form a 3-inch wiring compartment or gutter between the sides of the box and the slate frame surrounding the panel.

Boxes will be drilled for conduit without extra charge, provided complete drilling information accompanies the order. Knockouts will be furnished at the following additions per knockout to list prices: ½, ¾ or 1-inch, 10 cents; 1¼, 1½ or 2-inch, 15 cents.

### SAFETY PANELS AND CABINETS

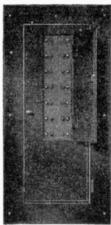
Trims for Safety panel cabinets are made in two standard forms—\$1 and \$2. Form \$1 trims have one large door, the same size as the panel, giving access to the entire panel. This door is provided with a combination Yale lock and spring catch with polished brass vault handle. In the large door is hung a small door giving access only to the push buttons of the switches. This door is provided with a snap catch and polished brass vault handle. Attached to the back of the large door is a plate with an opening which telescopes the switch cover. This plate makes it impossible to reach other parts of the panel through the small door.

Form S2 trims have an outer door which gives access only to the push buttons of the switches. This door is provided with a snap catch only with polished brass vault handle. Back of the outer door is an inner door having an opening which telescopes the switch cover. This door is provided with a Yale lock and gives access to the entire panel.

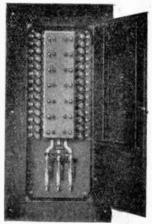
#### FORM S1 STEEL TRIM



Both Doors Closed

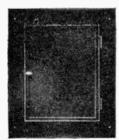


Small Door Open, Giving Access to Switches



Large Door Open, Giving Access to Fuses

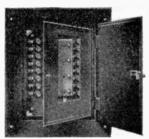
#### FORM S2 STEEL TRIM



Outer Door Closed



Outer Door Open, Giving Access to Switches



Both Doors Open, Giving Access to Fuses

### SAFETY PANELS AND CABINETS

# FORM S1 WOOD TRIM (Type TS1)



Both Doors Closed



Small Door Open, Giving Access to Switches

### FORM S3 STEEL TRIM\*



Form S2 wood trim (type TS2) has a steel inside door, identical with the inside door of form S2 steel trim.

\*Form S3 steel trim has but one door, which is cut away to allow the switch plate to project slightly through the opening, thus giving immediate access to the push buttons. This construction also allows the use of a box four inches deep, and, if specified, will be furnished on M, N or T trims at a discount of five per cent from list prices for form S1 construction.

#### FORM SI-

#### SAFETY PANEL CABINETS

FORM S2





Type BMS1
Front and Sectional Views

Type letters for safety panel trims are arrived at by taking the type letters M, N and T and adding the form letters S1 or S2 as required.

Type MS1 is a steel trim for surface mounting with form S1 construction.

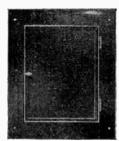
Type MS2 is a steel trim for surface mounting with form S2 construction.

Type NS1 is a steel trim for flush mounting with form S1 construction.

Type NS2 is a steel trim for flush mounting with form S2 construction.

Type TS1 is a wood trim for flush mounting with form S1 construction.

Type TS2 is a wood trim for flush mounting with form S2 construction.





Type BMS2 Front and Sectional Views

Cabinets shown here are for surface mounting (type M) design and have the same face measurements as the box. Flush mounting trims (type N) have mats which extend three inches higher and wider than the box.

**Example:** A safety panel with plug fuse receptacles in the branches and mounted in a flush cabinet with a wood trim (B box and T trim) of form S2 construction would be a type DPS panel mounted in a BTS2 cabinet.

# 3 to 2-WIRE—TYPE DPS SAFETY PANELS—125 VOLTS

Double Branches with 10-Ampere Push Button Switches Arranged for Edison Plug Fuses

		PANEI	ONLY			DIMENS side in I		PAN	EL WITH List I	I CABINI Price	E <b>T</b> *
Illustrations of Type DPS Panels	No.	Catalogue	List	Cap Mains	Тур	es S1 ar	nd S2	Types BMS1	Types BMS2	Туре	Турв
	Cir.	Number	Price Price	Amps.	Wide	High	Deep	BNS1	BNS2	BTS1	BTS2
				P	ANEL	S WITH	I MAI	N LUGS			
Contract of	2	71101	\$ 7.00	30	20	1512	512	\$ 34.50	\$ 36.80	\$ 40.30	\$ 42.00
	6	71102 71103	12.30 18.20	30 30	20 20	17 1 2 21 1 2	51 <sub>2</sub> 51 <sub>2</sub>	40.60 48.30	43.20 51.70	46.60 54.50	48.50 56.90
	8	71104 71105	23.70 29.00	30 30	20	$\begin{array}{c}23{}^{1}_{2}\\27{}^{1}_{2}\end{array}$	512	54.50 61.60	58.20 66.10	60.80 68.10	63.40 71.20
	12	71106	34.70	60	20	31 ½ 33 ½	51 <sub>2</sub> 51 <sub>6</sub>	68.90 74.90	74.00 80.30	75.70 82.00	79.30 85.80
	14	71107 71108	39.90 45.30	60	20	37 1 2 39 1 2	512	82.10	88.20	89.70	93.90
A K II A	18	71109 71110	50.50 55.90	60	20	4312	5 1 2 5 1 2	90.20 97.30	94.60 102.20	96.00 103.50	108.00
	22 24	71111	62.60 68.00	100 100	20	4712	$\frac{5}{5}^{1}_{2}$	108.40 114.90	116.30 123.10	112.70 119.50	120.10 126.90
Personal	26 28	71113 71114	73.30 78.50	100 100	20 20	53 14 55 12	$\frac{5}{5}\frac{1}{2}$	122.40 128.70	131.40 138.10	128.10 135.10	135.70 142.80
	20	71114	10.50	1	11			1		100.10	142.00
MITT NAL COLS			10.000		FI .			LE MAIN		6 42 50	O 45 40
10	2	71117 71118	\$ 9.20 14.60	30 30	20	1712 1912	51 <sub>2</sub> 51 <sub>2</sub>	\$ 37.50 43.80	\$ 40.10 46.80	\$ 43.50 49.90	\$ 45.40
23	6 8	71119	19.50 26.00	30	20	23 1 2 25 1 4	512	50.30 57.70	54.00 61.80	56.60 64.10	59.20 66.90
9-11-41	10 12	71121 71122	31.30 37.40	30 60	20 20	29 1 2 35 1 2	51 <sub>2</sub> 51 <sub>2</sub>	64.70 73.30	69.50 79.10	71.30 80.50	74.60 84.60
100	14	71123	42.60	60	20 20	3715	512	79.40 88.60	85.50 93.20	87.00 94.60	91.20 98.9
STATE BELL	16 18	71124 71125	48.00 53.20	60	20	41 ½ 43 ½	512	94.60	99.50	100.80	105.30
	20	71126	58.60 66.70	100	20 20	47 ½ 53 ½	512 512	104.40 115.80	112.30 124.80	108.70 121.50	116.10
	24	71128 71129	72.10	100	20	55 1/2 59 1/2	51 <sub>2</sub> 51 <sub>2</sub> 51 <sub>2</sub>	122.30 132,20	131.70 139.90	128.70	136.40
	28	71130	82,60	100	20	61 12	512	138.60	146.70	144.00	152.20
			PA	ANELS	WIT	H FUSE	ELESS	MAIN S	witch		
	2	71133	\$12.80	30	20	2312	512	\$ 43.60	\$ 47.30	\$ 49.90	\$ 53.20
	6	71134 71135	18.80 24.70	30	20 20	$\frac{25}{29}\frac{1}{2}$	5 1 2 5 1 2	50.50 53.10	54.60 62.90	56.90 64,70	59.70 68.00
	8 10	71136 71137	30.20 35.50	30	20 20	31 12 35 16	512	64.40 71.40	69.50 77,70	71.20 78.60	74.80 82.70
	12	71138	42.50	60	20 20	35 1/2 39 1/2 43 1/2	51 <sub>2</sub> 51 <sub>2</sub>	82,20 89.10	86.60 94.00	95.30	92.3
	16	71139	47.70 53.10	60	20 20 20	4512	512	. 95.50 105.20	100.60 113.40	101.90	106.5
	18	71141	58.30 63.70	60	20	49 ½ 51 ½	512	111.70	120.50	116.70	124.4
<b>自然的有效</b>	22 24	71143	74.60 80.00	100	20	57 12 59 1/2	512	128.30 136.00	135.60 142.40	132.70 141.40	140.6
	26 28	71145 71146	85.30 90.50	100	20 20	63 14	512 512	142.50 150.00	151.10 157.80	148.60 157.70	157.10 164.3
					s wi	TH FUS		MAIN S	WITCH		
	2	71149	\$15.40	30	20	2312	512	\$ 46.20	\$ 49.90	\$ 52.50	\$ 55.10
	4	71150 71151	20.90	30	20 20 20	2512	512	52.60 60.20	56.70 65.00	59.00	61.8
₹.	8	71152	26.80 32.30	30	20	3116	512	66.50	71.60	73.30	76.9
1 gg	10 12	71153 71154	37.60 44.60	30 60	20 20	35 1 2 39 1 2	51 <sub>2</sub> 51 <sub>2</sub>	73.50 84.30	79.30 88.70	80.70 90.10	94.4
	14 16	71155 71156	49.80 55.20	60 60	20 20	$\begin{array}{c} 41\frac{12}{4}\\ 45\frac{12}{4}\\ 49\frac{12}{2} \end{array}$	512 512	91.20 97.60	96.10 102.70	97.40 104.00	101.9
	18	71157	61.40	60	20	4912	5 2	108.30	116.50 122.60	112.90	120.3
	20 22	71158 71159	65.80 74.90	100	20	51 1/2 59 1/2	512 512 512	113.80	137.40	118.80	126.50 142.70
	24 26	71160	90.10	100	20	6512	516	142.00 148.50	150.60 157.40	148.10 155.50	156.6
	28	71162	95.30	100	20	69 1/2	512	156.00	166.10	164.60	173,30

<sup>\*</sup>Prices under heading "Panel with Cabinet" include panel, slate frame, box and trim complete. Prices for above panels with through feeds or meter loops will be furnished upon request. Prices do not include fuses. Order by catalogue number.

# 2 TO 2-WIRE-TYPE DPS SAFETY PANELS-125-VOLT

Double Branches with 10-Ampere Push Button Switches Arranged for Edison Plug Fuses

		PANE	LONLY			X DIN			PAN		H CABIN	NET*
Illustrations of Type DPS Panels	No.	Catalogue Number	List Price	Cap. Mains	8	pes \$1 nd \$2	Type \$1	Type \$2	Types BMS1	Types BMS2	Type BTS1	Type BTS2
	"	Italiabai	11100	Amps.	Wide	High	Deep	Deep	BNS1	BNS2	Bioi	0132
			1 111			ELS W						
	4 6	71001 71002 71003	\$ 7.50 12.50 17.60	30 30 60	20 20 20	$\begin{array}{c c} 15 \frac{1}{2} \\ 17 \frac{1}{2} \\ 21 \frac{1}{2} \end{array}$	51/2 51/2 51/2	5 1/2 5 1/2 5 1/3	\$ 35.00 40.80 47.70	\$ 37.30 43.40 51.10	\$ 40.80 46.80 53.90	\$ 42.50 48.70 56.30
	10 12	71004 71005 71006	22.80 27.70 33.30	60 60 100	20 20 20	$\begin{array}{ c c c c c }\hline 25\frac{1}{2} \\ 27\frac{1}{2} \\ 31\frac{1}{2} \\ \end{array}$	5 ½ 5½ 5½ 5½	5 ½ 5 ½ 5 ½	54.50 60.30 67.50	58.60 64.80 72.60	60.90 66.80 74.30	63.70 69.90 77.90
30 vo 00 F	14 16 18	71007 71008 71009	38.90 43.90 50.60	100 100 200	20 20 20	35 ½ 37 ½ 41 ½	5½ 5½ 5½ 5½	$   \begin{array}{r}     5\frac{1}{2} \\     5\frac{1}{2} \\     5\frac{1}{2}   \end{array} $	74.80 80.70 91.20	80.60 86.80 95.80	82.00 88.30 97.20	86.10 92.50 101.50
	20 22 24	71010 71011 71012	55.80 61.10 66.20	200 200 200	20 20 20	43 ½ 47 ½ 49 ½	5 ½ 5 ½ 5 ½ 5 ½	5 ½ 5 ½ 5 ½ 5 ½	97.20 106.90 113.10	102.10 114.80 121.30	103.40 111.20 117.70	107.90 118.60 125.10
(English makes appropriately	26 28	71013 71014	71.50 76.70	200 200	20 20	53 ½ 55 ½	5 ½ 5 ½	5 ½ 5 ½ 5 ½	120.60 126.90	129.60 136.30	126.30 133.30	133.90 141.00
				PA	NEL	s wit	H FU	SIBLE	MAINS	,		
24 1 2 2 .	2 4 6	71017 71018 71019	\$ 9.00 14.00 19.40	30 30 60	20 20 20	17½ 19½ 25½	5 ½ 5 ½ 5 ½ 5 ½	5 ½ 5 ½ 5 ½ 5 ½	\$ 37.30 43.20 51.10	\$ 39.90 46.20 55.20	\$ 43.30 49.30 57.50	\$ 45.20 51.50 60.30
3E	8 10 12	71020 71021 71022	24.60 29.50 36.00	60 60 100	20 20 20	29 ½ 31 ½ 37 ½	5 ½ 5 ½ 5 ½ 5 ½	5½ 5½ 5½ 5½	58.00 64.00 72.80	62.80 68.80 78.90	64.60 70.50 79.90	67.90 74.10 84.60
3 w w 3	14 16 18	71023 71024 71025	41.60 46.60 54.90	100 100 200	20 20 20	41 ½ 43 ½ 47 ½	5 ½ 5 ½ 5 ½ 5 ½	5 1/2 5 1/2 5 1/2	82.20 88.00 100.70	86.80 92.90 108.60	88.20 94.20 105.00	92.50 98.70 112.40
3 A 7 7	20 22 24	71026 71027 71028	60.10 65.40 70.50	200 200 200	20 20 20	51 ½ 53 ½ 57 ½	5 ½ 5 ½ 5 ½ 5 ½	5 ½ 5 ½ 5 ½ 5 ½	108.10 114.50 124.20	116.90 123.50 131.50	113.10 120.20 128.60	120.80 127.80 136.50
	26 28	71029 71030	75.80 81.00	200 200	20 20	59 ½ 63 ½	5 ½ 5 ½	$   \begin{array}{c c}     5 \frac{1}{2} \\     5 \frac{1}{2}   \end{array} $	130.60 138.20	138.30 146.80	135.60 144.30	143.60 152.80
			P.	ANEL	s wi	TH FU	SELE	ss m	AIN SW	тсн		
	2 4 6	71033 71034 71035	\$11.80 16.80 22.80	30 30 60	20 20 20	23 ½ 25 ½	51/2 51/2	5½ 5½ 5½	\$ 42.60 48.50	\$ 46.30 52.60	\$ 48.90 54.90	\$ 51.50 57.70
	8 10 12	71036 71037 71038	28.00 32.90 41.30	60 60	20 20 20 20	31 ½ 33 ½ 37 ½ 41 ½	5 1/2 5 1/2 5 1/2	5 ½ 5 ½ 5 ½ 5 ½	57.00 63.00 69.70	62.10 68.40 75.80	63.80 70.10 77.30	67.40 73.90 81.50
	14 16	71039 71040	46.90 51.90	100 100 100	20 20	41 ½ 45 ½ 47 ½	5 ½ 5 ½ 5 ½	516	81.90 89.30 97.70	86.50 94.40 105.60	87.90 95.70 102.00	92.20 100.30 108.90
	18 20 22	71041 71042 71043	61.80 67.00 72.30	200 200 200	20 20 20	55 ½ 57 ½ 61 ½ 63 ½	6 ½ 6 ½ 6 ½ 6 ½	8½ 8½ 8½ 8½ 8½ 8½	114.10 123.00 130.80	127.20 134.10 142.80	120.50 127.40 136.20	131.90 139.10 148.30
	24 26 28	71044 71045 71046	77.40 82.70 87.90	200 200 200	20 20 20	63 1/2 67 1/2 69 1/2	6 1/2 6 1/2	8½ 8½ 8½ 8½	137.20 144.90 151.30	149.70 158.40 165.90	143.30 152.60 159.90	155.70 165.30 173.10
			P	ANEL	s w	ITH F	JSIBL	E MA	IN SWI	гсн		
13 ·· · · · · · · · · · · · · · · · · ·	2	71049	\$13.20	30	20	23 1/2	51/2	51/2	\$ 44.00	\$ 47.70	\$ 50.30	\$ 52.90
· · · · · · · · · · · · · · · · · · ·	6 8	71050 71051 71052	18.20 24.20 29.40	30 60 60	20 20 20	23 ½ 25 ½ 31 ½ 33 ½	5 1/2	5 ½ 5 ½ 5 ½ 5 ½	49.90 58.40 64.40	54.00 63.50 69.80	56.30 65.20 71.50	59.10 68.80 75.30
	10 12 14	71053 71054 71055	34.30 44.50 50.10	60 100 100	20 20 20	451/2	5 ½ 5 ½ 5 ½ 5 ½	51/2 51/2 51/2	71.10 86.90 95.90	77.20 92.00 103.80	78.70 93.30 100.20	82.90 97.90
H	16 18 20	71056 71057	55.10 66.30	100 200	20 20	47 ½ 51 ½ 57 ½	5 ½ 5 ½ 6 ½	81/2	103.10 122.30	111.90 133.40	107.30 126.70	107.60 115.80 138.40
å å	22 24	71058 71059 71060	71.50 76.80 81.90	200 200 200	20 20 20	59 ½ 63 ½ 65 ½	6 ½ 6 ½ 6 ½	8 ½ 8 ½ 8 ½ 8 ½	128.80 136.60 142.80	140.20 149.10 155.90	133.80 142.70 149.80	145.60 155.10 162.40
	26 28	71061 71062	87.20 92.40	200 200	20 20	69 ½ 71 ½	61/2	8 1/2 8 1/2	150.60 156.90	165.20 173.00	159.20 166.40	172.40 180.80

<sup>\*</sup>Prices under heading "Panel with Cabinet" include panel, slate frame, box and trim complete. Prices for above panels with through feeds or meter loops will be furnished upon request. Prices do not include fuses. Order by catalogue number.

## 2 TO 2-WIRE-TYPE EPS SAFETY PANELS-125 VOLTS

Double Branches with 10-Ampere Push Button Switches Arranged for N. E. C. Cartridge Fuses

		PANEI	ONLY			ζ DIM tside i			PANE	L WITH		ET*
Illustrations of Type EPS Panels	No. Cir.	Catalogue Number	List Price	Cap. Mains	an	es \$1 d \$2	Type S1	Type \$2	Types BMS1 BNS1	Types BMS2 BNS2	Type 8TS1	Type BTS2
,				Amp.	Wide	High	Deep	Deep		DINGE		
Market Mark House Company	_	71201	\$ 7.50	30	20				LUGS \$ 35.00	\$ 37.30	\$ 40.80	\$ 42.50
	4 6	71201 71202 71203	\$ 7.50 12.50 17.60	30 60	20 20 20	15 ½ 17 ½ 21 ½	5 1/2 5 1/2 5 1/2	5 1/2 5 1/2 5 1/2	40.80 47.70	43.40 51.10	46.80 53.90	48.70 56.30
200 000	8	71204	22.80	60	20	25 1/2	51/2	51/2	54.50 60.30	58.60 64.80	60.90 66.80	63.70 69.90
- OU OO	10 12	71205 71206	27.70 33.30	60 100	20 20	$27\frac{1}{2}$ $31\frac{1}{2}$	5 ½ 5 ½	5 ½ 5 ½ 5 ½	67.50	72.60	74.30	77.90
	14 16	71207 71208	38.90 43.90	100 100	20 20	35 1/2 37 1/2 41 1/2	51/2	5 1/2 5 1/2 5 1/2	74.80 80.70	80.60 86.80	82.00 88.30	86.10 92.50
	18	71209 71210	50.60 55.80	200 200	20 20	41 1/2	0 1/2	$5\frac{1}{2}$ $5\frac{1}{2}$	91.20 97.20	95.80 102.10	97.20 103.40	101.50 107.90
	22 24	71211 71212	61.10 66.20	200 200	20 20	43 ½ 47 ½ 49 ½	5 1/2 5 1/2 5 1/2	5 ½ 5 ½	106.90 113.10	114.80 121.30	111.20 117.70	118.60 125.10
	26	71213	71.50	200	20	53 1/2	51/2	512	120.60 126.90	129.60 136.30	126.30 133.30	133.90 141.00
	28	71214	76.70	200	20	55 1/2	51/2	5 1/2		1	133.30	141.00
PRODUCTION OF THE PARTY	_	****	0.00						E MAIN:	\$ 30.90	\$ 43.30	\$ 45.20
	4	71217 71218	\$ 9.00 14.00	30	20	17 ½ 19 ½	5 1/2 5 1/2 5 1/2	51/2 51/2 51/2	43.20 51.10	46.20 55.20	49.30 57.50	51.50 60.30
* A 10	8	71219 71220	19.40 24.60	60 60	20	25 1/2 29 1/2	5 ½ 5 ½ 5 ½	514	58.00	62.80	64.60	67.90
10 . W. W. W.	10 12	71221 71222	29.50 36.00	60 100	20 20	31 ½ 37 ½	5/2	5 ½ 5 ½	64.00 72.80	68.80 78.90	70.50 79.90	74.10 84.60
10 00	14 16	71223 71224	41.60 46.60	100 100	20 20	41 ½ 43 ½ 47 ½	5 1/2 5 1/2 5 1/2	5 ½ 5 ½ 5 ½ 5 ½	82.20 88.00	86.80 92.90	88.20 94.20	92.50 98.70
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	18 20	71225 71226	54.90 60.10	200	20 20		51/2	51/2	100.70	108.60	105.00	112.40
# E	22 24	71227 71228	65.40 70.50	200 200	20 20	51 ½ 53 ½ 57 ½	5 ½ 5 ½	5 1/2 5 1/2 5 1/2	114.50 124.20	123.50 131.50	120.20 128.60	127.80 136.50
	26 23	71229 71230	75.80 81.00	200 200	20 20	59 ½ 63 ½	5½ 5½	5 ½ 5 ½	130.60 138.20	138.30 146.80	135.60 144.30	143.60 152.80
		-	PA	NEL	s wi	тн г	JSELI	ESS N	IAIN SV	итсн		
	2	71233	\$11.80	20	20	2316	51/6	5 1/2	\$ 42.60	\$ 46.30	\$ 48.90	\$ 51.50
845	4	71234 71235	16.80 22.80	30 60	20 20	23 ½ 25 ½ 31 ½	5 1/2 5 1/2 5 1/2	5½ 5½	48.50 57.00	52.60 62.10	54.90 63.80	57.70 67.40
ted 2	8	71236	28.00	60	20 20	33 ½ 37 ½	51/2 51/2	51/2	63.00 69.70	68.40 75.80	70.10 77.30	73.90 81.50
10 100 00 1 m	10 12	71237 71238	32.90 41.30	100	20	41 1/2	5 1/2	51/2	81.90	86.50	87.90	92.20
	14 16	71239 71240	46.90 51.90	100 100	20 20	45 ½ 47 ½ 55 ½	5 1/2 5 1/2 6 1/2	5½ 5½ 8½	89.30 97.70	94.40 105.60	95.70 102.00	100.30
	18	71241	61.80	200	20	57 1/2	61/2	81/2	114.10	127.20 134.10	120.50 127.40	131.90 139.10
	22	71243 71244	72.30 77.40	200 200	20	61 1/2 63 1/2	61/2	8½ 8½ 8½ 8½	130.80 137.20	142.80	136.20 143.30	148.30 155.70
	26 28	71245 71246	82.70 87.90	200 200	20 20	67 1/2 69 1/2	61/2	81/2	144.90 151.30	158.40 165.90	152.60 150.90	165.30 173.10
		ı	F	ANE	Ls w	ітн ғ		LE M	IAIN SW	тсн		
10.	2	71249	\$13.20	30	20	231/2	51/2	51/2	\$ 44.00	\$ 47.70	\$ 50.30	\$ 52.90
965 E	6	71250 71251	18.20 24.20	30 60	20 20	31 12	51/2	5 ½ 5 ½ 5 ½	49.90 58.40	54.00 63.50	56.30 65.20	59.10 68.80
	8 10	71252 71253	29.40 34.30	60	20 20	33 ½ 37 ½ 45 ½	5 1/2 5 1/2 5 1/2	5 1/2 5 1/2 5 1/2	64.40 71.10 86.90	69.80 77.20 92.00	71.50 78.70 93.30	75.30 82.90 97.90
	12 14 16	71254 71255 71256	44.50 50.10 55.10	100 100 100	20 20 20	47 ½ 47 ½ 51 ½ 57 ½	5 ½ 5 ½ 6 ½	5½ 5½ 5½ 8½	95.90 103.10	103.80 111.90	100.20 107.30	107.60 115.80
	18	71257	66.30	200	20	57 1/2	61/2	81/2	122.30	133.40	126.70	138.40
	20	71258 71259	71.50 76.80	200	20 20	59 ½ 63 ½ 65 ½	612	8½ 8½ 8½ 8½	128.80	149.10	142.70	155.10
77	24	71260 71261	81.90 87.20	200	20 20	69 1/2	61/2	8½ 8½ 8½ 8½	142.80 150.60	155.90 165.20	149.80 159.20	162.40 172.40
	28	71262	92.40	200	20	71 1/2	61/2	81/2	156.90	173.00	166.40	180.80

<sup>\*</sup>Prices under heading "Panel with Cabinet" include panel, slate frame, box and trim complete. Prices for above panels with through feeds or meter loops will be furnished upon request. Prices do not include fuses. Order by catalogue number.

### 3 TO 2-WIRE—TYPE EPS SAFETY PANELS—125 VOLTS

Double Branches with 10-Ampere Push Button Switches Arranged for N. E. C. Cartridge Fuses

		PANE	LONLY			DIMENS		PAN	EL WITH	I CABINI Price	ET*
Illustrations of Type EPS Panels	No.	Catalogue	List	Cap. Mains	Тур	es S1 aı	nd S2	Types BMS1	Types BMS2	Туре	Туре
	Cir.	Number	Price	Amps.	Wide	High	Deep	BNS1	BNS2	BT\$1	BT\$2
				P	ANEL	S WIT	H MAI	N LUGS			
2 1.0° 20 2	2 4 6	71301 71302 71303	\$ 7.00 12.30 18.20	30 30 30	20 20 20	15 1/2 17 1/2 21 1/2	5 1/2 5 1/2 5 1/2	\$ 34.50 40.60 48.30	\$ 36.80 43.20 51.70	\$ 40.30 46.60 54.50	\$ 42.00 48.50 56.90
	8 10 12	71304 71305 71306	23.70 29.00 34.70	30 30 60	20 20 20	$ \begin{array}{c c} 23 & 1 & 2 \\ 27 & 1 & 2 \\ 31 & 1 & 2 \end{array} $	5 ½ 5 ½ 5 ½ 5 ½	54.50 61.60 68.90	58.20 66.10 74.00	60.80 68.10 75.70	63.40 71.20 79.30
0 00 00	14 16 18	#1307 71308 71309	39.90 45.30 50.50	60 60 60	20 20 20	$\frac{33 \frac{1}{2}}{37 \frac{1}{2}}$	$ \begin{array}{c c} 5 \frac{1}{2} \\ 5 \frac{1}{2} \\ 5 \frac{1}{2} \end{array} $	74.90 82.10 90.20	80.30 88.20 94.60	82.00 89.70 96.00	85.80 93.90 100.30
	20 22 24	71310 71311 71312	55.90 62.60 68.00	100 100	20 20 20	$\begin{array}{c} 43\frac{1}{2} \\ 47\frac{1}{2} \\ 49\frac{1}{2} \end{array}$	5 1/2 5 1/2 5 1/2	97.30 108.40 114.90	102.20 116.30 123.10	103.50 112.70 119.50	108.00 120.10 126.90
	26 28	71313 71314	73.30 78.50	100 100	20 20	$53\frac{1}{2}$ $55\frac{1}{2}$	5 ½ 5 ½	122.40 128.70	131.40 138.10	128.10 135.10	135.70 142.80
Control of the second				PA	NELS	WITH	FUSIB	LE MAII	NS		
	2 4 6	71317 71318 71319	\$ 9.20 14.60 19.50	30 30 30	20 20 20	17 ½ 19 ½ 23 ½	5 1/2 5 1/2 5 1/2	\$ 37.50 43.80 50.30	\$ 40.10 46.80 54.00	\$ 43.50 49.90 56.60	\$ 45.40 52.10 59.20
3	8 10 12	71320 71321 71322	26.00 31.30 37.40	30 30 60	20 20 20	25 ½ 29 ½ 35 ½	5 ½ 5 ½ 5 ½ 5 ½	57.70 64.70 73.30	61.80 69.50 79.10	64.10 71.30 80.50	66.90 74.60 84.60
3 02 00	14 16 18	71323 71324 71325	42.60 48.00 53.20	60 60 60	20 20 20	37 ½ 41 ½ 43 ½	512 512 512	79.40 88.60 94.60	85.50 93.20 99.50	87.00 94.60 100.80	91.20 98.90 105.30
	20 22 24	71326 71327	58.60 66.70	60 100	20 20	$\frac{471_{2}}{531_{2}}$	5 1 ½ 5 1 ½ 5 1 ½	104.40 115.80	112.30 124.80	108.70 121.50	116.10 129.10
	26 23	71328 71329 71330	72.10 77.40 82.60	100 100 100	20 20 20	551 <sub>2</sub> 591 <sub>2</sub> 611 <sub>2</sub>	51/2 51/2	122.30 132.20 138.60	131.70 139.90 146.70	128.70 137.20 144.00	136.40 145.20 152.20
			PA	NELS	WITI	H FUSE	LESS	MAIN S	WITCH	1	
24 (197	2 4	71333 71334	\$12.80 18.80	30	20 20	$\frac{23\frac{1}{2}}{25\frac{1}{2}}$	512	\$ 43.60	\$ 47.30	\$ 49.90	\$ 53.20
	6 8	71335 71336	24.70	30 30	20 20	29 1 ½ 31 1 ½ 35 1 ½	512 512 512	50.50 58.10 64.40	54.60 62.90 69.50	56.90 64.70 71.20	59.70 68.00 74.80
	10 12 14	71337 71338 71339	35.50 42.50 47.70	30 60 60	20 20 20	35 1 2 39 1 2 43 1/2	512 512 512	71.40 82.20 89.10	77.70 86.60 94.00	78.60 88.00 95.30	82.70 92.30 99.80
	16 18	71340 71341	53.10 58.30	60 60	20 20	$45\frac{1}{2}$ $49\frac{1}{2}$	51 <sub>2</sub> 51⁄2	95.50 105.20	100.60 113.40	101.90 109.80	106.50 117.20
	20 22 24	71342 71343 71344	63.70 74.60 80.00	100 100	20 20 20	51 ½ 57 ½ 59 ½	512 512 512	111.70 128.30 136.00	120.50 135.60 142.40	116.70 132.70 141.40	124.40 140.60 147.80
. !!! .	26 28	71345 71346	85.30 90.50	100 100	20 20	$63\frac{1}{2} \\ 65\frac{1}{2}$	5 ½ 5 ½	142.50 150.00	151.10 157.80	148.60 157.70	157.10 164.30
· · · · ·			P	ANELS	WIT	H FUS	IBLE I	MAIN SV	VITCH		
	2 4 6	71349 71350 71351	\$15.40 20.90 26.80	30 30 30	20 20 20	$\begin{array}{c} 23  {}^{1}_{ 2} \\ 25  {}^{1}_{ 2} \\ 29  {}^{1}_{ 2} \end{array}$	$ \begin{array}{c c} 51_{2} \\ 51_{2} \\ 51_{2} \end{array} $	\$ 46.20 52.60 60.20	\$ 49.90 56.70 65.00	\$ 52.50 59.00 66.80	\$ 55.10 61.80 70.10
	8 10 12	71352 71353 71354	32.30 37.60 44.60	30 30 60	20 20 20	31 1/2 35 1/2 39 1/2	51/2 51/2 51/2 51/2	66.50 73.50 84.30	71.60 79.30 88.70	73.30 80.70 90.10	76.90 84.70 94.40
1 = 1	14 16 18	71355 71356 71357	49.80 55.20 61.40	60 60 60	20 20 20 20	41 1/2 45 1/2 49 1/2	5 1/2 5 1/2 5 1/2	91.20 97.60 108.30	96.10 102.70	97.40 104.00	101.90 108.60
	20 22 24	71358 71359 71360	65.80 74.90	60 100	20 20	51 1/2 59 1/2	5½ 5½ 5½ 5½ 5½	113.80 129.70	116.50 122.60 137.40	112.90 118.80 134.70	120.30 126.50 142.70
. 111	26 28	71360 71361 71362	90.10 95.30	100 100 100	20 20 20	63 ½ 65 ½ 69 ½	5 ½ 5 ½ 5 ½	142.00 148.50 156.00	150.60 157.40 166.10	148.10 155.50 164.60	156.60 163.90 173.30
*Prices under heading	"Pan	el with (	Cabinat''	include	nanel	alate fr		v and trim	complete	Prince f	or shove

<sup>\*</sup>Prices under heading "Panel with Cabinet" include panel, slate frame, box and trim complete. Prices for above panels with through feeds or meter loops will be furnished upon request. Prices do not include fuses. Order by catalogue number.

# 2 TO 2-WIRE-TYPE EPS SAFETY PANELS-250 VOLTS

Double Branches with 10-Ampere Push Button Switches Arranged for N. E. C. Cartridge Fuses

		PANEI	ONLY			DIMENS ide in I		PAN	EL WITH List P	CABINE	ET*
Illustrations of Type EPS Panels	No.	Catalogue	List	Cap. Mains	Тур	es S1 ar	nd S2	Types BMS1	Types BMS2	Туре	Туре
	Cir	Number	Price	Amps	Wide	High	Deep	BNS1	BNS2	BTS1	BTS2
		-		P	ANEL	s WITH	I MAI	N LUGS			
A Third Sale	2 4	71401 71402	\$ 7.70 12.80	30 30	20 20	$\frac{151_{2}}{171_{2}}$	512	\$ 35.20 41.10	\$ 37.50 43.70	\$ 41.50 47.10	\$ 42.70 49.00
	6	71403 71404	18.00 23.30	30	20	$\frac{21}{2}$ $\frac{1}{2}$	512	48.10 54.10	51.50 57.80	54.30 60.40	56.70 63.00
e tur	10 12	71405 71406	28.40 34.10	30 60	20 20	$\frac{27}{31} \frac{1}{2}$	$\begin{bmatrix} 5 & 1 & 2 \\ 5 & 1 & 2 \\ 5 & 1 & 2 \end{bmatrix}$	61.00 68.30	65.50 73.40	67.50 75.10	70.60 78.70
	14	71407	39.40	60	20	3312	512	74.40 81.30	79.80 87.40	81.50 88.90	85.30 93.10
	16 18	71408 71409	44.50 49.90	60	20 20	37 1 2 39 1 2	51 <sub>2</sub> 51 <sub>2</sub>	89.60	94.00	95.40	99.70
	20 22	71410 71411	55.40 61.70	60 100	20 20	$\frac{43}{47}\frac{1}{2}$	$\frac{51_{2}}{51_{2}}$	96.80 107.50	101.70 115.40	103.00 111.80	107.50 119.20
ALCOHOLD TO SERVICE	24 26	71412 71413	67.20 72.30	100	20	491 <sub>2</sub> 531 <sub>2</sub>	512	114.10 121.40	122.30 130.40	118.70 127.10	126.10
	28	71414	77.70	100	20	5512	512	127.90	137.30	134.30	142.00
				PA	NELS	WITH	FUSIB	LE MAIN	is		
	2 4	71417 71418	\$ 9.90 14.30	30	20 20	17 1/2 19 1/2	51 <sub>2</sub> 51 <sub>2</sub>	\$ 38.20 43.50	\$ 40.80 46.50	\$ 44.40 49.60	\$ 46.00
	6 8	71419	19.50 24.80	30	20 20	2515	512 512	50.30 56.50	54.00 60.60	56.60 62.90	59.20 65.70
	10 12	71421 71422	29.90 35.90	30 60	20	$\frac{29}{35}\frac{1}{2}$	$\frac{51_{2}}{51_{2}}$	63.30 71.80	68.10 77.60	69.90 79.00	73.2 83.1
Sec. 10.	14 16	71423 71424	41.20 46.30	60 60	20 20	3712	$\frac{5}{5}^{1}_{2}$	78.00 86.90	84.10 91.50	85.60 92.90	89.8 97.2
	18	71425 71426	51.70 57.20	60	20 20	4312	512 512	93.10 103.00	98.00 110.90	99.30 107.30	103.8
	22 24	71427 71427 71428	64.40	100	20 20	5312 5512	51 <sub>2</sub> 51 <sub>2</sub>	113.50 120.00	122.50 129.40	119.20 126.40	126.8
	26 28	71429 71430	75.00 80.40	100	20 20	59 1 ½ 61 1 2	512 512	129.80 136.40	137.50	134.80 141.80	142.8
	28	71430	80.40	100	20	01-2	0 2	100.40	144.00	111100	100.0
			PA	NELS	WITH	FUSE	LESS !	MAIN SW	ITCH		
	2	71433 71434	\$13.40 17.10	30 30	20 20	$\begin{array}{c} 23{}^{1}_{\;2} \\ 27{}^{1}_{\;2} \end{array}$	5 1 2 5 1 2	\$ 44.20 49.70	\$ 47.90 54.20	\$ 50.50 56.20	\$ 53.10 59.3
1 Es	6 8	71435 71436	22.30	30	20	291 <sub>2</sub> 331 <sub>2</sub>	51 <sub>2</sub>	55.70 62.60	60.50 68.00	62.30 69.70	65.6 73.5
- 10 Ho	10 12	71437 71438	32.70 39.30	30 60	20	3512	$\frac{51_{2}}{51_{2}}$	68.60 79.90	74.40 84.50	75.80 85.90	79.9 90.2
	14 16	71439 71440	44.60 49.70	60 60	20 20	$\frac{431_{2}}{471_{2}}$	5 1 2 5 1 2	86.00 95.50	90.90	92.20 99.80	96.7 107.2
	18	71441	55.10	60	20	4912	512	102.00	110.20	106.60	114.0
	20 22	71442 71443	60.60 69.70	100	20 20	53 1 2 57 1 2	512	109.70	118.70	115.40 127.80	123.0 135.7 144.7
	24 26	71444	75.10 80.30	100	20 20	63 1 2	51 <sub>2</sub> 51 <sub>2</sub>	131.10 137.50	139.20 146.10	136.50 143.60	152.1
	28	71446	85.70	100	20	67 12	512	147.00	154.50	152.90	161.4
			I	PANEL	s wi	rh Fus	BIBLE	MAIN S	WITCH		
PC	2			30		$\begin{array}{c c} 23{}^{1}_{2} \\ 27{}^{1}_{2} \end{array}$	5 1 2 5 1 2	\$ 45.70 51.10	\$ 49.40 55.60	\$ 52.00 57.60	\$ 54.6 60.7
97% 2 3 326 gr 3	6	71451	24.00	30	20	2912	$5^{+}_{2}$	57.40	62.20	64.00	67.3
	10	71453	34.10	30	20	331 <sub>2</sub> 351 <sub>2</sub>	512	70.00	69.40 75.80	71.10	74.9 81.3
	12 14			60	20	4112	51 <sub>2</sub> 51 <sub>2</sub>	81.30 87.40	85.90 92.30	93.60	91.6
	16 18	71456	51.10	60 60	20	$\begin{array}{c} 471_{2} \\ 491_{2} \end{array}$	512	96.90 103.40	104.80 111.60	101.20 108.00	108.6
10	20	71458	62.00	60 100	20	$\frac{53}{61} \frac{1}{2}$	512	111.10 128.90	120.10 137.00	116.80 134.30	124.4
	24	71460	78.30	100	20	63 2	.) 2	135.50	144.10	141.60	150.1
50 D	26					$\begin{array}{c} -67  {}^{1}  {}^{2}_{2} \\ -69  {}^{1}  {}^{2}_{2} \end{array}$	5 1 2 5 1 2	143.00 149.60	152.30 161.30	150.70 158.20	166.9

<sup>\*</sup>Prices under heading "Panel with Cabinet" include panel, slate frame, box and trim complete. Prices for above panels with through feeds or meter loops will be furnished upon request. Prices do not include fuses. Order by catalogue number.

### STANDARD SYMBOLS FOR WIRING PLANS

AS ADOPTED AND RECOMMENDED BY

THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION OF THE UNITED STATES and THE AMERICAN INSTITUTE OF ARCHITECTS,
Copies may be had on application to the Sec'y of the Nat. Elec. Cont. Associ'o, Utics, N. Y., and the Sec'y of The American Instit. of Architects, Washington, D. C.

Ceiling outlet; Electric only. Numeral in center indicates number of Standard 16 C. P. Incandescent Lamps, 🛣 🕏 Ceiling Outlet; Combination. 🛊 indicates 4-16 C. P. Standard Incandescent Lamps and 2 Gas Burners. If gas only 1-0 Bracket Outlet; Electric only. Numeral in center indicates number of Standard 16 C. P. Incandescent Lamps. Bracket Outlet; Combination. 4 indicates 4-16 C. P. Standard Incandescent Lamps and 2 Gas Burners. If gas only 3-3 Wall or Baseboard Receptacle Outlet. Numeral in center indicates number of Standard 16 C. P. Incandescent La mps. Floor Outlet. Numeral in center indicates number of Standard 16 C. P. Incandescent Lamps. াৰ 00 Outlet for Outdoor Standard or Pedestal; Electric only. Numeral indicates number of Stand. 16 C. P. Lamps. Ø 6 Outlet for Outdoor Standard or Pedestal; Combination. § indicates 6-16 C. P. Stand. Incan. Lamps; 6 Gas Burners **(a)** Drop Cord Outlet. Ø One Light Outlet, for Lamp Receptacle. 1 Arc Lamp Outlet. Special Outlet, for Lighting, Heating and Power Current, as described in Specifications. Ceiling Fan Outlet. S. P. Switch Outlet S1 Show as many Symbols as there are Switches. Or in case of a very large group Se D. P. Switch Outlet. of Switches, indicate number of Switches by a Roman numeral, thus: S1 XII, S3 3-Way Switch Outlet. meaning 12 Single Pole Switches. S 4 4. Way Switch Outlet. Describe Type of Switch in Specifications, that is, So Automatic Door Switch Outlet. Flush or Surface, Push Button or Snap, SE Electrolier Switch Outlet. Ħ Meter Outlet Distribution Panel. Junction or Pull Box. Motor Outlet; Numeral in center indicates Horse Power. Motor Control Outlet. Transformer. Main or Feeder run concealed under Floor. SUGGESTIONS IN CONNECTION WITH STAN-- Main or Feeder run concealed under Floor above. DARD SYMBOLS FOR WIRING PLANS --- Main or Feeder run exposed. It is important that ample space be - Branch Circuit run concealed under Floor. allowed for the installation of mains, feed-- Branch Circuit run concealed under Floor above. ers, branches and distribution panels. ---- Branch\_Circuit run exposed. It is desirable that a key to the symbols ----- Pole Line. used accompany all plans. If mains, feeders, branches and dis-Riser. tribution panels are shown on the plans, it is desirable that they be designated by letters or numbers. Telephone Outlet; Private Service. Heights of Centre of Wall Outlets (unless Telephone Outlet; Public Service. otherwise specified) Bell Outlet. 5' 6" Living Rooms Buzzer Outlet. Chambers 5' 0" [12 Push Button Outlet; Numeral indicates number of Pushes. Offices 6' 0" 6' Corridors Annunciator; Numeral indicates number of Points. Height of Switches (unless otherwise spec-Speaking Tube. (C) Watchman Clock Outlet. Watchman Station Outlet. Master Time Clock Outlet. -(13) Secondary Time Clock Outlet. Door Opener. Special Outlet; for Signal Systems, as described in Specifications. Battery Outlet. ( Circuit for Clock, Telephone, Bell or other Service, run under Floor, concealed. Kind of Service wanted ascertained by Symbol to which line connects. ( Circuit for Clock, Telephone, Bell or other Service, run under Floor above, concealed

> NOTE-If other than Standard 16 C. P. Incandescent lamps are desired, Specifications should describe capacity of Lamp to be used.

Kind of Service wanted ascertained by Symbol to which line connects.

### C. G. S. Units

The electrical units are derived from the following mechanical units of the metric system:

Centimeter—Unit of length—One thousand millionth part of a quadrant of the earth's surface.

Gramme—Unit of Weight—Weight of a cubic centimeter of water at a temperature of 4 degrees

Second—Unit of Time—The time of one swing of a pendulum making 86,400 swings in a solar day. The unit of area is the square centimeter. The unit of volume is the cubic centimeter.

### The Electrical Units Are as follows

Volt-The Unit of Electro-Motive Force-Force required to send one ampere of current through one ohm of resistance.

Ohm-Unit of Resistance-The resistance offered to the passage of one ampere when impelled by one volt.

Megohm—1,000,000 ohms.

Ampere—Unit of Current—The current which one volt can send through a resistance of one ohm. Coulomb-Unit of Quantity-Quantity of current which, impelled by one volt, would pass through one ohm in one second.

Farad—Unit of Capacity—The capacity of a conductor or a condenser which will hold one coulomo

under the pressure of one volt.

Microfarad (Mfd.)—One millionth of a farad.

Watt-Unit of Power-The power to do work when one ampere passes through one ohm under pressure of one volt. (746 watts equal one horse power.)

Joule—Unit of Work—The work done by one watt in one second.

### Ohm's Law

Ohm's law is a method of expressing the relationship existing between the electro-motive force, current and resistance, and is practically the basis of most electrical computations. It is expressed in various forms, as follows:

Current flow equals the electro-motive force divided by the resistance.

Electro-motive force. E Current flow = Resistance

Electro-motive force equals the current flow multiplied by the resistance.

Electro-motive force = Current flow x Resistance or E=C x R.

Resistance equals the electro-motive force divided by the current flow.

Electro-motive force Resistance = -Current flow

Electro-motive force varies directly as the current and resistance.

Resistance varies directly with the electro-motive force and inversely as the current. Current varies directly with the electro-motive force and inversely as the resistance.

#### Mil

-(.001) of an inch, is the practical basis for The "mil," whose expressed value is-

one-thousandth determining the diameters and thereby the areas of all wires used as electric conductors. The diameter being given, the area is obtained by the well-known rule, "the area of a circle, in circular units, is equal to the squarc of its diameter," hence, the square of the diameter of a wire expressed in mils equals the area of its cross section. d2=A, which area is expressed in circular mils or CM; hence, D2=CM.

# Wiring Formulas

Ohm's law is practically the basis for the various formulas in general use for determining the proper sizes of wire to use to carry various currents. It is essential to know the amount of current expressed in amperes, the distance, and to decide upon the loss to allow in transmission; the best rule is as follows:

The cross section (CM) of the necessary wire is found by multiplying twice the distance one way (2D) by amount of current expressed in amperes (C) and this by the resistance of one mil-foot (10.7) and dividing by the loss in transmission expressed in volts (V).

Or CM = 
$$\frac{2D \times C \times 10.7}{V}$$
 Or CM =  $\frac{D \times C \times 21.4}{V}$ 

## General Equivalents

CM = Circular mils. SqM = Square mils.1 CM = 7854 SqM.1 SqM. = 1.2732 CM.1 Sq. in. = 1,000,000 SqM. 1 Sq. in. = 1,273,200 CM. 1 Sq. in. = area of a circle 1.128" diam. Area of a circle 1'' diam. = 1.000.000 CM. Area of a circle 1" diam. = 785,400 SaM.

# Table of Multiples

Diameter of a circle x 3.1416 = Circumference. Radius of a circle x 6.283185 = Circumference. Square of the radius of a circle x 3.1416 = area. Square of the diameter of a circle  $\times 0.7854 =$ 

Square of the circumference of a circle x 0.07958

= Area. Half the circumference of a circle x by half its diameter = Area.

Circumference of a circle x 0.159155 = Radius. Square root of the area of a circle  $\times 0.56419 =$ Radius.

Circumference of a circle x 0.31831 = Diameter. Square root of the area of a circle x 1.12838 = Diameter.

Diameter of a circle  $\times 0.86 = \text{Side}$  of inscribed

equilateral triangle. Diameter of a circle x 0.7071 = Side of an inscribed square.

Circumference of a circle  $x \cdot 0.225 = \text{Side of an}$ inscribed square.

Circumference of a circle x 0.282 = Side of an

equal square. Diameter of a circle  $\times 0.8862 = \text{Side of an equal}$ 

Base of a triangle x by ½ the altitude = Area. Multiplying both diameters and .7854 together Area of an ellipse.

Surface of a sphere x by 1-6 of its diameter = Solidity.

Circumference of a sphere x by its diameter = Surface.

Square of the diameter of a sphere x 3.1416 = Surface.

Square of the circumference of a sphere x 0.3183

Surface. Cube of the diameter of a sphere x 0.5236 = Solidity.

Cube of the radius of a sthere x 4.1888 = Solidity. Cube of the circumference of a sphere x 0.016887 = Solidity.

Square root of the surface of a sphere x 0.56419 Diameter.

Square root of the surface of a sphere x 1.772454 = Circumference. Cube root of the solidity of a sphere x 1.2407

Diameter.

Cube root of the solidity of a sphere x 3.8978 = Circumference.

Radius of a sphere x 1.1547 = Side of inscribed cube.

Square root of  $(\frac{1}{3})$  of the square of) the diameter of a sphere = Side of inscribed cube.

Area of its base x by ½ of its altitude = Solidity of a cone or pyramid, whether round, square or triangular.

Area of one of its sides x 6 = the surface of a

Altitude of trapezoid x 1/2 the sum of its parallel sides = Area.

# Horsepower for Belting

In general the load per inch width for single dynamo belts should not exceed 40 pounds for belt speeds under 4000 feet per minute and should not exceed 32 pounds for speeds from 4000 to 6000 feet, which is the practical limit of working. The total working pull on a belt may be found from the formulas: H.P. x 33000

Pull in pounds= Belt speed in feet per min.

Belt speed=Pulley diameter in inches x .262 x R.P.M.

The maximum ratio between driving and driven pulleys should not exceed 6:1 for ordinary conditions. The distance between centers will depend on the ratio, good proportions being approximately as follows:

Ratio 2:1 3:1	Min. Dist. between centers
4:1	10 12
5:1 6:1	15 20

World Radio History

# Field Current in D. C. Dynamos

The field current (expressed as a percentage of full load current on lines) is determined with all of the resistance out, that is, with rheostat on first notch.

# Copper Wire Resistance

The basis for computation of resistance of copper wires is a wire one foot long and one circular mil of cross section known as a mil-foot, and which has a resistance at 24° C. or 75° F. of about 10.7 ohms. The resistance of a copper wire varies directly as its length and inversely as its cross section: hence,

The resistance (R) of a copper wire is equal to its length (D) multiplied by the resistance of a mil-foot and divided by the cross section in circular mils (CM).

Or, 
$$R = \frac{D \times 10.7}{CM}$$
 also

The cross section (CM) in circular mils of a wire is equal to its length (D) multiplied by the resistance of a mil-foot, divided by its resistance (R).

$$CM = \frac{D \times 10.7}{R}$$
 also

The length (D) of a wire is equal to the cross section in circular mils (CM) multiplied by its resistance (R) and divided by the resistance of a mil-foot.

$$D = \frac{CM \times R}{10.7}$$

### Metric Conversion Table

Code—A = (factor) x B, thus—Metre = 39,3698 Inches

# Simple Units

#### Length

 $\begin{array}{lll} \text{Cm. 3937 In.} & \text{In. = 2.54 Cm.} \\ \text{Metre = 3.28 Ft.} & \text{Ft. = .305 Metre} \\ \text{Metre = 1.09 Yds.} & \text{Yd. = .914 Metre} \\ \text{Kilom. = .621 Mile} & \text{Mile = 1.61 Kiloms.} \end{array}$ 

#### Area

#### Volume

#### Capacity

#### Weight

Gram = 15.432 Grains Gram = 0.353 Ounce Kilog'm = 2.205 Lbs. Kilog'm = .0011 Ton Tonne = 1.1025 Tons (Ton = 2000 lbs.)

Grain = .0648 Gram Ounce = 28.35 Grams Lb. = .454 Kilog'm Ton = .907 Tonne

## Compound Units

#### Pressure

Kilog'm per Sq. Cm. = 14.225 lbs. per Sq. in. Lb. per Sq. in. = .0703 Kilog'm per Sq. Cm. Kilog'm per Sq. M. = .205 lb. per Sq. Ft. Lb. per Sq. Ft. = 4.88 Kilog'ms per Sq. M. Kilog'm per Sq. Cm. = .968 Atmosphere Atmosphere = 1.033 Kilog'ms per Sq. Cm.

#### Weight

Gram per Cu. Metre = .437 Grains per Cu. ft. Grain per Cu. ft. = 2.288 Grams per Cu. M. Kilog'm per Cu. M. = .0624 lbs. per Cu. ft. Lb. per Cu. ft. = 16.02 Kilog'm per Cu. M. Kilog'm per Litre = 8.33 lbs. per U. S. Gal. Lb. per gal. = .12 Kilog'm per Litre

#### Heat

Centigrade (Deg.) = 5/9 Fahr. Deg.—32 Fahrenheit (Deg.) = 9/5 Cent. Deg. +32 Calorie = 3.968 B. T. U. B. T. U. = .252 Calorie Calorie per Kilog'm = 1.8 B. T. U. per lb. B. T. U. per lb. = .5556 Calorie per Kilog'm Cal. per Litre. = 112.366 B. T. U. per C. ft. B. T. U. per Cu. ft. = .00889 Cal. per Litre Calorie per Cu. M. = 8.99 B. T. U. per Cu. ft. B. T. U. per Cu. ft. = .1125 Cal. per Cu. M.

#### Miscellaneous

Kilogram-Metre = 7.233 Ft. lbs.
Ft. lb. = .1384 Kilogram-Metre
Cheval (Franch H. P.) = .986 H. P.
H. P. 1.014 Cheval
Litre per second = 2.12 Cu. ft. per minute
Litre per second = 4.74 U. S. Gal. per minute
Litre per Cu. Metre = .798 U. S. Gal. per Cu. ft.
Gal. per Cu. ft. = 1.254 Litres per Cu. Metre

## Alternating Current Formulas

The power factor of an alternating current circuit is the number by which the apparent power in the circuit (volts times amperes), must be multiplied in order to ascertain the true power. When an alternating current circuit contains inductance, the current lags behind the E.M.F., and when it contains capacity the current rises ahead of the E.M.F.; in each case the current and E.M.F. reach their maximum values at different instants, and the product of the E.M.F. and current at any instant is less than it would be if the two were in phase with each other. If the E.M.F. and current be measured separately the voltmeter and ammeter will give the individual mean effective values; if they are measured by a wattmeter, the instrument indicates their combined effect synchronously, not the product of their effective values which occur at different instants. Consequently, the wattmeter indication will be less than the product of the separate voltmeter and ammeter readings; the ratio of the power to this product is the power factor of the circuit. Expressed as a formula:

Amperes x Volts. Power Factor = Watts.

This gives rise to the two methods of rating electrical apparatus, one on the basis of watts or kilowatts, and the other on the basis of volt-amperes or kilovolt-amperes (K,V,A,).

The former represents the actual power, usually in K.W., the latter the apparent power, usually in K.V.A., generated, transmitted or used by the apparatus. The latter or K.V.A. rating is coming into more general use since it represents more adequately the voltage and current conditions to which the apparatus is subjected.

Current per Phase in Various Systems  $I = 0.50 \text{ x} \frac{W}{E \text{ x P.F.}}$  for two-phase circuit.  $I = \frac{W}{E_{r} \times P_{r}}$  for single-phase circuit.  $I = 0.58 \text{ x} \frac{W}{\text{E x P.F.}}$  for three-phase circuit.

Temp. C.—5/9 (Temp. F. —32) Temp. F. =9/5 Temp. C. —32 I = Current in line in amperes; W = energy delivered in watts; E = potential between mains in volts; P.F. = power factor. When power factor cannot be accurately determined it may be assumed as follows: Lighting load with no motors, 0.95; lighting and motors, 0.85; motors only, 0.80.

## Centigrade and Fahrenheit Scales

Tempe	erature	Temperature		Temperature		Tempe	rature
Centigrade	Fahrenheit	Centigrade	Fahrenheit	Centigrade	Fahrenheit	Centigrade	Fahrenheit
0	32	30	86	50	122	80	176
5	41	35	95	55	131	85	185
10	50	38	100.4	60	140	90	194
15	59	40	104	65	149	95	203
20	68	42	107.6	70	158	100	212
25	77	45	113	75	167		

## Melting Point and Relative Electrical Conductivity of Different Metals and Alloys

Metals	Relative Conduc- tivity	Melting Point ° F.	Metals	Relative Conduc- tivity	Melting Point ° F.
Pure silver	100.	1873	Phosphor-tin	17.7	
Pure copper		2550	Alloy of gold and silver (50%)	16.12	
Refined and crystallized copper	99.9		Swedish iron	16.4	4000
Telegraphic silicious bronze	98.		Pure Banca Tin	15.5	442
Alloy of copper and silver (50%)	86.65		Antimouial copper		
Pure gold	78.	2016	Aluminum bronze (10%)		
Silicide of copper, 4% Si			Siemens steel		
Silicide of copper, 12% Si			Pure platinum	10.6	4100
Pure aluminum		1160	Copper with 10% of nickel	10.6	
Tin with 12% of sodium			Cadmium Amalgam (15%)		
Telephonic silicious bronze			Dronier mercurial bronze		
Copper with 10% of lead			Arsenical copper (10%)		000
Pure zinc		773	Pure lead	8.88	630
Telephonic phosphor-bronze	29.	1	Bronze with 20% of tin		2004
Silicious brass, 25% zinc	26.4	1	Pure nickel	7.89	2800
Brass with 35% zinc	21.59		Phosphor-bronze, 10% tin		
			Phosphor-copper, 9% phos	4.9	0.40
	1	1	Antimony	3.88	840

### **USEFUL DATA**

## Electrical Devices for Individual Households

At a 10 cent rate the cost is a cent per hundred watts per hour.

## In the Dining Room

Toaster Stove. Almost an entire meal can be cooked on one of these little stoves. 500 watts or 5 cents an hour.

Grill. Breakfast or luncheon can be easily supplied by a combination grill. 600 watts or 6 cents an hour.

Disc Stove or Hot Plate, upon which any flat saucepan or dish can be heated. 500 watts or 5 cents an hour.

Combination Set. This provides a chafing dish, double boiler, tea samovar and coffee percolator, all fitted with a single heating unit, 500 watts, or 5 cents an hour.

Table Range, 550 watts or 5½ cents an hour.

Table Range, 530 watts or 5½ cents an nour.

Coffee Percolator, 400 watts or 4 cents an hour.

Tea Samovar, 400 watts or 4 cents an hour.

Egg Boiler, 360 watts, or 3.6 cents an hour.

Immersion Heater, 500 watts, or 5 cents an hour.

Water Cups, for heating quickly a small quantity of water, 500 watts, or 5 cents an hour.

Soup Tureen, 360 watts, or 3.6 cents an hour.

Toaster, 450 watts, or 4.5 cents an hour.

### In the Kitchen

Double Boiler for cereals, 400 watts, or 4 cents an hour. Electric Frying Pan, 400 watts, or 4 cents an hour. Waffle Iron, 800 watts, or 8 cents an hour. Egg Beater, 60 watts, or .6 cents an hour. Plate Warmer, 300 watts and up, or 3 cents an hour.

# In the Cleaning Closet

Vacuum Cleaner for carpets, rugs, etc., 75 watts, or ¾ cents an hour. Buffing Wheel for polishing silver, brasses, etc., 100 watts, or 1 cent an hour.

# In the Laundry

Iron, 500 watts, or 5 cents an hour. Washing Machine, 200 watts, or 2 cents an hour.

# In the Living Room

Radiator, 800 watts, or 8 cents an hour. Fan, 100 watts or 1 cent an hour. Lamps of all varieties, decorative, study, etc., 25 watts per bulb, or ¼ cent an hour.

### In the Bed Room

Hair Dryer, with hot and cold air blast, 100 watts, or 1 cent an hour. Curling Iron, 25 watts, or ½ cent an hour. Heating Pad, 50 watts, or ½ cent an hour. Vibrator, 50 watts, or ½ cent an hour. Nursery Milk Warmer, 440 watts, or 4.4 cents an hour.

# In the Bath Room

Luminous Radiator, 500 watts and up, or 5 cents an hour and up.

Shaving Mug, 50 watts, or ½ cent an hour.

Shaving Mirror, with lamps at either side, 50 watts, or ½ cent an hour.

Cosmetic Heater, 80 watts, or .8 cents an hour.

Hot Water Heater, to be attached to faucet, 5000 watts, 2½ gallons boiling water per minute.

# In the Sewing Room

Pressing Iron, 250 watts and up, or  $2\frac{1}{2}$  cents an hour. French Hat Iron, 50 watts and up, or  $\frac{1}{2}$  cent an hour. Fluting Iron, 150 watts, or  $1\frac{1}{2}$  cents an hour. Sewing Machine, motor driven, 50 watts,  $\frac{1}{2}$  cent an hour.

### USEFUL DATA

# Electrical Devices for Individual Households (Continued)

One cent's worth of electricity at ten cents per kilowatt-hour will operate:

A 16 candle power Mazda lamp for five hours.

A 6-pound flatiron fifteen minutes.

An electric washer, having a capacity of 12 sheets per washer, long enough to wash 20 sheets. An electric vacuum cleaner long enough to clean 450 square feet of carpet. A pump long enough to raise 100 gallons of water 100 feet.

A radiant toaster long enough to produce ten slices of toast. A sewing machine for two hours.

A fan 12 inches in diameter for two hours.

An electric percolator long enough to produce three cups of coffee.

A heating pad from two to four hours.

A domestic buffer and grinder for one and one-quarter hours.

A chafing dish 12 minutes.

A foot warmer for one half hour.

A water heater and bring to boil one quart of water.

An electric broiler six minutes.

An electric griddle for eight minutes.

A 4 inch disc stove for 12 minutes.

A radiant grill for 10 minutes.

An electric curling iron once a day for two weeks.

The following table gives a clear idea of average cost of various electrical appliances, hours used per month and amount of current consumed:

Appliances	Hours use	Watt- age	Cost per C Mo. at 10c. per Kw. Hr.	at 8c. per
Flatiron	12	500	\$0.60	\$0.48
Toaster	5	450	.23	. 185
Percolator	10	400	. 10	.32
Chafing dish	4	500	.20	. 16
Shaving mug	8	150	. 12	.10
Washing machine	8	200	. 16	.13
Vacuum cleaner	15	75	.11	.09
Fan	120	33	.40	.32
Sewing machine motor	20	33	.07	.06
Dish washer	14	150	. 21	.17
			\$2.55	

The "1 cent" card where figures are based on rate of 5 cents per kilowatt hour in Indianapolis. (Merchants Heat & Light Co.)

#### A CENT'S WORTH OF OUR SERVICE WILL

Toast 30 slices of bread. Brew 14 cups of tea. Make 14 cups of coffee. Warm 6 bottles of baby's milk. Light a 40-watt lamp 5 hours. Operate a flatiron for 25 minutes. Operate a vacuum cleaner 1½ hours. Sew 60,000 stitches on a machine. Operate a warming pad 2 hours.

#### WHAT A NICKEL'S WORTH OF ELECTRICITY WILL DO

The Rutland Vermont Railway Light and Power Company thus sets forth the low cost of various domestic uses of electricity:

Do you know that with electricity, for the price of a street car ride, you can: Light an average room with Mazda lamps 3 hours a night for 12 days?

Clean your house six times?

Do your family washing eight times?

Run your sewing machine 3 hours a day for a week?

Operate an electric fan 3 hours a day for 6 days?

Make toast for family breakfast each morning for a week?

### Wiring Tables

The wiring tables will be found most useful when the electric light outfit is located over one hundred feet or so from where the current is to be used. In distributing electricity there is always a loss, owing to the resistance in the wires, which causes a drop in the voltage just as a pipe too small will cause a drop in water pressure. In order to keep this loss as small as possible, the size of the wire should be suitably chosen

Table I is based on allowing a friction loss of two volts, which would give on the 32 volt plant, 30 volts

at the end of the line or 108 volts where the service voltage was 110.

No. 12 B. & S. copper wire is suitable in most houses for 12 or 15 lights and No. 10 B. & S. copper wire will bring the current from the plant to the house. No. 14 B. & S. may be used where only few lights and short wires are used, but the larger wire gives brighter lights on low voltage current and allows use of electrical appliances without re-wiring.

To find size of wire from plant to house:

Add up from Table IV the amperes of each lamp, motor, etc., that will likely be used at one time. Find the total figure in the first or ampere column of Table I. Then, in a column in the same line across the page, find the number of feet nearest to that between the plant and the house. Right at the head of that column is the size number of the wire to use.

This table is also useful if you find it necessary to locate your generator and engine or water wheel away from the switchboard and battery.

Example I. Suppose the house will have 16 lights of 16 C.P., 10 of which are to burn at one time, a 61/2 B flat iron, and a washing machine. The house is 80 feet from the plant.

The total amperes from Table IV will be 32 amperes. In Table I a No. 6 wire is shown to carry 30 amperes for 80 feet, which is sufficiently close to the exact size.

Example II. Suppose the generator output is 20 amperes and the distance from the battery 100 feet, No. 6 B. & S. wire should be used, which is good for 120 feet.

Example III. A motor of ¼ H.P. is to be operated 90 feet from the plant, what size wire.

Table IV gives 9 amperes for ¼ H.P. motor. In Table I, on the 10 ampere line, which is the nearest, 95 feet is in the No. 10 B. & S. column, which is the size to use.

#### TABLE I

Showing the size of copper wire to carry a given number of amperes at any voltage to a point a given distance from the electric plant or public service entrance switch, loss 2 volts.

re	in	B.	&	S.	Gauge	

TABLE II
Carrying Capacities and Areas of Insulated
Wires and Cables Published in National
Electrical Code of 1909

Amperes

					B. & S.	Capacity	Zimperes		
			B. & S. (		1	Gauge Number	Circular Mills	Rubber Insulation Amperes	Other Insulation Amperes
	No. 14	No. 12	No. 10	No. 8	No. 6	18	1624	3	5
Amperes	Ft.	Ft.	Ft.	Ft.	Ft.	16	2583	6	10
1	400					14	4107	15	20
2	200	300	475			12	6530	20	25
3	133	200				10	10380	25	30
4	100	150		400		8	16510	35	50
5	80	120	190	320		6	26250	50	70
6				266		5	33100	55	80
8	50	75	118	200	300	4	41740	70	90
10	40	60	95	160	240	3	52630	80	100
12					200	2	66370	90	125
15			63	107	160	1	83690	100	150
20			48	80	120	0	105500	125	200
25					96	00	133100	150	225
30				53	80	000	167800	175	275
40				,	60		200000	200	300
						0000 ===	211600	225	325

Number of feet shown above in table I is the distance from source of current to appliance to be oper-The total length of wire, therefore, will be twice the above, as there are two wires to the circuit.

Table II shows the size of wire necessary to carry a given current at any voltage without heating, and is generally used when the wires are shorter than 30 feet. If lamps or motors are more than 30 feet from plant, larger wires should be used from Table I, in which the safe load for the wire is already included.

The power required to operate most electrical appliances is marked in watts. The number of watts so marked multiplied by the hours in use, gives the watt hours of basis upon which the public service companies charge for electricity.

Watts are volts multiplied by amperes. To use 30 volt table of amperes for 110 volt, divide amperes given by 3 1/3 as 110 volts is practically 3 1/3 times as strong as 30 volts. Likewise to use any 110 volt table of amperes for a 30 volt circuit, multiply the amperes given for 110 volt circuit by 3 1/3.

#### TABLE III

Minimum size wire for direct current motor wiring when wires are concealed or partly concealed, also good practice for open wires.

C2 7	A		
	Size	Wire B. & S. Ga	uge——
H.P.	30 Volts	110 Volts	220 Volts
76	14		
1/4	14		
1,2	10	14	1.1
1	8	14	14
2		12	14
3		10	14
4		8	12
2 3 4 5		6	10
71/2		4	8
10		3	. 6

This table only shows safe size of wire to avoid overheating. If motor is over 30 feet from plant larger wire must be used. Find amperes in Table IV and select size of wire by using Table 1.

### TABLE IV Approximate Amperes Taken at 30 Volts

		Western	Electric—
Moto	rs	Sunbeam Ma	ızda Lamps
Horsepower	Amperes	Watts	Amperes
1/16	21/2	10	.3
16	5 2	20	. 7
1,	9	40	1.3
1.5	16	75	2.5
1	30		

A motor is rated by the power it delivers, not by the power it takes. The figures given are the approximate amperes when the motor is working at full load.

I dilli berede bine or title of the bill	11	,		
	Amperes			Amperes
6 in. 4 blade, fan motors	80	23516	Coffee percolator	14.0
12 in 6 blade fan motors	1 00	5215	Water heater	10.6
Klatiron	16 4	3130	Soldering iron	10.0
5825 Toaster.	15.0	No. 11	Western Electric cleaner	-4.0
3910 Disc heater	15.0	Type A	Washing machine	8.0
3231 Disc heater	20.0	Western	Electric sewing machine	. 66
5205 Water heater				

The total amount of current taken from the regular key socket or pull chain socket should not exceed 21/2 amperes. We supply sockets which will carry up to 6 amperes. Above this, special wall receptacles or baseboard receptacles should be used.

# Figuring in Watts Instead of Amperes

The power required to operate most electrical appliances is marked in watts. The number of watts so marked multiplied by the hours in use gives the watt hours or basis upon which the public service companies charge for electricity.

# TABLE OF WATT FEET FOR 30 VOLTS

To find size of wire to carry so many watts a given distance, multiply the distance in feet by the total number of watts to be carried, thus obtaining the "watt feet," and use the size of wire in the table against the nearest number of watt feet. Example, 10 lamps 20 watts each to be burned in a barn 200 feet distant.  $10 \times 20 \times 200$ —40,000 watt feet. Nearest wire is Number 8.

Between	0 and	18870 watt ft. use No.	12 wire
Between	18871 and	29000 watt ft. use No.	10 wire
Between	29000 and	46545 watt ft. use No.	8 wire
Between	46545 and	73018 watt ft. use No.	6 wire
Between	73018 and	116363 watt ft. use No.	4 wire

Between 116363 and 186180 watt ft. use No. 2 wire Between 186180 and 232727 wattft use No. 1 wire Between 232727 and 290000 wattft use No. 0 wire Between 290000 and 372362 wattft. use No. 00 wire

### TABLE FOR 110 VOLTS

In using the table for 110 volt circuits, either the watts carried or the distance may be multiplied by 3½, or smaller wire be used, as 110 volts is almost 3½ times as strong as 30 volts.

Above example: 10 lamps, 20 watts in barn 200 feet distant, equals 40,000 watt feet. Divided by 3½ is 12,000 watt feet. Nearest wire is No. 12.

#### CURRENT RATINGS IN WATTS

A motor is rated by the power it delivers, not by the power it takes. The figures given are the approximate watts when the motor is working at full load.

	Wat's		Watts
1/16 H.P. motor	75	Dolly washing machine, 1/6 H.P.	230
1/8 H.P. motor	150	Dish washer, 1/7 H.P	200
1/6 H.P. motor	210	6 in. fan	23
<sup>1</sup> / <sub>4</sub> H.P. motor	270	9 in fan non-oscillating	25
Western Electric sewing machine	20	No. 1 Western Electric iron	500
Jack Rabbit motor for sewing machine	20	No. 5825 toaster	440
No. 11 vacuum cleaner, 1/12 H.P	120	No. 3210 disc heater	450
No. 1 vacuum cleaner, 1/12 H.P	120	No. 3221 disc heater	550
No. 2 vacuum cleaner, 1/6 H.P	230	No. 3231 disc heater	600
No. A washing machine, 1/6 H.P	230		

Watts are volts multiplied by amperes. To use 30 volt table of amperes for 110 volt, divide amperes given by 3 1/3, as 110 volts is practically 3 1/3 times as strong as 30 volts. Likewise to use any 110 volt table of amperes for a 30 volt circuit, multiply the amperes given for 110 volt circuit by 3 1/3.

# Carrying Capacities of Insulated Wires and Cables

Published in latest National Electrical Code (1915)

B. & S. Gauge Number	Diameter of Solid Wire in Mils	Area in Circular Mils	Table A Rubber Insulation Amperes	Table F Other Insulation Amperes
18	40.3	1624	3	
16	<b>50</b> .8	2583	6	10
14	64.1	4107	15	20
12	80.8	6530	20	2
10	101.9	10380	25	3
8	128.5	16510	35	50
8 6 5	162.0	26250	50	70
5	181.9	33100	55	80
4	204.3	41740	70	
3	229.4	52630	80	90
3 2	257.6	66370	90	100
1	289.3			123
0	325.	83690	100	150
00		105500	125	200
	364.8	133100	150	223
000	409.6	167800	175	278
000	111**	200000	200	300
000	460.	211600	225	325
• • •		300000	275	400
		400000	325	500
		500000	400	600
		600000	450	680
		700000	500	760
		800000	550	840
		900000	600	920
		1000000	650	1000
'		1100000	690	1080
		1200000	730	1150
		1300000	770	1220
		1400000	810	1290
		1500000	850	1360
	*****	1600000	890	
		1700000	930	1430
• • •				1490
• • •	* * * * *	1800000	970	1550
• • • •		1900000	1010	1610
		2000000	1050	1670

<sup>1</sup> Mil=0.001 inch

Drop of potential is not taken into consideration in the above table. These amperages for rubber-covered wires are adopted because to exceed them may cause gradual deterioration of the insulation even though the change of ignition from overheating may be small.

Wires smaller than No. 14 should not be used except as prescribed in Underwriters' rules.

# Current Required to Fuse Wires and Copper, German Silver and Iron

B. & S.	Copper	German Silver	Iron	B. & S.	Copper	German Silver	Iron
Gauge	Amperes	Amperes	Amperes	Amperes	Amperes	Amperes	Amperes
10	333.	169.	101.	26	20.6	10.6	6.22
11	284.	146.	86.	27	17.7	9.1	5.36
12	235.	120.7	71.2	28	14.7	7.5	4.45
13	200.	102.6	63.	29	12.5	6.41	3.79
14	166.	85.2	50.2	30	10.25	5.26	3.11
15	139.	71.2	42.1	31	8.75	4.49	2.65
16	117.	60.	35.5	32	7.26	3.73	2.2
17	99.	50.4	32.6	33	6.19	3.18	1.88
18	82.8	42.5	25.1	34	5.12	2.64	1.55
19	66.7	34.2	20.2	35	4.37	3.24	1.33
20	58.3	29.9	17.7	36	3.62	1.86	1.09
21	49.3	25.3	14.9	37	3.08	1.58	. 93
22	41.2	21.1	12.5	38	2.55	1.31	.77
23	34.5	17.7	10.9	39	2.20	1.13	.67
24	28.9	14.8	8.76	40	1.86	.95	. 56
25	24.6	12.6	7.46				

# Comparative Sizes Wire Gauges in Decimals of an Inch

No. of Wire Gauge	American Steel and Wire Gauge	Browne & Sharpe Gauge	Birmingham Stubs'	British Imperial Standard*	Old English or London	French
0000000	.4900			.500		
000000	. 4615	.58000		.464		
00000	.4305	.51650	.500	.432		
0000	.3938	.46000	.454	.400	. 4540	
000	.3625	.40964	. 425	.372	. 4250	
00	. 3310	.36480	.380	.348	.3800	
0	3065	. 32486	.340	.324	.3400	
1	.2830	.28930	.300	.300	.3000	.033
2	. 2625	. 25763	. 284	.276	.2840	.040
3	.2437	.22942	. 259	.252	.2590	. 050
4	. 2253	. 20431	.238	. 232	.2380	.063
4 5	. 2070	.18194	.220	.212	.2200	.068
6	. 1920	. 16202	.203	192	.2030	.083
7	.1770	. 14428	. 180	. 176	.1800	.097
8	. 1620	. 12819	. 165	. 160	. 1650	.110
9	. 1483	.11443	.148	.144	. 1480	.120
10	. 1350	.10189	. 134	. 128	. 1340	. 135
11	1205	.09074	. 120	.116	. 1200	.149
12	. 1055	.08081	.109	.104	. 1090	.162
13	.0915	.07196	. 095	.092	.0950	.172
14	.0800	.06408	. 083	080	. 0830	.185
15	.0720	. 05706	072	.072	.0720	.197
16	.0625	.05082	.065	.061	.0650	.212
17	.0540	.04525	.058	.056	.0580	.225
18	0475	.04030	. 049	.048	.0490	238
19	.0410	.03589	.042	040	.0400	.250
20	.0348	.03196	.035	.036	.0350	.263
21	.0317	.02816	.032	.032	.0315	.279
22	.0286	02535	.028	.028	0295	.290
23	.0258	.02257	.025	.024	.0270	.303
24	0230	.02010	.022	022	.0250	.316
$\tilde{2}_{5}^{1}$	0204	.01790	.020	020	.0230	.331
26	.0181	.01594	.018	.018	.0205	.342
27	.0173	.01420	.016	.0164	.01875	.356
28	.0162	.01264	.014	.0148	.01650	.371
29	.0150	.01126	.013	.0136	.01550	.383
30	.0140	.01003	.012	.0124	.01375	.394
31	.0132	.00893	.010	.0116	.01225	.408
32	.0128	.00795	.009	.0108	.01125	419
33	.0118	.00708	.008	.0100	.01025	.431
34	.0104	.00630	.007	.0092	.00950	.448
35	.0095	.00561	.005	.0081	.00900	.458
36	.0090	.00500	.004	.0076	.00750	472
37	.0085	.00445	.001	.0068	.00650	.485
38	.0080	.00396		.0060	.00575	.499
39	.0030	.00353		.0052	.00500	.509
40	.0070	.00314		.0048	.00450	.524

<sup>\*</sup>Also called New British or English Legal Standard.

## Minimum Size Wire for Motor Services

When Concealed or Partly Concealed Wires Are Used

	Size Wire B. & S. Gauge				Size Wire B. & S. Gauge		
H.P. 110 Volts 220 Volts 550 Volts	550 Volts	H.P.	110 Volts	220 Volts	500 Volts		
1/2	14	14	14	30	0000	0	5
1	14	14	14	40		00	3
2	12	14	14	50		000	2
3	10	14	14	60		0000	1
4.	8	12	14	70			0
5	6	10	14	80			00
71/2	4	8	14	90			000
10	3	6	12	100			0000
15	0	5	10	120			
20	00	3	8				
25	000	1	6				

# Stranded Conductors

Size		We	atherproof	Wire	Slow-Burning Weatherproof Wire		Slow-Burning Wire			
B. & S.		Wt. per 1000 Ft.	Wt. per Mile	Diameter Over All	Wt. per 1000 Ft.	Wt. per Mile	Diameter Over All	Wt. per 1000 Ft.	Wt. per Mile	Diameter Over All
2000000	C.M.	7000	37000	2	7300	38500	2 7/8	7800	41000	2
1750000	C.M.	6200	32750	$ \tilde{2} $	6550	34600	1 7/8	6900	36300	$\frac{1}{1} \frac{7}{8}$
1500000	C.M.	5400	28500	1 7/8	5675	30000	1 3/4	6000	31300	$\frac{1}{1} \frac{3}{4}$
1250000	C.M.	4500	23800	1 3/4	4780	25200	1 11/16	5000	26400	1 11/16
1000000	C.M.	3675	19400	1 21/32	3860	20400	1 39/64	3980	21000	1 39/64
900000	C.M.	3330	17600	1 39/64	3520	18600	1 9/16	3640	19200	1 9/16
800000	C.M.	3000	15800	1 9/16	3180	16800	1 33 /64	3280	17300	1 33/64
700000	C.M.	2650	14000	1 15/32	2820	14900	1 27/64	2920	15400	1 27/64
600000	C.M.	2235	11800	1 21/64	2350	24000	1 9/32	2460	13000	1 9/32
500000	C.M.	1900	10000	1 1/4	1990	10500	1 13/64	2080	11000	1 13/64
450000	C.M.	1725	9100	1 3/16	1820	9600	1 9/64	1900	10000	1 9/64
400000	C.M.	1550	8200	1 9/61	1650	8700	1 3/32	1700	9000	1 3/32
350000	C.M.	1345	7100	1	1440	7600	1 1/32	1500	7900	31/32
300000	C.M.	1175	6200	31/32	1270	6700	15/16	1310	6900	15/16
250000	C.M.	985	5200	29/32	1060	5600	7/8	1120	5900	7/8
0000		800	4220	55/64	900	4750	53/64	940	5070	53/64
000		653	3450	51/64	735	3880	49/64	785	4150	49/64
00		522	2760	43/64	583	3080	41/64	625	3300	41/64
0		424	2240	39/64	480	2530	37/64	510	2700	37/64
1		328	1735	35/64	355	1870	33/64	380	2000	33/64
2 3		270	1425	33/64	290	1540	31/64	335	1770	31/64
3		206	1090	15/32	240	1270	29/64	280	1480	29/64
4		170	900	7/16	195	1030	27/64	230	1220	27/64
5		140	740	3/8	160	845	3/8	195	1030	3/8
6		115	610	11/32	132	695	11/32	165	870	11/32
8		78	410	9/32	87	460	9/32	105	555	9/32

Ann	 2400	Wina

### Damp-Proof Office Wire

Size B. & S.	Pounds per 1000 Ft.	Diameter Over All	Size B. & S.	Pounds per 1000 Ft.
1.4	15		12	34.
16	15. 9.5		16	$\frac{24}{13.5}$
18	9.5		18	10.
20	4.5		20	8.

Fixture Wire—Heavy Wall
-------------------------

		100		Pounds per Mile.
14	27	3/16	0000	3376
16	17	5/32	000	2677
18	12	1/32	00	2123
19	11	1/8	0	1684
20	10	1/8		

Light Wall	Weatherproof Twisted Pairs

				Per 1000 Ft.
16	12	1/8	14	53
18	9	7/64	16	32
19	8	7/64	18	23
20	7	3/32	19	20
	-	-,		

### Weatherproof Iron Wire

Size B. & S.	Pounds per Mile.
8	470
9	400
10	350
12	230
14	150

All weights are approximate, but are exact enough for all practical purposes.

# Weatherproof Wires

Solid Conductors

	We:	atherproof V	Vire	Slow-Burn	ing Weather	proof Wire	Slov	v-Burning V	Vire
Size B. & S.	Wt. per 1000 Ft.	Wt. per Mile	Diameter Over All	Wt. per 1000 Ft.	Wt. per Mile	Diameter Over All	Wt. per 1000 Ft.	Wt. per Mile	Diameter Over All
0000 000 00	767 630 502 407	4050 3220 2650 2150	25/32 47/64 39/64 9/16	862 710 562 462	4550 3750 2970 2440	3/4 45/64 37/64 17/32	925 760 600 495	4890 4020 3170 2610	3/4 45/64 37/64 17/32
1 2 3	316 260 200	1670 1370 1050	1/2 $15/32$ $27/64$	340 280 230	1800 1480 1220	15/32 7/16 13/32	365 320 270	1930 1690 1425	15/32 7/16 13/32
4 5 6 8	164 134 112 75	865 710 590 395	25/64 11/32 5/16 17/64	190 155 127 85	1000 820 670 450	$\begin{array}{r} 3/8 \\ 11/32 \\ 5/16 \\ 7/64 \end{array}$	220 190 160 100	1160 1000 845 530	$ \begin{array}{r} 3/8 \\ 11/32 \\ 5/16 \\ 17/64 \end{array} $
10 12 14	53 35 25	280 185 130	1/4 7/32 3/16	60 42 30	315 220 160	$\frac{1/4}{7/32}$ $\frac{3}{16}$	80 55 40	420 290 210	1/4 7/32 3/16
16 18	14 11	75 58	5/32 1/8	15 12	80 63	5/32 1/8	18 14	95 75	5/32

# Rubber Covered Wire

Solid Conductors

			Single	Braid	Doubl	e Braid
Size B. & S.	Diameter of Conductors, Mils	Capacity Circular Mils	Diameter Over All	Weight per 1000 Ft.	Diameter Over All	Weight per 1000 F
0000	460	211600	47/64	809	55/64	832
000	410	167803	11/16	666	13/16	690
00	365	133079	5/8	546	47/64	568
0	325	105524	19/32	453	45/64	476
1	289	83695	33/64	355	5/8	376
$\tilde{2}$	258	66373	29/64	275	9/16	295
3	230	52634	27/64	227	33/64	245
2 3 4 5	204	41743	25/64	186	15/32	200
5	182	33102	23/64	160	7/16	170
6	162	26250	5/16	128	25/64	135
8	129	16510	17/64	80	11/32	86
10	102	10382	15/64	58	19/64	64
12	81	6530	7/32	43	9/32	48
14	64	4107	13/64	32	1/4	37
16	51	2583	3/16	20		
18	40	1624	11/64	16		
19	36	1288	5/32	15		
20	32	1022	9/64	14		

## Rubber Covered

### Duplex

	So	lid	Stranded				
Size B. & S.	Diameter Over All	Weight per 1000 Ft.	Diameter Over All	Weight per 1000 Ft.			
1			1 1/4	810			
2			1 1/8	638			
3			1 1/32	528			
4			31/32	442			
5			29/32	375			
6			53/64	307			
8	11/16	170	49/64	203			
10	37/64	125	5/8	143			
12	1/2	94	9/16	107			
14	27/64	73	15/32	78			

All weights are approximate, but are exact enough for all practical purposes.

# USEFUL TABLES PROPERTIES OF COPPER WIRE

Size <b>B</b> . & S.	Diam. in Mils.	Mils. C. M.=D	Wei	ghts	Resistance p	
		Areas in Cir.	1000 Ft.	Mile	At 60° F.	At 70° F.
0000	460.	211600.	641.	3382.	.04811	.0496
000	410.	168100.	509.	2687.	.06056	.0625
00	365.	133225.	403.	2129.	.07642	.0788
0	325.	105625.	320.	1688.	.09639	.0994
1	289.	83521.	253.	1335.	.1219	.1258
2	259	66564.	202	1064	1529	. 1579
2 3 4 5 6 7 8	229.	52441.	159.	838.	. 1941	.2004
4	204	41616.	126.	665.	2446	.2525
5	182	33124.	100.	529.	.3074	
6	1.62	26244.	79.	419.		.3172
7	144.	20736.	63.		.3879	.4004
6	128.	16384.		331.	.491	.5067
0			50.	262.	.6214	.6413
10	114.	12996.	39.	208.	.7834	.8085
	102.	10404.	32.	166.	.9785	1.01
11	91.	8281.	25.	132.	1.229	1.269
12	81.	6561.	20.	105.	1.552	1.601
13	72.	5184.	15.7	83.	1.964	2.027
14	64.	4096.	12.4	65.	2.485	2.565
15	57.	3249.	9.8	52.	3.133	3.234
16	51.	2601.	7.9	42.	3.914	4.04
17	45.	2025.	6.1	32.	5.028	5.189
18	40.	1600.	4.8	25.6	6.363	6.567
19	36.	1296.	3.9	20.7	7.855	8.108
20	32.	1024.	3.1	16.4	9.942	10.26
21	28.5	812.3	2.5	13.	12.53	12.94
22	25.3	640.1	1.9	10.2	15.9	16.41
23	22.6	510.8	1.5	8.2	19.93	20.57
24	20.1	404.	1.2	6.5	25.2	26.01
25	17.9	320.4	.97	5.1	31.77	32.79
26	15.9	252.8	.77	4.	40.27	41.56
27	14.2	201.6	.61	3.2	50.49	52.11
28	12,6	158.8	.48	2.5	64.13	66.18
29	11.3	127.7	.39	2.	79.73	82.29
30	10.	100.	.3	1.6	101.8	105.1
31	8.9	79.2	.24	1.27	128.5	132.7
32	8.	64.	. 19	1.02	150.0	
33	7.1	50.4	. 15		159.1	164.2
34	6.3	39.7	.13	.81	202.	208.4
35	5.6			. 63	256.5	264.7
36		31.4	0.95	.5	324.6	335.1
90	5.	25.	0.76	.4	407.2	420.3

### STRANDS OF COPPER WIRE

Size	O:1	Diamet	ters	Wei	ghts	11
B. & S.	Circular Mils	Decimal Parts of Inch	Nearest 32d	1000 Feet	Mile	Resis. at 75° Fah per 1000 Feet
	1000000	1.152	1,8	3050	16104	.01051
	950000	1.125	11/8	2898	15299	.01106
1.1.	900000	1.092	$1\frac{1}{8}$ $1\frac{3}{32}$	2745	14.194	.01167
	850000	1.062	1 16	2593	13688	.01236
	800000	1.035	$1\frac{1}{32}$	2440	12883	.01313
, , , ,	750000	.999	1	2288	12078	.01401
	700000	.993	3 7	2135	12273	.01501
	650000	.927	15	1983	10468	.01617
,,,,	600000	.891	29	1830	9662	.01751
	550000	.855	7/8	1678	8857	.01910
	500000	.819	792560927 836527 441652 1232 4416 5232 4416 5232 4416 532 532 4416 532 532 532 532 532 532 532 532 532 532	1525	8052	.02101
	450000	.770	25	1373	7247	.02335
	400000	.728	3/4	1220	6442	.02627
	350000	.679	11	1068	5636	.03002
	300000	. 630	5/8	915	4831	.03502
	250000	. 590	19	762	4026	.04203
0000	211600	.530	17	645	3405	.04966
000	168100	.470	15	513	2709	.00251
00	133225	.420	7	406	2144	.07887
0	105625	.375	3/8	322	1700	.09948
1	83521	.330	10 117 127 137 137 16 38 16 37 16 37 16	255	1346	.1258
1 2 3 4	66564	.291	5	203	1072	. 1579
3	52441	.261	90	160	845	.2004
4	41616	.231	1/4	227	671	2525

# Fine Magnet Wire

No.		Ohms 1	per Lb.	Feet p	per Lb.	
B. & S. Gauge	Diameter	Single Cotton	Double Cotton	Single Cotton	Double Cotton	
20	.0319	3.15	3 02	311	298	
21	.0284	4.97	4.72	389	370	
22	.0253	7.87	7.44	491	461	
23	.0225	12.45	11.7	624	584	
24	.0201	19.65	18.25	778	745	
25	.0179	30.9	28.45	958	903	
26	.0159	48.5	44.3	1188	1118	
27	.0142	76.5	68.8	1533	1422	
28	.0126	120	106.5	1903	1759	
29	.0112	190.5	164.	2461	2207	
30	.0100	294.5	252	2893	2534	
31	.0089	<b>46</b> 1.	384.5	3483	2768	
32	.0079	717.	585.	4414	3737	
33	.0070	1115.	880.	5688	4697	
34	.0063	1715	1315.	6400	6168	
35	.0056	2640	1960.	8393	6737	
36	.0050	4070	2890.	9846	7877	
37	.0044	6180.	4230	11636	9309	
38	.0039	9430	6150.	13848	10666	
39	.0035	14200	8850.	18286	11907	
40	.0031	21300	12500.	24381	14222	

# Table of Decimals Equivalent to

8ths, 16ths, 32nds and 64ths

8ths	16ths	32ds	64ths	Decimal	8ths	16ths	32ds	64ths	Decimal
			1	.015625				33	.515625
		1	1 2 3 4 5	.03125			17	34	.53125
			3	.046875				35	. 546825
	. 1	2	4	.0625		9	18	36	. 5625
			5	.078125				37	.578125
		3	6 7	.093755			19	35 36 37 38 39	. 59375
			7	. 10937				39	.609375
1	2	4	8 9	. 125	5	10	20	40	. 625
				. 146325				41	. 640625
		5	10	. 15625			21	42	. 65625
			11	. 171875	1			43	.671878
	3	6	12	. 1875		11	22	44	. 6875
			13	.203125				45	.703128
		7	14	.21875	U 10		23	46	.71875
			15	.234375				47	.734275
2	4	8	16	$.25\frac{1}{4}$	6	12	24	48	.753/4
			17	.265625				49	765625
		9	18	.28125			25	50	.78125
			19	. 296875				51	.796878
	5	10	20	.3125		13	26	52	.8125
			21	.328125				53	.828128
		11	22	. 34375			27	54	.84375
			23	.359375				55	.859375
3	6	12	24	.375	7	14	28	56	.875
			25	. 390625				57	.890625
		13	26	. 40625			29	58	.90325
			27	.421875				59	.921875
	7	14	28	.4375		15	30	60	.9375
			29	.453125				61	.953925
		15	30	.46875			31	62	.96875
			31	. 484375				63	.984375
4	8	16	32	$.5\frac{1}{2}$	8	16	32	64	1.

# Copper Bus Bar Data

Sizes, Weights and Resistances

Thickness Inches	Width Inches	Weights per Ft. at 3.213 Lbs. per Cubic Inch	Area in Square Inch	Ohms per Ft. at 8.341 per Square Mil. Ft.	Capacity in Ampere
16	1,6	. 1205.	.0313	.00026691	30
10	1/2 3/4	.1807	.0469	.00017790	50
1	1 1 4	.2410	.0625	.00013344	60
10	11/6	.3615	.0938	.00008897	90
1/8	1½ ½ ½ 34	.2410	0625	.00013344	75
1%	3/4	.3615	.0938	.00008897	90
1%	1 1 4	.4820	.125	.00006672	125
1%	11/2	.7230	. 1875	.00004448	200
1%	2 2	.9640	.25	.00003336	250
1,4	3/4	7230	. 1875	.00004448	
1/	1 1/4	.9640	.25	.00003336	185
74	11/	1.205	.3125		250
1/	$1\frac{1}{4}$ $1\frac{1}{2}$	1.446	3.75	.00002669	315
74 1/	13/4	1.687		.00002224	375
74	2 2		. 4375	00001906	435
74	21/	1.928	.5	.00001668	500
74	$\begin{array}{c c} 2\frac{1}{4} \\ 2\frac{1}{2} \\ 3\frac{1}{4} \end{array}$	2.169	. 5625	.00001482	565
74	2/2	2.410	. 625	.00001334	630
72	, 24	1.446	.375	.00002224	370
1/2	1 11/	1.928	. 500	.00001668	500
1/2	$\begin{array}{c c} 1\frac{1}{4} \\ 1\frac{1}{2} \\ 1\frac{3}{4} \end{array}$	2.410	. 625	.00001334	625
1/2	1 1/2	2.892	.750	.00001112	750
1/2	13/4	3.374	.875	.00000953	875
1/2	2	3.856	1.	.00000834	1000
1/2	214	4.338	1.125	.00000741	1185
1/2	$ \begin{array}{c c} 21\frac{7}{2} \\ 23\frac{3}{4} \\ 3 \end{array} $	4.820	1.25	.00006667	1250
1/2	234	5.304	1.375	.00000606	1375
1/2	3	5.784	1.500	.00000556	1800
1/2	$3\frac{1}{4}$	6.266	1.625	.00000513	1625
1/2	$\frac{3\frac{1}{4}}{3\frac{1}{2}}$	6.748	1.750	.00000475	1750
$\frac{1}{2}$	33/4	7.23	1.875	. 00000444	1875
1/2	4	7.712	2 000	.00000417	1000
3/4	1	2.892	.750	.00001112	1750
3/4	11/2	4.338	1.125	.00000741	1125
-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	2	5.784	1.500	90000556	2500
3/4	$2\frac{1}{2}$	7.23	1.875	00000444	2875
3/4	3	8.676	2.250	.00000370	3250
3/4	31/2	10.122	2.625	.00000317	2650
3/4	4	11.568	3.000	.00000278	3000

Carrying eapacity is figured at 1000 amperes per square inch.

Current per Phase in Motor Circuits

This table, which will be found useful in determining the size of wire, carrying capacity of fuses, and setting of circuit-breakers, considers the average efficiency and power factor of the motor in each case and indicates, in amperes, the current flowing in each wire of the motor circuits.

пр		110 Volts			220 Volts			440 Volts	
H.P.	1-ph.	2-ph.	3-ph.	1-ph.	2-ph,	3-ph.	-ph.	2-ph.	3-ph.
1	12.72	5.57	6.43	6.36	2.78	3.22	3.18	1.39	1.61
$egin{array}{c} 1 \\ 2 \\ 3 \\ 5 \end{array}$	23.80 34.30	10.10 14.24	11.54 16.44	11.90 17.15	5.05 7.12	5.77 8.22	5.95 8.53	$\frac{2.52}{3.56}$	2.89 4.11
	52.30	22.92	26.50	26.15	11.46	13.25	13.07	5.73	6.63
$\frac{7\frac{1}{2}}{10}$	68.75	34.42 45.30	39.70 52.40	34.37 45.30	$17.21 \\ 22.65$	19.85 26.20	$\begin{array}{c c} 17.19 \\ 22.65 \end{array}$	8.60 11.32	9.93
15	132.8	66.40	76.80	66.4	33.20	38.40	33.2	16.60	19.20
$\frac{20}{25}$	175.2 219.0	87.4 109.6	101.3 126.7	87.6 109.5	43.70 54.8	50.70 63.4	43.8 54.7	$\begin{array}{c} 21.85 \\ 27.4 \end{array}$	25.35 31.70
30	263.0	131.5	152.0	131.5	65.8	76.0	65.8	32.9	38.0
35 40	321.0	160.5 175.0	185.8 202.1	160.5 175.0	80.2 87.5	92.9 101.0	80.0 87.5°	40.1 43.7	46.4
45	394.0	197.0	227.6	197.0	98.5	113.8	98.5	49.3	50.5 56.9
50	428.0	214.0	247.2	214.0	107.0	123.6	107.0	53.5	61.8
60 70	513.0	256.5 306.0	296.2 353.0	256.5 305.5	128.2 153.0	148.1 176.5	128.2 152.7	64.1 76.3	74.1 88.3
75	656.0	328.0	379.1	328.0	164.0	189.5	164.0	82.0	94.7

# Trolley and Feeders for D.C. Practice

When the volts drop, the ampere load and the distance from the power house are known, the size of feeders can be readily determined from the table following. Example: 87 volts drop, 300 amperes and 6 miles. This gives 29 volts per 100 amperes and under 6 mile column 29 volts correspond with 1,195,000 C. M., the required size of conductor. A suitable size of wire for the trolley is found as follows: Since in most cases the table would give too large a wire, the size of trolley is taken at No. 000 B.&S. and the remaining copper required is put in the feeders. Feeders are tapped in every quarter mile or oftener. It is to be noted that the drop used above must be the allowable drop in the feeders only and must not include the drop in the track return circuit. The drop in the rail must be allowed for by determining the track resistance. If the track drop is too high, the required size of cable for the return circuit can be determined by a proper use of the table. The total drop is sum of the drops in feeders and track.

## Horsepower of Traction

The horsepower required at the car axle to propel a car weighing W tons at a speed S in miles per hour, is given by the following formula:

$$H.P. = \frac{W \times R \times S}{375}$$

Where R — the tractive effort of train resistance. (See accompanying table.) Thus, for a 40 ton car at 50 miles per hour on a level where R — 23. (See table.)

H.P.=
$$\frac{40 \times 23 \times 50}{375}$$
= 122.7

# Volts Drop per 100 Amperes

Table Compiled by W. E. and M. Co.

Size of								Mile	S						
Conductors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1
B & S	52	104													
0	40	0.4													
00	42	84													
0000	26	52	78												
Circular Mills	,														
300 000	18	37	55	73	92	00	00				Н,				
400 000 500 000	11	27 22	41 33	55 44	69 55	82 66	96 77	88							
600 000	9	18	27	37	46	55	64	73	82	91					
700 000	8 7	16	24	31	39	47	55	63	70	78	86	94			
800 000		14	20	27	34	41	48	55	62	69	75	82	89		
900 000 40 Lb. Rails	6	12	18	24	30	37	43	49	55	61	67	73	79	85	6
1000 000	6	11	16	22	27	33	38	44	49	55	60	66	71	77	8
1025 000	6	lii	16	22	27	32	38	43	49	54	60	65	70	76	8
45 Lb. Rails									11 3 3 4						
1135 000 50 Lb. Rails	5	10	15	20	25	29	34	39	44	49	54	59	64	69	7
1360 000	4	8	12	16	21	25	29	33	37	41	45	49	53	58	1
60 Lb. Rails	1			"	2.		2.7						00	1,30	1
1590 000	4	7	11	14	18	21	25	28	32	35	39	42	46	49	5
70 Lb. Rails	3		9	12	15	18	21	24	27	30	33	36	39	42	4
1820 000 80 Lb. Rails	3	б	9	12	19	18	21	24	21	30	0.0	30	39	42	4
2040 000	3	6	8	11	14	16	19	22	24	27	30	32	35	38	4
90 Lb. Rails															
2270 000	3	5	7	10	12	14	17	19	22	24	26	29	31	34	1 :

Above values are for D.C. work. The conductivity of 1,140,000 C.M. Copper Conductor is assumed equal to a single track of 40 lb. rails. Resistance of bonding is taken equal to three times that of an equal length of single track rails. Resistance of copper at 75° F.

### Pulleys and Gears

For single reduction or increase of speed by means of belting where the speed at which each shaft should run is known, and one pulley is in place:

Multiply the diameter of the pulley which you have by the number of revolutions per minute that its shaft makes; divide this product by the speed in R.P.M. at which the second shaft should run. The result is the diameter of pulley to use.

Where both shafts with pulleys are in operation and the speed of one is known:

Multiply the speed of the shaft by diameter of its pulley and divide this product by diameter of pulley on the other shaft. The result is the speed of the second shaft.

Where a countershaft is used, to obtain size of main driving or driven pulley, or speed of main driving or driven shaft, it is necessary to calculate, as above, between the known end of the transmission and the countershaft, then repeat this calculation between the countershaft and the unknown end.

A set of gears of the same pitch transmit speeds in proportion to the number of teeth they contain. Count the number of teeth in the gear wheel and use this quantity instead of the diameter of pulley, mentioned above, to obtain number of teeth cut in unknown gear, or speed of second shaft.

# Rule for Finding Size of Pulleys

$$d = \frac{D \times S}{S'}$$

$$D = \frac{d \times S'}{S}$$

d = diameter of driven pulley.

D = diameter of driving pulley.

S = number of revolutions per minute of driving pulley.

S' = number of revolutions per minute of driven pulley.

# **USEFUL TABLES**

# Fine Magnet Wire

20 21 22 23 24 25 26 27 28 29 30 31		Ohms 1	per Lb.	Feet 1	per Lb.	
No. B. & S. Gauge	Diameter	Single Cotton	Double Cotton	Single Cotton	Double Cotton	
20	.0319	3.15	3.02	311	298	
	.0284	4.97	4.72	389	370	
	.0253	7.87	7.44	491	461	
	.0225	12.45	11.7	624	584	
	.0201	19.65	18.25	778	745	
	.0179	30.9	28.45	958	903	
	.0159	48.5	44.3	1188	1118	
27	.0142	76.5	68.8	1533	1422	
	.0126	120.	106.5	1903	1759	
29	.0112	190.5	164.	2461	2207	
	.0100	294.5	<b>25</b> 2.	2893	2534	
	.0089	461.	384.5	3483	2768	
32	.0079	717.	<b>5</b> 85.	4414	3737	
33	.0070	1115.	880.	5688	4697	
34	.0063	1715.	1315.	6400	6168	
35	.0056	2640.	1960.	8393	6737	
36	,0050	4070.	2890.	9846	7877	
37	.0044	6180.	4230.	11636	9309	
38	.0039	9430.	6150.	13848	10666	
39	.0035	14200.	8850.	18286	11907	
40	.0031	21300.	12500.	24381	14222	

## **Electrical Machinery**

Relation of speed, alternations and number of poles in A. C. generators. Alternations per minute=Number of poles x revolutions per minute. Cycles per second=Alternations ÷ 120.

#### Temperature Rise by Resistance.

Rise in degrees Centigrade= 
$$\frac{\text{Rt} - \text{Rt}_{\circ}}{.004 \text{ Rt}_{\circ}}$$

Rt=Resistance when hot.

Rt<sub>o</sub>=Resistance at room temperature.

The hot and cold resistances are found from simultaneous volt and ammeter readings.

### Volts or Amperes Necessary for Given H. P. of D. C. Motors.

$$V = \frac{746 \times HP}{1 \times E} \qquad \qquad l = \frac{746 \times HP}{V \times E}$$

V=Voltage of circuit.

I = Amperes.

E=Machine efficiency.

#### Motor Efficiency by Brake Horsepower

Efficiency = 
$$\frac{746 \text{ HP} \quad \text{T x N}}{\text{V x I} = 7 \text{ x V x I}}$$

N=Revolutions per minute.

T=Torque in lbs. at distance of one foot from center of pulley.

A more accurate method is to measure the input and the losses separately; then,

$$\frac{\text{Efficiency=}}{\text{Input}} \frac{\text{Losses}}{\text{Input}}$$

## Conduit Sizes for Different Size Wires

No.	Circular	Amperes		Size of Pip	е	No.	Circular	Amperes	Si	ze of Pize	)
B. & S.	Mils	Rubber	1 Wire	2 Wire	3 Wire	B. & S.	Mils	Rubber	1 Wire	2 Wire	3 Wire
18	1020	3	1/2	1/2	1/2		500000	390	$\overline{2}$	3	31/2
16	2583	6	1/2 1/2 1/2 1/2 1/2 1/2 1/2 3/4 3/4 3/4	1/2 1/2 1/2 1/2 3/4 3/4	1/2 3/4 3/4		550000	420	2	31/2	4
14	4107	12	1/2	1/2	3/4		600000	450	$\frac{2}{2}$	31/2	4
12	6530	17	1/2	3/4	3/4		650000	475	2	$3\frac{1}{2}$	4
10	10380	24	1/2	3/4	1		700000	500	$\frac{1}{2}$	$3\frac{1}{2}$	4
8	16510	33	1/2	1	1		750000	525	2	$3\frac{1}{2}$	4
6	26250	46	3/4	1	11/4		800000	550	2	31/2	4
5	33100	54	3/4	11/4	11/4		850000	575	$2\frac{1}{2}$	4	4
4	41740	65	3/4	11/4	11/2		900000	600	$2\frac{1}{2}$	4	$\begin{array}{c c} 4\frac{1}{2} \\ 4\frac{1}{2} \\ 4\frac{1}{2} \end{array}$
3	52630	76	3/4	11/4	11/2		950000	625	$2\frac{1}{2}$	4	41/2
2	66370	90	3/4	1 1/2	2		1000000	650	$2\frac{1}{2}$	4	41/2
1	83690	107	1	1½	2		1100000	690	$2\frac{1}{2}$	4	5
0	105500	127	1	2	2		1200000	730	21/2	4	5
00	133100	150	1	2	2		1300000	770	$2\frac{1}{2}$	41/2	5
000	167800	177	11/4	2	21/2		1400000	810	3	41/2	6
0000	211600	210	11/4	2	$2\frac{1}{2}$		1500000	850	3	5	6
	200000	200	$1\frac{1}{4}$ $1\frac{1}{2}$	2	$\frac{2\frac{1}{2}}{2\frac{1}{2}}$		1600000	890	3 3 3	5	6
	250000	235	11/2	$2\frac{1}{2}$	$2\frac{1}{2}$		1700000	930	3	5	6
	300000	270	$ \begin{array}{c c} 1\frac{1}{2} \\ 1\frac{1}{2} \\ 1\frac{1}{2} \end{array} $	$2\frac{1}{2}$ $2\frac{1}{2}$ $2\frac{1}{2}$	3		1800000	970		6	7
	350000	300	11/2	21/2	3		1900000	1010	3	6	7
	400000	330	11/2	3	3		2000000	1050	3	6	7
	450000	380	2	3	31/2		2011 100			1	

### Machine Bolts

Approximate Weight in pounds of 100 bolts of sizes enumerated below

Length Inches	1/4	5 1 6	3 8	7 16	1/2	9	5 8	3/4
11/2	3.7	6.0	9.0	15.2	19.6	27.5	34.3	54.3
2	4.2 4.8 5.5	7.0	10.5	17 2	22.2	31.0	38.4	60.
$\frac{\overline{2}}{3}$	4.8	8.0	12.0	19.2	24.8	34.5	42.5	65.
3	5.5	9.0	13.5	21.2	27.5	38.0	46.7	71.
312	6 1	10 0	15 0	23.2	30.1	41.5	50.8	77 .
4	6.8	11 0	16.5	25.2	32.8	45.0	55.0	82.
4 41/2	7.4	12 0	18.0	27.2	35.4	48.5	59.1	88.
5 1	8.1	13 0	19.5	29.2	38.1	52.0	63.3	95
5 5½ 6	8.7	14 0	21 0	31 2	40.7	55.5	67.4	101
6 2	9 4	15 0	22.5	33 2	43.4	59.0	71.6	107
616	10 1	16.0	24 1	35 2	46.0	62.5	75.7	113
$\frac{61}{2}$	10 8	17.0	25.7	37 2	48.7	66.0	79.9	119.
71/6	11 5	18 0	27.3	39 2	51.3	69.5	84.0	125.
8	12.2	19.0	28.9	41.2	54.0	73.0	88.2	131
9			32.1	45 2	59.5	80.0	96.5	143
7½ 8 9			35 3	$49 \ 2$	65.0	87.0	104.8	156 .
11			38.5	53 2	70.5	94.0	113.1	168.
12			41.7	57.2	76.0	101.0	121.4	180.
13					81.5	108.0	129.7	192.
14					87.0	115.0	138.0	204.
15					92 5	122.0	146.3	217.
16					98.0	129.0	154.6	229.
17					103.5	136.0	162.9	241.
18					109.0	143.0	171.2	253.
19					114.5	150.0	179.5	265
20					120.0	157.0	187 .8	278.

# Carriage Bolts

# Approximate Weight in pounds of 100 bolts of sizes enumerated below

Length Inches	1/4	.5 16	3 8	716	1/2	5 8
1	2.8	4.8 5.2 5.7	6.9	9.4	14.5	28.0
114	3_1_	5 2	7.6	10.4	1,5.9	30.0
116	3.4	5.7	8.3	11.4	17.3	32.0
112 134 2 214 212 234 3 312	3.4 3.7	6.1	9.0	12.4	18.6	34.0
2	4.0	6.6	9.7	13.3	20.0	36.0
214	4 4	7.0	10.4	14 3	21.4	38.0
212	4 7 5 0 5 3	7.5	11.1	15.3	22.8	40.0
23	5.0	7.9	11.8	16.3	24.2	42.0
3	5.3	8.4 9.3	12.5	17.3	25.5	44.0
316	5.9	9.3	13.9	19.3	28.3	48.0
4	6.6	10.2	15.3	21.3	31.0	52.0
41.,	7.2 7.8	11.1	16.7	23 3 25 3 27 3	33.8	56.0
41 <sub>2</sub> 5 51 <sub>2</sub> 6 61 <sub>2</sub> 7	7.8	12.0	18.0	25.3	36.5	60_0
51.5	8.4	12.9	19.4	27.3	39.3	64 0
6	9.0	13.8	20.8	29.3	42.0	68.0
61/2	9.7	14.7	21.2	31 .2 33 .2	44 8	72.0
7	10.3	15.6	23.6	33.2	47.5	76.0
716	10.9	16.5	25 0	35.2	50 3	80.0
8	11.6	17.4	26.4	37.2	53.0	84.0
71/2 8 81/2 9 91/2		18.4	27.8	39.2	55.8	88.0
9		19.3	29.2	41.2	58 5	92.0
916		20.2	30.6	43.1	61 3	96 0
10		21.0	32 0	45.1	64.0	100 0
1012			33.4	47.1	66.8	104 0
11			34.8	49.1	69.5	108.0
111/2			36.2	51.0	$\frac{72.3}{}$	112.0
12			37.5	53.0	75.0	116.0

# Western Electric

# USEFUL TABLES

#### WIRE NAILS—THEIR DIMENSIONS AND PROPERTIES

The electrician has frequent occasion to order wire nails for certain purposes, and to do this intelligently he must be familiar with the dimensions of each of the trade sizes, which are usually expressed in "pennies." For instance, a size for D nail is read "a four-penny nail." For these purposes the two accompanying tables will be found valuable, in that they give the length in inches and the diameter and wire gauge for each of the sizes of nails which the electrician is apt to have occasion to use.

TABLE 1. DIMENSIONS OF COMMON NAILS AND BRADS

Size	Length	Gauge No.	Diameter in Decimals Inches	Approx. Diameter in Inches	Nearest B. & S. Gauge	Approx. No. to Lb.
2d	1	15	.0720	5 64	13	876
3d	114	14	.0800	5	12	568
4d	112	1212	.0985	7	10	316
5d	134	1212	.0985	7	10	271
6d	2	1112	.1130	5.4 5.4 6.4 7.6.4 7.6.4 7.6.4 7.6.4	9	181
7d	214	1112	.1130	7	9	161
8d	$2\frac{1}{2}$	1014	. 1314	1/8	8	106
9d	$2\frac{3}{4}$	1013	. 1314	1%	8	96
10d	3	9	.1483	1/8 9 64 84 52 32 32 313 64	7	69
12d	317	9	. 1483	9	7	63
16d	312	8	. 1620	5	6	49
20d	4	6	. 1620	5.	Ğ	31
30d	412	5	.2070	13	4	24
40d	5 2	4	.2253	64	3	18
50d	51/2	3	.2437	14	$\frac{7}{2}$	14
60d	6	9 8 6 5 4 3	.2625	32 14 17 64	$\tilde{2}$	11

Wire nails are formed from steel wire of the same diameter as the shank of the nail is to be. Ordinary nails have a "bright" finish. Copper, brass and galvanized steel nails can be obtained. The wire from which nails are made, hence the nail diameters, are measured by the American Steel & Wire Company's gauge.

TABLE 2. DIMENSIONS OF CASING, FINISHING, SHINGLE AND FINE NAILS

		Ca	sing	Fini	shing	Shi	ingle	Fine		
Size	Length Inches	Gauge	Approx. No. per Lb.	Gauge	Approx. No. per Lb.	Gauge	Approx. No. per Lb.	Gauge	Approx- No- per Lb-	
2d	1	1512	1010	1612	1351			1612	1351	
3d	114	1412	635	$15^{1}_{2}$	807	13	429	†15	778	
$3\frac{1}{2}d$	138					1212	345			
4d	11/2	14	473	15	584	12	274	14	473	
5d	134	14	406	15	500	12	235			
6d	2	1212	236	13	309	12	204			
7d	21/4	1212	210	13	238	11	139			
8d	212	1112	145	1212	189	П	125			
9d	234	1112	132	$12^{1}_{2}$	172	11	114			
10d	3	$10^{1}_{2}$	94	1112	121	10	83			
12d	31/4	1012	87	1112	113					
16d	31/2	10	71	11	90					
20d	4	9	52	10	62					
30d	$4\frac{1}{2}$	9	46							
40d	5	8	35							
*2d	1							17	1560	
*3d	11/8							16	1015	

<sup>\*</sup>These sizes are called "Extra Fine." | This nail is only 11% inches long.

# Discount Tables

As many of the goods embraced in this book are sold by discounts, or a series of discounts from their list of prices, it will be found convenient to refer to a table and ascertain at once the equivalent and net remainder.

For instance, a discount of 50, 10 and 5 per cent. (erroneously supposed by many to equal 65 per cent.) is equivalent to 57½ per cent., and the net remainder, 42¾ per cent., is the multiplier with which to ascertain the net price.

Discount-Per Cent.	Equiv- alent	Net	Discount-Per Cent.	Equiv- alent	Net	Discount-Per Cent.	Equiv- alent	Net
25 and 2½ and 2½ 2½ 2½ 7½ 5 2½ 5 7½ 10 5 7½ 5 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½	25 26875 2870 3053 3236 3419 2875 3053 3231 3409 35875 3236 3409 35875 3236 3409 3583 3756 3409 3583 3756 3409		10 77/2	.325 .3419 .3583 .3748 .3912 .4077 .35875 .3748 .3908 .4029 .4068 .4229 .4068 .4226 .4381 .3925 .4077 .4229 .4381 .45325	.675 .6581 .6417 .6252 .6088 .5923 .64125 .6252 .6092 .5932 .5771 .6244 .6088 .5932 .5775 .5619 .6075 .5923 .5771 .5619	and 2½ 2½ and 2½ 2½ 5 2½ 7½ 2½ 5 5 2½ 5 7½ 5 5 5 5 7½ 7½ 7½ 2½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 10 10 10 2½ 10 5 10 7½ 10 10	.40 .415 .4296 .4425 .4589 .4735 .48 .4445 .4585 .47275 .487 .4589 .47275 .4866 .5005 .487 .5005 .524	.60 .585 .5704 .55575 .5411 .5265 .5775 .5415 .52725 .513 .5551 .52725 .5134 .4995 .5466 .5265 .513 .4995 .486
2714 2 2 3 and 2 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	.275 .2931 .3108 .3285 .3461 .3638 .31125 .3457 .3629 .3801 .3629 .3797 .394 .3461 .3629 .3797 .394 .3475 .3638 .3475 .3638 .3801 .3965 .41275	.725 .7060 .6892 .6715 .6539 .6362 .68875 .6715 .6543 .6371 .6199 .6706 .6539 .6371 .6203 .6362	35 and 2½ and 2½ 2½ 5 2½ 7½ 5 2½ 7½ 5 5 7½ 5 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 10 10 10 2½ 10 5 10 7½ 10 10 2½ 10 5 10 7½ 10 10 10 2½ 10 5 10 7½ 10 10 10 2½	35 36623 3821 3979 4138 4296 3825 3979 4134 4288 44428 4138 4288 4438 4438 4589 4735	.65 .63375 .6171 .6021 .5862 .5704 .6175 .6021 .5866 .5712 .5.5575 .60125 .5.5573 .5862 .5712 .5562 .5714 .585 .5704 .55573 .5704 .55573 .5704 .55573 .5704 .55573	732 5 732 732 732 732 10	.525 .4394 .4534 .4674 .4814 .4915 .4674 .4681 .4947 .5084 .4947 .5084 .5213 .53425 .53425	.4916 .5319 .5186 .5053 .492 .4787 .5175 .5046 .4916
30 and 2½ 2½ and 2½ 2½ 7½ 2½ 7½ 2½ 7½ 2½ 10 5 5 2½ 5 7½ 5 10 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 10 10 2½ 10 5 10 7½ 10 10 2½ 10 7½ 10 10 7½	.30 .3175 .3346 .3516 .3687 .3857 .355 .3516 .3682 .3849 .4015 .3687 .3849 .4016 .4172 .433	1 53	$ \begin{array}{c cccc} 5 & 7\frac{1}{2} & 10 \\ 10 & 10 \\ 10 & 2\frac{1}{2} \end{array} $	375 3906 4059 4211 4363 4516 4062 4211 4359 4508 4656 4219 4363 4508 4652 4797 4375 4516 4656 4797 4937	.5781 .5637 .5492 .4348 .5203 .5625 .5484 .5344	5 10° 5 10° 7½ 2½ 7½ 5 7½ 7½ 7½ 10° 10° 10° 5 10° 5 10° 7½	.504 .5167 .5294 .5421	. 5094 . 496 . 4826 . 5225 . 5094 . 4964 . 4963 . 4702 . 5087 . 496 . 4833 . 4702 . 4703 . 47

# Discount Tables

	Faving		11	Im. :		II .		
Discount—Per Cent	-	-	Discount—Per Cent.	Equiva- lent	Net	Discount—Per Cent.	Equiva- lent	Net
### A Proposition of the proposi	.475 .4881 .5009 .5137 .5265 .5393 .50125 .5386 .5511 .5144 .5265 .5387 .5508 .5629 .5275 .5393 .5511 .5629 .57475	.525 .5119 .4991 .4863 .4735 .4607 .49875 .4863 .4738 .4614 .4489 .4856 .4735 .4613 .4492 .4371 .4725 .4607 .4489 .4371 .42525	571/2 and 21/2 5 21/2 and 21/2 5 21/2 77/2 77/2 10 5 5 71/2 77/2 21/2 77/2 77/2 77/2 10 10 21/2 10 5 10 71/2 10 10 21/2 10 10 21/2 10 10 71/2 10 10 71/2 10 10 71/2 10	575 5856 6063 6167 6271 50626 6063 6164 6265 6366 6069 6167 6271 6366 6462 63575	. 425 4114 .404 .3937 .3838 .3728 .40375 .3836 .3735 .3634 .3931 .3833 .3735 .3636 .3538 .3825 .3729 .3634 .3538 .34425	5 2½ 5 5 7 7 5 10 7 7½ 7 7½ 7 7½ 7 7½ 7 7½ 7 7½ 10 10 10 2½ 10 5 10 7 7½	.675 .6831 .699 .7069 .7148 .69125 .699 .7067 .7144 .7221 .6994 .7144 .7219 .7294 .7219 .7214 .7217 .7218 .7	.325 .3169 .309 .301 .2931 .2852 .3087 .301 .2933 .2856 .2779 .3006 .2781 .2931 .2856 .2781 .2706 .2925 .2852 .2779 .2706 .26325
50 and 21/2 and 21/2 21/2 and 21/2 21/2 71/2 5 5 5 5 71/2 71/2 71/2 71/2 71/2 71/2 71/2 71/2 71/2 71/2 71/2 71/2 10 10 21/2 10 10 21/2 10 10 5	.525 .5369 .54875 .5606 .5725 .5375 .5491 .5606 .5722 .58375 .55 .56125 .5725 .5725	.50 .4875 .4753 .4631 .4509 .43875 .4631 .45125 .4625 .4625 .4509 .4394 .4278 .4509 .4394 .4278 .44278 .44278 .44278 .44278 .44278 .44378 .44394 .44494 .443	and 2½ and 2½ 2½ and 2½ 2½ 5 5 5 5 5 5 5 5 7½ 5 7½ 7½ 7½ 7½ 7½ 7½ 10 10 5 10 7½ 10 10 5 10 7½ 10 10 5 10 7½ 10 10 5 10 7½ 10 10 5 10 7½ 10 10 5 10 7½ 10 10 5 10 7½ 10 10 5 10 5 10 7½ 10 10 5 10 5 10 5 10 5 10 5 10 5 10 5	. 6485 . 658 . 63 . 63925 . 6485 . 65775 . 667 . 64 . 649 . 658 . 667	.40 .39 .38025 .3705 .36075 .351 .38 .3705 .361 .3515 .342 .37 .36075 .3515 .34225 .333 .36 .351 .34225 .333 .36 .351 .34225 .333 .36 .351 .34225 .333 .36 .351 .34225 .333 .34225 .342	and 2½ and 2½ 2½ 2½ 5 5 2½ 5 5 7½ 5 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½	.715 .7221 .72925 .7364 .7435 .7225 .7294 .7364 .7433 .75025 .73 .73675 .7435 .75025	.30 .2925 .2852 .2779 .2706 .26325 .285 .2779 .27075 .2565 .2775 .2636 .2567 .34975 .27 .26325 .2565 .2775 .24975
5 7½ 5 10 7½ 7½ 7½ 2½ 7½ 7½ 7½ 7½ 10 10 2½ 10 5	525 5369 5485 56 5716 5832 5713 5826 5713 5826 5716 5826 5716 5826 5936 6046 5725 5832 5832 6046 61525	.475 .4631 .4515 .44 .4168 .45125 .44 .4287 .4174 .4C61 .4394 .4284 .4174 .4064 .3954 .4275 .4168 .43954 .38475	62½ and 2½ and 2½ 2½ 2½ 5 7½ 5 7½ 5 7½ 5 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 10 10 2½ 10 5 10 7½ 10 10 5 10 7½ 10 10	.6705 .6794 .6531 .6618 .6705 .6791 .6878 .6625 .6709	. 375 . 3656 . 3565 . 3473 . 3382 . 3291 . 35625 . 3473 . 3384 . 3295 . 3206 . 3469 . 3295 . 3209 . 3122 . 3375 . 3291 . 3291 . 3296 . 3291 . 3295 . 3291 . 3295 . 3291 . 3295 . 3291 . 3295 . 3295	72½ and 2½ and 2½ 2½ 2½ 5 2½ 5 7½ 2½ 5 5 5 5 7½ 5 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 10 10 10 2½ 10 7½ 10 10 10 2½ 10 10 10 5 10 7½	.7386 .7452 .752 .7587 .73875 .7453 .7518 .7583 .7649 .7456 .752 .7583 .7647 .7711 .7525 .7587 .7649 .7711	.275 .2681 .2681 .2614 .2548 .2413 .2612 .2487 .2487 .2417 .2351 .2544 .2417 .2353 .2417 .2353 .2417 .248 .2417 .2353 .2413 .2413 .2413 .2413 .2425 .2475 .2
55 and 2 ½ 2 ½ and 2 ½ 2 ½ and 2 ½ 2 ½ 5 5 5 7½ 5 5 7½ 7 ½ 7 ½ 7 ½ 7 ½ 7 ½ 7 ½ 7 ½ 7 ½ 7 ½	56125 5722 5832 5942 6051 5725 5832 5939 6046 61525 58375 5942 6046 815 8254 5959 3051 31525	.455 .4387 .4278 .4158 .4058 .3949 .4275 .4168 .4061 .3954 .38475 .41625 .4058 .3954 .385 .3954 .387 .4058 .3954 .387 .4058 .3954 .387 .4058 .40	and 2½ 2½ and 2½ 2½ and 2½ 2½ 7½ 5 2½ 7½ 5 5 5 5 7½ 5 7½ 7½ 7½ 2½ 7½ 7½ 7½ 7½ 7½ 10 10 10 2½ 10 5 10 7½ 10 10 10 10 10 10 10 10 10 10	.65875 .6673 .6758 .6843 .6929 .6675 .6758 .6841 .6924 .70075 .6843 .6924 .7005 .7086 .685 .6929 .70075 .7086	35 34125 3327 3242 3157 3071 3325 3242 3159 3076 29925 32375 3157 3076 2995 29914 315 3071 29925 2914 2835	75  and 2½ 2½ and 2½ 2½ 2½ 5 2½ 7½ 2½ 5 5 5 7½ 5 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 7½ 10 10 2½ 10 5 10 7½ 10 10 5 10 7½ 10 10 10 5 10 7½	76234 7584 7745 7806 7625 7684 7744 7803 78625 76875 7745 7803 7861 7919 775 7806 78625 78625	25 24375 23766 2316 22255 2194 2375 2216 22197 21325 22125 221325 22197 2139 2081 2197 2139 2081 2197 2194 21375 2194 2255

# Discount Table

The table beneath shows Nets of one dollar (\$1.00) when subject to the various discount combinions shown across the heads of columns and down the margins.

	10%	15%	20%	25%	30%	331/8%	35%	40%	45%	)%	55%	60%
E 01	\$0.855	\$0.8075	\$0.76	\$0.7125	\$0.665	\$0.6333	\$0.6175	\$0.570	\$0.5225	\$475	\$0.4225	\$0.380
5-2%	.8379	.7913	.7448	.6982	. 6517		. 6051	, 5586	.5121	4655 4631	.4189	.3724
5-21/2%	.8336	. 7873	. 741	. 6947	. 6484	. 6175	.6020 .5294	. 5557 . 4887	. 448	4073	.4168	.3258
5-5-5-5%	. 7331	.6923	.6516 .6207	.6109 .5818	.5701	.543	.5043	4655	4267	3879	.3491	.3103
5-162/8-2%	.6982	.6995 .799	.752	.705	.658		.611	.564	.517	47	. 423	.376
6%	837	7905	.744	.6975	.651		. 6045	. 558	.5115		.4185	.372
7_907	.8203	.7746	.7291	.6835	.6379		.5924	.5468		4557	.4101	.3646
10%	.81	.765	.72	.675	. 63	.6	.585	.540 .5292	.495	45	.405	.360
10-2%	. 7938	.7497	.7056	.6615	.6174		.5733	5265	4826		.3949	.351
10-21/2%	. 7897	.7458	.702	.6581 .645	.6143		.559	.516	.473	43	.387	.344
10-21/2-270	7857	7421	.6984		.6111		.5674	. 5238	.4801	4365	.3928	.3492
10-5%	.7695	7267	.684	.6413	.5985		.5557	.513	.4703	4275	. 3847	.342
10-5-21/6	7503	.7086		. 6252			.5418	.5002	.4585	4168 3858	.3751	.3334
10-5-5-5%	. 6945	.6559		.5787	.5401		.5016				.3472	.3086
10-10-2%	.7144		.635	.5954			.5134				.3554	.3159
10-10-21/2%	.7108	6678					.5107				.3536	.3143
10-10-3%	.6925						.5002	.4617	.4232	3848	.3463	.3078
10-10-5-9%	.6787		,6033		.5279		. 4902		.4147		. 3393	.3016
10-10-5-21/2%	.6752	.6377	. 6002	.5627			.4877	.4502			.3376	.3001
10-10-5-2-7 1/2 %	. 6268						.4527				.3134	.2716
10-10-5-21/2-2-71/2%	.6111		. 5432				4773				.3304	.2937
10-10-71/2-2%	. 6608		. 5874 6 . 5832			. 486	.4738		4 .401	3645	.3281	.2916
10-10-10%	643	6073					.4644	.428	.3929	3572	.3215	. 2858
10-10-10-2%	.639		. 5686	.533	1 .497	5	.462	.426	.390	3554	.3199	. 2843
10-10-10-5%	.6233	.588		.519			450		342	9 3463 8 3116	.3116	.277
10-10-10-10-5%	.561	.529			.4363	.415			6 308	5 2804	.2524	.2244
10-10-10-10-10-5%	504		8 .4488 2 .5998							3 3748	.3374	.2999
10-15-2%	. 674						.460	.425		7 3543	.3189	. 2834
10-15-5-27270	.625		5 . 555	7 .521	.486	3	.451			1 3473	.3126	.2779
10-25-5%	577	1 .545	1 .513	.481	. 448		.416	.384	8 .352	7 3206 3 1375	.2886	. 2565
121/2%	787			.656		3 .571	7 .557			6 1287	.3859	.35
121/2-2%	771	7 .728		. 643 5 . 639	1 .600 8 .597		.554			2 1266	.3839	.3413
121/2-21/2%	767									2 1156	.3740	.3325
12½-5%	733					3 .543	1 .529	5 .488	8 .448	1073	. 3665	.3258
1912-5-91697	. 729			4 .607	8 .567	3 .540	3 .526		3 .445	7 1052	.3647	.3242
15%	.765	.722	5 .68	. 637	5 . 595	.566			.467	5 125 1 1165	.3825	.34
15-2%	749		1 .664	6 .624			3 .541 4 .538			8 1144	.3748	.3332
15-21/2%	745	8 .704					.511				.3543	.3149
15-5-21/27/0							.487		8 .412	3 1748	.3374	.2999
15-10-2%	75	.708					.541	7 .50		3 1167	.375	. 3333
102/2-90/	. 735			4 .612	5 .571	7	.530		.449	2 1084	.3675	.3267
1624-5-21/6%	. 694	. 656	.617		.540	3	.501			5 859	.3473	.3087
17-2%	732	. 691			.569	14	.528	7 .488	.44	4 .067	.366	.3254
20%	72	. 68		2 .588	.56	8	509	6 .470		2 .92	.3528	.3136
20-2%	705	66 .663					.507	. 468	.429	9	.351	.312
20-21/2%	670				.521	4	. 484	1 .446			.3352	. 2979
20-5-21607	666		. 592	. 555	.518	17	.481				.3334	. 2964
20-5-5-2%	. 636	.60	. 566	.530	. 495		.459			92 538 72 52	.3184	.283
20-5-5-21/2 %	. 633				.504	10	.457		396	6 6	.324	. 2816
20-10%	648	.612	2 .576 98 .564		2 .493		.458	6 423		1 528	.3175	. 2822
20-10-2%	. 63		67 .561				.456	3 .42	12 .386	51 51	.3159	. 2808
20-10-212%	603				27 .469	92	.435		.368	37 351	.3016	. 268 1
20-10-5-21697	.600			35 ,500	02 .46		. 433			68 334	.3001	.2603
25%	. 67	. 63	75 .6	. 562			.488			25 75 42 675	.3375	.3
25-2%	. 66	15 . 62					.478		87 40	22 656	.3291	.294
25-21/2%	65	81 .65					.45		.38	4 491	.3142	.275
25-5-2%	. 62						. 453	.41	68 .38	21 473	.3126	.277
25-5-21/27/2							.43	. 39	8 .36	48 317	. 2985	265
25-5-5-2%				8 .49	5 .46	2	. 42	.39	6 .36	3 299	. 297	264
25-10-2%	59		23 .529	92 .49	61 .46		.43	.39	.36	38 307 2 291	. 2977	. 264
$\begin{array}{c} 5\% \\ 5-2\% \\ 5-24\% \\ 5-24\% \\ 5-24\% \\ 5-5-24\% \\ 5-5-5-5\% \\ 5-163/2-2\% \\ 66\% \\ 7\% \\ 109\% \\ 10-2\% \\ 10-2\% \\ 10-24/3-2\% \\ 10-24/3-2\% \\ 10-24/3-2\% \\ 10-24/3-2\% \\ 10-10-2\% \\ 10-10-3\% \\ 10-10-5-5-5\% \\ 10-10-2/3/3 \\ 10-10-5-2/4 \\ 10-10-5-2/4 \\ 10-10-5-2/4 \\ 10-10-5-2/4 \\ 10-10-5-2/4 \\ 10-10-5-2/4 \\ 10-10-5-2/4 \\ 10-10-5-2/4 \\ 10-10-5-2/4 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-10-5/2 \\ 10-10-10-5/2 \\ 10-10-10-10-5/2 \\ 10-10-10-10-5/2 \\ 10-10-10-10-10-5/2 \\ 10-10-10-10-10-5/2 \\ 10-10-10-10-10-5/2 \\ 10-10-10-10-10-5/2 \\ 10-10-10-10-10-10-5/2 \\ 10-10-10-10-10-10-5/2 \\ 10-10-10-10-10-10-5/2 \\ 10-10-10-10-10-10-5/2 \\ 10-10-10-10-10-10-5/2 \\ 10-10-10-10-10-10-10-5/2 \\ 10-10-10-10-10-10-10-5/2 \\ 10-15-5-2/2 \\ 10-15-2/2 \\ 10-10-2/2 \\ $	59	23 .58	55 . 52	65 .49	36 .46		.42			2 291 56 142	.2962	.2634
25-10-5-2%				27 .47 02 .46			.40	64 .37		39 126	. 2813	. 2514