

# GENERAL ELECTRIC REVIEW

## INDEX TO VOLUME XXII

January, 1919 December, 1919

# INDEX TO AUTHORS

	PAGE		PAGE
Adams, L. F. The Continuous-rated Motor and Its Application	421	Craighead, J. R. Measurement of the Crest Values of Alternating Voltage by the Kcnotron, Condenser, and Voltmeter	104
Alexander, J. P. Electricity in the Ceramic Arts	113	Crane, J. B. The Use of Electric Power in the Mining of Anthracite	116
Alexander, E. F. W. General Characteristics of Electric Ship Propulsion Equipments	224	Darling, A. G. Automatic and Remote Control Generating Stations	846
Allen, J. L. Experiences with an Electric Power Plant Eleven Degrees from the North Pole	92	Davey, W. P. Prolongation of Life of Tribolium Confusum Apparently Due to Small Doses of X-rays Water Japan	479 634
Allen, O. F. Army Electrical Work in the Advance Areas in France	368	Davis, W. J., Jr. Railroad Electrification as a Fuel Conservation Measure	196
Arnold, L. Secondary Connections for Constant-current Transformers: Single-circuit vs. Multi-circuit	632	Dewey, H. H. Power and Transmission	876
Badgley, A. D. The New Mexico's Motors	255	Dillard, E. A. New England Power Company	974
Baldwin, H. S. Mobile Searchlight Power Units for U.S. Army	694	Dodd, S. T. Electrification of Main Line Railroads	430
Bassett, P. R. Light Weight Barrel Searchlights	714	Eby, E. D. Interchangeable Bushings for High-voltage Apparatus	565
Beare, W. D. A 3000-volt Direct-current Passenger Locomotive for the Chicago, Milwaukee & St. Paul Railway	1004	Edgell, W. T., Jr. Electrification of Paper Mill Finishing-room Machinery	399
Beechlyn, J. T. Adaptation of the High Intensity Arc to the Open-type Sixty-inch Army Searchlight	655	Edwards, E. J. Electricity in Household Service: Lighting	162
Beers, R. S. The Cam-operated Railway Controller	95	Emmet, W. L. R. The Electric Propulsion of Ships	222
Behan, T. W. Electricity in Household Service: Motor-driven Domestic Utilities	174	Gibson, Langdon Searchlight Production	683
Benford, F. A. Searchlight Testing	668	Gilbert, C. G. Competition in Coal Mining and Full Utilization of Fuel The Need for a Constructive Economic Policy in Developing the Coal Products Industry	72 149
Berg, Eskil A Review of the Propelling Equipment and Operation of the New Mexico	293	Goodall, S. V. Welding as a Process in Ship Construction	213
Blume, L. F. Characteristics of Some Polyphase Transformer Connections	1035	Goodwin, H., Jr. Preventing Versus Correcting Poor Power-factor	970
Boyajian, A. Characteristics of Some Polyphase Transformer Connections	1035	Gordon, T. W. Spring Thrust Bearings and Cooling Coils on the Large Vertical Generators at Cedars Rapids Power Station	840
Butler, H. E. Single Light Compared with Cluster Units for Street Lighting	1044	Guthrie, K. O. The Construction of a Pumping Station for the Schenectady Works, General Electric Company	538
Byrnes, T. J. Synchronous Motors in the Meat Packing Industry	461	Hackett, C. M. Concrete Parts for Generators	843
Chadbourne, H. W. Ventilation of Coal Mines	341	Hall, J. L. Distant Control of Projectors for Seacoast Defense	676
Clarke, C. L. Edison and the Incandescent Lamp	1066	Hall, Theodore Distant Electrical Controls for Military Searchlights	718
Coffin, F. P. Fuel for the Merchant Marine The Coal Resources of Alaska and Transportation Facilities	200 517	Halvorson, C. A. B., Jr. The Lynn Sixty-inch Open-type Army Searchlight Development	704
Conover, W. R. Salvaging Industrial Wastes Salvaging Miscellaneous Wastes	88 127	Hardman, W. H. Searchlight Electrodes	685

Harrington, R. E. Light as an Aid to the Transportation of Material	91
Harvey, H. F., Jr. Controlling the Propulsion of the New Mexico	57
Hazeltine, W. E. Varnished-Gummi Cable for Underground Service	412
Hentschel, C. T. The Main Control Equipment of the New Mexico	501
Hershey, Frank Voltage Regulation of Distributing Feeders as a Means of Improving Central Station Efficiency	511
Hewett, J. R. The General Electric Company in the Great World War Part II—Research Work Part III—Ship Propulsion, Electric Heating Devices and Searchlights Part IV—Other War Work Part V—General War and Industrial Activities	493 601 726 746 996
Hohart, H. M. Welding Mild Steel	415
Hood, R. S., Jr. Searchlight Tower Units	689
Hoyt, H. C. Electricity in Household Service, The Source, The Central Station	156
Hughes, G. A. Electricity in Household Service: Heating and Cooking	188
Hunt, E. O. The Turbines of the U.S.S. New Mexico	233
Hunt, F. L. Centralization and Conservation in Power Supply of Central Massachusetts	947
Hussey, R. B. Metal Mirrors for Searchlights	652
Jackson, J. A. Car Dumpers	366
Jones, Bassett The Flow of Steam Through Pipes	805
Langmuir, Irving The Arrangement of Electrons in Atoms and Molecules	505-587 780
Lemp, Hermann A Practical Brake Horse Power Formula for Internal Combustion Engines	808
Lewis, R. R. Turbines for Mechanical Drives	458
Lewis, W. W. Calculation of Short-circuit Currents in Alternating-current Systems High-voltage Power Transmission Problems	110 927
Lichtenberg, Chester Searchlight Developments of U.S. Army	700
Liston, John Some Developments in the Electrical Industry During 1918	785
Loewenstein, L. C. Centrifugal Compressor Installation at Newport News Shipbuilding and Dry Dock Company	785
Lof, E. A. Hydro-electric Power and Its Use for Industrial Purposes	942

McLaughlin, P. F. Electric Drives	7
McLean, B. H. Electricity Applied to Locomotives and Ore Boats Speed Control of Industrial Motors Heats by Means of Steam-heated Liquid	10 10 10 10
McMann, C. H. The Alabama Power Company's System: Development and Operation	980
McMan, H. F. Lighting Installation	10
Merrick, E. G. Effect of Short-Circuit on Power House Equipment	55
Mitchell, H. D. Glass Searchlight Mirrors	660
Montgomery, V. M. Cooling of Transformer Windings After Shutdown	1956
Moody, W. S. A New Form of Tank for Static Transformer Some Recent Developments in Power Transformer	730 831
Morrison, G. F. A Review of the N.E.L.A. Lamp Committee Report National Electric Light Association Lighting Exhibit	767 776
Mosley, L. C. Magnet-type Motors	318
Moss, S. A. Problems in Designing Small Turbines for Industrial Purposes	620
Murphy, E. J. Thirty-inch Open-type Searchlight with Tripod Mount	680
Nash, E. J. A Year's Record of the Automatic Substation at Butte	552
Nikiforoff, B. The Alabama Power Company's System, Its Development and Operation	980
Oliver, J. M. The Alabama Power Company's System, Its Development and Operation	980
Olson, M. C. Designs of Large Vertical Alternating-current Water-wheel-driven Generators	843
Oudin, M. A. Chinese Students and American Training	782
Pauly, K. A. Electric Drive for Steel Mill Main Rolls	208
Peek, F. W., Jr. Lightning: The Effect of Lightning Voltages on Arrestor Gaps, Insulators and Bushings on Transmission Lines	980
Piper, F. S. Records and Maintenance of Aluminum-cell Lightning Arresters	475
Pogue, J. E. Competition in Coal Mining and Full Utilization of Fuel	72
Pogue, J. E. The Need for a Constructive Economic Policy in Developing the Coal Products Industry	149
Porter, L. C. Mazda Lamps for Motion Picture Projection	556

	PAGE		PAGE
Potter, W. B.		Steinmetz, C. P.	
Electrification of Main Line Railroads	430	Electric Power Collection	565
Powell, A. L.		Hydro-electric Power Collection	960
Light as an Aid to the Transportation of Material	61	Taylor, W. G.	
Raymond, C. S.		Operation of Oil Wells by Electric Power and the Resulting Gain to the Oil Producer	354
The New Mexico's Generators	244	Thomson, Elihu,	
Rea, N. L.		Searchlight Development	722
Recent Developments in Shaft Pressing at Destination	135	Tompkins, W. F.	
Some Sidelights on Construction Work	913	Searchlight Air Defense Operations	663
Reist, H. G.		Traver, O. C.	
Single-Collar vs. Multi-collar Thrust Bearings for Propeller Shafts	133	Relay Protection for Large Power Stations	585
Ripley, C. M.		Treat, Robert	
Induction Generator Plants	963	Electrical Layout of Large Power Systems	918
Some Problems in Shipping	82	Synchronous Motor as a Means of Reducing Costs	407
Robinson, S. M.		Upp, J. W.	
Electric Drive from a Military Point of View	220	Recent Developments in Oil Circuit Breakers	858
Rogers, F. H.		Vernon, H. H.	
Features of Design in Large Hydraulic Turbines	849	Electrical Equipments for Movable Highway and Railway Bridges	373
Rogers, H. W.		Speed Control of Induction Motors on Cranes and Hoists by Means of Solenoid Load Brakes	117
Centrifugal Machines and Their Adaptability to Electric Motor Drive	413	White, A. V.	
Rose, S. L. E.		Fuel Problem of Canada—Some National and Inter- national Aspects	465
Single Light Compared with Cluster Units for Street Lighting	1044	Wilson, H. R.	
Rushmore, D. B.		New England Power Company	974
Some Fundamentals of Engineering Economics	820	Winne, H. A.	
Ryan, W. D'A.		A Simple Electric Water Heater for the Utilization of Surplus Hydro-electric Power	1030
The Development and Testing of Arc and Incan- descent Searchlights	724	Worcester, T. A.	
Sage, R. S.		Limitations of High-voltage Transmission	880
Progress in the Electrification of Mine Hoists	332	Wright, J. D.	
Smith, A. R.		Direct-current Mill-type Motors for Steel Mill Aux- iliary Drives	323
Features of the New Steam Power Plant at the Erie Works of the General Electric Company	907	Wyer, S. S.	
		Natural Gas	636, 760

# INDEX TO SUBJECTS

PAGE

Alabama Power Company—See Section II, Development and Operation, by J. M. Oliver, B. S. Kistall and F. B. McManus ..... 980

Alaska, The Coal Resources and Transportation Facilities in, by F. P. Coffin ..... 517

Alternating-current Systems, Calculation of Short-circuit Currents in, by W. W. Lewis ..... 140

Aluminum-vulcanite Lightning Arrester, Records and Maintenance of, by F. S. Piper ..... 475

Anthracite, The Use of Electric Power in the Mining of, by J. B. Crane ..... 116

Arc, High Intensity, Adaptation of the, in the Open-type Sixty-inch Army Searchlight, by J. T. Bowdlen ..... 653

Army Electrical Work in the Advance Areas of France, by O. F. Allen ..... 368

Automatic and Remote Control Generating Stations, by A. G. Darling ..... 846

Automatic Substation at Butte, A Year's Record of the, by E. J. Nash ..... 592

Bearings, Spring Thrust, and Cooling Coils on the Large Vertical Generators at Cedar Rapids Power Station, by T. W. Gordon ..... 840

Bearings, Thrust, Single Collar vs. Multi-collar, for Propeller Shafts, by H. G. Reist ..... 133

**BIOGRAPHIES**

    Captain L. A. Bostwick ..... 299

    Captain A. L. Willard ..... 299

    Commander J. S. Evans ..... 300

Boats, Coal and Ore, Electricity as Applied to Loading and Unloading, by R. H. McLain ..... 352

Boyer, F. N., Retires ..... 39

Brakes, Solenoid Load, Speed Control of Induction Motors on Cranes and Hoists by Means of, by R. H. McLain and H. H. Vernon ..... 117

Brake Horse Power Formula, A Practical, for Internal Combustion Engines, by Hermann Lemp ..... 808

Bridges, Movable Highway and Railway, Electrical Equipments for, by H. H. Vernon ..... 373

Bushings, Interchangeable, for High Voltage Apparatus, by E. D. Eby ..... 863

Cable, Varnished Cambric, for Underground Service, by W. E. Hazeltine ..... 442

Canada, Fuel Problem of, Some National and International Aspects, by A. V. White ..... 465

Car Dumpers, by J. A. Jackson ..... 368

Cedar Rapids Power Station, Spring Thrust Bearings and Cooling Coils on the Large Vertical Generators at, by T. W. Gordon ..... 840

Central Station, The, by H. C. Hoyt ..... 156

Centrifugal Machines and Their Adaptability to Electric Motor Drive, by H. W. Rogers ..... 413

Ceramic Arts, Electricity in the, by J. P. Alexander ..... 413

China (Editorial) ..... 745

Chinese Students and American Training, by M. A. Oudin ..... 782

Circuit Breakers, Oil, Recent Developments in, by J. W. Upp ..... 858

Coal Products Industry, The Need for a Constructive Economic Policy in Developing the, by C. G. Gilbert and J. E. Pogue ..... 149

Coal Resources and Transportation Facilities in Alaska, The, by F. P. Coffin ..... 517

Compressor, Centrifugal, Installation at Newport News Shipbuilding and Dry Dock Company, by L. C. Loewenstein ..... 785

Concrete Parts for Generators, by C. M. Hackett ..... 843

Construction Work, Some Sidelights on, by N. L. Reed ..... 913

Control Equipment of the New Mexico, The, Main, by C. T. Hentschel ..... 261

    Control Equipment, The, Main, of the New Mexico, by C. T. Hentschel ..... 261

    Comparing the Propulsion Systems, Marine, by E. F. W. Alexanderson ..... 274

    Cranes and Hoisting, by G. A. Hughes ..... 368

    Cranes and Hoisting, Mechanical, by E. F. W. Alexanderson, by Means of Solenoid Electrical Control, by F. P. Coffin and H. H. Vernon ..... 117

    Crest Voltage of Alternating Voltage, Measurement of, by the Electron-tube Method, by E. P. Craghead ..... 31

    Domestic Utilities, Maintenance, by T. W. Brown ..... 28

    Dry Cells, Electrical Characteristic and Temperature of, by J. A. Jackson ..... 39

    Dumper, Car, by J. A. Jackson ..... 368

    Economic Activity, Fundamental Factors of, Electrical, Edison and the Incandescent Lamp, by F. L. Conrad ..... 194

    Electric Marine Propulsion (Editorial) ..... 274

    Electric Power Collection, by C. P. Scrimmager ..... 565

    Electric Power Plant, Experiments on the High Voltage North Pole, by J. L. Auld ..... 92

    Electric Propulsion of Ships, The, by W. L. R. Emmet ..... 223

    Electric Ship Propulsion Equipment, General Characteristics of, by E. F. W. Alexanderson ..... 274

    Electrical Industry During 1918—Some Developments of the, by John Lester ..... 9

    Electricity in the Household (Editorial) ..... 155

**ELECTRICITY IN HOUSEHOLD SERVICE**

        Heating and Cooking, by G. A. Hughes ..... 188

        Lighting, by E. J. Edwards ..... 162

        Motor-driven Domestic Utilities, by T. W. Bohannan, The Source, The Central Station, by F. C. Howell ..... 156

    Electrification of Main Line Railroads (Editorial) ..... 129

    Electrification of Main Line Railroads, by W. B. Boyer and S. T. Dodd ..... 129

    Electrodes, Searchlight, by W. H. Hardman ..... 685

    Economics, Engineering, Some Fundamentals of, by H. B. Rushmore ..... 829

    Electrons and Atoms in Molecules, The Arrangement of, by Irving Langmuir ..... 365, 587, 786

    Erie Works of the General Electric Company, Features of the New Steam Power Plant at the, by A. R. Smith ..... 907

    Feeders, Distributing, Voltage Regulation of, as a Means of Improving Central Station Efficiency, by F. Hershey ..... 544

**FUELS**

        Coal Resources and Transportation Facilities in Alaska, The, by F. P. Coffin ..... 517

        Competition in Coal Mining and Fell Utilization of Fuel, by C. G. Gilbert and J. E. Pogue ..... 72

        Fuel for the Merchant Marine, by F. P. Coffin ..... 200

        Fuel Problem of Canada: Some National and International Aspects, by A. V. White ..... 465

        Natural Gas, by S. S. Wyer ..... 636, 760

        Railroad Electrification as a Fuel Conservation Measure, by W. J. Davis, Jr. .... 196

        Use of Electric Power in the Mining of Anthracite, by J. B. Crane ..... 116

    Gas, Natural, by S. S. Wyer ..... 636, 760

    General Electric Company, The Construction of a Pumping Station for the Schenectady Works of the, by K. O. Guthrie ..... 358

    General Electric Company in the Great World War, The, John R. Hewett ..... 495, 601, 726, 746

    Generating Stations, Automatic and Remote Control, by A. G. Darling ..... 846

    Generation and Transmission (Editorial) ..... 815

    Generators, Concrete Parts for, by C. M. Hackett ..... 843

    Generators, Large Vertical Alternating-current Water-wheel-driven Designs of, by M. C. Olson ..... 832

	PAGE		PAGE
Generators, The New Mexico's, by C. S. Raymond	244	Motors, Induction, Speed Control of, on Cranes and	
Generator Plants, Induction, by C. M. Ripley	963	Hoists by Means of Solenoid Load Brakes, by R. H.	
Water, A Simple Electric Water, for the Utilization of		McLain and H. H. Vernon	117
Surplus Hydro-electric Power, by H. A. Winne	1030	Mine-type Motors, by L. C. Mosley	348
Heating and Cooking, by G. A. Hughes	188	Motors, The New Mexico's, by A. D. Badgley	255
High Voltage Power Transmission Problems, by W. W.		<b>MOTOR DRIVE</b>	
Lewis	927	Electric Drive for Steel Mill Main Rolls, by K. A.	
Hoists, Mine, Progress in the Electrification of, by R. S.		Pauly	308
Sage	332	Electricity in the Ceramic Arts, by J. P. Alexander	113
Hydraulic Turbines, Large, Features of Design in, by P.		Electrification of Paper Mill Finishing-room	
H. Rogers	849	Machinery, by W. T. Edgell, Jr.	399
Hydro-electric Power Collection, by C. P. Steinmetz	960	Operation of Oil Wells by Electric Power and the	
Hydro-electric Power and Its Use for Industrial Purposes,		Resulting Gain to the Oil Producer, by W. G.	
by R. A. Lof	942	Taylor	384
<b>ILLUMINATION</b>		Synchronous Motors in the Meat Packing Industry,	
Illumination, Progress in	47	by T. J. Byrnes	461
Light as an Aid to Transportation of Material, by		Natural Gas, by S. S. Wyer	636
A. L. Powell and R. E. Harrington	61	Necessity's Stimulus (Editorial)	651
Lighting Legislation (Editorial)	103	Need for a Constructive Economic Policy in Developing	
Lighting Legislation, by H. E. Mahan	110	the Coal Products Industry, by C. G. Gilbert and	
Single-light Compared with Cluster Units for Street		J. E. Pogue	149
Lighting, by S. L. E. Rose and H. E. Butler	1044	N. E. L. A. Lamp Committee Report, The Review of, by	
Industry, A Triumph for (Editorial)	491	G. F. Morrison	767
Induction Generator Plants, by C. M. Ripley	963	N. E. L. A. Lighting Exhibit, by G. F. Morrison	776
Internal Combustion Engines, A Practical Brake Horse		New England Power Company, by E. A. Dillard and H. R.	
Power Formula for, by Itermann Lemp	808	Wilson	971
In Memoriam, E. D. Mullen	488	Newport News Shipbuilding and Dry Dock Company,	
In Memoriam, J. B. Pevear	810	Centrifugal Compressor Installation at, by L. C.	
In Memoriam, Frederick Sargent	631	Loewenstein	785
In Memoriam, F. C. Todd	725	Oil Wells, The Operation of, by Electric Power and the	
In Memoriam, H. C. Wirt	216	Resulting Gain to the Oil Producer, by W. G.	
Japan, Water, by W. P. Davey	634	Taylor	384
Lamps, Mazda, for Motion Picture Projection, by L. C.		Paper Mill Finishing-room Machinery, Electrification of,	
Porter	536	by W. T. Edgell, Jr.	399
Layout of Large Power Systems, The Electrical, by Robert		Pumping Station, The Construction of a, for the Schenck-	
Treat	918	edy Works of the General Electric Company, by	
Legislation, Lighting (Editorial)	103	K. O. Guthrie	538
Legislation, Lighting, by H. E. Mahan	110	Progress (Editorial)	563
Light as an Aid to Transportation of Material, by A. L.		Propelling Equipment and Operation of the New Mexico,	
Powell and R. E. Harrington	61	A Review of the, by Eskil Berg	293
Lightning Arresters, Aluminum-Cell, Records and Main-		Propulsion, Electric Marine (Editorial)	219
tenance of, by F. S. Piper	475	Propulsion of Ships, The Electric, by W. L. K. Emmet	292
Lightning, The Effect of Lightning Voltages on Arrester		Power-factor, Poor, Preventing Versus Correcting, by	
Gaps, Insulators and Bushings on Transmission		H. Goodwin, Jr.	970
Lines, by F. W. Peek, Jr.	900	Power Systems, Large, The Electrical Layout of, by Robert	
Loading and Unloading Coal and Ore Boats, Electricity as		Treat	918
Applied to, by R. H. McLain	352	Power Supply of Central Massachusetts, Centralization	
Locomotive, 3000-volt Direct-current Passenger, Exhibi-		and Conservation in, by F. L. Hunt	917
tion Tests of	1008	Power and Transmission, by H. H. Dewey	876
Locomotive, 3000-volt Direct-current Passenger, for the		Power Transmission and Industrial Development, by R. J.	
Chicago, Milwaukee & St. Paul Railway, by W. D.		McClelland	825
Beaure	1004	Railroad Electrification as a Fuel Conservation Measure,	
Main Control Equipment of the New Mexico, by C. T.		by W. J. Davis, Jr.	196
Hentschel	261	Railway Controller, The Cam-operated, by R. S. Beers	95
Massachusetts, Central, Centralization and Conservation		Relays, Recent Developments in, by O. C. Traver	885
in Power Supply of, by F. L. Hunt	947	Research, Value of (Editorial)	743
Merchant Marine, Fuel for the, by F. P. Coffin	200	Reconstruction Congress of the War Service Committees of	
Mines, Coal, The Ventilation of, by H. W. Chadbourne	341	American Industry	3
Mining, Coal, Competition in, and Full Utilization of		Relays, Standard Unit	535
Fuel, by C. G. Gilbert and J. E. Pogue	72	Review of the Propelling Equipment and Operation of the	
Mirrors, Searchlight, Glass, by H. D. Minchin	660	New Mexico, A, by Eskil Berg	293
Mirrors, Metal, for Searchlights, by R. B. Hussey	652	Russia, A Fertile Field for American Commerce	1000
Motion Picture Projection, Mazda Lamps for, by L. C.		Safety Rules for Men Handling Electrical Circuits or	
Porter	536	Apparatus	484
<b>MOTORS</b>		Salvaging Industrial Wastes, by W. R. Conover	88
Continuous-rat Motor and Its Application, The,		Salvaging Miscellaneous Wastes, by W. R. Conover	127
by L. F. Adams	421	<b>SEARCHLIGHTS</b>	
Direct-current Mill-type Motors for Steel Mill Auxili-		Adaptation of the High Intensity Arc to the Open-type	
ary Drives, by J. D. Wright	324	Sixty-inch Army-Searchlight, by J. T. Beechlyn	655
		Development and Testing of Arc and Incandescent	
		Searchlights, by W. D'A. Ryan	724

	PAGE
Distant Control of Projectors for Sea Coast Defense, by J. L. Hall . . . . .	676
Distant Electrical Controls for Military Searchlights, by T. Hall . . . . .	718
Glass Searchlight Mirrors, by H. D. Mindon . . . . .	690
Light Weight Barrel Searchlights, by P. R. Bassett . . . . .	714
Lynn Sixty-inch Open-type Army Searchlight Development, The, by C. A. B. Halverson, Jr. . . . .	704
Metal Mirrors for Searchlights, by R. B. Hussey . . . . .	652
Mobile Searchlight Power Units for U.S. Army, by H. S. Baldwin . . . . .	694
Searchlight Air Defense Operations, by W. F. Tompkins . . . . .	664
Searchlight Development, by Elbin Thomson . . . . .	722
Searchlight Development in the U.S. Army, by Chester Lichtenberg . . . . .	700
Searchlight Electrodes, by W. H. Hardman . . . . .	685
Searchlight Production, by L. Gibson . . . . .	684
Searchlight Testing, by F. A. Bentford . . . . .	668
Searchlight Tower Units, by R. S. Hood, Jr. . . . .	689
Thirty-inch Open-type Searchlight with Tripod Mount, by E. J. Murphy . . . . .	680
Shaft Pressing at Destination. Recent Developments in, by N. L. Rea . . . . .	438
Shafts, Propeller, Single Collar vs. Multi-collar Thrust Bearings for, by G. H. Reist . . . . .	433
Ship Construction, Welding as a Process in, by Commander S. V. Goodall . . . . .	213
Ship Propulsion, Electric. General Characteristics of Equipments, by E. F. W. Alexanderson . . . . .	224
Ship Propulsion, Electric, from a Military Point of View, by Commander S. M. Robinson . . . . .	220
Ships, Electric Propulsion of, by W. L. R. Emmet . . . . .	222
Shopping, Some Problems in, by C. M. Ripley . . . . .	82
Short-circuit Currents, Calculation of, in Alternating-current Systems, by W. W. Lewis . . . . .	140
Short Circuits, Effects of, on Power House Equipment, by E. G. Merriek . . . . .	945
Synchronous Motors in the Meat Packing Industry, by T. J. Byrnes . . . . .	461
Speed Control of Induction Motors on Cranes and Hoists by Means of Solenoid Load Brakes, by R. H. McLain and H. H. Vernon . . . . .	417
Spring Thrust Bearings and Cooling Coils on the Large Vertical Generators at the Cedars Rapids Power Station, by T. W. Gordon . . . . .	840
Steam, The Flow of, Through Pipes, by R. Jones . . . . .	805
Steel Mill Auxiliary Drives, Direct-current Mill type Motors for, by J. D. Wright . . . . .	323
Steel Mill Main Rolls, Electric Drive for, by K. A. Pauly . . . . .	308
Street Lighting, Single-unit Compared with Cluster Units for, by S. L. E. Rose and H. E. Butler . . . . .	1044

Submarine Motors, by C. M. Ripley . . . . .	1040
Submarine Motors, by Robert Tracy . . . . .	80
Submarine Motors in the Merchant Fleet, by T. J. Byrnes . . . . .	1040
Transformer Construction, Characteristics of, by Physics, by L. F. Boring and A. B. Boring . . . . .	670
Transformers, Triangular Core Type, Design of, for 4800-volt, 50-hp. to 100-hp. Motors, by W. S. Moody . . . . .	670
Transformers, Power, Some Recent Developments, by W. S. Moody . . . . .	670
Transformer Winding, Calculation of, by A. M. Montgomery . . . . .	670
TRANSMISSION	670
Generation and Transmission of Electric Power, by High Voltage Power Transmission, by W. W. Lewis . . . . .	670
Power and Transmission, by H. H. Dyer . . . . .	670
Limitations of High-voltage Transmission, by W. W. Lewis . . . . .	670
Transportation of Material, Lignite, in Air, by Powell and R. E. Harrington . . . . .	670
Tribulum Confusion, Probation of, Late of, Applied, Due to Small Doses of N-rays, by W. P. Dyer . . . . .	479
TURBINES	670
Centrifugal Compressor Installation at Newport News Shipbuilding and Dry Dock Company, by L. C. Loewenstein . . . . .	784
Turbines for Mechanical Drives, by R. R. Lewis . . . . .	438
Turbines of the U.S.S. New Mexico, by E. O. Hunt . . . . .	234
Turbines, Large Hydraulic, Features of Design, by F. H. Rogers . . . . .	819
Turbines, Small, Problems in Designing, for Industrial Purposes, by S. A. Moore . . . . .	620
Varnished Cambric Cable for Underground Service, by W. E. Hazeltine . . . . .	442
Ventilation of Coal Mines, The, by H. W. Chaffourne . . . . .	344
Voltage, Alternating, Measurement of the Crest Values of, by the Kenotron Condenser and Voltmeter, by J. R. Craighead . . . . .	1004
Voltage Regulation of Distributing Feeders as a Means of Improving Central Station Efficiency, by F. Hershoy . . . . .	544
War Service Committees of American Industry, Reconstruction Congress of the . . . . .	88
Wastes, Salvaging Industrial, by W. R. Conover . . . . .	88
Wastes, Salvaging Miscellaneous, by W. R. Conover . . . . .	127
Water Heater, A Simple Electric for the Utilization of Surplus Hydro-electric Power, by H. A. Winne . . . . .	1040
Welding Mild Steel, by H. M. Holart . . . . .	443
Welding as a Process in Ship Construction, by Commander S. V. Goodall . . . . .	213