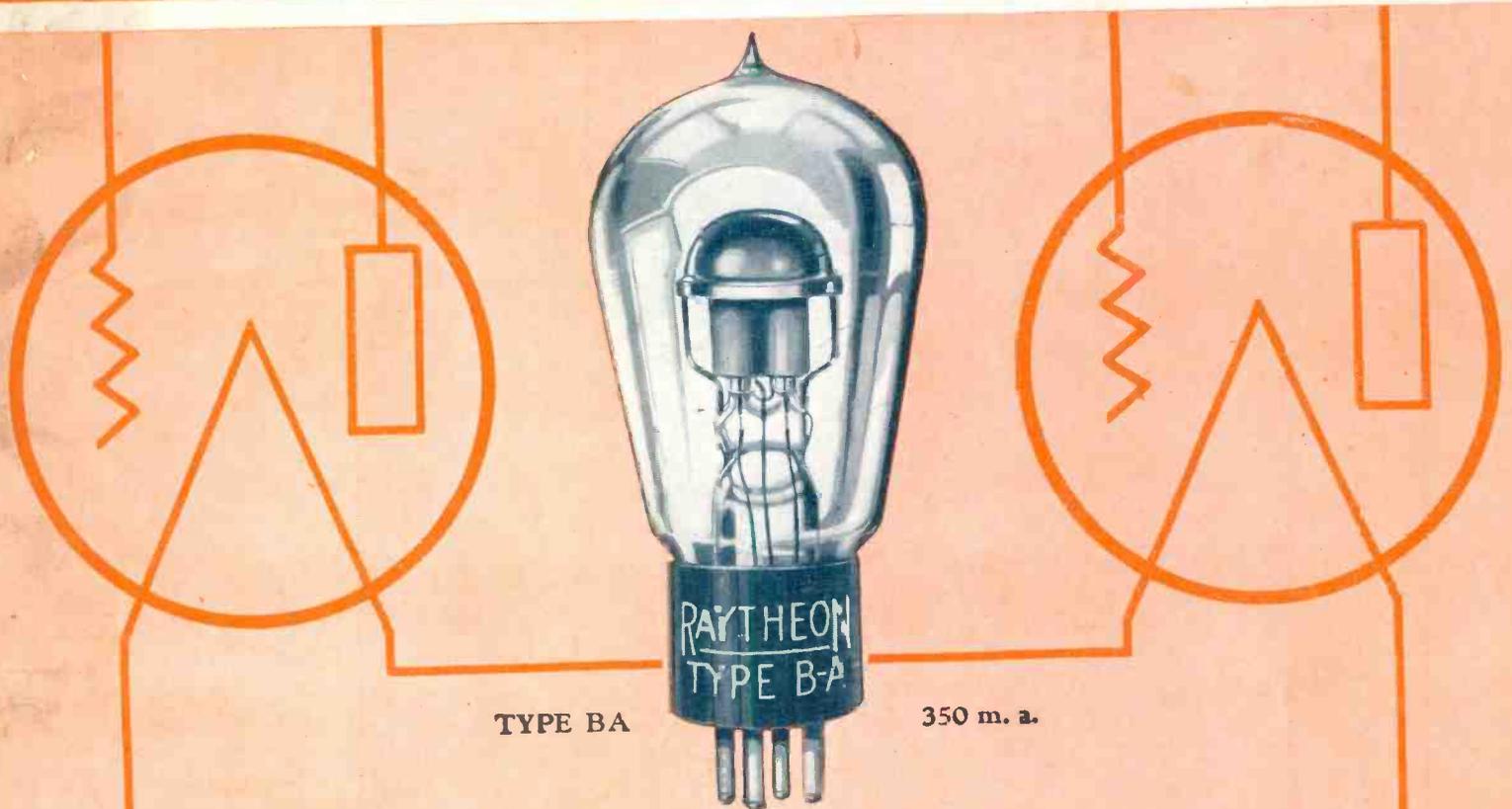


# Radio Retailing

*The Business Magazine of the Radio Industry*



TYPE BA

350 m. a.

**SERIES FILAMENT CONNECTION AND RAYTHEON TYPE BA RECTIFYING TUBE**—*the simplest, cheapest and most satisfactory solution to the problem of A-B-C Light-Socket Power Operation*

**T**HE Raytheon BA Rectifying tube in a properly designed power unit provides a tried and proven A-B-C power supply, direct from the light socket, for any radio receiver employing 201-A or other standard tubes connected in series. The resulting hook-up is inexpensive to build, profitable to sell and entirely satisfactory in performance.

Consider, too, that any battery set can easily be rewired to operate perfectly from this one-tube power unit. Dealers can bank on plenty of Raytheon BA Tube sales—especially since this complete A-B-C power supply costs very little more than a "B" power unit alone! List Price, \$7.50.

RAYTHEON MANUFACTURING COMPANY, Cambridge, Mass.

**Raytheon**  
LONG LIFE RECTIFYING TUBE

# Cunningham RADIO TUBES

SINCE 1915

STANDARD FOR ALL SETS



On top in  
**Tube Sales**  
at the  
**Peak Season**

**O**UR Holiday consumer message is that a set of Cunningham Radio Tubes makes an admirable Christmas gift.

You can recommend these tubes with absolute confidence in their reliability. Such confidence has built a nation-wide consumer demand for these tubes.

*Twenty different types—all in the Orange and Blue Carton.*

**E. T. CUNNINGHAM, Inc.**  
New York      San Francisco      Chicago

EARL WHITEHORNE,  
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RAY V. SUTLIFFE,  
Western Editor, Chicago  
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S. J. RYAN,  
Merchandising Counsellor

# Radio Retailing

The Business Magazine of the Radio Industry

WILLIAM C. ALLEY  
Managing Editor

Editorial Staff  
HARRY PHILLIPS  
LEWIS F. KENDALL, JR.  
OVID RISO  
C. GRUNSKY, San Francisco  
PAUL WOOTON, Washington

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DAY-FAN ELECTRIC COMPANY  
DAYTON, OHIO

November 2nd, 1927.

McGraw-Hill Publishing Co., Inc.  
Tenth Avenue at 36th St.,  
New York, N. Y.

Attention - Mr. M. Clements -

Gentlemen

In reply to your letter of October 31st, we can see no objection to supplying you with information relative to the results obtained from dealer questionnaires which was put out last summer.

Among the questions asked in our letter was the following -

"If you were to subscribe to but one radio trade paper, which one would it be?"

The letter brought in two hundred and sixty three returns and tabulations of this particular question show the following results -

Radio Retailing	165
A radio trade magazine	8
A radio fan paper	11
" " " "	1
" " " "	1
" " " "	8
A manufacturer's publication	1
A radio trade magazine	2
An electrical trade magazine	1
A phonograph trade magazine	1
An electrical trade magazine	11
A phonograph trade magazine	1
A radio fan paper	8
None	1
	217

If this information will prove helpful to you you are free to use it.

Yours very truly,  
DAY-FAN ELECTRIC CO.  
*D. D. Drucker*  
3571, South 22nd St.

### A Letter That Speaks for Itself

THE letter reproduced above is self-explanatory. It indicates the overwhelming preference of radio dealers for *Radio Retailing*, voted for as their favorite radio magazine, in the consumer and trade publication fields as well as among electrical and talking machine papers.

As it is contrary to the policy of the McGraw-Hill Publishing Company to mention names of competitive magazines in material of this sort, the actual names are deleted.

It is interesting to note that *Radio Retailing* received 165 out of 217 votes, the remaining 52 votes being divided among 12 competitors, for an average of 4 1/3 votes each.

Member Audit Bureau of Circulations

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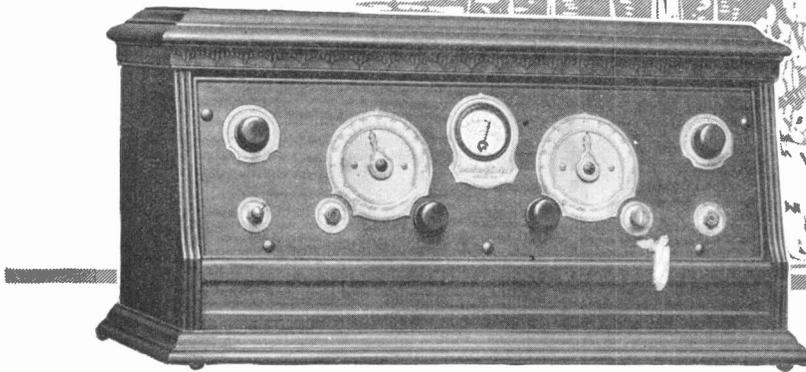
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SAN FRANCISCO, 833 Mission Street  
LONDON, E. C. 8 Boulevard St.

*Giant Sequoias of California*  
—standing since the time when  
Caesar led his army into Gaul.



*No. 523 A.C. Receiver*

Price with Audio-Power Unit and 8 R.C.A. Tubes but without Cone Speaker; East of Rockies, \$295; Rockies and West \$315; Canada \$390.

## Why Stromberg-Carlson Owners Are Loyal to Their Dealers!

EVERY Stromberg-Carlson owner knows that he could not buy his receiver today for half what he paid for it yesterday.

And that is not only because Stromberg-Carlson guarantees not to reduce its prices. It is also because every Stromberg-Carlson being listened to today is as efficient, as sturdy and as capable of giving enjoyment for many years, as ever it was.

Permanence is the keynote of Stromberg-Carlson Radio—permanence of value, permanence of performance, permanence of ownership.

Stromberg-Carlson dealers get full credit from owners for conferring Stromberg-Carlson benefits. The dealer with the most “boosters” and the fewest “knockers” is the one who concentrates hardest on selling Stromberg-Carlsons.

*(A.C. Stromberg-Carlsons range in price: East of Rockies, Radio Sets, equipped with phonograph input jack, \$295 to \$755; Radio and Phonograph Combined \$1245; Rockies and West \$315 to \$1299; Canada \$390 to \$1650.)*

STROMBERG-CARLSON TELEPHONE MFG. CO., ROCHESTER, N. Y.

# Stromberg-Carlson

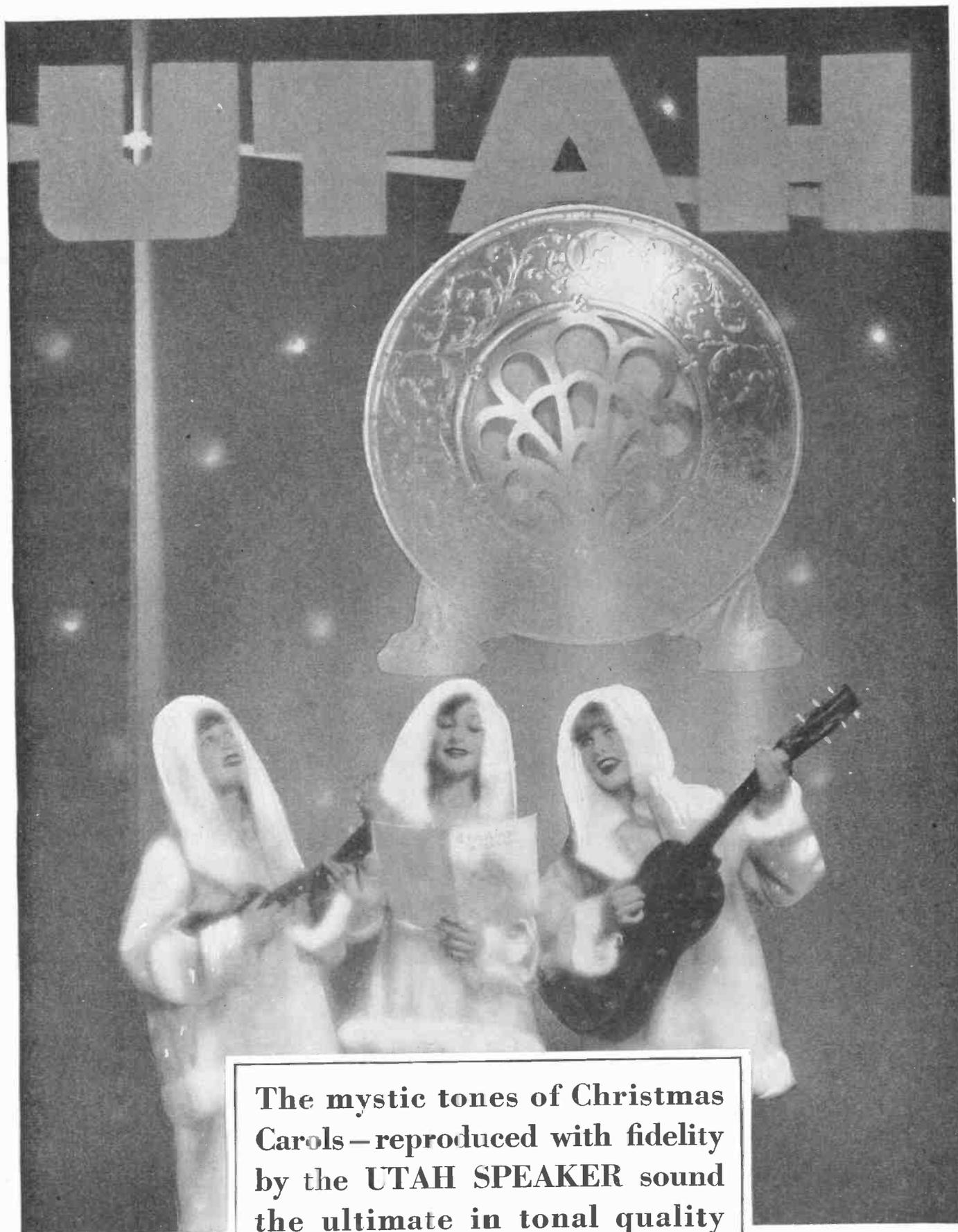
*Makers of voice transmission and voice reception apparatus for more than 30 years*

✦

**The  
Stromberg-Carlson  
H O U R**

Tuesday Evenings, 8 to 9  
Eastern Standard Time  
through  
WJZ, WBZ-WBZA, KDKA,  
KYW, WJR, WBAL  
and WHAM

✦



**The mystic tones of Christmas  
Carols—reproduced with fidelity  
by the UTAH SPEAKER sound  
the ultimate in tonal quality**



*The most complete line—ranging from \$10 to \$100*  
**UTAH RADIO PRODUCTS CO., 1615 S. Michigan Ave., Chicago**



E-45-60 6 tubes.  
Operated  
from light socket.  
Without  
tubes. . . . . \$460<sup>00</sup>

E-45-25 Operated  
from light  
socket. With-  
out tubes. . . . \$475<sup>00</sup>

*"I'll tell you one reason  
why I handle Federal,"*  
said a designated Federal retailer

*"It's because I know the makers never  
will leave me high and dry with a lot of  
obsolete models on my hands"*

"They are on their toes every minute. I don't know of another line of radio that is kept so up-to-date with new models and new improvements as Federal—and I've been in the game since its infancy. But do you think they tell the public about any new models if I've still got old models in stock? They do NOT! They hold off until they know we've about cleaned out!

"Neither am I afraid my store is ever going to be turned overnight into

an orphan asylum. Never yet have I heard of a Federal retailer having to dump any Federal Ortho-sonic models."

Find out more about the Federal designation.

Your Federal wholesaler will put you in touch with the opportunity. If you don't know him, write us.

FEDERAL RADIO CORPORATION  
Buffalo, N. Y.

(Division of The Federal Telephone Manufacturing Corp.)  
Operating Broadcast Station WGR at Buffalo  
FEDERAL ORTHO-SONIC RADIO, Ltd., Bridgeburg, Ont.

*The Sign of the Designated*



*Federal Retailer*

# ORTHO-SONIC<sup>★</sup>

Reg. U. S. Pat. Off.

Licensed under patents owned  
and/or controlled by Radio  
Corporation of America and  
in Canada by Canadian Radio  
Patents, Ltd.

## Federal Radio

★Federal's fundamental exclu-  
sive development making possi-  
ble Ortho-sonic reproduction  
is patented under U. S. Letters  
Patent No. 1,582,470

# Make This the Biggest Christmas Ever

The market is set for the biggest Christmas business in radio's history.

But net profits are the only ones that count. You will make the most real money on the radio set that sells quickly, performs as you promise and requires little or no servicing—the Grebe Synchronphase Seven.

Send for Booklet RR giving full details of the Complete Grebe Line.

A. H. Grebe & Co., Inc., 109 West 57th Street, N. Y. C.

Factory: Richmond Hill, N. Y.

Western Branch: 443 S. San Pedro St., Los Angeles, Cal.

Makers of quality radio since 1909



Grebe Natural Speaker \$35



Grebe Synchronphase Seven \$135

# GREBE

SYNCHROPHASE  
TRADE MARK REG. U.S. PAT. OFF.

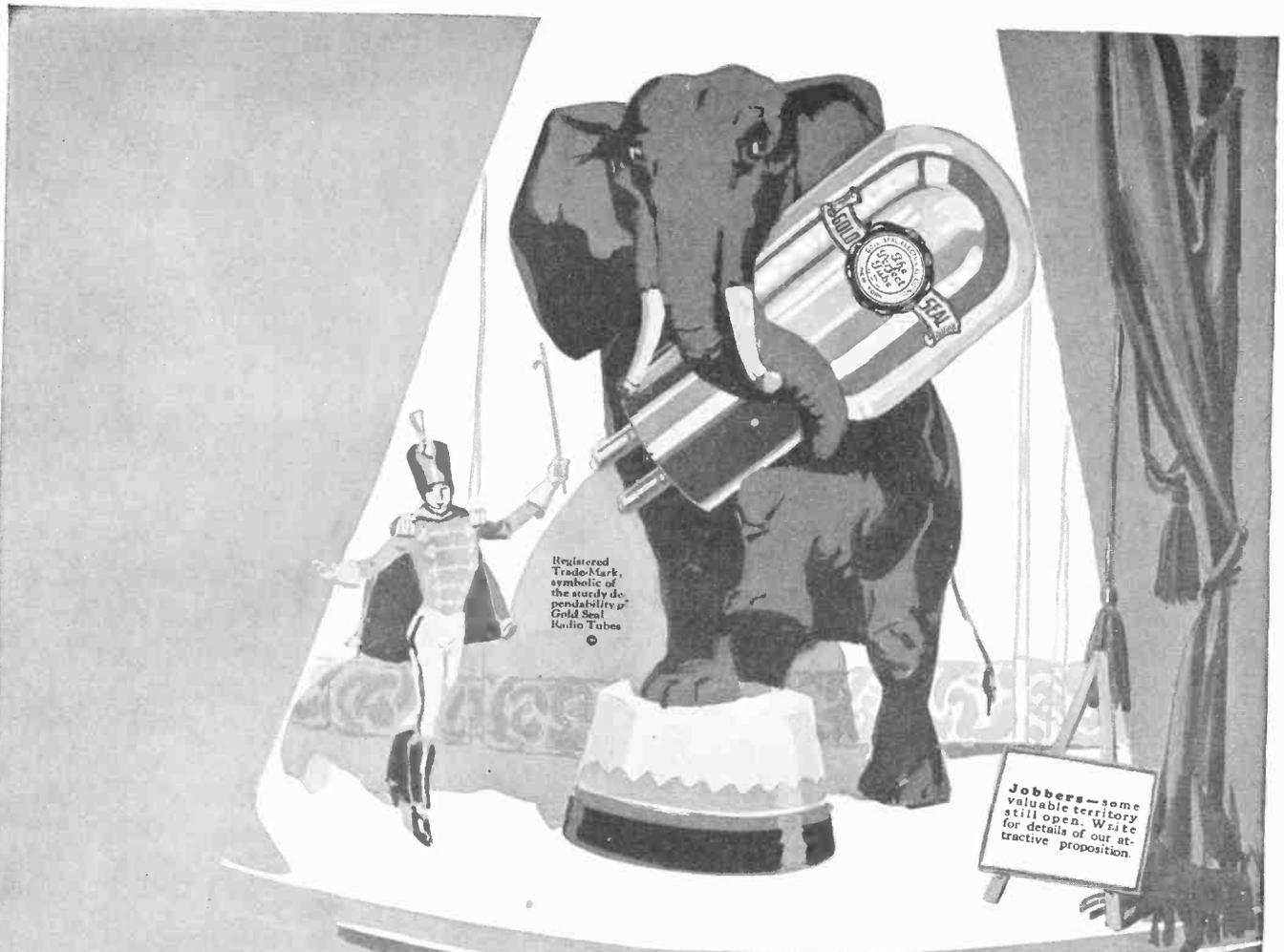
# RADIO



Grebe Socket Power

Type 671-B for "B" and "C" Power Supply (less tube) \$50





## Always the Headliner— Gold Seal

If every radio dealer knew what every Gold Seal dealer knows, they would envy the cordial relations, active sales cooperation and square deal policies that have put Gold Seal Radio Tubes on top.

Of course, the tubes must be right, too! They are—none better can be made at any price. And the public knows it—is coming back for more and more.

Share in the profits of this unprecedented success—write for details of our attractive proposition.



# Gold Seal Radio Tubes

ALL STANDARD TYPES

**GOLD SEAL ELECTRICAL CO.**  
INCORPORATED

250 PARK AVENUE, NEW YORK



Type GSX-213—Rectifier tube, designed to accomplish full wave rectification of alternating current (a. c.) to direct current (d. c.) List price \$5.00



Type GSX-201a  
The popular general purpose type, for amplifier or detector. Long life and high efficiency.  
List price \$1.75

# You can get **MORE!** Christmas Business



ADVENTURER  
\$11.95



## WITH **Tower** RADIO SPEAKERS

Western Prices  
ADVENTURER ..... \$12.95  
CASTLE CONE ..... 12.95  
PIRATE SHIP ..... 9.75  
No change in prices of other models.



CASTLE CONE  
price \$11.95

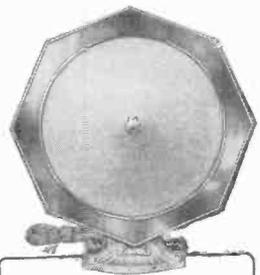


MODEL 28  
price \$17.50

It's a fact! TOWER Speakers sell faster than any other line made. They offer more! Your customer gets more for his money. Every TOWER Speaker is equipped with a powerful armature-type unit that guarantees the purest possible tone and fullest volume. And Tower Speaker beauty is famous. There is a model to suit every taste. Their appearance itself creates instant demand!

Wire your jobber now for your Christmas stock. It will mean greater profits for you and greater satisfaction for your customers!

TOWER MANUFACTURING CORPORATION  
122 Brookline Ave., Boston, Mass.



New Improved **Meistersinger**  
price \$15.00



PIRATE SHIP  
price \$8.95

# ATTAINING THE ULTIMATE IN MUSICAL CREATION

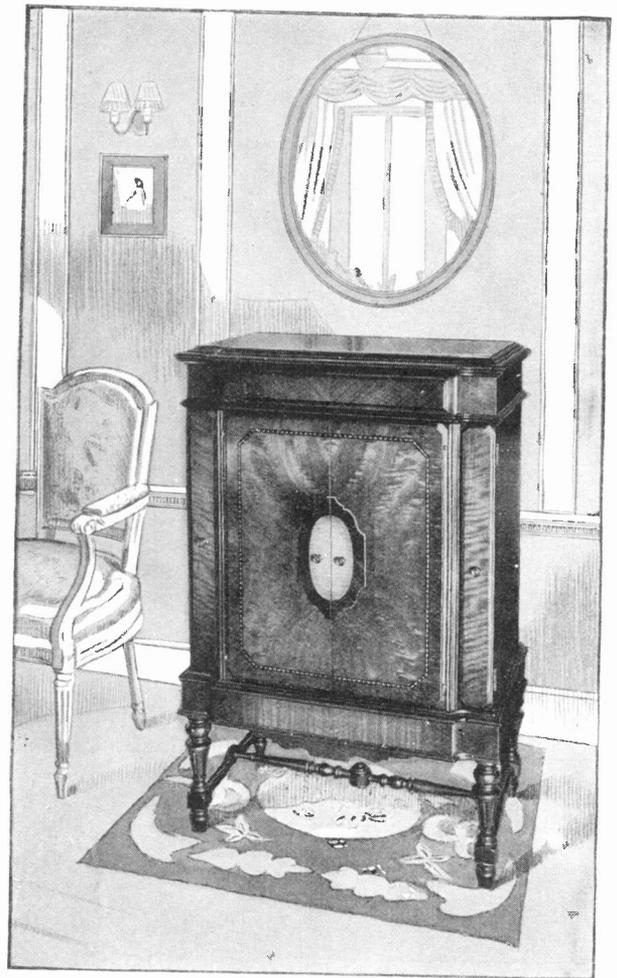
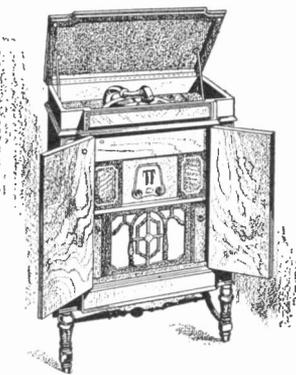
## FRESHMAN Power Electric Phonograph and Electric Radio Combination

Now, for the first time, can music lovers appreciate the true merits of Electric Phonograph and Electric Radio reproduction.

Science has found a method of reproducing voice and instrumental music by means of power amplification, which assures absolute fidelity of tone and diction. This marvelous instrument permits you to enjoy the recorded works of master singers and players as well as the diversified entertainment of broadcasting.

Your light-socket supplies all the power necessary to operate this new Freshman creation. All of the usual inconveniences of radios are eliminated—there are no batteries, liquids or other accessories.

The cabinet—distinctive in its beauty and design is of genuine burl walnut handsomely inlaid. It blends with any color scheme and is adapted to any plan of interior decoration. The complete instrument is custom-built and obviously limited in quantity—assuring exclusiveness to the purchaser.



*This exclusive Freshman Power Electric Phonograph and Electric Radio Combination—complete ready to operate—is priced at Five Hundred Dollars.*

*The entire line of Freshman Battery and Electric radios are sold only to Authorized Freshman Dealers. They range in price from \$29.50 to \$500 . . . Complete information on request.*

CUSTOM-BUILT BY  
**CHAS. FRESHMAN CO., INC.**

NEW YORK

CHICAGO

LOS ANGELES

# KARAS A-C-FORMER

## FILAMENT SUPPLY

### TYPES 12 and 13

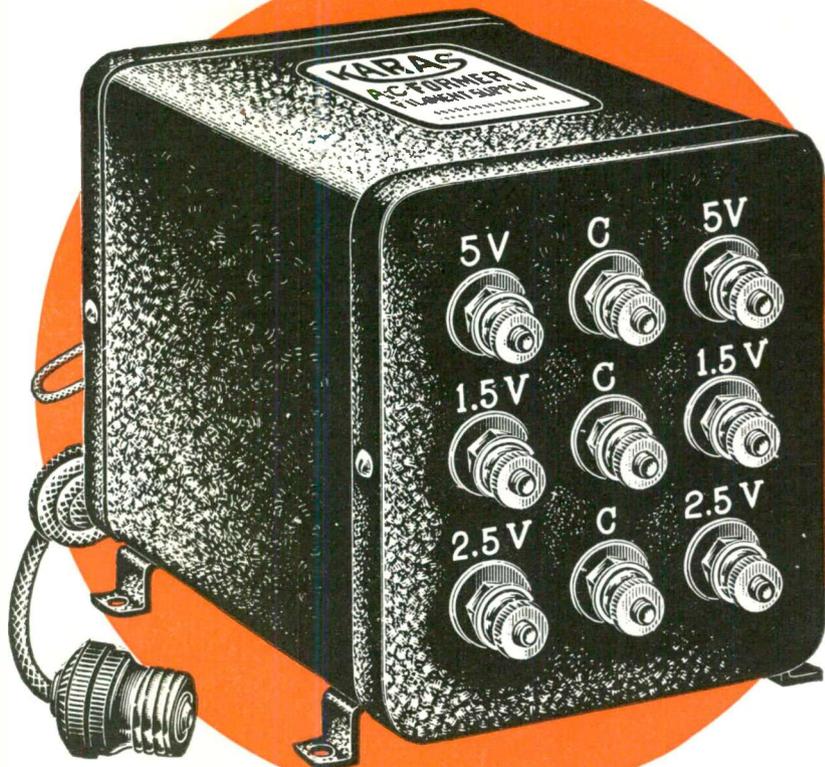
#### Type 12

Supplies filament potential for 12 tubes, as follows: 8 1½-volt Type 226 or 326 tubes, 2 2½-volt Type 227 or 327 tubes, and 2 5-volt Type 171 tubes.

List price

**\$13.50**

Not a hum in a trainload!



#### Type 13

Supplies filament potential for 10 tubes, as follows: 8 Type 227 or 327, 2 ½-volt tubes, and 2 Type 171 5-volt tubes, or 2 Type 210 tubes.

List price

**\$13.50**

### The NEW KARAS A-C-FORMER

## Mr. Dealer:

**H**AVE you battery-operated receivers on hand that are not selling? Are you receiving inquiries from customers who wish to change battery-operated receivers to A.C. operation? Regardless of the make of receiver and whether factory or custom-built, it is now possible to convert any set to A.C. operation. The process is easy, simple, with few changes.

With the Karas A-C-Former you can change all of your battery-operated receivers to A.C. because the new Karas A-C-Former Filament Supply delivers the correct voltage for the new standard A.C. tubes such as Cunningham, RCA and CeCo—and there is not a hum in a whole trainload! This marvelous Karas invention removes the last drawback to A.C. operation from any house lighting circuit.

The A-C-Former needs no separate device for center tap. It has a convenient extra loop of wire for connecting the A-C-Former to the control switch on the panel. It is designed for mounting all connections beneath sub-panel, if desired, or it may be mounted on separable feet in position shown in illustration. It is sturdy, compact, powerful, silent,

does not heat up, and it always delivers an unvarying, absolutely correct filament voltage. Provided with plug-in connection for "B" eliminator use. The A-C-Former sells for less than the price of a cheap battery and charger. It is in tremendous demand for converting battery-operated sets to A.C., as well as for building the wonderfully popular A.C. kits now on the market. Mail the coupon today for complete information, discounts, etc.

This is going to be an A.C. winter! Be prepared by having ample stocks of the new Karas A-C-Former to meet the demand! Don't delay a minute. Get in touch with your jobber NOW, and write us for further particulars TODAY.

Karas Electric Co.  
4040 North Rockwell Street, Chicago, Illinois  
Send me by return mail full details regarding the new Karas A-C-Former and a supply of literature for distribution in my store. My jobber is

Jobber's Name

Name

Address

City State

MAIL THIS COUPON TODAY FOR FULL DETAILS

**KARAS ELECTRIC CO.**  
4040 North Rockwell Street, Chicago

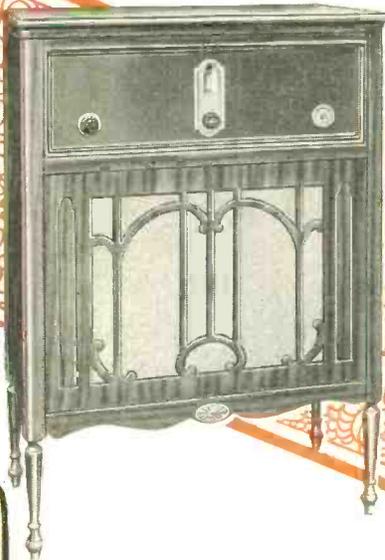
# An Exceptional Opportunity

## Boost Your Sales of Special Consoles

For Radiola 6



For Radiola 17



For Crosley



### *Newcombe-Hawley 86-inch Tone Chamber!*

The outstanding feature of these Console Reproducers is the Newcombe-Hawley 86-inch Tone Chamber which assures perfect reproduction, from the deepest organ note to the highest pitched voice or instrument. Great volume is available with a mellowness that amazes the most critical audience. Since no separate amplifier or extra tubes are required with this efficient reproducer, no servicing is required to maintain perfect operation.

### *Plenty of Space for Batteries and Eliminators*

Ample room is provided for batteries and accessories, eliminating all unsightly wiring usually associated with table receivers and separate reproducers.

# NEWCOMBE-

# Now Open to Radio Dealers

## With This New Line for Leading Radio Sets

THE great popularity of the compact Radiola, Crosley, Atwater Kent and Zenith receivers has created a tremendous demand for special Newcombe-Hawley Reproducers for these receivers.

Here is a new line of special console reproducers that opens the door to new sales, not only for consoles but radio receivers, too. The mellow tone quality, even at big volume, makes the Newcombe-Hawley Console Reproducer a splendid sales builder.

The radio public prefers special consoles with built-in reproducers for their receivers. Meet the demand with these Newcombe-Hawley Special Console Reproducers. Mail coupon for complete information.

For Atwater Kent



For Zenith



Mail the Coupon!

### The Standard Line



Model 53—A compact table model with the remarkable 86-inch tone chamber. A popular reproducer for table receivers.



Model 55—A larger table model with space for batteries and accessories. Furnished with doors, if desired.



Model 58—A typical model with room for the complete receiving set. Several other models are available, with or without doors.

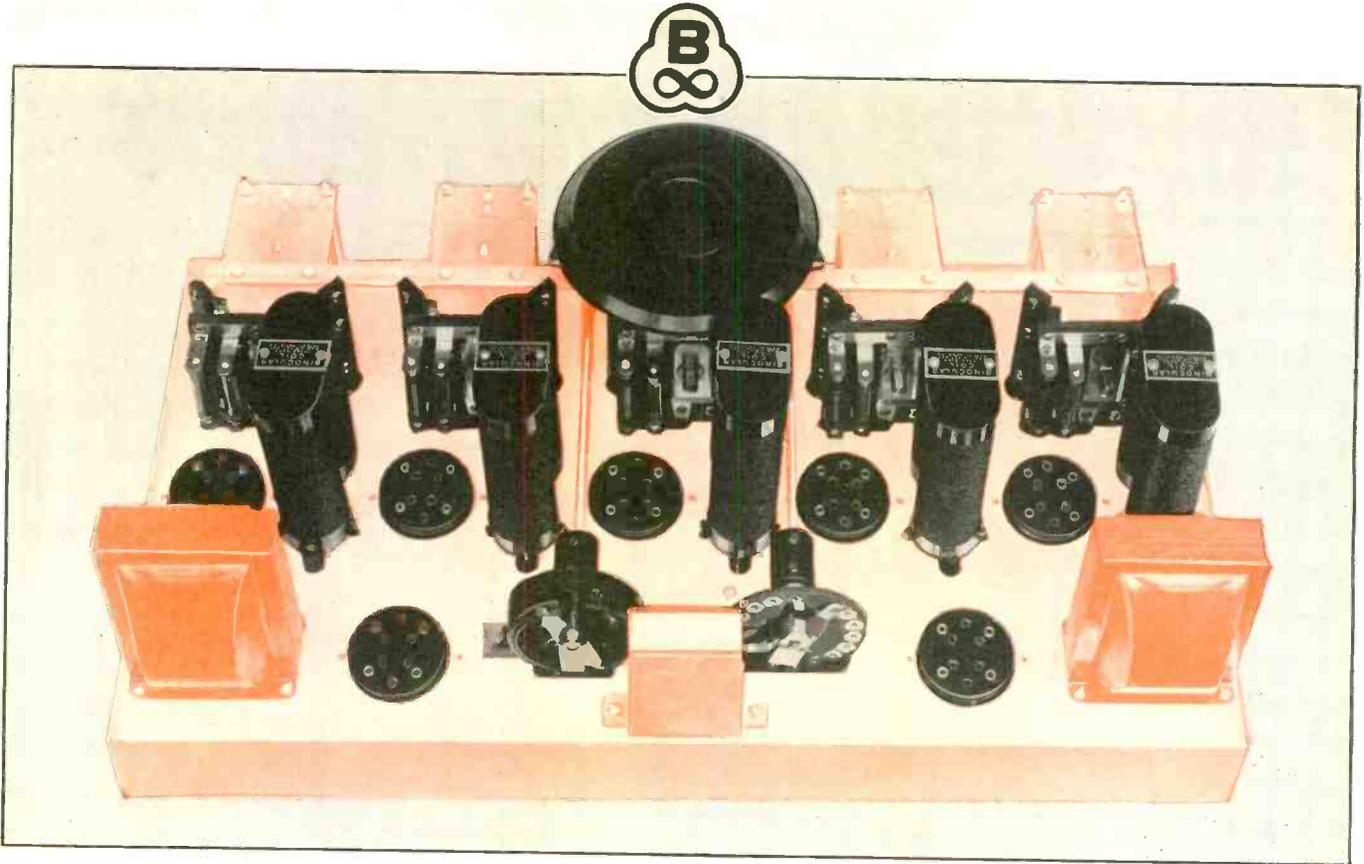


NEWCOMBE-HAWLEY, INC.,  
201 N. First Ave., St. Charles, Ill.  
Please send us full information on the new line of special  
Newcombe-Hawley Consoles. Also include literature  
on standard line.

Name .....

Address .....

# HAWLEY



*Chassis of Grebe Synchronphase. Parts insulated with Bakelite Materials are shown in black. The Grebe is made by A. H. Grebe, Inc., New York, N. Y.*

## Bakelite Materials are relied upon to uphold Grebe reputation

**A** GLANCE at the illustration above proves the faith of the makers of the famous Grebe Synchronphase in the effectiveness of Bakelite Insulation. Practically every essential part is insulated with Bakelite Materials, either molded or laminated, for Grebe recognizes that the use of insulation which will not deteriorate in any climate or under any conditions, is the only guarantee of permanently satisfactory performance.

Materials considered so vital by the manufacturer are of

equal consequence to the retailer. The use of Bakelite Materials for insulating the important parts of a radio receiver is a sure indication that the manufacturer is taking every precaution to assure quality reception for the life of a set. It will pay you to make sure that Bakelite Materials are used in the receivers you sell, for it decreases service calls and increases customer satisfaction.



*Write for Booklet 39.*

### BAKELITE CORPORATION

247 Park Avenue, New York, N. Y. Chicago Office: 635 West 22nd Street  
BAKELITE CORPORATION OF CANADA, LTD., 163 Dufferin Street, Toronto, Ontario

# BAKELITE

REGISTERED U. S. PAT. OFF.

THE MATERIAL OF  A THOUSAND USES

"The registered Trade Mark and Symbol shown above may be used only on products made from materials manufactured by Bakelite Corporation. Under the capital 'B' is the numerical sign for infinity, or unlimited quantity. It symbolizes the infinite number of present and future uses of Bakelite Corporation's products."

# 1st

in Sales  
Profits  
Satisfaction

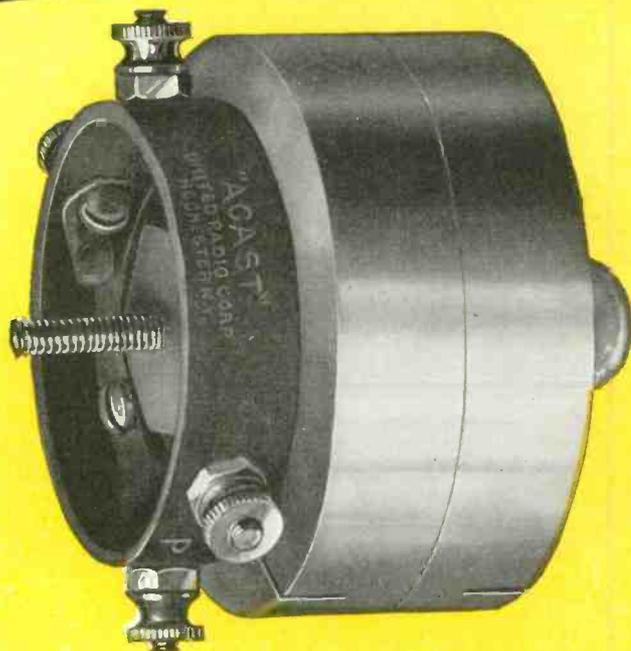
**P**EEERLESS Reproducer has captured the radio market of America as no other speaker in its price class ever has.

It is stocked by more jobbers, sold by more dealers and demanded by more radio listeners than any other independent radio reproducer on the American market.

PEERLESS Reproducer sells at \$35—pays the dealer a substantial profit on each unit—and builds up a powerful consumer satisfaction for the man who sells it.

One hundred thousand enthusiastic owners will be spreading the story of PEERLESS excellence before Christmas.

If you don't sell PEERLESS Reproducer you may be able to get a stock from your jobber. Write us—or wire—for the name of the nearest.



## A New Principle

*In audio-transformer construction  
does away with laminations*

**T**HE makers of Peerless Reproducer offer a revolutionary new audio-transformer called the "Acast." Built on a radically new principle. Entirely without laminations. Produces an amazing improvement in both volume and quality on distant stations—and better quality on locals.

This new transformer has a solid core, cast from a new high-resistance copper-nickel-iron alloy called "A" Metal. This core, cast in two pieces and fitted together, forms both core and shield. It completely encloses the winding, doing away with all need for further electrical or magnetic shielding.

The "Acast" has the same efficiency in either first or second stages due to the fact that the D. C. flux set up by the plate current produces but a negligible effect upon the properties of the magnetic circuit used in this transformer.

Made in style shown here, for set builders and amateurs. Can also be supplied to radio set manufacturers in factory model. Parts distributors and dealers—or set makers are invited to write for complete descriptive folder, RR-12, with prices and discounts.

**UNITED RADIO CORPORATION**

15 Caledonia Avenue, Dept. RR-12. ROCHESTER, NEW YORK

# Acast- AUDIO FREQUENCY Transformer



**T**HE Erla Model B Phonograph Pick-up Unit, comprising electromagnetic pick-up, tone arm and volume control, is mounted at one side of the old mechanical tone arm.

A special plug, an integral part of the unit, is inserted into the detector socket of the radio receiver and the ensemble is ready for operation.

## Radio Tone Quality Now Added to Phonograph Enjoyment

**R**ADIO has worked a revolution in the reproduction of sound. Scientific development of audio frequency circuits and apparatus, loud speakers and loud speaker units, and power tubes, has made possible a quality of tone reproduction that commonly approximates and not infrequently equals the original rendition at the broadcast studio. Indeed, the new electrical system of reproduction has demonstrated its superiority so conclusively that phonograph manufacturers, one by one, are adopting it for their newest models.

The chief obstacle to a universal popularity of the new electrically reproducing phonograph is price. Ranging from \$300 to over \$1000, it is prohibitive for many homes that already have an old type mechanical phonograph and a radio. To place the enjoyment of electrically re-created phonograph records within the reach of everyone, Erla engineers have produced a highly sensitive

electromagnetic pickup for use in conjunction with radio receivers.

Obviously, tonal quality and volume will be no better than that normally delivered by the receiver. Good records, and an efficient, modern audio and reproducing system in the radio receiver are essential to good results.

Electromagnetic pickup, tone arm and volume control are combined in a single unit thereby economizing space and greatly simplifying installation. No changes are necessary in either the phonograph or radio receiver—either one can be operated independently of the other.

The Erla Pick-up Unit described above is the same model that large phonograph manufacturers are installing in their highest priced machines. Its scientific design, sturdy construction and compact arrangement will, upon comparison, place it far above all others on the market. Price complete, \$20.00.

*Territories still available for jobbers and dealers*

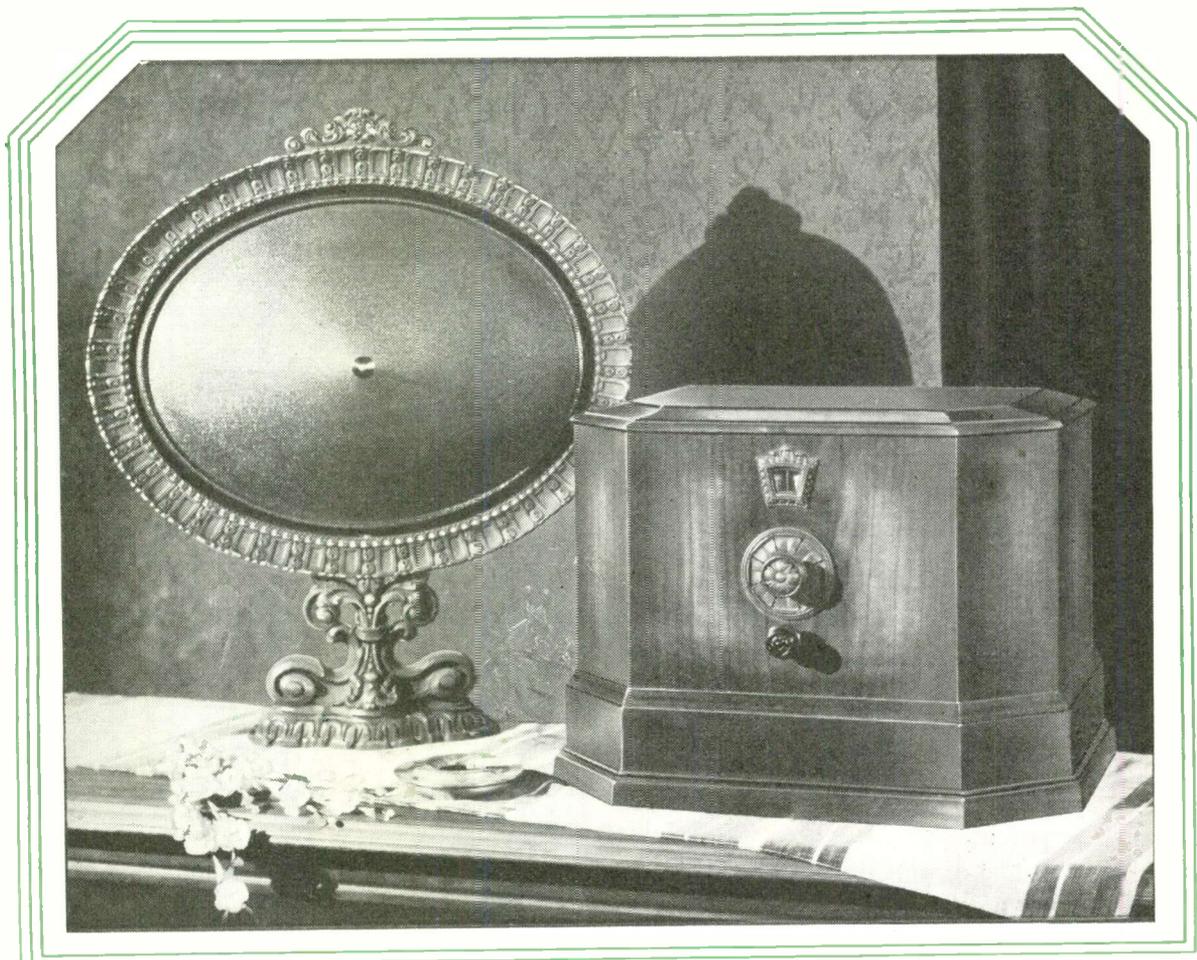
ELECTRICAL RESEARCH

**ERLA  
RADIO**

LABORATORIES, CHICAGO

# One of the beautiful SPLITDORF models

## The ABBEY All-Electric



The Abbey All-Electric (above). Six tubes. Single illuminated dial. Single knob control. List price for all-electric operation direct from a light socket without batteries or eliminators, \$175; this model for battery operation, \$100. Tubes not included. Splitdorf Period Cone Tone, \$35.

This beautiful table model is patterned after an Old World jewel case. Gracefully beveled corners and richly carved control knobs and dial ornament emphasize in this instrument a charming distinction never before offered in a moderately priced receiver. This attractive model is done in deep antique American walnut.

This Abbey set is equipped with the new Splitdorf "171" all-electric radio receiver, employing four tuned circuits and operating completely from a light socket without batteries or eliminators. The tonal quality, sensitiveness and selectivity of this receiver are remarkable.



The Lorenzo. A magnificent Italian Renaissance model, equipped with the new Splitdorf all-electric receiver operating directly from a light socket without batteries. No acids or eliminators. List price with built-in loud-speaker, but without tubes, \$350.

This and all other Splitdorf Receivers are manufactured completely within the Splitdorf factories. Splitdorf is the only radio manufacturer operating its own cabinet plant. As a result a Splitdorf Receiver is not a miscellaneous assembly but is the finished product of organized, experienced experts. Distinctive performance, unusual beauty and exceptional value are made possible in the Splitdorf line by this unified production.

Investigate the unusually profitable sales possibilities of the twelve beautiful Splitdorf models priced from \$45 to \$800.

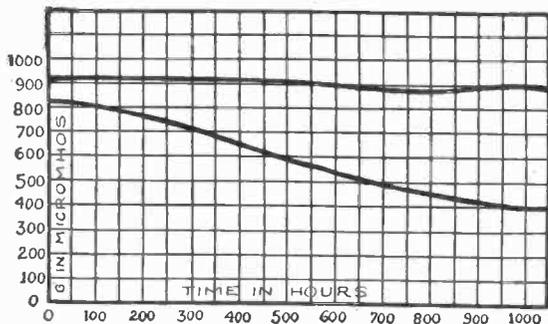
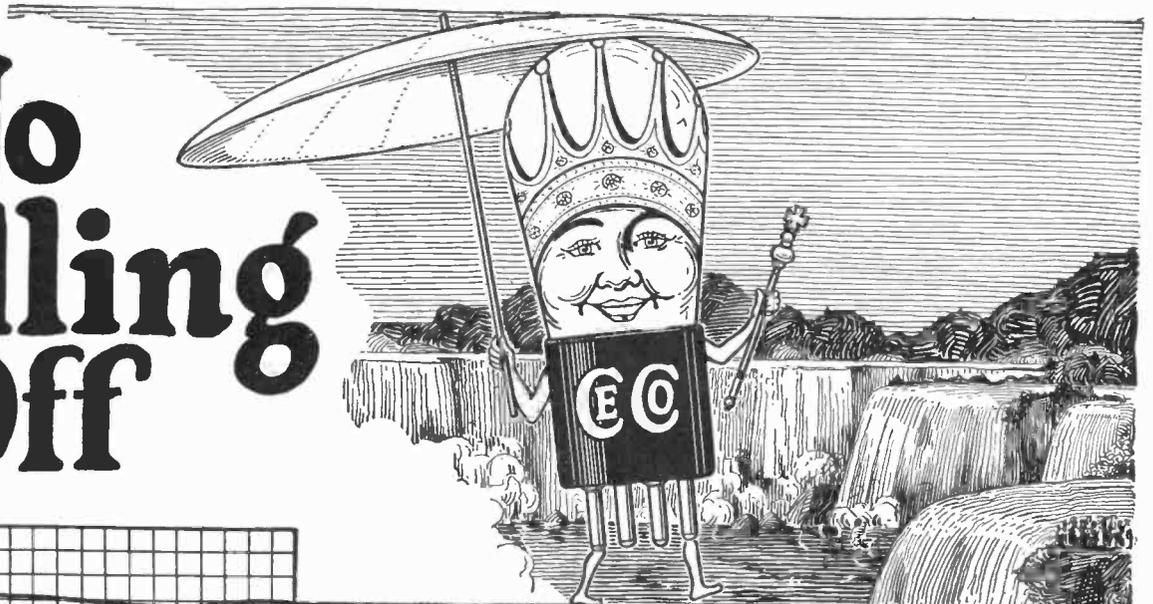
Cabinets designed under the personal



direction of Mr S Noel Dunbar

SPLITDORF RADIO CORPORATION, Subsidiary of Splitdorf-Bethlehem Electrical Company, Newark, N. J.

# No Falling Off



**CeCo Tubes**  
Avg. of 27  
Other Makes

**T**HE above chart graphically illustrates the longer life and steadier performance of CeCo Tubes as shown by an unbiased test of CeCo Tubes in comparison with twenty-seven other makes.

The test was conducted by a nationally known set manufacturer (Name on request).

CeCo Tubes prove to be as efficient after 1,000 hours of use as when new. In fact, hundreds of instances have been called to our attention by users where CeCo Tubes have performed for over 2,000 hours without apparent deterioration.

Experiences like these, together with a noticeable improvement of tone, clarity and volume resulting from the use of CeCo Tubes, have secured the recommendations of well-known radio authorities such as

ARTHUR H. LYNCH	GERALD M. BEST	HERMAN BERNARD
GLENN H. BROWNING	KENNETH HARKNESS	KEITH HENNEY
LAWRENCE M. COCKADAY	VOLNEY HURD	JAMES MILLEN

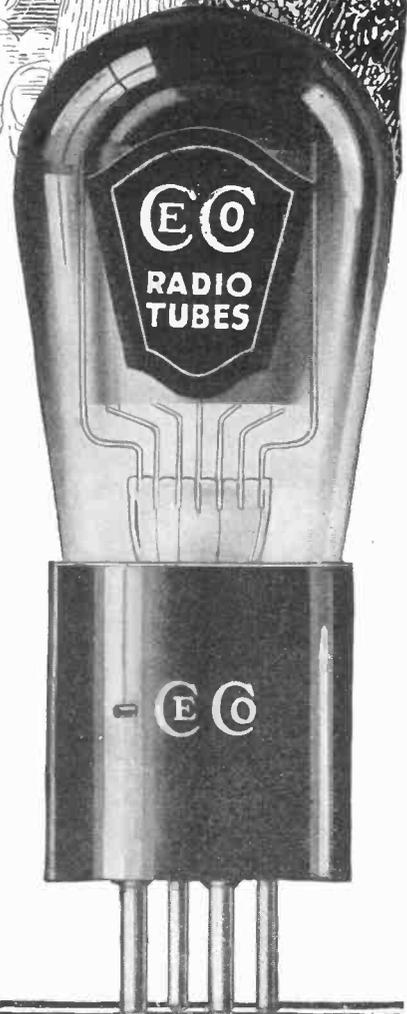
*There's a CeCo Tube for Every Radio Need*

GENERAL PURPOSE TUBES	POWER TUBES
SPECIAL PURPOSE TUBES	RECTIFIERS
A. C. TUBES	

Write for complete data sheet of CeCo Tubes.

**C. E. MFG. CO., INC., Providence, R. I.**

*Largest plant in the world devoted exclusively to making of Radio Tubes*



**Bone Dry  
Noiseless**

# MARATHON RECTIFIERS

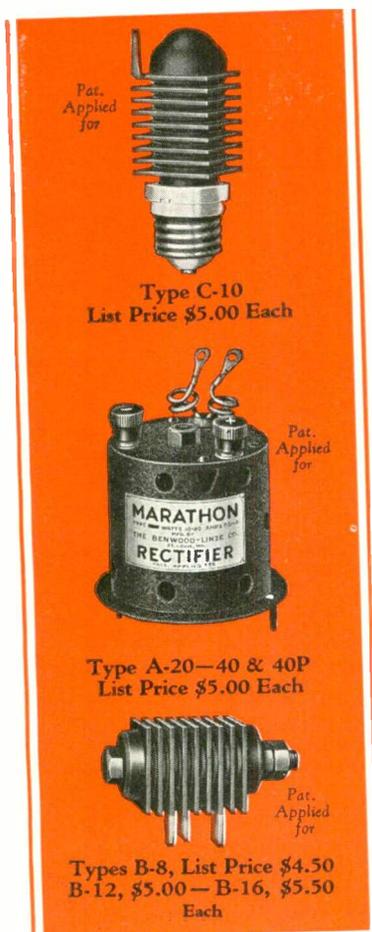
**Durable  
Compact**

## A New Principle of Rectification DRY DISCS

MARATHON Rectifiers are bone dry, require no acids, no liquids, no bulbs, no care, no adjustments—are noiseless, durable and long-lived. Their taper charging rate is self-regulating. Available in the following types:

### Marathon Rectifying Element Type, C-10

This Marathon Rectifying Element has a standard screw base and is designed for use with all 2½ ampere bulb charging devices, having a transformer secondary voltage of from 15 to 18 volts under load. Operates as a single-wave rectifier—noiseless—no hum. Adaptable to high and low rate chargers . . . Requires no attention—install it and forget it.



### Marathon Rectifying Replacement Units, Type A

For replacing electrolytic rectifiers in trickle chargers and power devices. Three types for different transformer secondary voltages:—A-20: full wave, 10 to 12 volts under load, A-40: Single wave 15 to 16 volts under load, A-40P for Philco chargers.

### Marathon Rectifying Element, Type B

A full-wave unit especially designed to meet requirements of manufacturers of trickle chargers and "A" Power devices, with transformers having a secondary voltage of from 9 to 11 volts depending on type of units.

**Manufacturers**  
Write for information on  
Marathon Rectifying  
Elements for your power  
equipment.

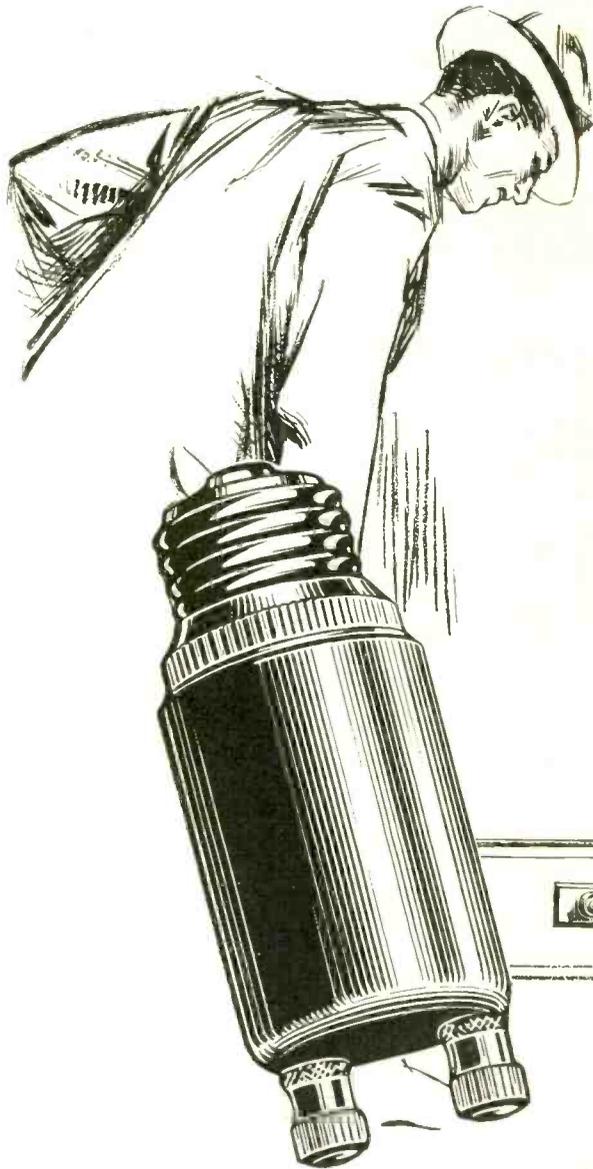
**Jobbers**  
Our selected jobbing  
policy will interest you.  
Some desirable terri-  
tories open.

**Dealers**  
Order from your jobber,  
or write us for name of  
nearest distributor.

**THE BENWOOD-LINZE CO.**

"PIONEERS IN RADIO.—FIRST IN MIDWEST"

1832 WASHINGTON AVE. • ST. LOUIS, MISSOURI



*"We find this gives a better demonstration"*



**Your Customers See Dubilier Advertising in These Leading Newspapers**

New York Journal	San Francisco Examiner
New York News	Boston Globe
New York American	Boston Herald Traveler
New York Herald Tribune	Buffalo News
New York Sun	Washington Star
Philadelphia Bulletin	Providence Bulletin
Philadelphia Public Ledger	Hartford, Conn., Times
Pittsburgh Post Gazette	Springfield, Mass., Republican
Pittsburgh Press	Columbus Dispatch
Cleveland Press	Indianapolis News
Cincinnati Post	Grand Rapids Press
Detroit News	Milwaukee News
Chicago News	Des Moines Register & Tribune
Chicago American	Omaha World Herald
Chicago Herald Examiner	Denver Post
Kansas City Times Star	Atlanta Journal
St. Louis Post Dispatch	Oklahoma City Oklahoman-Times
St. Louis Globe Democrat	New Orleans Times Picayune
Minneapolis Journal	Dallas News
Los Angeles Examiner	Rochester Times Union
Los Angeles Express	Baltimore Sun
	Newark Sunday Call

**D**UBILIER LIGHT-SOCKET AERIAL is a mighty good little salesman in itself. It will show off your receivers to the best advantage by bringing in programs almost free from static and interference and then turn around and sell itself to the customer for \$1.50 after he's bought the set!

Dealers everywhere are learning that the aerial you simply "connect to the set and plug in" is a whale of a good item to carry. Its price, its performance and its money-back guarantee are inducements such as few customers will pass up. And the market for Dubilier Light-Socket Aerial is limited only by the number of set owners.

Dubilier Light-Socket Aerial comes "ready for work" in display cartons of 10 individually packaged aerials. Put this carton on your counter without explanations—national and local advertising has made Dubilier's name familiar to all.

**Dubilier**  
**LIGHT-SOCKET AERIAL**

## The amateur who knows enough to build a power unit knows these blocks are RIGHT

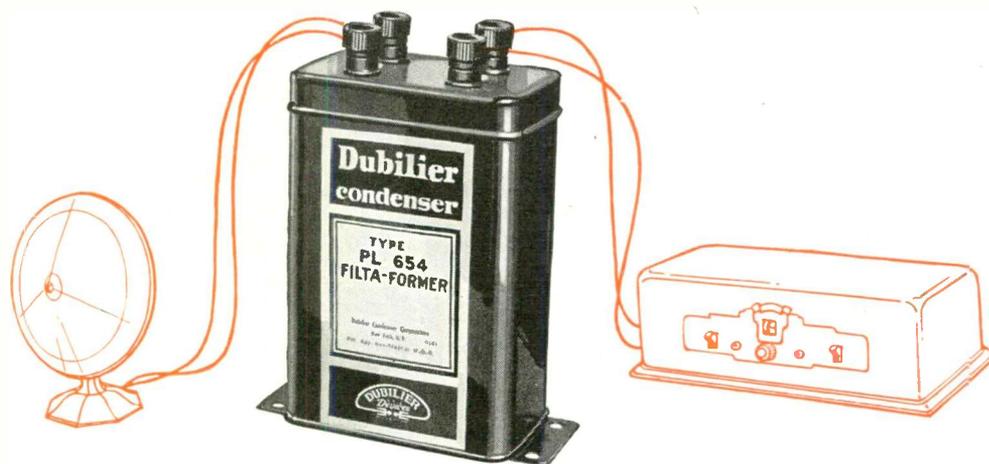


Following the endorsement of well-known radio manufacturers, engineers and technical editors, Dubilier Condenser Blocks were accepted by the majority of experimenters as *standard* for power-supply use. In actual service Dubilier performance proves the reason for professional endorsement—Dubilier ratings are accurate, the factor of safety is much higher than necessary and their life far above the average. Dubilier condenser blocks are enclosed in compact, ja-

panned tin cases with convenient mounting tabs. Flexible terminals, plainly marked, make connections easy and eliminate errors.

Type PL 574 is designed especially for the Thorndarson R 171 power compact and all light-socket devices employing the Raytheon BH Rectifying Tube. Type PL 575 is the approved Condenser Block for Thorndarson R 210, AmerTran 210 and other 216B or 281 Filament Rectifiers.

Type PL 574, \$16.50. Type PL 575, \$17.50.



### The FILTA-FORMER — a Necessity on All High-Powered Sets

Any loud speaker operated from a receiver employing power tubes will soon demagnetize and break down if not protected by an adequate output filter. The Dubilier Filta-Former affords full protection to the speaker and improves the clarity of its tone to a marked degree by filtering out the destructive D.C. current from the power tube's

plate circuit. The Filta-Former may be built into receivers during construction or attached to completed instruments without disturbing the set in the least. Anyone can connect it correctly in a few moments.

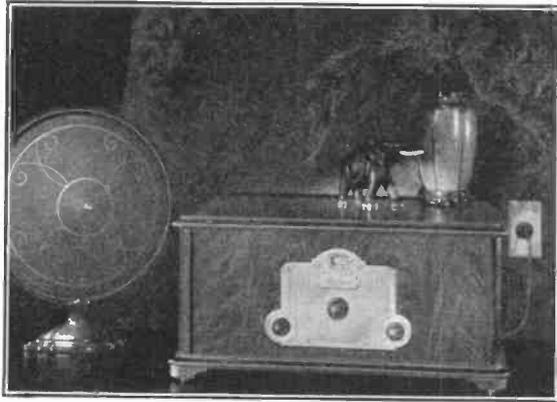
Encased in a heavy japanned container with engraved binding posts. List price, \$7.50.

DUBILIER CONDENSER CORPORATION, 4377 Bronx Boulevard, New York

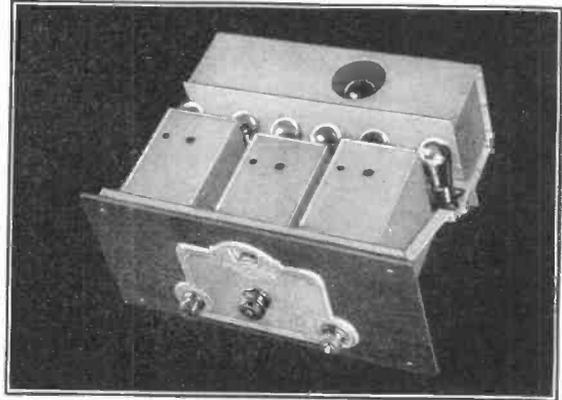
# Dubilier CONDENSERS

# An Overwhelming Success!

Here is the new, *SELF-CONTAINED* FREED-EISEMANN Electric, using the new A. C. tubes (226-227)



FRONT VIEW MODEL NR 60 ELECTRIC  
*Showing New Cone Speaker (List Price \$20)*



TOP VIEW OF CHASSIS  
*Showing Gold Finished Metal Compartment Shielding*

# FREED- EISEMANN

\$160

(Prices slightly higher West of the Rockies)

The MODERN ELECTRIC set should have *all*\* these vital features—

1. Electric light socket operation.
2. No batteries of ANY kind. (No liquids)
3. Obtain ALL its power from the house lighting current supply through the new A. C. tubes (226-227).
4. Self-contained—all the elements are housed *inside* the cabinet.
5. Individual compartment shielding.
6. A single tuning window.
7. An illuminated dial.
8. Patent rights enabling freedom in design.
9. An "output" transformer and two large heavy core audio transformers.
10. An inductor in the antenna circuit to insure full power on high waves.
11. At least 180 volts on plate circuit.

*\*All these features will be found in the new Freed-Eisemann*

Licensed under Latour, Hazeltine-Neutrodyne and Radio Corp. of America Patents

FREED-EISEMANN RADIO CORPORATION, Junius Street & Liberty Avenue, BROOKLYN, N. Y.

# STEEL TAKES ITS PLACE IN RADIO

The **Vee Dee** Cabinet  
NO 250  
THE KIT BUILDERS CHOICE

The Form Finish- and Construction are **SUPERIOR**



Power Unit Assemblies

Panel and Sub-Panel Assemblies

**FAVORED**  
for Precision Safety in Shipping and Cost

**Manufacturer—Jobber—Dealer**

Right now—Vee Dee Metal Housings are leading in radio popularity. Consumers are demanding them. Inquiries arrive daily. These are immediately referred to our distributors and dealers. Display the goods that are in greatest demand. Display Vee Dee Metal products that are up-to-the minute. Tie-up with radio cabinets, chassis, panels, and kit parts. Ride on the crest of the consumer demand wave. It means more profits for you—and good merchandising. *Vee Dee Metal Housings Sell in All Seasons. Write Us Immediately!*



Special Kit Panels

All Standard Sizes Stock Panels

# The VANDOORN COMPANY

160 N. LA SALLE ST.  
CHICAGO, ILLINOIS  
FACTORIES  
QUINCY, ILL.

# KOLSTER

*Broadcasting in your town about your merchandise!*

That is what KOLSTER is doing for you!

To speed turnover! To swell profits!

You want the extra business resulting?

You can get it and you will get it,

but

HOW MUCH

is decided by posting the KOLSTER Broadcasting Announcements in your window. These tell the world to listen in every Wednesday from 9 to 10 P. M. Eastern Time for the

KOLSTER HOUR

If you don't receive these window displays several days ahead let us know. Also, put the message in your own advertising.

# brooad

over the nation-wide Columbia Broadcasting System

*Every Wednesday—9 to 10 P. M. Eastern Time*

KOLSTER FAMOUS COMPOSERS' HOUR

# KOLSTER

*Sign the coupon below.*

Join the thousands of Kolster dealers who display this Authorized Sign.

If there is an opening in your territory you may be able to share in the amazing growth of Kolster demand right away.

Put the coupon in the mail today or you will be late for Christmas Business.



# casting

FEDERAL-BRANDES, Inc.

200 MT. PLEASANT AVENUE

NEWARK, N. J.

Please let me know if there is room for another Kolster dealer in my locality.

Name .....

Street .....

City .....

**RUSH**

# Immediate Delivery!

of the New Perfected

# Electric AC

*Pfanstiehl*

Overtone Radio



Yes, we're making *immediate deliveries*, in any quantity, of the perfected and genuine Electric AC Pfanstiehl. Give your customers what they want this Christmas. Send coupon below at once [or wire] for our proposition to jobbers and dealers.

### 100% Electric

The Pfanstiehl Electric AC Receiver operates directly from the electric light circuit without batteries or eliminators of any kind.

A *genuine* Electric AC set—a not a compromise or makeshift. Uses R. C. A. or Cunningham AC tubes. Perfected volume control prevents fading signals when line current varies. Tuned with one knob. Entire set and power unit are self-contained in a mahogany finished cabinet.

### What the Public Wants

Tone, selectivity, distance and *genuine* light socket operation—that's what the public demands today. That's where the profit lies. And that's

what you can supply in the new Pfanstiehl Electric AC set. A thoroughly dependable and durable set. One dealer last year sold 3,000 sets with not a single service call! Pfanstiehl won't eat up your profits in service.

### Full License Protection

The Pfanstiehl is fully licensed under the patents of the Radio Corporation of America and associated companies. That's important to the radio dealer who is posted on conditions in the radio industry.

### Big Profits for Jobbers and Dealers

Pfanstiehl now offers everything the radio public wants, from a \$65.00 battery operated set to the perfected Electric AC Console at \$300.00. A complete line and a *real money making opportunity*, as you'll see when you investigate. We still have good territory for progressive jobbers and responsible dealers.

### Local Advertising

We back Pfanstiehl jobbers and dealers with advertisements in their own local newspapers. Business getting ads that bring customers to the Pfanstiehl store and move the goods. *And we pay the bill.* That is advertising cooperation that counts!



Model 34-528  
Complete, ready to operate,  
\$300

Model 50, \$135  
With 7 tubes, \$162.50

# Send Coupon

Act at once. Cash in on Christmas profits. Remember, we're making immediate deliveries of the Electric AC Set which the public is clamoring for now. We'll gladly send full details of our proposition without obligation. So, get posted.

Just send coupon below (or wire) now!

**Pfanstiehl Radio Company**  
Waukegan, Ill.

Please send me, without cost or obligation, full details of your proposition to  Jobbers or  Dealers on the Pfanstiehl Overtone Radio including the new Electric AC Set on which you are making immediate deliveries.

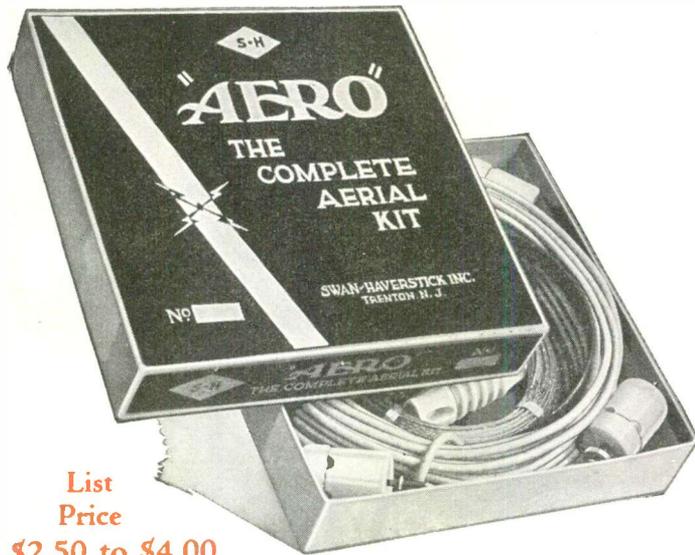
Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

PFANSTIEHL RADIO COMPANY, WAUKEGAN, ILL.

# 3 Aids to Better Reception and to Steady Profits



List Price  
\$2.50 to \$4.00

## "AERO" Complete Aerial Kit

It contains everything needed for a perfect aerial. Each item which goes into the outfit is guaranteed to do its part and to link up with the other items in the kit. The customer who uses the entire outfit gets better reception and incidentally you profit by selling him a quantity of merchandise instead of one or two odds and ends.

## S-H Light Socket Antenna

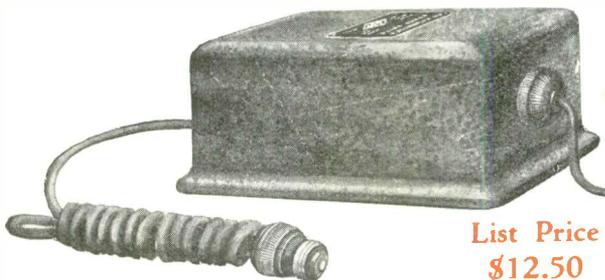
There is no better aerial for local reception than this light socket antenna. It brings out the sound clear and loud. It is particularly popular with the apartment dweller who hasn't the space for an outdoor aerial. Directions in each package tell how to make four different connections so as to adjust antenna to set capacity and obtain finest results.



List Price  
\$1.00

## S-H Automatic "A" Power Unit

Guaranteed To Cut Out Hums



List Price  
\$12.50

The switch on the set does it all

The S-H Dry "A" Power Unit is automatic in action—INTERNALLY automatic! All you have to do is to hook it up to the set—"A" Battery—and "B" Eliminator, if you use one—then let this unit take care of the power supply.

It keeps the battery charged—never overcharged. It prevents the possibility of a reverse current flowing back and causing the battery to run down. It keeps out the hums and noises which ordinarily filter through house current.

The S-H Power Unit operates without tubes or acids—so it is really and truly "trouble-proof." 110 volt—60 cycle.

If Your Jobber Doesn't Carry

Them, Write Us Direct

SWAN-HAVERSTICK, INC.

**S-H**

Trenton, New Jersey

# La Salle

## RADIO



All  
Popular  
Sizes

**A Good Profit  
Margin for  
Jobbers and Dealers**

Here's  
**MONEY-  
Opportunity**

### *Exclusive Features of Superiority*

Higher vacuum and the new bridge construction lift La Salle High-Vacuum Radio Tubes far above the average. Higher vacuum improves reception and eliminates distortion. It is the most important factor in radio tube construction. Any scientific test for "high-vacuum" will prove that La Salle Tubes have the highest vacuum it is possible to obtain. These facts assure you of substantial sales volume on La Salle Tubes.

### *Bridge Construction*

A Mica bridge separates the main support wires to which the grid, the plate and the filament are spot-welded at the correct distance. Rigidity is thus assured,

*Manufacturers*

**LA SALLE RADIO CORPORATION**

149 West Austin Avenue, Chicago, Illinois

*Sole Distributors*

Matchless Electric Company, 145 West Austin Avenue, Chicago, Illinois

# High-Vacuum TUBES

The Big  
MAKING  
for 1-9-2-8

also exact spacing of the grid to the filament and the grid to the plate. Such construction is added assurance for the uniformity in results obtained with La Salle Tubes. It also makes short-circuiting virtually impossible and eliminates microphonic noises insofar as they affect reception.

## Our Policy Protects Everyone

Only a limited number of jobbers in any territory . . . each of which will cover an entirely different class of trade . . . will be granted sales franchises. All dealer orders secured by us will be turned over to these jobbers. Being a better tube, and being backed by an unqualified guarantee, La Salle High-Vacuum Radio Tubes offer jobbers and dealers highest profits for next year. Your inquiry for details will receive prompt attention.

### Guarantee

We guarantee that La Salle High-Vacuum Radio Tubes will give satisfactory results if used at the correct filament and plate voltage. If, for any reason, the tube fails to give absolute satisfaction it may be returned for exchange or credit.

La Salle Radio Corporation  
Manufacturers  
149 West Austin Avenue  
Chicago, Ill.

Matchless Electric Company  
Sole Distributors  
145 West Austin Avenue  
Chicago, Ill.

WRITE Quick for  
Sales Proposition  
to Jobbers and  
Dealers

Manufacturers

LA SALLE RADIO CORPORATION

149 West Austin Avenue, Chicago, Illinois

Sole Distributors

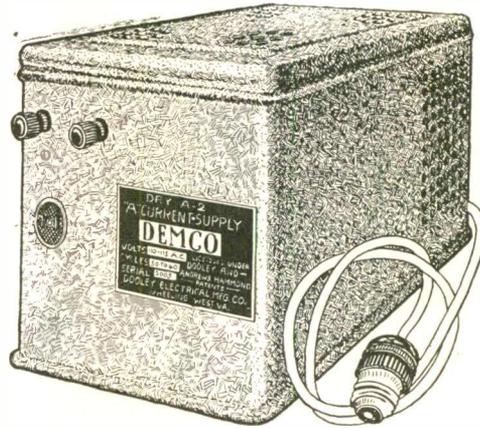
Matchless Electric Company, 145 West Austin Avenue, Chicago, Illinois

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**DEMCO**

# Your First

*"Enduring  
as the  
Rock of  
Gibraltar"*



*"Unfailing  
as  
Niagara's  
Power"*

DEMCO DRY "A"  
POWER UNIT

Guaranteed to deliver 2½ amperes filtered. "A" supply, free from any hum or distortion, at 6 volts D.C. Automatically disconnects power supply from "B" eliminator and "A" unit by operation of set switch.

The rectifying element is fullwave dry metallic type of such ample dimensions and sturdy construction that no replacements are necessary.

The filter has two condensers having a total capacity of 125,000 Mfds.

Unit operates ten tubes or less.

Twenty-five cycle units are interchangeable on twenty-five, thirty, forty, fifty and sixty cycles. Orders filled same day received on Demco A units and battery chargers.

**Specially Designed Units for Set**

**Dooley Electrical Manu**  
WHEELING,

---

**DEMCO**

**DEMCO**

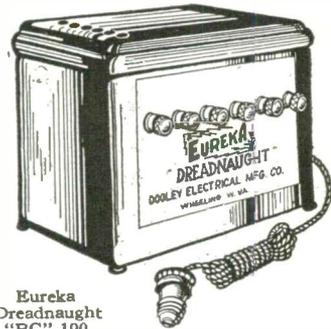
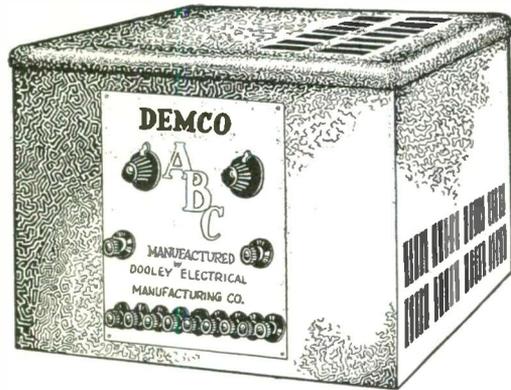
# Cost is Your Last Cost

An automatic power supply requiring no replacements of tubes, cartridges etc. and guaranteed not for a number of hours but for the life of the transformers —tests indicating years of service.

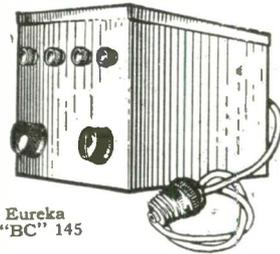
These sturdy units require little attention, no replacements, no servicing and they stay sold, outlasting his radio set.

To the dealer, jobber or manufacturer, who prefers the time proven, reliable TUBES, but desires an A. C. OPERATED. receiving set, **DEMCO** units satisfactorily solve his problem and permanently end his troubles.

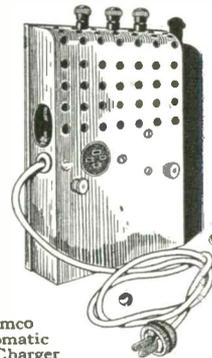
**NO**  
BATTERIES  
TUBES  
CARTRIDGES  
ACIDS  
PASTE



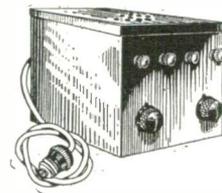
Eureka Dreadnaught "BC" 190



Eureka "BC" 145



Demco Automatic Dry Charger



Eureka Universal "B" 135

**Manufacturers**  
**facturing Co.**  
WEST VIRGINIA

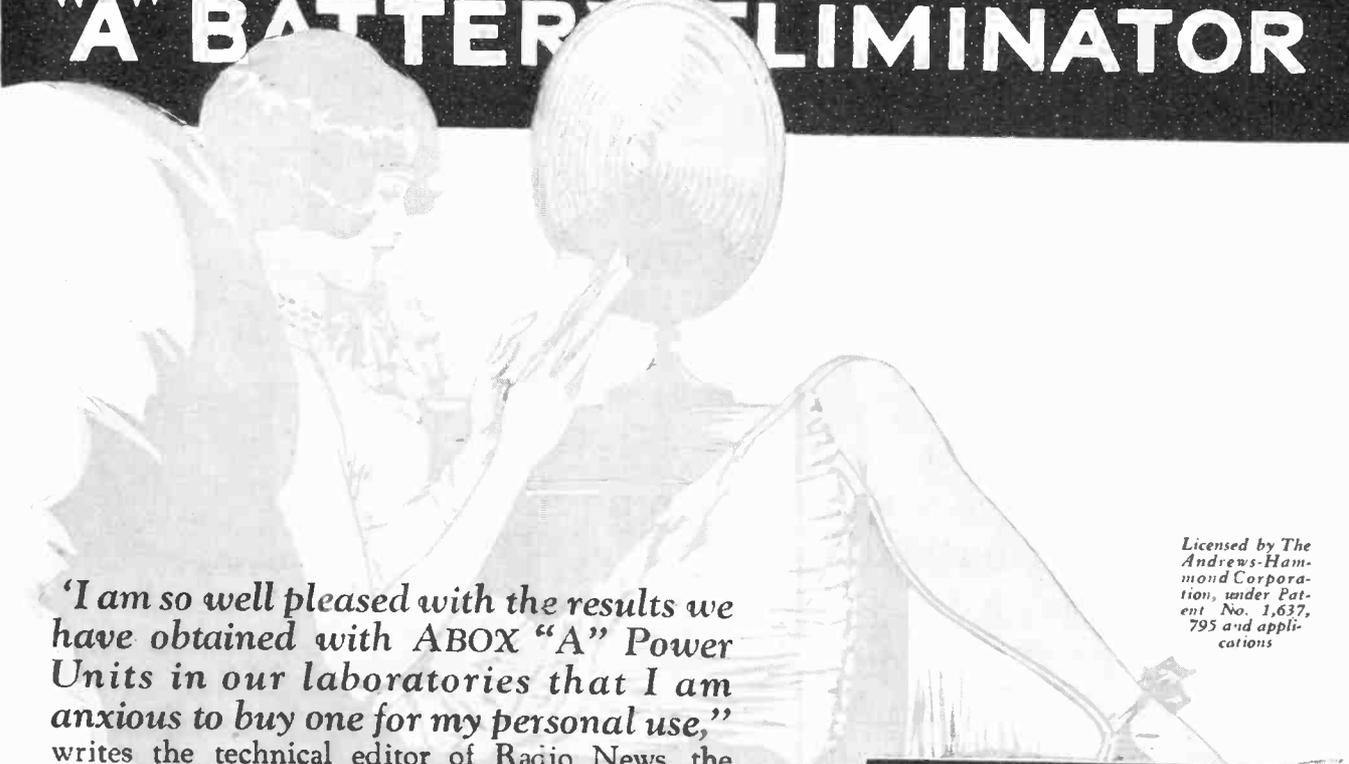
DOOLEY ELECTRICAL MFG. CO.  
Wheeling, West Virginia

Send me address nearest Jobber   
Send me information regarding Power Units.  
 Dealer  Distributor

Name .....  
Address .....  
City ..... State .....

# A BOX

## "A" BATTERY ELIMINATOR



*"I am so well pleased with the results we have obtained with ABOX "A" Power Units in our laboratories that I am anxious to buy one for my personal use,"* writes the technical editor of Radio News, the leading radio magazine.

Everybody wants freedom from the troubles of the storage battery, charger and relay. ABOX supplies the demand—instantly applicable to any radio set without change of tubes or wiring.

ABOX contains no battery. It operates only while the set is in use and requires no more attention than a floor lamp.

The six-volt model operates all sets using eight or less 1/4-ampere tubes. The four-volt model operates any set using type 199 tubes and will fit into the battery compartment of Radiola receivers.

Profit by this technical editor's vast experience and expert judgment—sell your customers ABOX, the best and cheapest "A" power.

[ Send for interesting detailed description and ABOX merchandising plan ]

*Licensed by The Andrews-Hammond Corporation, under Patent No. 1,637,795 and applications*



**\$3-2-50**

*Slightly higher west of the Rockies*  
 Input—110 volts, 50-60 cycles A. C. Output—6 volt direct current, 2 amperes. Shipping weight, 25 lbs. Unlimited shelf life.

4-volt model for Radiola sets or any receiver using small tubes **\$27<sup>50</sup>**

*The ABOX FILTER can be used to filter the output of your battery charger if you have one. The combination is equivalent to the complete Abox eliminator. Ask for special circular. Price, \$19 50. Slightly higher west of the Rockies.*

# The ABOX Company

215 North Michigan Avenue

Chicago, Illinois



**W**E'RE giving 'em the works! We're laying down a barrage of advertising and dealer helps that clears the way for Basco dealers. New sales objectives are being reached, and *passed*, week by week!

Basco radio power units *are selling* — selling even better than we expected. The high standards of performance that these super-quality units have established, plus the cumulative result of Basco merchandising, assure a continued, and *greater* success.

As a radio dealer, in business to *stay*, you cannot afford to do less than handle power units of proved reputability, backed by aggressive, resultful sales co-operation. Basco gives you this.

**BRIGGS & STRATTON CORPORATION**  
MILWAUKEE, WISCONSIN



This sign will identify your store with the Basco campaign and the Basco line of Super-quality radio power units. Get one from your jobber — let it guide new customers into your store.



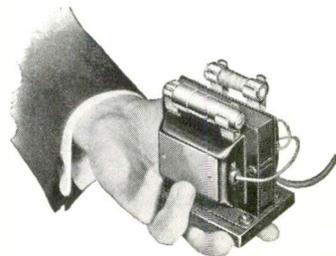
Basco "B" Power—Exclusive hook-up brings out the best performance of which radio set is capable. Easily adjustable to all power tubes. Output of 50 milliamperes at 185 volts.



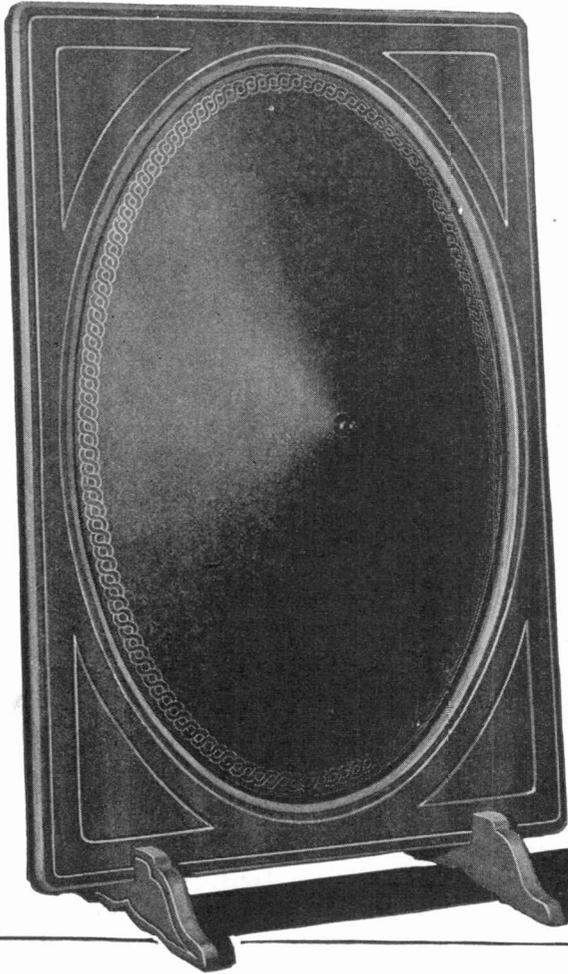
Basco "AB" Power — employs best quality glass-jar Exide "A" battery with Basco built-in charger (not a trickle charger) equipped with Raytheon rectifying cartridge. "B" Power same as individual Basco "B". Entirely automatic. Radio switch controls complete operation.



Basco "A" Power—Automatic operation. Glass-jar Exide "A" battery with Basco automatic charger and Raytheon rectifying cartridge—same as "A" unit of Basco "AB" Unit.



Basco Charger—Small, compact. 2½ ampere charging rate. High efficiency. No moving parts. Raytheon rectifying cartridge.



# Farrand

## CONCERT

### SPEAKER

\$35.00  
Slightly higher in  
Far West and Canada

## *An entirely NEW type* by FARRAND

The wanted BASS tones captured  
as never before!

Another Farrand advancement—a new, deep-reaching tonal radius, with all the pleasing treble retained as heretofore—virtually *next year's* model presented *today!* Already enjoying record-breaking demand, and a sure “leader” for the holidays. Order now from your nearest Farrand distributor.

The unusual eye-value of the Farrand *Concert* Speaker, together with its superlative performance, forms an irresistible selling combination. Designed in the

manner of a fine portrait frame, exquisitely wrought of richly finished walnut veneer, its artistry offers instant appeal. Height, 22 inches, overall.

FARRAND MFG. CO., INC., LONG ISLAND CITY, NEW YORK



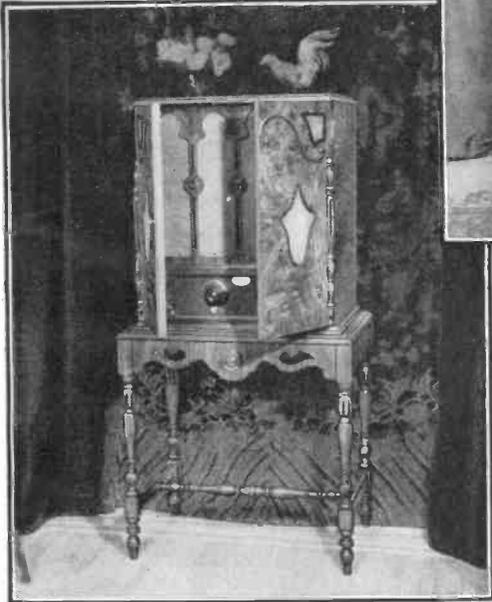
**Model 33 (Desk)—\$50.00**  
 Including approved built-in Speaker with Atwater Kent Unit.  
 With Atwater Kent Receiving Set No. 30 .....\$109.00  
 With Atwater Kent Receiving Set No. 33 .....\$119.00



**Model E-30 (Desk)—\$40.00**  
 With Atwater Kent Receiving Set No. 30 and Model E Speaker ....\$123.00  
 With Atwater Kent Receiving Set No. 33 and Model E Speaker ....\$133.00



**Model 35 (Desk)—\$45.00**  
 Including approved built-in Speaker with Atwater Kent Unit.  
 With Atwater Kent Receiving Set No. 35 .....\$94.00



**Model 9000—\$90.00**  
 Including approved built-in Speaker with Atwater Kent Unit.  
 With Atwater Kent Receiving Set No. 30. \$149.00  
 With Atwater Kent Receiving Set. No. 33. \$159.00



**Model 4750—\$47.50**  
 With Atwater Kent Receiving Set No. 30 and Model E Speaker .....\$130.50  
 With Atwater Kent Receiving Set No. 33 and Model E Speaker.....\$140.50

**Successful  
 Cabinets  
 for a  
 Successful  
 Radio**

A fine instrument at a popular price, together with an aggressive advertising policy, has put Atwater Kent Radio in the homes of countless thousands. Red Lion is headed for the same goal with equally fine merchandise, prices that represent the utmost in value and a decidedly effective national advertising campaign.

If your Atwater Kent distributor has not yet shown you the latest additions to Red Lion's complete collection of fine desks and consoles for Atwater Kent equipment, get in touch with him at once. The season is well on, and it's the biggest season in Red Lion's history.

RED LION CABINET COMPANY . . . . .

RED LION, PENNA.

# Red Lion Cabinets

# ATWATER KENT RADIO

*Don't wait for the  
last minute rush*

**Y**OUR prospects are thinking NOW about Atwater Kent Radio for Christmas. But human nature being what it is, many of them are going to put off BUYING until the last moment. Avoid disappointing them and missing profits for yourself by sizing up your Christmas needs and sending *your* order to your distributor NOW.

Give your distributor a chance to make orderly deliveries. Don't wait for the last minute rush. Reach for that order blank NOW.

ATWATER KENT MANUFACTURING COMPANY

A. Atwater Kent, President

4733 Wissahickon Avenue

Philadelphia, Pa.

## “Keep Your Shirt ON!”

**P**ATENTS tighten up and manufacturers get panic-stricken. Business slumps in October and the trade throws in the sponge.

Everywhere you heard, “Industry all shot. Why go on? What’s the use?”

Answer, “Keep your shirt on.” Inelegant, but expressive. Good advice.

Why? First, patents. Well, what about it? They belong to those who have them. They can be controlled at the discretion of the patent-holder. Those who infringe must pay tribute or prove the patents invalid. Either course is open. In the meanwhile, cross-licensing plans progress. Public interest in radio strong. Merchandise continues to be sold.

Squawks from a few set manufacturers. “Patents are putting us out of business. We can’t pay the tolls.” Unfortunate, but we must have patents. Patents are property. Protection of property—an inherent right, bequeathed by Constitution.

Abuse of property rights, that’s another thing. Prove it. Try the case in the courts of the land. That’s what they are for. May take time. But try it.

**T**HAT brings up Clause 9. Squawks from tube manufacturers; maybe justifiable, this time. Federal Trade Commission goes to work. Maybe the clause will stand. Maybe it won’t. Meanwhile, tubes, good ones, are produced and sold by variety of manufacturers. Because tubes cannot be forced down anybody’s throat. Dealers and public alike will buy what they consider best tube. Just as they buy what they consider best tire for their automobiles.

**T**HEN A. C. tubes. Wildfire. Public must have them. Won’t buy anything else. Can’t get them out fast enough. Receivers using them can’t be produced quick enough. Everybody excited.

Squawks from power unit manufacturers. “Ruining our business.” Too bad. But this industry moves fast. Takes unusual speed to keep up with the procession. But

that is not enough. To survive, you must keep one step ahead, at least. If not, consequences are swift and sure.

Conditions change. Power units on the way out? All right, if it’s inevitable, meet it. Change and adapt to meet new conditions. Difficult? So is anything worth while. But can be done. Takes time. And it will be a long time, too, before power units pass out completely. Millions of battery sets now in use. Many more will be. Think that over before you scrap power units.

Then, business slumps sharply. The last straw. Battery sets can’t be sold. Panic! Slash prices!! Dump!!! Applesauce. Read that heading again. “Keep your shirt on.” Slumps are natural. Bound to have them. Never heard of an industry that didn’t.

It’s an old fashioned business cycle. Peak today. Valley tomorrow. Peak again the day after. Apparently only a certain amount of business to be done. Seems that if we get it in September, we don’t get it in October. If we don’t get it now, we’ll get it next Spring. Some day we’ll stabilize our calendar but we haven’t yet.

**W**ASN’T such a bad year—1927. Way ahead right up to middle of October. Then it slowed up. But not enough to bring the year’s totals down under last year.

Going to be a good year—1928. But—“Keep your shirt on.” Don’t look for another period of wide and rapid expansion. Or be disappointed. Those days are gone, in radio. We’re settling down to normal levels.

Yet we still have over-expansion. Probably will have for a while. Seems to be a lesson this industry will never learn. Striving for volume. Volume without profit. “For what shall it profit a man if he gain much volume but no net?”

*Retrenchment has caused fewer failures than over-expansion.* Perhaps next year’s production and sales should be planned on that basis.

*William C. Alley*

# Here's a Long, LOUD

*The editors found the following story in the mail one morning—from E. F. Haberstroh, a radio set owner in a little town in Massachusetts. It doesn't need explaining, and it's worth reading even if you don't think you need the message it contains*

I HAVE a radio set. Anybody can see that by the antenna on the roof. I've had the set for two years.

And not once, in those two years, has a single radio dealer ever asked me in person, by phone, by mail—or by mental telepathy, so far as I know—if my set didn't need a little looking over or if it wasn't about time to dump the old one and get acquainted with something modern!

## DO I LIVE IN GREENLAND?

Do I live in Timbuctoo? Or Greenland? Or the Sahara? Or even in Pumpkin Center?

I do not! I live in a city of 50,000 well-to-do folks. Eight miles off is a city of probably 150,000. Within ten miles is another "village" of about 750,000. And all in between and around there's hardly vacant land enough to lay out a two-hole golf course.

Less than half a mile from my ground wire there's a hardware dealer. He handles radio—as a sideline. A mile and a half in the other direction are four stores that *keep* radio—notice the "keep." Two miles toward the north, more radio handlers. Two miles or so, north-easterly, still more—

No, my city doesn't lack radio stores! It just seems to lack radio *merchants*. It seems to lack men who are so alive to the possibilities of radio that they stay up nights figuring out ways to root out every last bit of radio business within broadcasting distance. Men who would rather eat tubes than steak and much prefer radio spaghetti to the kind their wives buy at the corner grocery.

I wouldn't be writing this, if I were the only one in my community who seems to be neglected by the local radio dealers. We're a whole boatful together. And what do we do when some thingumbob acts up and we can't even get static out of the box? Give the whole outfit a ride into the big city, ten miles away! Though some of us, who happen to have seen a radio sign, here and there, in our own fair village, have been known to

make contact with the store behind the sign, providing our sense of direction is good and the dealer is still in business.

## GONE BUT NOT FORGOTTEN

You may ask me—and rightfully—what's happened to the man who sold me my set. Why doesn't he keep after me? In the first place, he didn't sell me the set—I bought it. There's a lot of difference. And, besides, his love for me waned as soon as his cash register rang its paean of joy over my welcome check and the set was safely out of the store and in my home.

He promptly forgot that I owned a set that might need some periodic tinkering or some new gadget occasionally—every need resulting in the music of coins merrily jingling on his counter. Poor soul! He's out of the picture now. His radio business has faded. Gone. Several others I know have quietly folded up their radio tents and stowed them away as useless.

What's wrong? Nothing—not with radio at least, so far as I can see. We all want radio. One of these days, every home will need a set—just as surely as it needs a telephone. But it looks to me as if a lot of dealers don't yet realize that radio has got to be *sold* today. Folks once trampled each other to buy—weren't those the glorious days? Sure. But no more, now.

The wise merchant is the one who *sells*—everlastingly sells, and knows that's the only way he can put his radio business over. No more of this "Pardon-me-for-disturbing-you-but-would-you-mind-selling-me-a-radio-set?" As I see this whole thing—and I think I'm like a lot of other radio owners—the dealer who's going to get my trade is the dealer who cares enough for it to come after it. That is, my steady trade. Nobody comes after it, so I simply go here, there and somewhere else—flitting aimlessly like a butterfly.

If I weren't a Harvard graduate I'd get sore and use strong language. What's the matter with these radio dealers, anyway? Are they dead from the neck up? And down,

## A Neglected Customer

*gives the whole structure of radio a black eye. It is an unfortunate fact that radio dealers everywhere do not take fullest advantage of every opportunity to make personal contacts with their customers.*

*Here's a neglected customer's own story, written from his own viewpoint. He doesn't mince any words in telling you what he thinks of you when you disregard his pleas for help.*

# WAIL *from a Customer*



*In the Homes of How Many of Your Customers Is This Scene Taking Place?*

and between the ears, too? Maybe there's something wrong with me and that's the reason why I'm so utterly neglected. But I doubt that because a good many of my friends are in the same condition.

I hate to knock but it does seem to me that the radio trade is unaccountably lax in following up its natural entry into my home. I don't know much about radio. When something goes wrong, I don't know how to fix it. If a radio man rang my front doorbell and asked me how my set was working I'd welcome him like a long-lost brother. Why? Because I like radio. I would actually welcome visits from radio dealers. I'd be glad to pay somebody to come around every once in a while just to insure that my set keeps working properly. And there are a lot of things my radio probably needs that he could sell me.

I ask you, why in the name of all the gods, is there so much talk about radio service? So far in my experience with radio, I don't even know it exists, except by hearsay. Service? Ho! Ho! Ho! Why, I even called up a radio dealer here in town three times and asked him to send somebody up to look at the set because it wouldn't perk. Did he send somebody? He did not. He promised to, all right, but that was the end of that. Do you wonder I'm sore at my blooming set? Did he think I was asking him to do something for nothing? I'm willing to pay for my radio service. You'd think I was asking him to murder his wife and children or something equally as terrible.

Now, I've done a lot of finding fault. How about a constructive suggestion? Right. It seems to me, if I were a dealer, that I'd gather up a first-class mailing list—scout 'round and dig up the name of every set owner within a reasonable distance of my store. I'd find out all I could about him and his set. Then I'd camp on his trail. I'd court him—yes, that's the word! Just as if he were a girl and I needed him to round out my existence prop-

erly. I wouldn't let him forget me. I'd send him flowers in the shape of folders. I'd appeal to his love for candy by dropping him a toothsome card now and then. I'd write him friendly letters. And then, I'd call him up occasionally, to get him used to my voice. Always having something worthwhile to say, of course.

Nor would I forget to call on him. Not enough to make a pest of myself, but just enough so that when he thought of radio he'd naturally think of me. Folders, postal cards, letters, personal calls, telephone—that would be my campaign. I'd show him I wanted his business and that I wanted it enough to go a good long mile for it. I'd make him believe that I've got the goods he'll like and the service he'll like—that I can satisfy him from the minute he buys his set until it grows white whiskers and needs to be supplanted by a younger and peppier brother.

So, why not ask me for my trade? Ask all of us radio owners. We're grand mechanics, we are—as long as our sets are in perfect order! When they refuse to peep, we stare at them with all the intelligence of a two-day-old eel. That's when your good licks count. Tell us that our sets need looking over periodically. Tell us you're the boys to do it properly. We'll believe you. We know that if we start a little plumbing work ourselves, in desperation because we're so alone in the radio world and no dealer loves us enough to want to help us, it's just like us to stick a screwdriver down into the middle of the works and blow the whole business!

Again I say, "Come on." All of us won't answer you the first time. Nor maybe the second time. It may happen that our sets are behaving themselves. But there'll come a day when all we'll get out of the loud speaker is a big chunk of silence. Then we'll remember that one of you has paid us the most marked attention in at least letting us know you realize that we're alive!"

HAROLD J. CHRISTELL  
HENRY J. CHOYNACKI

**CHRISTELL RADIO**  
NORTHWEST SIDE'S LARGEST DEALERS IN  
RADIO, MUSIC, MOVIE CAMERAS  
**2750 W. NORTH AVE.**  
NEAR CALIFORNIA AVENUE  
TELEPHONE HUMBOLDT 3011  
CHICAGO

WELCOME FOLKS!

We have just learned that you have made your home among us and we are happy to greet you and to welcome you as one of our neighbors. We are quite sure you will like this part of our city, its people and its places of business.

You see from our letterhead that we are in the radio and music business. But after you've been in the neighborhood awhile you will learn that we are something more than a radio and music store:

An institution of service --  
A store accommodating --  
An asset to your neighborhood.

Of course, if you are in need of radio or music, we want to serve you. We have the kind of merchandise that folks like you prefer - quality goods at attractive-to-you prices.

And to show you that we mean what we say, when we say "WELCOME" - we will allow you \$5.00 off the price of any radio set between \$75.00 and \$150.00 -- and \$10.00 on any set of \$150.00 or more. All you need to do is to bring this letter.

But whether you are in need of these things or not, come in for a friendly visit. We'll be glad to see you.

Cordially yours,  
CHRISTELL RADIO

### Increases Sales Welcoming Newcomers

ABOUT 100 letters which begin with cordial greetings are mailed each week to those who have recently settled within the trading territory of the Christell Radio Shop, Chicago. This concern averages, during the livelier months, one sale a week from this direct-mail sales promotional idea. Newcomers, it states, are frequently in the market for radio, or for radio service which ultimately amounts to the same thing.

Christell contracts with an organization which, for \$15 a month, obtains the names of recent arrivals and attends to the addressing and mailing of the letters.

# UP *with* the DOWN *Payments*

*Hyatt Music Company, Portland, Ore., points out to customers the advantage of making a maximum rather than a minimum first payment*

IT WAS just a year or two ago that E. B. Hyatt started pounding home to his salesman the idea of suggesting larger down payments, and today, as the result of this aggressive policy, the percentage of radio sets sold at the minimum down payment of 20 per cent has been reduced from 83 per cent of the total sales to 63 per cent.

Hyatt explains.

"While radios are being sold in some places in Portland for as low as 10 per cent down, we assume the attitude that the customer who can't pay at least 20 per cent down on a set is not in a financial position to make the investment. But even at 20 per cent down, there is grave danger of loss for several reasons.

"Take the customer who buys a radio, then, after a month's performance and criticism by his friends, he changes his mind and decides on a different kind of set. That man often decides to charge off the small down payment to rent and return the set so that he may go elsewhere and purchase a different set.

"Then too—the customer who has a heavy equity in a radio will take a much greater interest in it than the one with a small equity. He will take greater care, and evince more pride in his set, and there are apt to be fewer complaints.

"So, considering in addition to these reasons, the important one that stretching payments along increases office overhead, we decided to do all we could to grade our customers up in the matter of down payments."

AT THE Hyatt store, where eleven persons are employed in a live retail radio, phonograph and piano business, live sales meetings are held every Monday morning when Hyatt's men are impressed with the necessity of grading up their customers to maximum rather than minimum, down payments.

"Salesmen naturally want to make things just as easy as they can for the customer," Hyatt says. "They think if they emphasize how easy it is to buy radio that they will make more sales.

"There isn't a customer in existence, who, unable to pay for the radio in cash, will not react affirmatively to the suggestion, 'All you have to pay down, sir, is 20 per cent.' Of course he'll pay but 20 per cent down! Who would pay more unless he is shown that it is to his financial advantage to do so?

"Then we proceed to instruct our salesmen to sell *service*. Now selling service in radio is a whole lot different from selling service in phonographs, pianos, or any other musical instrument.

There is a mistaken method of many radio salesmen that is responsible for a large percentage of the dissatisfaction of the public with radio. Eager to close the sale the salesman assures the customer that the set is 'absolutely trouble-proof.'

"A trouble-proof radio is an unknown quantity. After all it is not wholly a musical instrument. It is also a mechanical instrument subject to influences over which no mortal has complete control. Hence, we instruct our men that the better way to sell radios is to say, 'Like all other radios there is bound to be some little trouble once in a while. But we'll always be glad to help you out and have an efficient service department in readiness for such occurrences.'

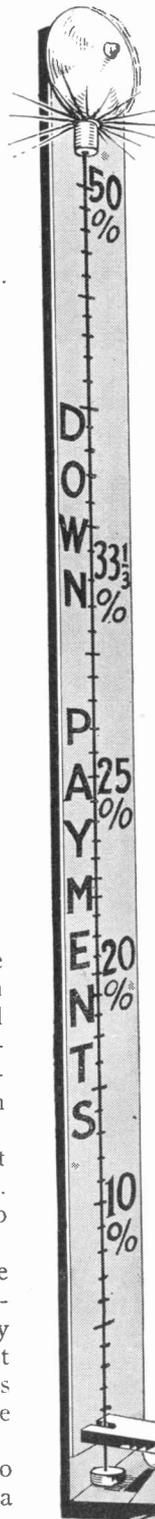
"We instruct them to explain frankly the difficulties to which radio is exposed, hence when trouble comes they are not disappointed as they would be had they been assured that nothing would ever interfere with perfect performance.

"It's a difficult thing to keep friends in the radio business," Hyatt continues, "unless they are sold right in the first place."

OF ALL the radio sets sold at this store 8 per cent are sold for all cash. Sixty-three per cent pay 20 per cent down, while the remaining 29 per cent pay from 33 $\frac{1}{3}$  to 50 per cent down. Of this group 9 per cent conclude the remaining payments in from 90 days to seven months, while 20 per cent stretch the remaining payments over the full contract.

"Last year our percentage of reverts was less than 3 per cent," Hyatt concludes, "which we know for a fact to be low, as many local radio dealers inform us that their reverts often run as high as 10 per cent, due to lax credit policies.

"We suffer little actual loss on returned sets because we secure quick turnover on them through the use of small classified ads, which dispose of them at minimum expense."



Dodge Electric Company			
Control Statement			
Date _____			
	INSTALLMENT	30-DAY OPEN	TOTAL
Outstanding Yesterday			
Charges			
No. Trans.			
Total			
Cash Credits			
No. Trans.			
Misc. Credits			
Outstanding Today			

Cash Received Today	No. Tran.	Bank Account	Miscellaneous Credits Summary
Cash Sales		Bal. in Bank Yesterday	Price corrections
Misc. Cash		Deposit Today	Disc. Chgd. to Sales
Down Pmts.		Checks Drawn	Mdse. Purchased
Inst. Pmts.		Balance Today	Adjustments
Rec. a/c 30 Da.			Mdse. Repossessed
Total Cash			Disc. All'd
Cash In Drawer			Int. Earned
Over-Short			Mdse. Ret'd
			Trade-In
			Expense
			Mdse. Replaced
			Voucher
			Sales
			Total

Sales This Month	Charge	Cash	Total
Total Sales This Month			
Last Year			
Total Sales To Date			
This Year			

Collections Today	Collections This Month	Collections This Month Last Year
Rec. on Acct.		
Misc. Cash		
Cash Sales		
Deposit		

A simple control form enables Dodge of Tulsa to visualize his business at a glance.

TO AN enterprising radio merchant in Tulsa, Okla., goes the credit for developing an unusually workable and simple plan whereby the daily condition of his business is available at a glance.

Each morning a form (reproduced with this article) is laid on the desk of J. W. Dodge, president and general manager of the Dodge Electric Company of Tulsa. This form Dodge calls his "Daily Where-We-Are-At System." It consists merely of a visualization of each day's transactions prepared by the store manager and in it other radio retailers may find a financial control plan which may be adapted to their own business.

Heading the sheet, which is on legal size paper, data on accounts is presented in convenient tabulated form. For installment accounts there is a column, "Outstanding

# Financial

Dodge calls his financial control form a "where-we-are-at" system. Summariz-

Yesterday," with the day's charges stated and space left for a total. The number of transactions is given. There is subtracted then "cash credits" and miscellaneous credits, to give the amount "outstanding today." This same procedure is carried out for "30 Day Open" accounts.

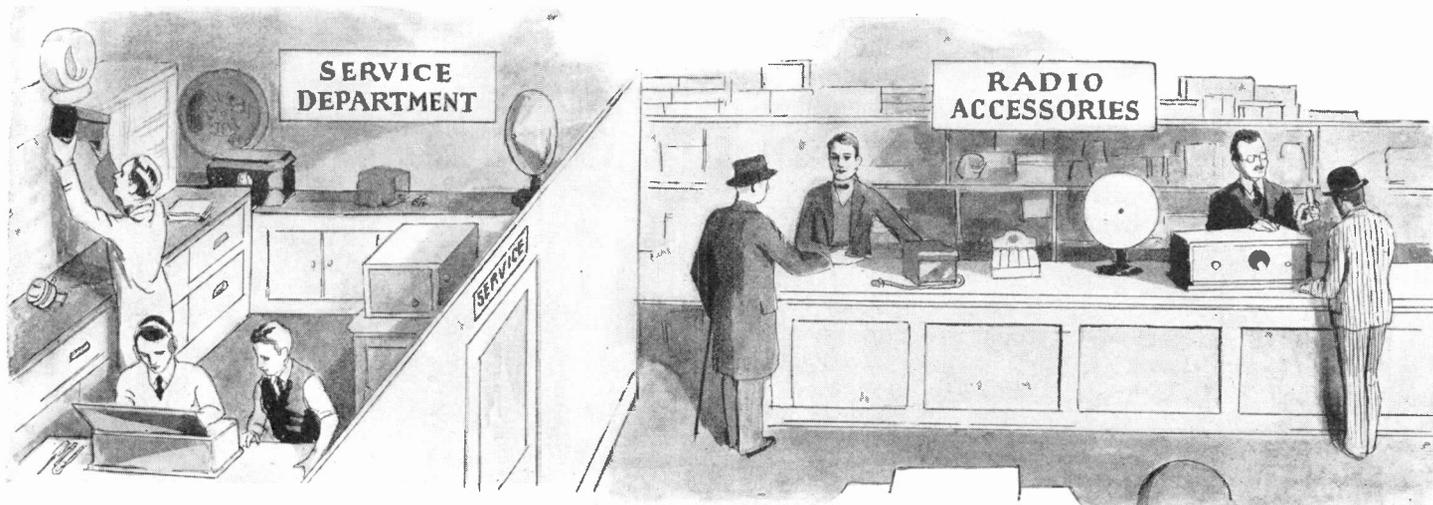
Horizontal totals, at the right, give the total of accounts outstanding yesterday. The day's charges are added to this to give total outstanding. Current credits are subtracted giving the total outstanding today.

JUST below, the space is divided perpendicularly into three columns. One contains an analysis of "Cash Received Today." Amounts are stated for cash sales, miscellaneous cash, down payments, installment payments, and received on 30-day accounts. These are totaled. Cash in drawer is stated, and a calculation gives over or short.

At the right is a summary of miscellaneous credits. These are itemized—Price corrections, discount charged to sales, merchandise purchased, adjustments, merchandise repossessed, discount allowed, interest earned, merchandise returned, trade-ins, expense, voucher, sales, merchandise replaced.

A bank account statement shows, "Balance in the bank yesterday," "deposit today," "checks drawn," "balance today," "total deposits this month."

Further data, completing the control statement, gives total charge sales this month, total cash sales this month, grand total; collections today, collections this month, col-



# Control *At His* *Finger Tips*

*ing each day's transactions, it gives him a condensed but complete picture of how his business stands to date*

lections this month last year; total sales this month last year, total sales to date this year. The remainder is a recapitulation of the day's transactions.

"Another plan we have introduced, which so far we like first-rate," Dodge declares, "is a daily calculation of gross profits. All sales tickets are costed daily, and totaled, giving us our gross profit. We know our overhead to put beside this in judging our showing.

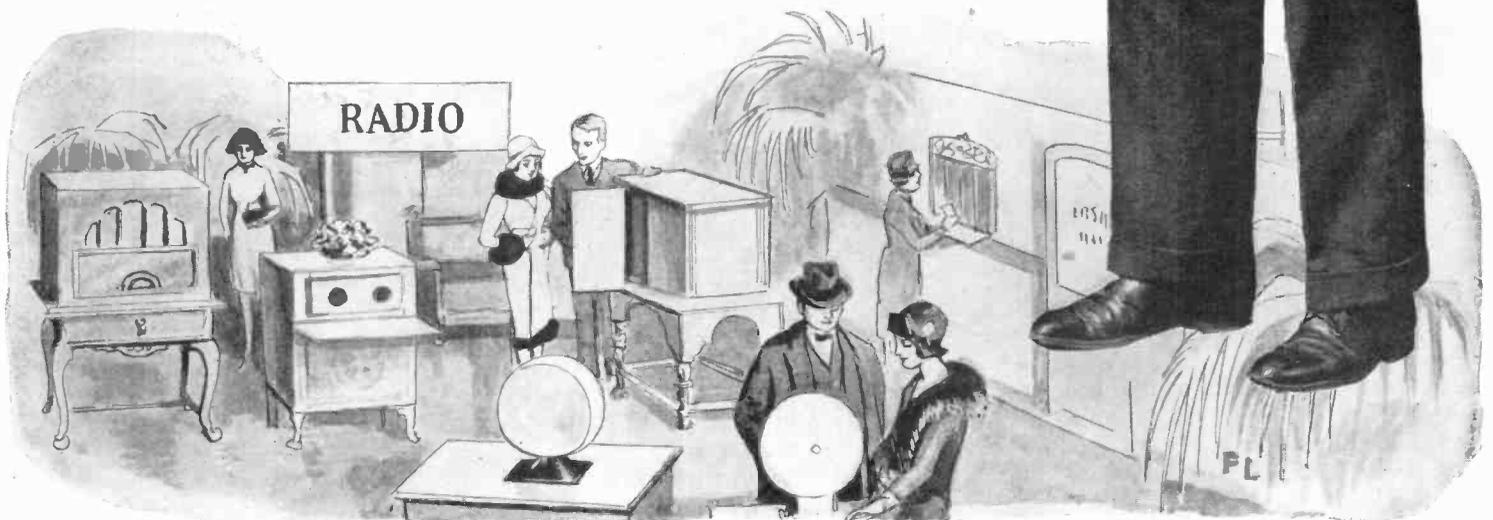
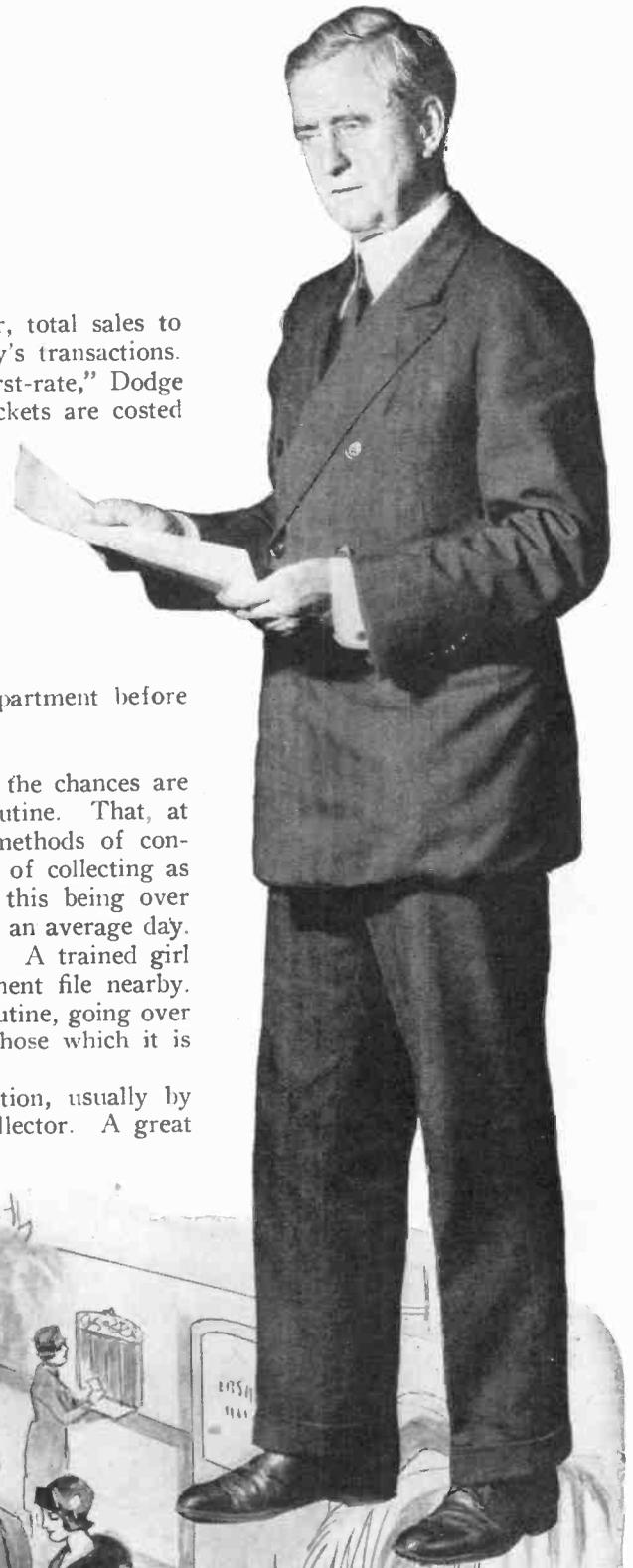
The situation with respect to credit memos is on an improved basis also, Dodge says, as the employée making out a credit memo must complete it with a notation on the original charge that a change has been made and with a notation on the credit memo of the original price. The memo must be approved by an officer of the company before it can be mailed.

All sales tickets are always marked OK by the credit department before merchandise is delivered or work performed.

**W**HEN a radio dealer has trouble with installment sales, the chances are that the cause lies in an imperfect office collection routine. That, at least, is the inference after an examination of the Dodge methods of controlling collections. A salesman is delegated to the dual task of collecting as well as selling. A part of the time he sells on the floor, this being over the time required in collecting, which is probably less than half an average day.

The telephone is also used to good advantage in collecting. A trained girl spends several hours a day at a telephone, with the installment file nearby. This girl systematically, day to day, handles a set collection routine, going over the time-payment file and sorting out over-due accounts. Those which it is felt need attention are placed in a special file.

Accounts which become delinquent have immediate attention, usually by telephone call. Sometimes there is a personal call by the collector. A great



many times the customer explains some temporary financial incapacity, and makes a promise as to just when he will bring his account up to date.

**A**LL this work has to be done very tactfully. The Dodge company employee is a trained worker who knows how to "tickle" the slow customers and keep accounts in proper shape, still keeping the "smile in the voice."

This store finds, like others, that some times customers like to have a collector call, while others are sensitive that the collector should not call. Both types are catered to, but the store prefers the system of payments at the store, and has an established routine. A convenient folder, 5 inches by 3½ inches, is issued to each time-payment purchaser, with space to record the dates and payments. "Always bring this book with you," reads a message on the cover. "Each time you come in to make a payment or to add to your account, bring this pass book. We will register in it your exact balance as shown on our ledgers."

This printed folder, on pages two and three (one for record keeping purposes) has customer's name and address, account number, terms (whether monthly or weekly), and due date, and numbers 1 to 24 down the left side, denoting payments. The columns left to right are: date, debit, credit, balance, and number of transactions.

Catchlines state that payments are to be made at office **ON** or **BEFORE** due date, and, "Merchandise should not be moved, without our written consent, as contract provides."

One of Dodge's business-building principles in cus-

tomers relations is, "The customer is right until proved otherwise."

When a customer makes a complaint, asks for an adjustment, claims an error, the Dodge employee is expected to go ahead in the matter on the assumption the customer is right. The attitude is thoroughly sympathetic and friendly.

This friendliness is indicated by the following instance: A radio service laboratory adjoins the radio department, with equipment for testing and repairs. An operator at work within can be seen from the floor. "Stop! Private. Thank You," is the message on the door, much more tactful than the customary brusque "Keep Out."

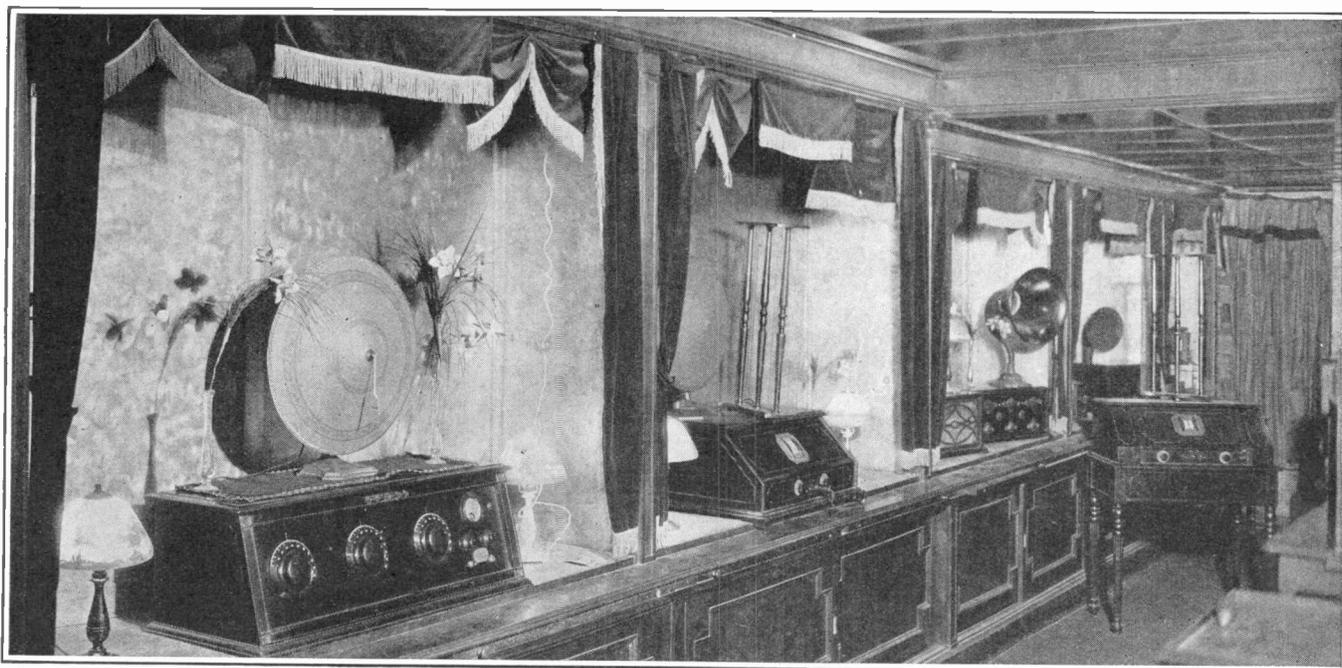
### Checks Customer's Reception on the Quiet

When "Bob" Murry of Logansport, Ind., is asked to give a home demonstration in a section of the city with which, from a reception standpoint, he is unfamiliar, he makes a private preliminary test with a portable set whenever at all possible.

"I stop my car near the prospect's home that very night and satisfy myself, with my portable, that there will be no discouraging local noises to mar or kill the success of the demonstration," he says.

If Murry finds that an unfavorable local condition exists he frankly informs the customer to that effect and endeavors to correct the cause before granting the prospect's request—a practice which has saved him many a sale.

## Uses Individual "Stages" to Display Small Receivers



A store arrangement plan that has proven effective has been worked out by Klein's Radio Shop, 42nd Street, New York City. Rows of shelves down the length of the store were removed when the parts business declined, and their place was taken by individual compartments as shown in the photo. Each compartment is lighted from

the inside and is bordered with well arranged curtains, giving each display compartment the effect of a miniature stage.

A table type receiver is placed in each "stage" and, with an attractive background, the lighting and drapes display it to excellent advantage.

# An OVERHEAD Location for the Large Speaker

*Making a combined chandelier and speaker resulted in sales of large cones*

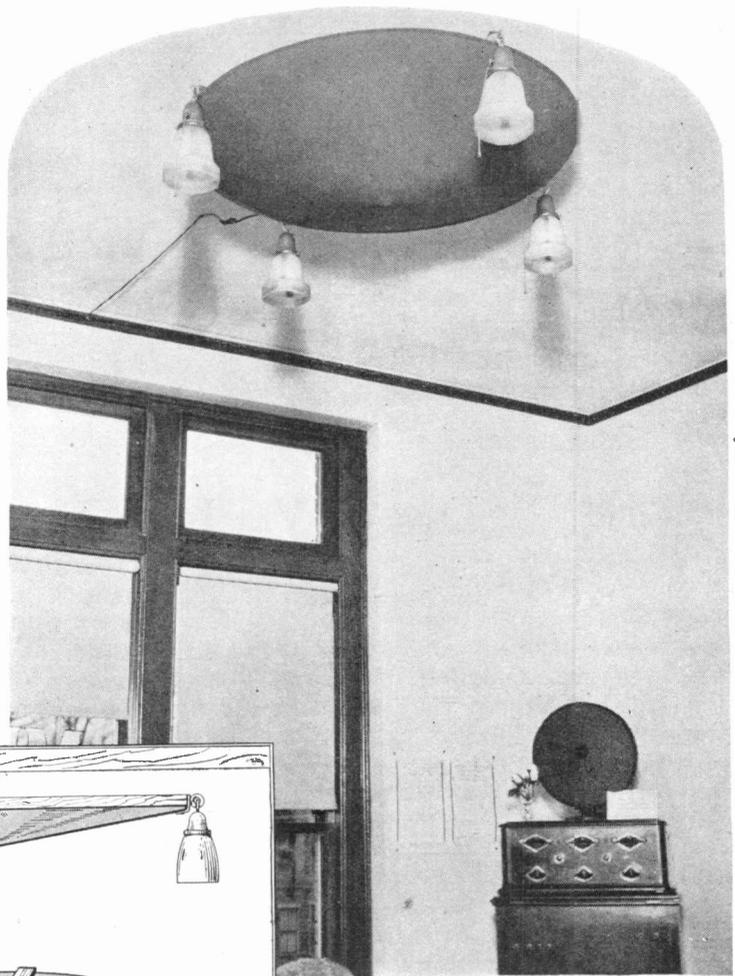
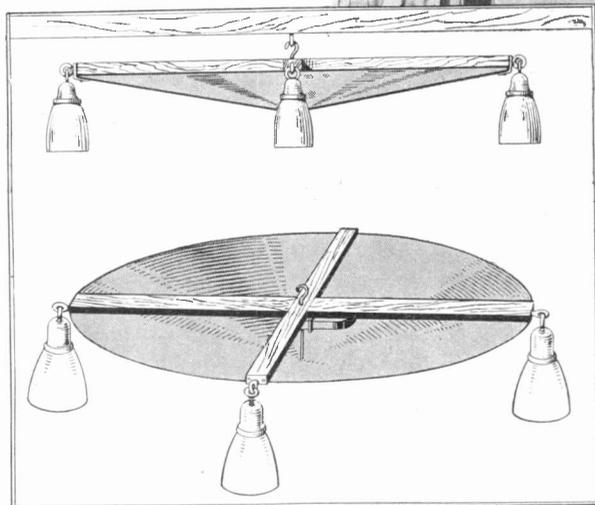
A STORE arrangement idea that resulted in sales was recently hit upon by H. L. Miller, president of Miller's Radio Service, Inc., East Hartford, Conn.

For several weeks, Miller sought a convenient place to put a large 36-inch cone where it could be used for store demonstrations and yet not take up too much floor space. He finally devised the scheme of combining the speaker with a chandelier and placing it overhead—an out-of-the-way, yet conspicuous, location.

He combined the cone with several lighting fixtures in the manner pictured by the illustrations on this page and found that the idea proved unexpectedly popular with his customers. Seeing the unusual combination upon entering the store, several of Miller's clients placed orders for a similar combination.

In addition to the sales feature of the idea, Miller has found that the tone quality of the speaker is improved by suspending it in this manner.

"I am convinced," he says, "from extensive experimenting that suspending a large cone from the ceiling is the only method of support which permits it to be held under an even tension throughout its entire area. An even tension is, of course, necessary for the faithful



reproduction of both the high and the low notes.

"Faithful reproduction is the most important claim advanced for this horizontally-suspended cone and the reason is that the mechanism functions better. There is no gravity side pull of the vibrator pin against the armature. The weight of both the delicate parts

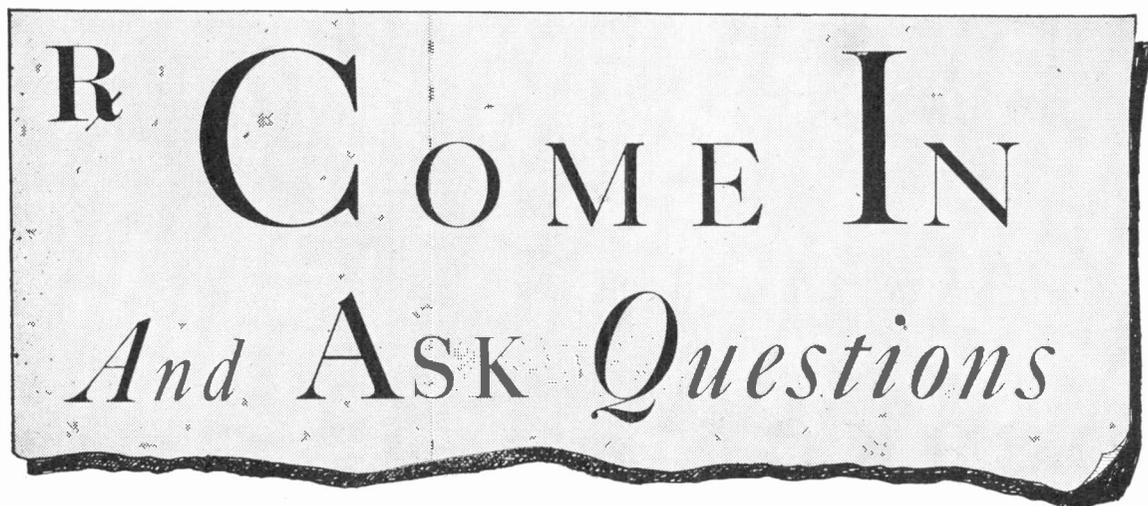
and the cone itself is evenly distributed, and as the cone is suspended from its periphery there is ample room for the actuating vibrations from the center to have full play.

"Then again, the sound is more evenly distributed throughout the room. There are no echoes as the opposite, reflecting surface is a rug or carpeted floor. In addition, the smooth ceiling in back of this speaker acts as a sounding board and contributes to the volume and quality of tone obtainable."

The combining of the electric-light fixture with the speaker happened to be a desirable feature which Miller was able to capitalize.

Miller has taken many orders for his overhead speaker since he displayed his first model—which proves that there is more than one method of selling speakers.

## For Radio Ailments



### Dealers Who Have Made Radio Pay, No. 12

**M**OST radio set owners are not radio fans in the sense of being technical experts and the language of the radio-fan magazines, ordinarily, is meaningless to them. They would like to understand more about radio, but do not always know where to turn for information, according to I. H. McCarty, "Radio Mac," of lower Market Street, San Francisco. "I have tried to build up my business on that basis," he states, "and make my store a place where they can come in and ask questions."

Many set owners know that the radio dealer can help them, but hesitate to ask for free advice. Moreover they are not sure that what they want to know is of any importance and they do not always want to or even need to purchase something every time they visit his store. So, as a rule, they let their troubles go, or tell them to the neighbors, which does not help the cause of radio at all. But, if they happen to be San Franciscans hurrying to the ferry some day along the northern side of Market Street, they see a little sign in the window of Radio Mac's store which reads "Come In and Ask Questions." And they do.

Mr. McCarty has taken for his slogan, "Come In and Ask Questions," adding "We specialize in furnishing expert advice in your own language, free from puzzling technical terms and without having to buy anything." This slogan is printed on all signs used, on all advertising and on every package which goes out of his shop.

How much this service is appreciated by the public is indicated by the number of people who take advantage of it. His store is open from 8:30 in the morning until 6:00 at night and during that time there is almost a constant procession of ques-

tioners. This does not mean that there are not customers in the procession nor that the questioners interrupt sales.

In innumerable cases, the two operations merge, the prospective customer catching something of the conversation as he comes in, finds that a subject is under discussion which is of interest to himself. Instead of asking that it be interrupted so that his needs can be met he joins in, ending up by modifying his order in accordance with the new knowledge he has acquired.

**F**OR instance, four men were in the store one day, when another came in and rather timidly put the question, "What is the use of a 'C' battery?" "That's what I'd like to know," added one of the four waiting customers. An explanation followed, with the result that every one of the five men present made the purchase of a "C" battery and carried it home with him.

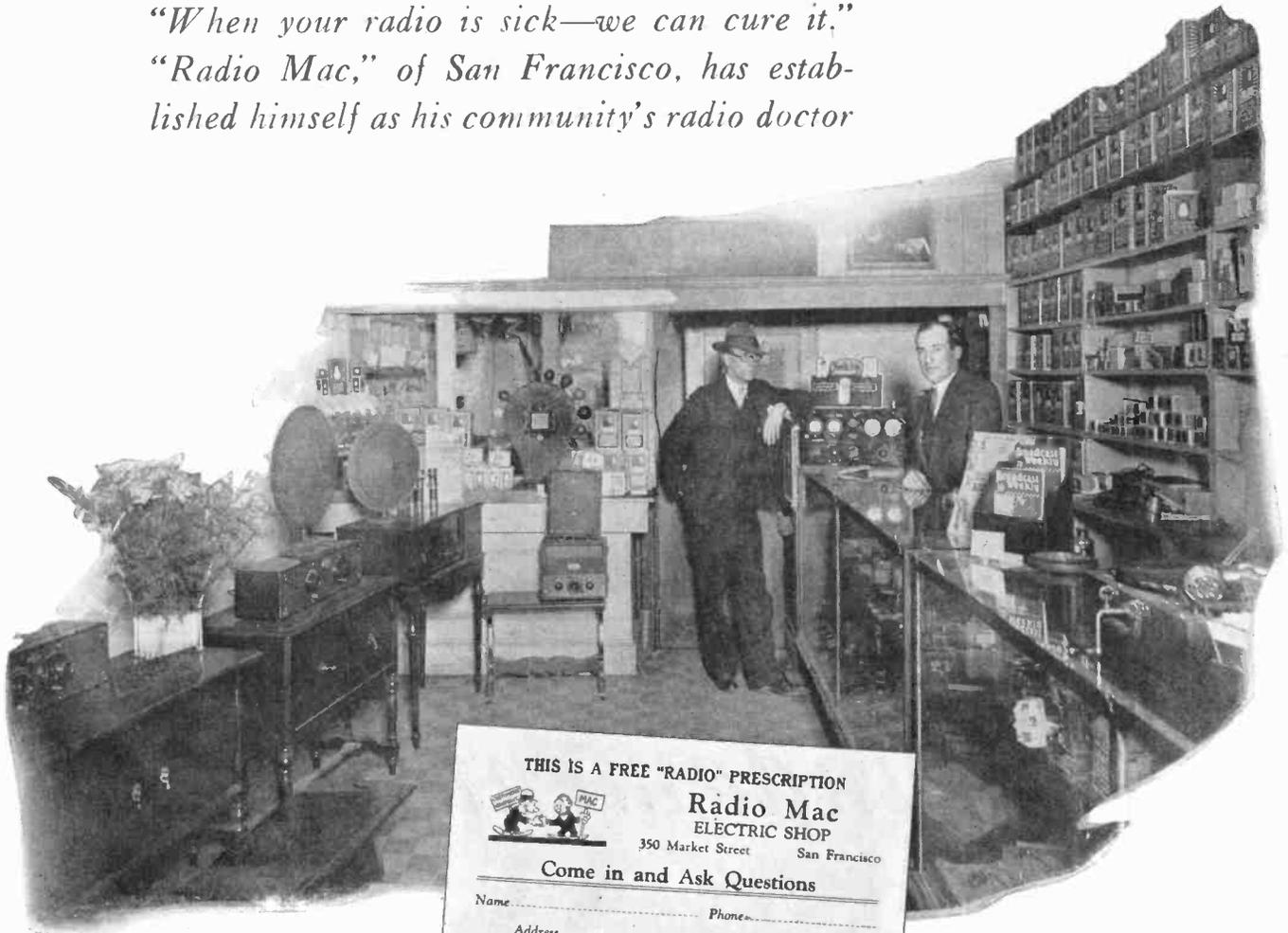
Such immediate sales are not always maneuvered for, however. Information is given freely and with pleasure without any strings attached. In nine cases out of ten, it leads to nothing at the moment, except a "thank you." But the customer comes back again when he has something to buy. What is more, when his neighbor wants something, he sends him in to the place where he has been so generously and efficiently helped. "Mac" has a thousand instances recorded where just that thing has happened.

The greatest problem of all, says Mac, is to get them to ask questions, to feel that he really is sincere when he says he is glad to answer them even if they do not buy anything. Their shyness in this respect speaks volumes for the way they must have been treated by other dealers. At any rate it has taken a good deal of thought on Mac's

***T**HE greatest problem of all, says "Radio Mac," is to get customers to come in and ask questions and make them feel that I am sincere about it.*

*How successful "Mac" has been with this problem is told in the steady growth of his business since he first tried out the idea.*

*"When your radio is sick—we can cure it,"  
"Radio Mac," of San Francisco, has estab-  
lished himself as his community's radio doctor*



THIS IS A FREE "RADIO" PRESCRIPTION

**Radio Mac**  
ELECTRIC SHOP  
350 Market Street San Francisco

**Come in and Ask Questions**

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

No. \_\_\_\_\_

R

SHOULD THE ABOVE FAIL TO BELIEVE  
YOUR FIDELITY CONSULT US  
FURTHER OR HAVE ONE  
OF OUR SERVICE MEN  
CALL AT YOUR HOME  
AT A REASONABLE CHARGE  
"RADIO MAC"  
I. M. MCCARTY, MGR.  
REARNEY 3038-1-3037

WE SPECIALIZE IN  
furnishing "EXPERT ADVICE" in your  
own language, free from puzzling technical terms and  
WITHOUT HAVING TO BUY ANYTHING

part to overcome the initial hesitation.

He breaks the ice by making his own friendly personality the keynote of the store. "Radio Mac" is on the window and on the awning and on the sign over the door. It is the answer he gives over the telephone, it is on the lips of half the people continually running in with an "Oh, Mac, can you" and it soon gets to be a habit even with the new ones who come in to ask a question and listen in for a few minutes. Then, too, the windows always bear a card saying "Come in and ask questions." Frequently, these cards are designed to answer some one of the most common questions customers bring in.

**R**ADIO MAC has worked out the question and answer part of his business to a science—and through the servicing of sets. He frequently makes five or six service calls a night, many of them quite on his own responsibility and time, just to see what conditions actually lay behind the questions he was asked in the store. In consequence, and aside from the great number of sales contacts he makes he has built up a wonderful knowledge of just what the customer really wants to know when he asks questions in the store.

He knows, for instance, that nine out of ten cases of so-called static are merely noises due to corroded battery

terminals. So, he has made up little envelopes containing a small wad of steel wool and a small can of vaseline and these he gives free to such questioners who reveal by their conversation that the trouble with their set can probably be helped by this simple remedy.

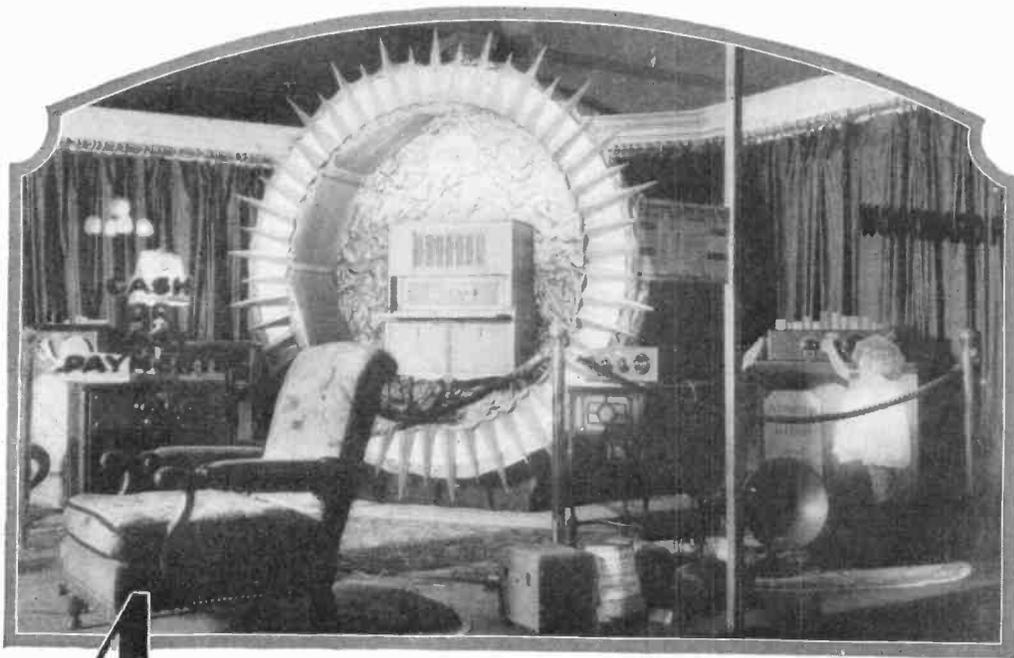
Another free prescription, which experience has taught him will solve many ills, is distilled water. He has had small bottles of this put up, with labels bearing his name and

the fact that the bottle is a gift, and where a diagnosis indicates that distilled water is needed, this too is given to the questioner to carry away. The bottles cost about five cents, including water and label and he gives away about 50 a month—\$2.50 well spent in his own particular brand of advertising.

Antennae and how to install them are subjects very much on the public's mind, says Mac, from his experience with many questioners. Judging from the installations of those who come in with troubles to report, the public has been taught that the longer the antenna the better. In consequence 100 ft. of wire with 50 ft. of lead-in add complications to the reception of many a radio set, when 20 ft. of antenna would answer the purpose more effectively.

Symbolic of his rôle as consulting physician to sick

*Please turn to page 64*



## 1. Wins attention

*This window of the Woodward Furniture Company, Minneapolis Minn., illustrates the attention-getting quality. The colorful and unusual frame attracts the attention on the model featured.*

# 4 Fundamentals of Effective Windows

**A**S CLOTHES make the man, so a window display makes the first impression of a store on the people of the community which it serves. It is an introduction to all the people of the community that is not limited by circulation or extent of personal acquaintance. Therefore, the window display is undeniably a most important avenue for establishing a definite and widespread impression of the character and quality of the merchandise and service you deliver.

Location is one of the largest items in determining the amount of rent you pay. Perhaps half the value of your location lies in its convenience to your established customers and the other half in the advertising value of windows which a good location brings. Window space, therefore, is not only of direct selling value but is something for which you actually pay good money, whether you use it to advantage or not.

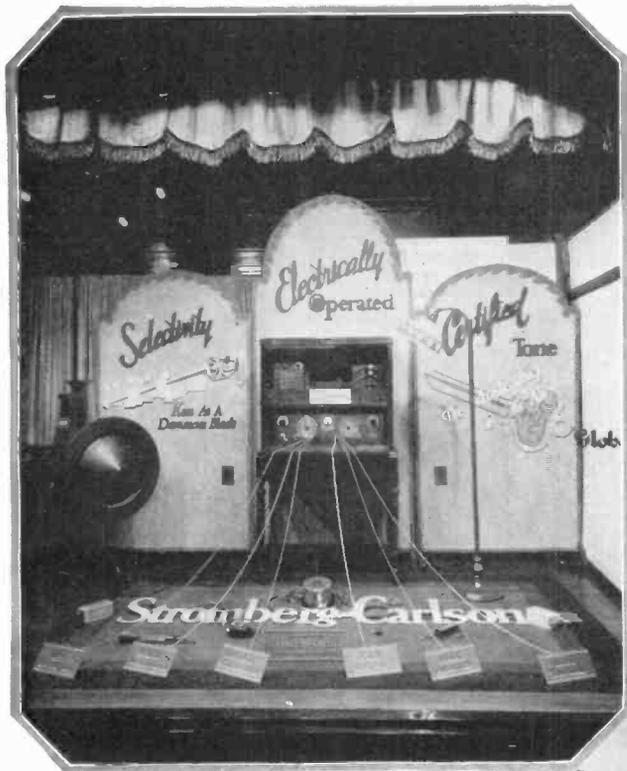
One prominent radio manufacturer's service manager stated that only twenty per cent of the hundreds of dealer stores he had observed use their windows in a way which

helps their sales, while eighty per cent discourage one element or another of the public by fundamental errors in appearance. There is no doubt that many a radio store is overlooking the opportunity which intelligent window display offers.

The habitual appearance of your window bespeaks the character of your merchandise and establishes a definite opinion of your store in the minds of the people of your community, whether they are prospects for radio or not. Effective window displays often create a sales impression on an individual which may not be capitalized for a year or more. Yet many a radio store tells its prospects that it is an electrical junk shop, an engineering establishment or a music store catering only to the wealthy when, in reality, it is attempting to sell radio to the average citizen.

Radio manufacturers and their jobbers are thoroughly alive to the importance of the store window. They know that much of the material and help offered the dealer is not utilized. To encourage better window displays, many of the jobbers conduct window dis-

***Y**OUR display window is your card of introduction to the public. It represents at least fifty per cent of the value of your location. Use it effectively or its greatest benefits are lost. This article gives you some of the fundamentals of effective window displays*



## 2. Concentrates

Buxton and Skinner, St. Louis, Mo., illustrate the concentration feature of a good window by centering attention through ribbons run from the foreground to the receiver on display.

play contests for valuable prizes. Such a concern is New Jersey Radio, Inc., of Newark, N. J., and it stands out as a model of what cooperative effort among dealers can do to stimulate profitable use of valuable window space.

In the words of Mr. P. J. Landemare, general manager of that organization, the two main objectives for which a window display should be planned are attractiveness and selling influence. Without attractive power sales influence becomes negligible and, on the other hand, many pleasing windows are totally lacking in selling influence.

"To win attention for a radio window, or for that

matter any window," said Mr. Landemare, "requires the use of motion or color. A shopper strolling casually by must be arrested by something in the window so as to be drawn to investigate it further. In this respect, a mechanically moving figure or flashing lights are very effective. In absence of motion, a border of bright color, a striking sign, or an appropriate picture has the arresting power which is necessary to win the attention of the casual passerby. Each time you win such attention, you make a selling impression directed not only to the product which you sell but to your particular store and your actual location, an impression which cannot be secured effectively in any other way.

"In trading centers where shoppers congregate a window display attracts the regular shopper at least once or twice a week. At least half of the shoppers are women, and since the feminine element is becoming a sales factor of increasing consequence in the radio field, the window display becomes proportionately more potent in its selling influence. There is no better way to win the attention of the woman shopper than through your window. This means that your window should be completely redressed each week, if you are to



## 4. Leads

A neat sign in the window of the Good Housekeeping Shop, Ravenna, O., indicating that the set on display may be installed on payment of a small initial sum leads customers into the store for further information.

## 3. Sells

By means of a huge dial on which is outlined the variety of entertainment obtainable by means of radio, the Robertson Hardware Company, of Detroit, illustrates the selling features of a window.

capitalize the curiosity which has been aroused by your window display on each successive visit of the shopper to your locality.

"Observers of window display effectiveness state that a series of well planned displays can lead the habitual window shopper to look at a display every time he or she passes. If, on the other hand, there is lack of variety in the character of the window display, the impression is soon created that that particular window is always the same and warrants no attention."

(Please turn to next page)

Winning attention is largely a matter of utilizing the influence of motion, color and variety. Having once caught the passer's eye, attention must be held by what is in the window. That formula seems childishly simple, yet many an attention attracting display which has aroused curiosity fails immediately after accomplishing that important step because there is nothing in it to warrant further inspection. The successful window concentrates the attention, once won by use of motion or color, on a single central object in the window. Do not expect a passerby to conduct a treasure hunt for the particular thing which he or she wants. This is a fundamental of successful windows—concentration of attention on a single leading article, a piece of merchandise having wide selling appeal.

Next in importance, the window must be informative and not merely a pleasing window display that creates no impression other than one of beauty. A deep, comfortable armchair, with a one dial set within reach of the hand, may be pleasing and may concentrate attention upon the simplicity of a one dial receiver but, if it is not informative, that pleasing impression is not capitalized.

"To take advantage of the pleasing impression created by a simple, concentrated, window display," continued Mr. Landemare, "put brief and telling information before the window shopper so that he will carry away something in his mind that will later help to make a sale. A mere name or slogan is not enough; let it be a concentrated dose of selling information put over by a neat, artistic, but effective show card. In the average community and shopping section, particularly where competition is keen, prices are always of value. If the price is within reach and curiosity has been aroused, you can often draw the shopper into the store.

**H**ERE and there are outstanding radio establishments which serve a particularly prosperous class which prides itself on being able to pay any price for what it desires. For this group, you must concentrate on the high quality and luxury of the lines you carry and in such a case price information may be omitted. You must realize, however, that a window display habitually catering to this class definitely discourages the average buyer who may rate your store at once as expensive.

"For the diverse line, where concentration on a single model means failure to approach important classes somewhat above and below that price, it is better to show two or three models to indicate the price range. But any extensive display, with many different models, only brings discouragement to the hesitant buyer.

A phase of successful window dressing, almost invariably neglected, is the all-important effort to lead the casual window gazer into your store.

You have gained if his attention is aroused and his inspection secured, but the real capitalization of his attention is a visit into your store. Encourage this by a leader, not necessarily a cut price article, but a small adjunct which implies no obligation. Here are a few suggestions which may, or may not, fit particular cases, but it should not be difficult to work out your own ideas with their aid:

'Ask about our monthly inspection service.'

'This leaflet gives full information about our entire line.'

'The latest call letter book free inside.'

'Can we help you with your radio problems? Ask our service expert.'

'Come inside for our weekly program list.'

"Finally, I wish to offer a few 'don'ts,'" concluded Mr. Landemare. "Don't clutter the window with many items. A lot of anything looks cheap. Don't confuse the buyer with competing lines. Don't drive away the feminine shopper by a dirty window. A layer of dust on a radio set turns away any housewife. And finally, don't forget that you have actually paid a landlord for selling power through your window. Don't fail to use it to the limit of its capabilities."

## Illuminated Bulletin *Puts the Weekly Special Over*



*Martinson's illuminated bulletin board for advertising the "week's special"*

**A** BULLETIN board suspended from a pole before the Radio Electric Shop of Sonoma, Cal., has been of infinite value in getting new radio accessories and equipment before the public with striking force, according to A. J. Martinson, the proprietor. Each week the message

of the electrically illuminated sign-board is changed while small strings of lights suspended between it and the ends of the main sign over the store window focus the attention of the passerby on the "week's special." A small canopy or shade over the sign protects it from rain.

# SERVICE *Seen as* Primary Requisite

*This and other topics discussed by  
"Radio Retailing's" readers this month*

## The Problem of Radio Distribution

Editor, *Radio Retailing*:

**M**ERCHANDISING radio should not present such a difficult task for the manufacturer and it would not if it did not cut across so many trades.

Radio should be a selling proposition by itself. It does not depend upon the grocery industry, the hardware industry, the drug industry or the cigar and candy industry, yet you will find all these stores selling radio.

Some time past I had several calls for electric refrigerators. I called up a distributor of such machines, and told him of my needs.

He honestly gave me every encouragement, but there was one glorious bumping block. "Can you qualify on service?" he asked. I had to prove by showing him, not telling him, that I was capable of setting up the plant and servicing it.

### SERVICE LEADS TO SALES

That policy is today selling more refrigerators for that distributor than all the drug, hardware, grocery, candy and cigar merchants could possibly sell if they were all turned loose on the trade.

Will it work equally as well with radio? Why not? I have in mind just now a case where a harness and carriage merchant plunged into the radio business. He secured the agency for a very popular make of machine and at first sold a great number of them, but when the service calls came in he was lost. He could not check a circuit. He could not repair a machine. Some sixteen or eighteen of his patrons had to go elsewhere with the machines that he had sold but on which he could not give service. Now this kind of treatment is a money loser for the manufacturer of that set because this same dealer is having hard work today selling his sets. The machine is not at fault—it is one of the best makes but the people of his district have turned against it. The *radio dealers* who know how to service machines are slow to take up an agency on machines that have been butchered by grocerymen, hardwaremen, candy and cigar merchants.

### CAN YOU QUALIFY ON SERVICE?

Why wouldn't it pay the manufacturer to instruct the distributors to ask one question. *Can you qualify on service?*

Manufacturers' advertisements read "Simple to set up and operate." True, but they do not say "Simple to tear to pieces and put back together." "Any child can operate this receiver" does not mean "any child can service it."

Mr. Manufacturer, if your dealers could all stand up any say "we can qualify on service" you would double your production with lasting sales and many repeats.

E. D. HOLT,  
The Radio Exchange.

Osceola, Pa.

## Selling a Demonstration or Selling a Set?

Editor, *Radio Retailing*:

**I**T IS generally admitted in most industries that the final outlet to the consumer, namely the dealer, should make money. I think I am perfectly safe in saying that radio dealers have not made money out of radio sets. I am speaking only of the music dealers of the United States and the radio dealers of this section.

You often ask for frank opinions regarding this situation and that is my excuse for writing you on this subject. I have the following comments to make.

One of the principle steps in the distribution of radio sets—one which costs the most for the least return, and one which has broken or sadly bent hundreds of radio dealers—is the proposition of sending out sets on "free trial." The dealer is almost helpless in the face of this condition.

The powerful national advertising of radio companies almost invariably state "Ask the nearest authorized dealer for a demonstration." In other words, the whole industry does not try to "sell the set," but, encouraged and urged by the manufacturer, the jobber, and the dealer, the salesman sets out to sell a demonstration with the result that he is successful in selling a good many demonstrations but very few sets on which a profit can be made.

It may not seem so, but we have a purpose in writing this letter, and that is that you may listen to the voice of the individual dealers throughout the United States, and possibly by some powerful articles in your publication, show them the folly of selling a demonstration so that during the season of 1928 they may eliminate one expensive method, and thereby help each other in selling at a profit.

ROBERT N. WATKIN,  
Secretary,  
Will A. Watkin Company.

Dallas, Texas.

## Jobbers' Retail Stores

Editor, *Radio Retailing*:

**N**OW is the time to recast merchandising plans to keep abreast of the changes in the radio industry. And while we are considering changes there is one growing evil that should be stopped—that is the practice of some distributors selling to the retail customer and industrial accounts at top dealer discounts. These jobbers find this so profitable that they are establishing chains of retail stores, openly and with the consent of the manufacturers.

Dealers naturally will not buy from these jobbers or from others who cannot quote prices low enough to enable them to compete with these cut-price jobbers. So they establish direct factory connections where possible, or patronize mail order jobbers quoting special cash prices.

Every manufacturer should try to force

this type of jobber out of the picture by treating him as a dealer and giving him dealer's prices. On a 15 to 20 per cent lower margin he will have to advance net selling prices 20 to 30 per cent.

F. R. PRAY,  
F. R. Pray & Company.  
Boston, Mass.

## Radio Mail for Service Men

Editor, *Radio Retailing*:

**H**ERE is an idea that I think you will approve of.

Why don't radio manufacturers, when sending information through the mails about their products—address their letters so that the radio service man can get them? I have to fish my information on late products, and some of great value to me, from the wastepaper basket. My employer never opens three-fourths of his mail. After lying around for a month on his desk they are all thrown out.

Therefore—why doesn't radio mail be so designated by a pattern or emblem or something—so that my employer can pass such letters over to me—his service man—immediately after receiving them.

The characteristic which would tell that such mail was for the radio man and not addressed to the store in general—would have to be made standard for all radio mail—then I would stand a chance of getting the latest circulars—and not the wastepaper basket.

FRED LICHTGARN.  
Evanston, Ill.

## The Buyers' Market Is Here to Stay

Editor, *Radio Retailing*:

**W**HEN radio first burst upon the country, manufacturers were not equipped to meet the overwhelming demand. Any sort of a set, no matter how poor, was easily sold. Radio was a fad and a novelty. The public was entirely uncritical and it was a gold rush for the unscrupulous dealer and manufacturer. The public bought radio in unlimited quantities. Factories worked night and day to supply the demand. There was little or no sales resistance.

Today that wild rush is over, and the buying fever is gone forever. The American public has settled down to steady and consistent buying in much the same way as it purchases automobiles. It has become critical of the quality of reception, of the appearance of the cabinet, and of the standing and reputation of the manufacturer. It is decidedly a buyers' market.

This buyers' market will continue to grow stronger each year and the value of worthwhile radio will advance year after year with unflinching regularity.

S. H. BEEBE,  
Editor, Fada Sales  
New York City.

# Some Christmas



## SCREENS OF HOLLY

Screens covered with green holly and used as a background featured this 1926 Christmas window of R. H. Macy and Company, New York City. (Left)

## USING STREAMERS

Christmas streamers to spell the name of the set featured was the last year holiday window of the Sun Electric Company, Baltimore, Md. (Right)



## CHRISTMAS BELLS

A window which gives the holiday atmosphere at minimum expense is this suggestion of the Barrows and Conkwright Company, Hollywood, Cal. (Left)

## DECORATE A TREE

A fully decorated and illuminated Christmas tree features this display of the Shepard Store, Providence, R. I. Wax figures provide the human interest appeal. (Right)

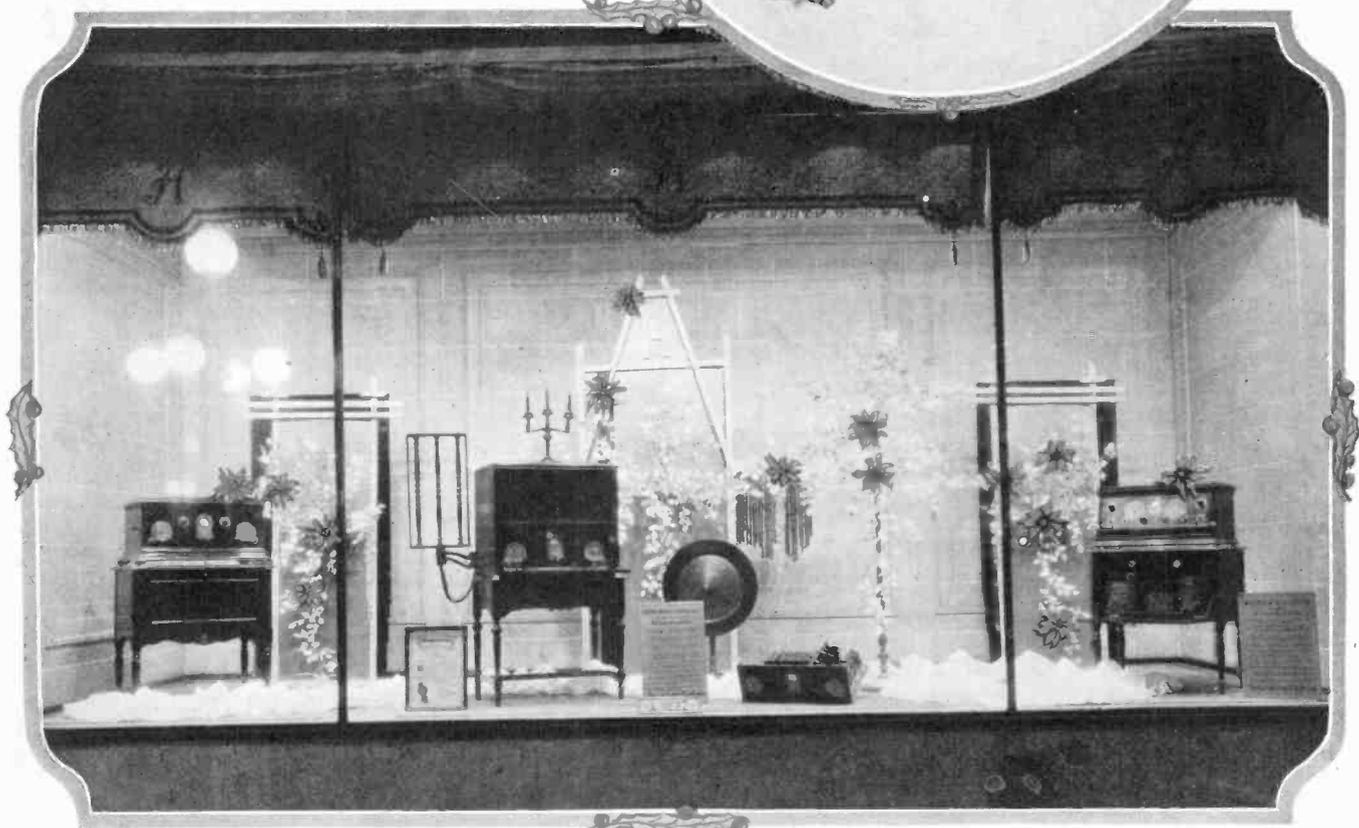


# Last-Minute WINDOWS



## COLOR CONTRASTS ATTRACT

*Flaming red poinsettias against a background of pure white give the correct holiday coloring to this window of the Good Housekeeping Shop, Ravenna, O.*



## POINSETTIAS ADD COLOR

*The Herz Store, Terre Haute, Ind., had an unusually attractive display last year, made so through the use of flowers and an occasional poinsettia to add color*



# “I Follow the

*This Middle West merchant keeps track of the crops his farmer prospects are raising and sells them when he knows they've got the money*

**F**OR the past two years, I have been “following the crops.” Because of this policy sixty per cent of my radio business now comes from farmers having “seasonal” incomes. Many of these “seasons” fall between April and October. Therefore summer sales have increased. This year they were 40 per cent greater than for 1926. The farmer needs, and uses, his radio twelve months in the year.

Total sales during my fiscal year just closed, September, 1926, to September, 1927, were \$20,740; almost double the record for the previous year. Moreover, the proportion of cash to credit transactions has increased, I estimate, twenty per cent. Sales during the so-called “slump” months, March to October, now represent 41.6 per cent of my total gross volume.

This is because I have made a study of the farmer. I think I understand his mental processes when it comes to buying. I know *when* and *where* his money comes from—and I go after it *hard* at the *psychological time*—that is, when I know he's got the money, after the sale of certain of his crops. I merely keep track of the crops my farmer prospects are raising and when they are harvested.

I was born and raised on a farm in Starke County, Indiana. Its soil supports nine profitable crops, and its waters, Bass Lake, one—the city vacationist. You can't get blood out of a turnip, or money out of a farmer when he's broke. But when the mint syrup goes to the bank, or the January grain pool sells—Oh Boy! Come and get it! That's why I file my rural prospects by crop seasons and that's why I give but a two-night demonstration, in season—then pull the set to force the decision. You see I know the money's there and that it's just a matter of bearing down.

**F**ARMER KIERNAN, for example, called me up at six o'clock one morning to tell me that he had sold those cattle that I had suggested to him he might profitably do; it was in April when cattle were ready for market that I went after this stock raiser.

I have even offered to take in trade a couple of cows at \$50 each, market price about \$45, in order to close a deal, because I knew where I could sell them—it was the right season again. This was a polite way of offering a slight inducement. The farmer took me up, thinking he



# CROPS

By SHIRLEY BLAKELY  
Radio Retailer, Knox, Indiana



was putting a little something over—and everybody was happy. To keep me straight on this crop plan, I file my prospects under the proper seasonal designation. Anyone can do the same who “knows his oats.” For example: Grain—January; Poultry—January to June; Cattle—April, May; Small Fruits—May to September, etc. In addition to this I have prepared a “Crop Quota” table. This covers 1927-28 sales expectations and is based on my past experience. Referring to the accompanying table on the following page, it will be seen that I should sell about ten outfits to the corn farmers this November and December—average unit sale \$130.

The season of high prices for eggs, January to May inclusive, ought to be good for fifteen sets. My job is clearly defined. The target is there for me to aim at. That of itself is a stimulating influence. And the best part of it is they can't say: “I haven't got the money.”

REFERRING to the table it will be seen that I sell for cash, for notes or for mortgage contract. I fit the terms to the nature of the crop yield. The longer the period of income, the more lenient the financing arrangement. If notes are preferred, I first find out whether that farmer's paper is acceptable to my banker. If I am talking to a mint, onion,

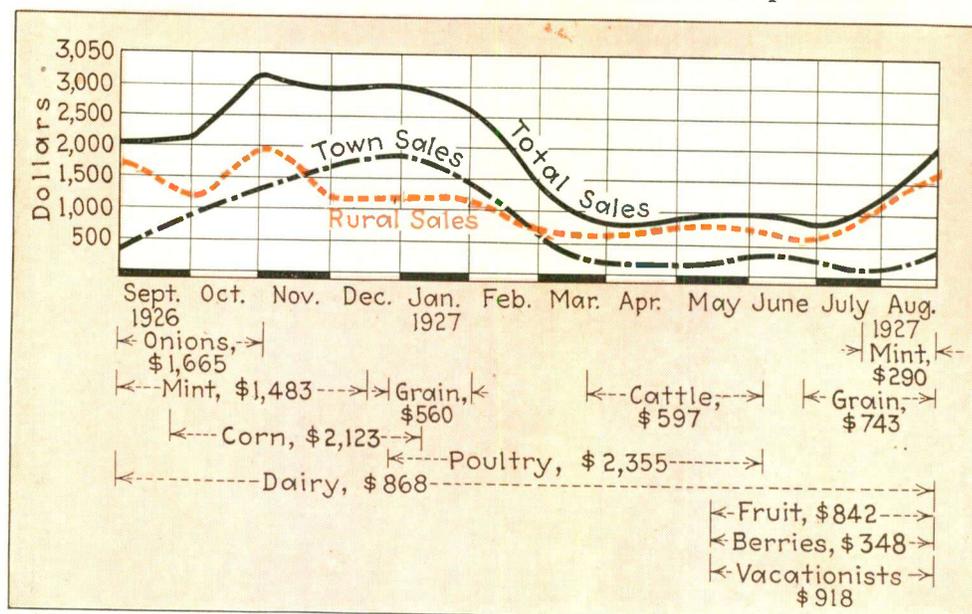
cattle, or corn raiser, I point out the saving of cash over credit. The out-of-town vacationist must pay cash.

Here is an idea for carrying this plan right down the line to the individual buyer. Cultivate, as I have done, the acquaintance of the grain and corn elevator men in town. Give them a five per cent commission for sales made to “hot tip” prospects. By this I mean to farmers who have just sold their grain or corn to the elevator man at a favorable price. To illustrate: Brownell, of the People's Grain Elevator Company, phones me, “Henry Silver's in town. He just sold me his late wheat. Gave him a pretty good price for it too.”

Immediately I start out looking for Farmer Silver.

*Please turn to next page*

## Following the Crops Fills In Summer Depression



The figures following the name of the crop are actual 1926-27 sales to farmers who paid for their sets out of the source of earnings indicated.

The object is to get to him before he spends his money for something else. Of course, when I do meet him I ease into the subject gradually and casually. Nine times out of ten I am able to persuade him to accompany me to the store. And three times out of four I sell him—if he doesn't own a set already.

One of my most effective methods of closing the individual sale with a farmer is to cite to him instances of other farmers who have sold their crops at better prices because of getting the latest quotations by radio.

"What did you get for your hogs, Mr. Smith?" I say.

When he tells me, I am generally able to show him, from a record of stock and grain quotations which I carry with me, that the market, as quoted over the air, had been higher at some time prior to his sale.

The competition of the mail-order houses doesn't worry me. Most of the farmers who use this service are of the poorer class. Here again, through friendly connections, I frequently find out who is getting an outfit from Chicago.

I call on these prospects, for such they are, at once. "If you don't like your catalog set remember you can return it within thirty days," I remind them.

Occasionally they do this, and, having been bitten by the radio bug, buy a slightly better set—frequently on time payment terms and expert service which I hold out to them as inducements to patronize their local dealer. If unsuccessful in getting them to try my set, I offer them, in friendly spirit, my services. This gives me an oppor-

tunity to keep in touch and sometimes leads to a replacement sale a year or two later.

Following the crops permits concentration of effort. And when covering farm territory this is important. For example—the mint and onion farmers are located in the rich bottom lands of the Yellow River. I canvass these birds in the late fall. First I take the prospect cards which have accumulated during the spring and summer out of the "Mint" and "Onion" sections. I arrange them by routes and start out calling also on every farmer in between whose crop looks good. During my summer contacting of the grain, dairy, fruit and berry fellows I line up many prospects whose crop

money will come in later. These are filed under the correct heading in the little crop box.

By classifying your territory according to its seasonal yield of money and by filing individual prospects likewise, not only will much lost motion be saved but you will be in a position to "strike while the iron is hot."

MY NET profit for the last fiscal year was eight per cent. I was able to close a large majority of my sales myself because when I tackled a rural prospect I knew that he was "ripe" and thus saved much time and unnecessary bickering. Volume without burdensome selling expense is an inherent part of this system of concentration on the prospect-in-funds. Analyze your farm market from the angle of its financial responsiveness if you would sell it economically and thoroughly.

### How Blakely's Radio Sales follow the Crops

Blakely's proportionate sales expectations, by months, attainable by following the crop movements.

Crop	Terms	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mch.	April	May	June	July	Aug.	Totals
Onions	Cash	\$800	\$800											\$1,600
Mint	Cash	300	300	400	500								\$300	1,800
Corn	Cash or short term notes		700	700	600									2,000
Grain	Short term notes					\$500						\$300	400	1,200
Cattle	Cash								\$300	\$300				600
Poultry	Weekly payments					550	\$500	\$450	400	300				2,200
Dairy	Weekly or monthly payments	80	90	90	100	90	80	70	60	60	\$50	50	50	870
Small fruits	Cash or three payments										400	100	300	800
Berries	Cash or three payments										100	200	200	500
Vacationists	Cash											500	400	900
Totals		\$1,180	\$1,890	\$1,190	\$1,200	\$1,140	\$580	\$520	\$760	\$660	\$550	\$1,150	\$1,650	\$12,470

Such a table will stimulate any radio dealer to greater efforts because it serves as a monthly objective and shows exactly where the sales should be made.



# Foiling *the Demonstration* HOUND

*A way of handling this pest that is always effective and saves the dealer time and money*

**W**HEN a prospect comes into our store and asks for a demonstration, our first move is to ascertain whether he is sincere and really intends to buy, provided the set suits him, or whether he is just another professional demonstration hound, says M. Brotherson, general manager of the Hafer Supply Company, Joplin, Mo. It is not always possible to tell the one from the other by sight or from the preliminary conversation. If it were, the "professional" could be disposed of very quickly. Here is a system we use which has proven very effective and which does not offend the real buyer.

We agree with the prospect that a demonstration is a fine thing. Then we explain to him that we have every faith in the set that we sell. We impress him with the fact that that is the reason we handle the makes of

sets which he sees before him. We further stress the fact that we will put our set up against any other make sold in Joplin and let him be the judge. Then we spring the real punch to our little idea.

#### DEMONSTRATE COMPETING SETS

We tell him that the only way to compare sets is to have them all together in the same place, on the same night and to tune them in on the same station, one after the other, then he can decide on the spot which is the set to buy. At no time do we act as if we didn't want to demonstrate our set; on the contrary we make it plain that we do want to demonstrate, but in competition with the other makes sold in Joplin.

After we have elaborated on the necessity of trying out the different sets on the same evening we state that any time that will suit our com-

petitors will also suit us. We urge him to go to the other dealers whose sets he is interested in and find out when they can give him a demonstration; then if he will let us know ahead of time we will be on deck too, with our set, ready for the test and demonstration.

The result of this offer is that the demonstration "nuisance" is scared away, never to return. The sincere prospect comes back and in many instances we sell a set, frequently *without* the comparative demonstration test. At no stage of the game have we offended the prospect or even told him that we won't make a demonstration.

On the contrary we have jumped at the chance to make a demonstration and under the most trying conditions. This little stunt has saved our company countless hours of valuable time and hundreds of dollars.

## Radio Dealer's Calendars Hang in 75 Classrooms

**T**HE accompanying illustration shows how a radio map has been used as the "attention getter" on an advertising calendar. To further add to the utility value of this piece of advertising matter there is printed on the back (reversed for handy reference), a complete list of every broadcasting station in the United States of 25 watts or more.

The Whiting Radio Service, Bridgeport, Conn., ordered 500 of these combined radio maps and calendars. They proved so popular that Sherman E. Whiting, owner of



this concern, ordered 500 more from the Thomas D. Murphy Company, Red Oak, Iowa.

"We have one of these in every high school classroom in Bridgeport—75 in all," he says and adds, "We mailed these calendars to our set owners and to a selected list of prospects. These advertising calendars cost us about 23 cents apiece. We feel that they have given us the best permanent publicity we have yet had."

The map gives the call letters and location of every broadcasting station of importance in the United States and Canada.

# Taking Radio



Above: Booth of the Privag Company, Berlin, at a recent industrial exposition, a corner of which was used to stage demonstrations of its sets by means of theatrical skits.

Right: One of the theatrical skits put on by the Privag Company to illustrate the uses of portable sets during the summer.



**M**ERCHANDISING radio in Germany presents a problem far different from that which obtains in the United States at present, according to T. C. Silber of the Privag Company, Berlin. German people have not as yet become so enthusiastic over radio that they shop at the radio stores let alone crowd into them as they appear to do in some of the large cities in America.

Consequently the radio dealers in Germany, more so than the radio dealers in America, have to depend upon outside selling in order to get any amount of business. Mr. Silber, in his business, has stressed this fundamental principle of merchandising radio sets to the extent that he has built up, exclusively, an organization for carrying radio into German homes instead of waiting for the people to learn to buy at the stores.

"The success of such a business as this," he claims, "is dependent upon developing a large turnover and upon keeping down the overhead. The building of an efficient sales force with a small labor turnover and the standardization of routine are the methods by which it can be accomplished."

The Privag company has found that a division of the duties of selling between two types of sales crews is most effective. The first type of salesman is the one entrusted with establishing the approach, and arranging for a dem-

*Outside selling is used almost exclusively by this Berlin concern in selling radio to its customers*

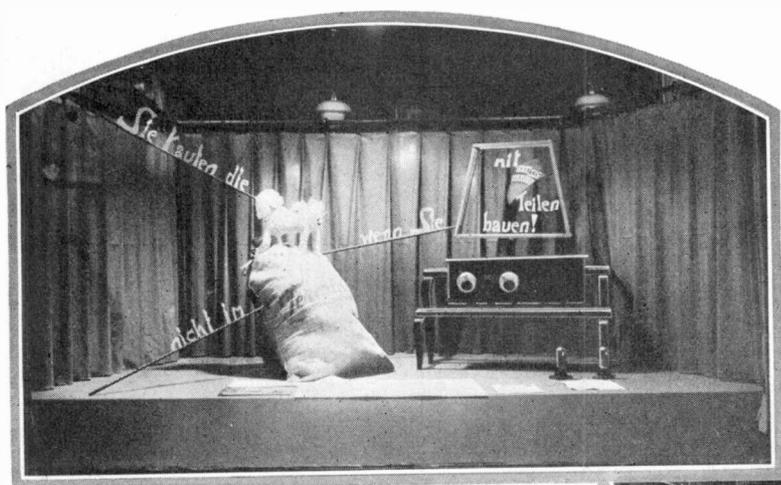
onstration. This type is generally a woman. The respectable middle-aged woman of the "upper-lower" or "lower-upper" class type is most successful for this kind of work both because she arouses confidence in her prospect and because her work from the standpoint of the firm is reliable and trustworthy.

**B**ERLIN, like most large European cities, is made up almost entirely of apartment dwellers. Entrance must be effected first, through a downstairs door (sometimes through an outer gate in addition) and later at the door of the apartment. The housewife usually has a mirror arrangement or peephole by which she can see who is at the door and hesitates to admit a strange man. A respectable appearing woman, however, is given admission and at least establishes the contact.

In this connection it has been found that a business card giving the name of the company's representative under the title of "Inspector" rather than "Salesman" has been found useful. The "inspection" is for the purpose of determining whether or not the family possesses a radio. If not, the question is, of course, whether they would be interested in the set offered. If the housewife reports a radio, she is asked if it is satisfactory or whether a better set would not be acceptable.

By C. GRUNSKY

# to the German People



"You do not buy a cat in a bag when you build a set with Baltic radio parts," read the cards in this window display of Radio Lauerland, Bielefeld.

An extremely conservative attitude is adopted toward the making of appointments for demonstrations, as the cost of the delivery of the machine is one of the major items in overhead, and it is only when the prospect is really good that the company wishes to incur this expense. A one-per cent success in the securing of permissions for demonstrations is, therefore, regarded as satisfactory, since it is expected that the demonstrations given will result in 90 per cent sales.

The time of this first battery of saleswomen is the cheapest commodity in which the company deals, and it has been proven by careful checks that it is cheaper to employ this contact force lavishly, as it were, rather than to waste the time of the more expensive follow-up salesmen and the other items of expense involved in an unproductive demonstration. Forms sent in by the field force, for every transaction made, enable the head office to keep in close touch with the comparative costs involved. In spite of this conservative policy, however, these women inspectors have shown themselves to be so successful that each one can keep at least one salesman busy following up her footsteps—sometimes two.

When the salesman reports a sale on credit, the company looks up the status of the purchaser before the demonstration is arranged. An effective check is obtained as to the prospect's profession, whether owner or renter, and other points which determine his ability to pay.

**T**HIS article is the last of a series on retail methods in Europe by C. Grunsky, "Radio Retailing's" Pacific Coast Editor, who has recently returned after making a special survey of retail radio conditions in European countries. The first article, "Retail Methods in England," appeared in the August issue; the second article "Selling Radio in Italy," appeared in the October issue; and the third article, "In France, Dealers Face a Money Problem," appeared in the November issue.



The Easter Parade throughout Europe will be led by the Loewe set is the interpretation of another display by Radio Lauerland.

**T**HE next procedure following this check is the delivery of the set, which it has been found cheaper to send separately than to entrust to the salesman. Present plans contemplate the use of an auto to carry four sets and to be accompanied by two salesmen. Costs are very carefully figured on this item in order that the delivery charge in the company's overhead be reduced to an absolute minimum.

Of those who purchase sets on time but one-half of one per cent later prove questionable risks on making further investigation. To these a letter is directed by the company stating that it regrets the fact that its "Directorate" (a convenient fictitious legal term) will not permit the credit and the set is called for. To date, no difficulty has been experienced in recovery. The contract reads "order to purchase" rather than "sale," in order to safe-

guard legally the company's right to the article until the last payment has been made.

Payments are collected by mail by means of a convenient German fashion of sending a card which is returned, with the cash, to the postman during his household rounds. The Privag company usually sends some pamphlet or small mail advertisement with the card as a reminder. 92 per cent of the purchasers are prompt in their payments. Of the remaining eight per cent, the majority remit on receipt of a friendly letter five days later, and the remainder on receipt of a second letter, still friendly, after ten days. Thus far the formal letter asking for payment in legal terms has not been required.

Service on sets sold is not advertised as a part of the company's program, but in practice the customer is given absolute satisfaction. Charge is made for material necessary in repairs, but the service is free until it is thought that the customer is fully acquainted with the use of the set—or even later, if the particular circumstances seem to warrant it. The set sold is a thoroughly high-class article, however, and it has been found that this item in the overhead does not amount to more than one and three-quarters

per cent of the cost. Service expense, therefore, is low. An extensive advertising campaign has been initiated and is to be extended as the business justifies the expenditure.

This advertising campaign is largely in the form of direct-by-mail advertising, although other mediums have not been overlooked. One of the pre-summer features which called favorable attention to the company was a booth at the "Week-End Exposition," which helped counteract the summer slump by suggesting holiday uses for radio. A series of short theatrical skits showing radio in use under various vacation conditions attracted the largest crowd of any booth at the Exposition.

However, it is recognized that the backbone of the business lies in the sales force—and every means is taken to keep this an effective working tool. Great care is exercised in the original choice of material and then an educational period of from one to two weeks is furnished, during which time the salesmen are further tested out and rejected if they do not appear promising. The middle-aged women who form the corps of inspectors are given a technical training sufficient to enable them to understand the article they are handling, followed by a tactful presentation of the rudiments of selling. They are found to be apt learners. Follow-up salesmen are required to have a more thorough technical knowledge before selection and their training is

confined, therefore, to a thorough study of the set and a short course in salesmanship. The expense of this training is one of the major items of cost and in consequence the emphasis is placed upon the selection of the right man or woman in the first place.

THE Privag business in Berlin is still young, but with a careful selection of salesmen, a thorough training, an enthusiastic leadership in a well-thought-out sales plan, and a continual and close check of expenses to keep down every item of overhead, Mr. Silber believes this plan is capable of unlimited expansion. It is possible to finance on the basis of a capital equal to 20 per cent of the turnover.

With these principles accepted as a basis for calculation, it is easy to prophesy results.



Die tägliche Arbeit in Küche und Haus wird durch Rundfunk noch einmal so leicht. Dazu bringt das redaktionelle Programm täglich nützliche Winke fürs Heim.

Auch draußen im Grünen bietet Ihnen der Rundfunk Erholung und Unterhaltung. Überall haben Sie mit unserer Ideal-Lautsprecher-Anlage guten Empfang.

Helles Kinderlachen, strahlende Gesichter überall wenn die Funkbegeisterten der Kleinen die schönsten Märchen erzählen. Bei ihm sind die Kinder gut aufgehoben.

Fröhliche Geselligkeit macht Ihnen Ihr Fest doppelt lieb. Ein Druck auf den Knopf—und der Frohsinn der Jugend erfüllt Ihr Haus.

Ihre Ideal-Lautsprecher-Anlage trägt Kunst und Wissen, Freude und Behaglichkeit in Ihr Heim.

**PROGRAMM**  
der  
**PRIVAG-SKETSCHÉ**

Täglich von 11-1, von 3-1/6 und 1/7-9 Uhr  
**FUNKHALLE - STAND 119 UND 142**  
**WOCHENEND-AUSSTELLUNG**

Erster Sketsch: Der Knalleffekt	Der letzte Tanz
Zweiter " Roman	
Dritter " Abschied vom Wege	
Vierter " Die Fahrt ins Glück	
Fünfter " Das Radio und der	
Sechster " Liebe Wellen	
Siebenter " Großstadtlucht	
Achter " Die Dritte im Bunde	
Neunter " Die letzte Seite	
Zehnter " Pan und Nymphen	

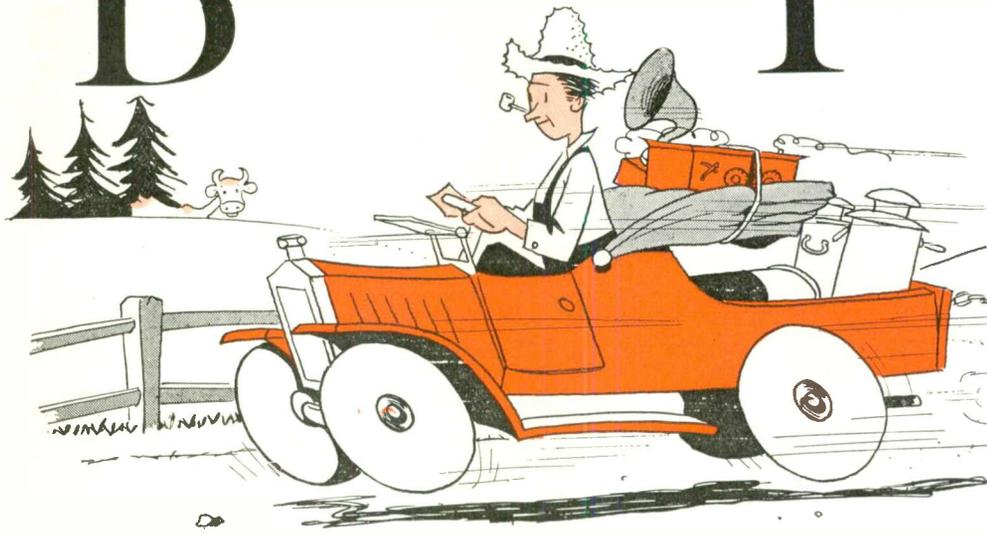
Entwurf und Leitung: J. C. S. Lore  
 Musikregie: J. C. S. Lore, M. C. Schreiber, M. John, H. Brandt  
 Darsteller: Die Damen: Maria Guglielmi, Gerda Loschinsky,  
 Grete Wintzen, Lisa Mohner  
 Die Herren: Josef Mailberg, Herbert Kröger, Franz Hagen  
 Bühnen-Gestaltung: Vereinigte Malerwerkstätten, Stöglitz, Luthardt 12;  
 Adolf Koschel G. m. b. H., Joachimsthaler Straße 4  
 Beleuchtung: Schwabe & Co., Köpenicker Straße 118

Eintritt zu den Vorstellungen frei

Above: Mailing folder of the Privag Company advertising its "ideal" reproducer on time payments.

Left: Program of the theatrical skits arranged by the Privag Company to demonstrate their radio sets at the "Week-End Exposition," Berlin.

# "BRING IT IN"



## Halves Cost of RURAL Servicing

*It is cheaper for both the dealer and the farmer customer to service the set in the store according to this Kansas merchant*

**T**IME and mileage are the expense-creating elements of servicing the farmer customer's set and no one realizes it better than H. C. Leonard, radio merchant in Abilene, Kansas. "There is no profit in this expensive element, and it only makes the customer dissatisfied with the cost of radio service so I sell 80 per cent of these 'remote control' customers on the advantages of bringing the set to the store.

"Bill, you know as well as I do that I can do a much better job in my back room where I have everything needed than in your front parlor. It'll save us both time and money. And if there's serious trouble it will have to come in anyway. When your auto goes wrong you take it to the garage, don't you? Well, why not chuck the set, everything except the aerial, in your Ford next time you come to town? Bring it in in the morning and it will be ready for you when you drive back," says Leonard to his agricultural friends and makes them think he's doing them a favor when he "advises" this course of action.

"Most every owner wants the personal attention of the boss on his favorite set so I tell the customer that I would have to send a man if he wants the set serviced in his home but that I will check the set myself if he brings it in to me." "But the real 'action' incentive," Leonard declares, "is in my guarantee which goes with every set I sell and which reads, a year's service free if you bring the set to the store.

Otherwise the free servicing period is limited to thirty days."

This farming-center radio dealer explains that the first call for service is always answered by a personal visit to the home. After that initial service visit the trouble is generally some minor thing or the natural deterioration of batteries and tubes. Asking them to "bring it in" saves these costly unnecessary trips.

"**T**HE farmer generally has the time and the facilities for complying with this request and if he doesn't think so I usually convince him of it through the pocket-book route. If the fault turns out to be his a house call costs him from \$3 to \$5 according to mileage—not hours. Store service averages but 50 per cent of that amount—and is more satisfactory.

"I talk straight from the shoulder. That's what they like. The same rule applies on service payments. It's harder to collect 'on the spot' in the customer's home than in your own shop. So this policy saves bookkeeping and collection losses as well as time and gasoline."

"How do you handle the aerial and ground testing?" he was asked.

"I give them the necessary simple instruction over the phone. If the set checks up O. K. in my workroom and its owner still reports trouble then I go out there—but this rarely happens."

### Leonard's servicing policy indicates these three things:

1. *A better job can be done in the shop.*
2. *The farmer can readily be sold the logical "bring it in" idea and taught to like it.*
3. *It saves both parties time and money.*

# Radio Retailing

A McGraw-Hill Publication

December, 1927  
Vol. 6, No. 6

# SELLING Requires a

## *A New Technique Required*

**N**O LONGER can the radio dealer slight the artistic appeal when selling the woman prospect. The advent of the quality cabinet, whose beauty is unquestioned and whose value is frequently more than that of the radio equipment which it houses, has interjected a new element in the merchandising of radio to a discerning public.

Most of these cabinets of high grade are of a "period" design. In line and materials they follow faithfully the *motifs* of the era they are supposed to represent.

People who have decided to spend from \$150 to \$300 for external appearance are frequently astute judges of "what's what" in furniture harmony.

The dealer who sees in this demand for fine furniture a chance to increase materially his average unit sale should realize that this new trend carries with it an obligation as well as an opportunity.

Stock period cabinets—they command their own price and never go out of style, but—learn how to sell them. Put yourself in a position to be able to discuss intelligently with the prospect, the distinguishing features of each school of furniture architecture. Cultivate, for example, an appreciation of the sturdiness of old English craftsmanship. Learn to recognize the delicate influence of the Renaissance, to recognize the difference between the Spanish as compared to the French methods of expression.

This may sound like a far cry from the business of selling radio but if radio and fine furniture are to become associated, then mastering the technique of selling the latter will most assuredly be part of the modern radio dealer's job.

\* \* \*

## *Installment Selling Sound*

**A**T A DINNER given by the General Motors Corporation recently, Edwin R. A. Seligman, Professor of Political Economy at Columbia University, declared that the practise of time payment purchasing is fundamentally sound.

Professor Seligman cited the history of time payments, stating that the financing of purchases on the part of the buyer parallels and is as basically sound as the financing of production on the part of the manufacturer through banks or other sources of credit.

In 1926, Professor Seligman said, total retail sales amounted to \$38,000,000,000, of which 12 per cent, or about \$4,500,000,000 was done on installments. Comparing this figure of \$4,500,000,000 *total* time payment business in 1926, with the annual national income of \$70,000,000,000 for the same year, and with the total savings bank deposits of \$24,000,000,000 as of June 30, 1926, it is readily seen that time payment obligations are extremely well protected. Time payment sales, therefore,

reduced to percentages, are less than seven per cent of the nation's annual earnings, and less than 19 per cent of total savings bank deposits.

Generally speaking, then, the nation as a whole is financially able to expand its time payment purchases to a still greater degree than has been done to date.

\* \* \*

## *Another Sales Opportunity*

**A**DAPTING battery-operated sets to use the new A. C. tubes presents a new sales opportunity to the industry. Several manufacturers have devised and are marketing apparatus to accomplish this with a minimum of re-wiring.

In most instances, it is a practical undertaking. In some cases it may be expected to result unsatisfactorily. With the constants of the circuit, the tubes, and the power supply individual in almost every installation, each re-wiring job may be subjected to experimentation. But, generally speaking, the plan opens up new fields of profit for the dealer through the sale of the necessary parts and accessories, as well as the service charge for doing the job.

\* \* \*

## *The Second Stage of Evolution*

**E**XPERIENCE has shown that any new article of merchandise such as radio passes through three distinct stages of evolution.

The first is the novelty stage, when the product is new and the public freely and willingly throngs into stores to buy it. Radio has passed through the craze era and is well into the second period.

The second period, which radio is now going through, is called the "specialty" period. That is the time when the relationship of the merchant and the public is exactly the opposite of the first period, and is the time when the product must be taken to the public and sold through "specialty selling" methods. The public, generally speaking, has stopped going after radio; radio must now be taken to the public.

The last era, which is yet to come in radio, can be called the staple period, that is, when the product has become a necessity. Then, similar to the first period; the public returns to the store to buy, but from an entirely different reason. At that time, they were curious. In the "staple" period they go to the store to purchase what they consider one of life's necessities.

Radio is now a specialty. It must be sold. How soon it will become a necessity depends on the broadcasting industry. Radio will become a staple product as soon as the public believes broadcasting is essential to our daily existence. Broadcasting is the keystone on which the future rests.

# CABINETS

## New Technique

*Furniture, Time Payments,  
Re-Wiring, Prosperity,  
Cheap Service Men,  
Chaos, Evolution,  
and other things  
discussed by the editors*

### Prosperity

TWO prophecies of national prosperity have been made within the past few weeks from two widely divergent sources.

President Coolidge, in his talk before the Union League Club at Philadelphia, stated that America's greatest prosperity still lies ahead and that the most serious test the nation will have to face is whether it meets and survives prosperity or permits luxury and indulgence to result in decadence. There was no indication, evidently, of any radical financial depression.

Similarly, J. J. Raskob, chairman of the finance committee of the General Motors Corporation, in a recent speech, declared, "Everything indicates that 1928 will witness the greatest prosperity our country has ever enjoyed. There is little, if any, inflation anywhere, an abundance of credit, and great farm purchasing power as a result of good crops and prices, and my prediction is that with the Ford Motor Company in production, the automobile industry will produce 5,000,000 cars in 1928, as against 3,500,000 this year."

This kind of opinion from such high authority makes food for thought. Despite the fact that next year will stage a Presidential election there is good ground for confidence if we keep our heads.

\* \* \*

### A Stimulating Influence

THE stimulating effect of national broadcasting "hook-ups" on the business of retailing radio has again been confirmed, this time by direct reports received from dealers in Kansas, Nebraska and Iowa.

Since stations WOW, Omaha; KOIL, Council Bluffs, and WHO, Des Moines, have been included in one or more of the big "chains" there has been a distinct and lively demand for sets from those who have, until now, kept away from radio.

It is gratifying to see this consumer response, in so tangible a manner, to the artistic programs now available through the addition of smaller stations to the national chains. Dealers whose local stations are now similarly served should not neglect to explain to their prospects the advantages of nearby reception of these enchanting and costly programs.

\* \* \*

### Cheap Service Men Do Not Pay

THE day is over when any "ham" can build as good a set as a factory-made product, and with this comes the realization that no longer can any young high school boy with a smattering of amateur radio be hired as an efficient service man. The money that is gained by paying a small salary to this type of service man is more

than lost in his inability to make a favorable impression upon the customer.

Get a service man with a congenial personality, pay a reasonable salary with a bonus or commission for sales made while on service calls, and then, above all, make sure that he is familiar with the sets to be serviced through studying and understanding the service instructions issued by the manufacturer.

\* \* \*

### "Chaos in the Radio Industry?"

"CHAOS in the radio industry," shouts a heretofore sensible advertising publication.

Isn't it remarkable the way this adolescent industry of ours always seems to be managed for us by somebody else?

To an outsider looking in, perhaps the present situation may look chaotic. But the radio industry is simply passing through a state of change common to any new industry, and new industries do not settle down quickly. It will be a long, tedious journey before the shaking down process is over.

Meanwhile, those who have had experience with radio know that "chaos" is mostly conversation and, as such, can be successfully survived.

### UNCROWNED KINGS

By McBride



Copyright, Central Press Association

The 1928 newspaper and magazine advertising of RCA products will be the largest ever planned by the Radio Corporation of America.

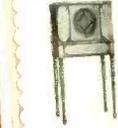
These receivers operate from the electric light socket.



RCA Radiola 17. Custom-built. De luxe construction of the famous Super-Heterodyne and the incomparable Loudspeaker in combination with RCA Radiola 17. The two best achievements in radio. Socket-power operation. A.C. or D.C. Complete with Radiotron \$895



RCA Radiola 28. The Super-Heterodyne, superior achievement in receiver design, in combination with RCA Loudspeaker 104 (See below). Radiola 28, with Radiotron \$260. 250v. A.C. operation with RCA Loudspeaker 104. \$315



RCA Loudspeaker 104. Universally recognized in the best reproduce ever designed. In combination with Radiola 28, it furnishes all features and provides socket-power operation. RCA Loudspeaker 104 (A.C.) \$275. RCA Loudspeaker 104 (D.C.) \$310

Buy with preference where you can. 1927-1928

The world's knowledge of radio is embodied in these new Radiolas



RCA Radiola 10A. Custom-built. De luxe cabinet, with standard Radiotron. Features the standard RCA Super-Heterodyne and the incomparable Loudspeaker 104. The electric light socket makes the set of operation directly from the electric light socket. 250v. A.C. or 110v. D.C. Complete with Radiotron \$495 complete

The complete line of RCA Radiolas and Loudspeakers now on display throughout the country embodies all the world's knowledge of radio.

Developed in the great Research Laboratories of RCA, General Electric and Westinghouse, these highly-perfected instruments are the culmination of a quarter century of discovery and invention by the leading electrical and acoustical engineers of the scientific world.

Radiolas are everywhere recognized as the standard of the radio art.

A Radiola is a Christmas gift that every member of the family can enjoy.

RCA Radiola  
MADE BY THE MAKERS OF THE RADIOTRON

Socket-power operation perfected by RCA, Westinghouse and General Electric



RCA Radiola 16. The latest and the most perfect in radio has long awaited for. The great achievement in radio design is embodied in the RCA Radiola 16. Features the standard RCA Super-Heterodyne and the incomparable Loudspeaker 104. The electric light socket makes the set of operation directly from the electric light socket. 250v. A.C. or 110v. D.C. Complete with Radiotron \$310. With Radiotron \$375

The new Radiolas that operate from the electric light circuit include custom-built, cabinet models of the incomparable Super-Heterodyne, and the wonderful new Radiola 17 that makes use of the new alternating current Radiotron.

Battery-operated sets have been developed to their highest efficiency in the new Radiola 16 and the nationally popular Radiola 20.

Before selecting a new radio set to replace your old one, ask an RCA Authorized Dealer to demonstrate these instruments for you—within an RCA Loudspeaker. Don't handicap a good radio receiver with an antiquated loudspeaker.

A Radiola is a Christmas gift that every member of the family can enjoy.

RCA Radiola  
MADE BY THE MAKERS OF THE RADIOTRON

NEW YORK CHICAGO SAN FRANCISCO

These receivers operate with batteries or battery eliminators



RCA Radiola 16. The latest and the most perfect in radio has long awaited for. The great achievement in radio design is embodied in the RCA Radiola 16. Features the standard RCA Super-Heterodyne and the incomparable Loudspeaker 104. The electric light socket makes the set of operation directly from the electric light socket. 250v. A.C. or 110v. D.C. Complete with Radiotron \$310. With Radiotron \$375



RCA Radiola 20. Many times as efficient as the average receiver set. Known to the country as "the biggest value in radio". Complete with Radiotron \$180.50. With Radiotron \$200.50



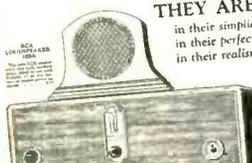
RCA Radiola 28. The Super-Heterodyne, superior achievement in receiver design, in combination with RCA Loudspeaker 104 (See below). Radiola 28, with Radiotron \$260. 250v. A.C. operation with RCA Loudspeaker 104. \$315



RCA Loudspeaker 104. The best, most perfect RCA Loudspeaker, a combination of the best materials, finest engineering, and most beautiful design. Buy with preference where you can. 1927-1928

"Amazing" is a hackneyed word—but that is what you will say when you first hear one of these socket-power Radiolas

THEY ARE AMAZING in their simplicity of operation in their perfection of tone in their realism of reproduction



RCA Radiola 17. Custom-built. De luxe construction of the famous Super-Heterodyne and the incomparable Loudspeaker in combination with RCA Radiola 17. The two best achievements in radio. Socket-power operation. A.C. or D.C. Complete with Radiotron \$895

The 100 electrical and acoustical engineers for the world of the Radio Corporation of America have achieved in Radiola 17, Radiola 28 and Radiola 10A the amplified socket-power operation that has been a first and never before Radiola were designed.

Radiola 28 employs the famous RCA Super-Heterodyne circuit and its therefore more efficient than any other receiver. The RCA Radiola 28 is a model of the Super-Heterodyne with the best speaker in the cabinet, the new Radiola 10A has been added to the RCA line.

RCA Radiola 10A. Custom-built. De luxe cabinet, with standard Radiotron. Features the standard RCA Super-Heterodyne and the incomparable Loudspeaker 104. The electric light socket makes the set of operation directly from the electric light socket. 250v. A.C. or 110v. D.C. Complete with Radiotron \$495 complete

RCA Radiola  
MADE BY THE MAKERS OF THE RADIOTRON

The tried, tested and perfected RCA Super-Heterodyne



RCA Radiola 10A. Custom-built. De luxe cabinet, with standard Radiotron. Features the standard RCA Super-Heterodyne and the incomparable Loudspeaker 104. The electric light socket makes the set of operation directly from the electric light socket. 250v. A.C. or 110v. D.C. Complete with Radiotron \$495 complete

RCA Radiola 16. The latest and the most perfect in radio has long awaited for. The great achievement in radio design is embodied in the RCA Radiola 16. Features the standard RCA Super-Heterodyne and the incomparable Loudspeaker 104. The electric light socket makes the set of operation directly from the electric light socket. 250v. A.C. or 110v. D.C. Complete with Radiotron \$310. With Radiotron \$375

RCA Radiola 28. The Super-Heterodyne, superior achievement in receiver design, in combination with RCA Loudspeaker 104 (See below). Radiola 28, with Radiotron \$260. 250v. A.C. operation with RCA Loudspeaker 104. \$315

RCA Loudspeaker 104. The best, most perfect RCA Loudspeaker, a combination of the best materials, finest engineering, and most beautiful design. Buy with preference where you can. 1927-1928

RCA Radiola  
MADE BY THE MAKERS OF THE RADIOTRON

that revolutionized the electrical reproduction of music and voice now available in 3 models

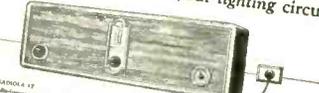
These remarkable Radiolas have set a new standard not only for radio but for faithful reproduction of music and voice. Nearly every new feature that is heralded in radio today is incorporated in these three Super-Heterodynes: super-selectivity, sensitivity, single control, antenna or both, battery or socket power operation.

They have made the old type radio obsolete, and have brought a new conception of radio and of music to thousands of homes. Whatever price you plan to pay for a radio, be sure to hear the RCA Radiola. From the least expensive (\$69.50) to the highest priced de luxe model (\$895), each represents the greatest advance in radio today, and the most thoroughly tried and proved.

A Christmas gift that every member of the family can enjoy 365 days of the year.

RADIO CORPORATION OF AMERICA  
New York Chicago San Francisco

There is still time before Christmas to replace your old radio set with one of these wonderful Radiolas that operate direct from your lighting circuit



RCA Radiola 17. Custom-built. De luxe construction of the famous Super-Heterodyne and the incomparable Loudspeaker in combination with RCA Radiola 17. The two best achievements in radio. Socket-power operation. A.C. or D.C. Complete with Radiotron \$895

These Radiolas are the leaders of the RCA line. The tried, tested and perfected "3P" with the incomparable, super-selective Super-Heterodyne circuit, may be operated either with batteries or direct from the lighting socket in combination with RCA Loudspeaker 104.

The "3P" has been designed for more than the demand for de luxe cabinet models of the RCA Super-Heterodyne with the loudspeaker in the integral part of the set.

The new "3P" is recognized as the outstanding achievement of the radio art. It has been a weeks ago.

These remarkable receivers, the RCA Radiola 16 and the RCA Radiola 28, are the most perfect in radio. They are designed for all-around use in any home and all phases of domestic life. A new standard in radio design and construction. Buy with preference where you can. 1927-1928

RCA Radiola  
MADE BY THE MAKERS OF THE RADIOTRON

RCA Radiola

MADE BY THE MAKERS OF THE RADIOTRON

—in 1927  
RCA Radiolas  
were the biggest sellers  
in the industry

—and in 1928  
the RCA line again will lead  
the market because of public  
acceptance of RCA leadership.

Since the beginning of public broadcasting Radiolas have outsold every other make of receiving set. They have been the pioneers in every great advance in radio design, and they have set the standards for the industry.

RADIO CORPORATION OF AMERICA

New York

Chicago

San Francisco

# RCA Radiola

MADE BY THE MAKERS OF THE RADIOTRON

## Come In and Ask Questions *(Continued from page 45)*

radio sets, Mac has had devised very neat little prescription blanks in true medical form which he uses in dispensing advice. These start off with the headline "This Is a Free Radio Prescription," Mac's own small cartoon which he uses in all forms of his advertising, his slogan "Come in and Ask Questions" and the address, followed by the necessary information of the newcomer's name and address which turns a questioner into a prospect. The prescription itself starts off with the crossed R familiar to all who have ever filled one at the corner drug store. Below comes the statement "Should the above fail to relieve your trouble consult us further or have one of our service men call at your home at a reasonable charge" thus leaving the customer free to come in again without cost to himself, or to turn to the store which has served him freely in the more businesslike form of a pay customer. This prescription more often than not is accompanied by the actual remedies in the form of the packet of steel wool and vaseline, or the distilled water.

This apparent willingness to serve the public's needs, whether there is money in it or not does not stop with the answering of direct questions. It is incorporated in every service of the store. For example, let a customer come in to ask for something which is not carried and he is sent away with a "Sorry, we don't carry that, but you can get it across the street, or three doors up, or at the nearest battery station."

Frequently Mac goes to considerable trouble to save

his customer money and, as some might regard it, to do himself out of a job. But the customer doesn't forget the good turn. He recognizes the absolute honesty of Mac's interest in his welfare. And it works out into a nice little dollar-and-cent balance at the end of the column.

Not merely this one customer, but the entire clientele of the shop—those who come in to ask questions and do not buy, those who have merely been directed on their way, and all of the friends of all of these—believe firmly in Mac's disinterested helpfulness. In consequence they trust him with their troubles and with their wants as they arise. They drop in to his store first, knowing that if he hasn't got the article, he will tell them where they can get it. They bring their friends in to have their misbehaving sets diagnosed and to buy new ones.

**I**NSTEAD of selling a customer everything which he possesses in the store, Mac's way is to ascertain just what the conditions and the needs are and then sell the customer as little as possible to render him absolute satisfaction, telling him at the time how best to take care of it so that it will last him a maximum length of time. When he sells two battery clips for instance, he throws in an envelope of steel wool and instructions on how to keep them free from corrosion.

It means a longer time before that customer buys his second set of battery clips, to be sure, but he has found that the results pay in the end.

---

## Getting References from Credit Customers

**R**ADIO retailing, in this day and age, is a highly competitive business. Each retailer is out to get customers and eventually every store is doing some measure of credit business. Very often, sad to relate, when a store begins to take on credit customers, someone will get on the books who will cause you a money or goods loss. When this happens it does not boost your Income Tax.

What kind of references do you require from your credit customers? Do you have a fixed policy in regard to this important matter? Do you at once get in touch with the reference and secure from them a guarantee? Important questions, these! Your success as a credit retailer depends very much on the answers.

One of the most successful mail order houses in a certain field has a policy in this connection that is at once simple and effective. This house will make a sale (average sale, I should imagine averages around \$50) to any man or woman who can make the initial payment of a few dollars and who can furnish three references: a doctor, a local business house and a priest or a pastor of some church. While the mail-order house does not say so, it never writes any of the references. Very often it has been found that references hesitate to guarantee the account of another person—this is a natural hesitation. The credit customer does not know this.

**I**F a customer fails to make a payment on time, the mail-order house simply writes that unless payment is made on a certain date that it will be necessary for it to take the matter up with the references given. This never fails to bring in the payment and it is certain that

some of these payments are made at the expense of other deserving accounts. About nine times out of ten, if the truth were known, the credit customer has given the names of the references without consulting them or asking their permission. Naturally he does not wish them informed of his delinquency! And who is there that would care to have his doctor, priest or pastor, or a local business firm know that he does not meet his obligations when due! This mail order concern, so I understand, boasts that this plan is infallible and that it has never suffered a loss of a single dollar and yet it has sold millions of dollars worth of goods.

**S**IMPLE plan, isn't it? Why couldn't the radio retailer use such a plan to excellent advantage? When a customer asks for credit, bring out a "Get-Acquainted Card" and tell him frankly that you are only too glad to extend credit courtesies but that it will be necessary for him to fill out the card. You will seldom find any customer who will not promptly fill out the card and that card will contain all of the information (plus the reference names and addresses) you need for your files: it should have the customer's name and address, employment-place of head of family and the name of the clerk who served the customer.

With this information before you, a certain amount of credit business can be handled with a minimum of risk. It will not be necessary to write the references; usually you will find references very, very slow about answering an inquiry and sometimes very vague and indefinite about their own responsibility in guaranteeing the account.

*“The World’s Most*

**MARVELOUS**  
*Merchandise”*



**R**adio has been called by Federal Radio Commissioner O. H. Caldwell “the world’s most marvelous merchandise.” Similarly it is the ideal gift “from Dad to the family.” That thought should feature your advertising from now until Christmas.

# The Symbol of a



Model No. 38 Cabinet for R.C.A. No. 16 Mahogany—Has ample battery space.

# Superior Creation

**I**N DAYS of old, when reading was the privilege of the rich and the clergy, the trademark was born.

First invented as a means of identification, it became with outstanding craftsmen the emblem of a superior creation.

People learned to know that certain trademarks were placed only on goods having that super quality which comes from loving craftsmanship of the highest order.

All this ancient significance attaches to this newly adopted label or trademark of Radio Master Corporation. It is the symbol of a superior creation.

Every cabinet bearing it must have every quality of design and construction which high artistry, master craftsmanship can give it.

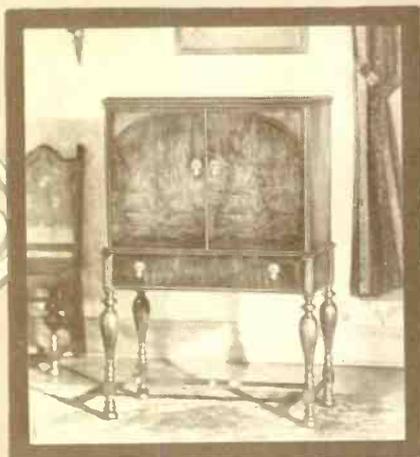
The world of radio has taken Radio Master Cabinets to its heart. They are splendid cabinets to sell, because you can back their quality with your last dollar. They are worthy of your highest recommendation.

## RADIO MASTER CORP.

One of the Ward Industries  
BAY CITY, MICH.

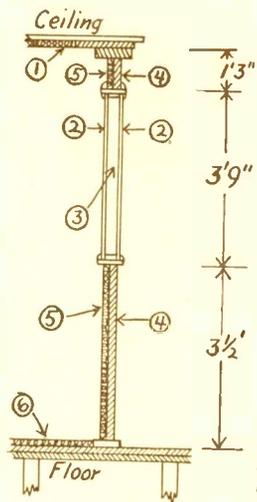


Model No. 88 Spinet for R.C.A. No. 17 Walnut with figured door and Maple overlays.



Model No. 87 chest for R.C.A. No. 17 Walnut with figured doors and Burl overlays.



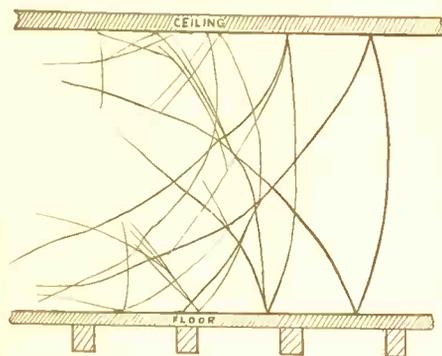


- ① Sound absorbing material on ceiling.
- ② Glass \*
- ③ 1/2" air space
- ④ Wood panel
- ⑤ Sound absorbing material against panel on inside.
- ⑥ Lined carpet.

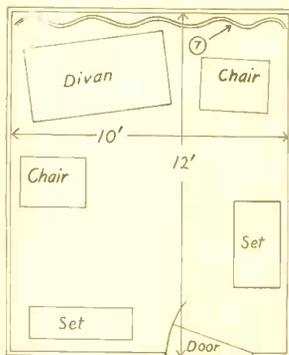
\* A double glass partition is not absolutely necessary. One will suffice if outside noises are not troublesome.

This cross-section of a demonstration room wall shows the construction of the wall and the placing of sound-absorbing material.

Right: This cross-section reproduction of spherical sound waves shows how the second wave impulse is weakened and distorted by the reflection of the first wave generated.



Left: Floor plan of a well-arranged demonstration room, indicating where to place sets in relation to position of sound-absorbing material.



⑦ Drapings full length of back wall

# Improving TONE VALUES

## in the Demonstration Room

WHY a demonstration booth or room? Does it actually aid or hinder the sale? Is it desirable? Is it necessary? Why do the tones we hear in it sometimes sound so "foggy"? How should it be built so as to bring out the full tonal quality of the set?

Proportion and the correct use of sound absorbing materials are the two main factors to consider. The room should not be unusually high or long with respect to its width. Most small rooms are entirely satisfactory. It is only with rooms longer than 25 feet that proportion must be considered. The ideal demonstration room should be sound-insulated and, to a certain extent but not wholly, reverberation-proof. Too much deadening kills the overtones and ringing qualities of good music. Air spaces and sound absorbing material between the outer and inner partitions will serve to isolate the room from foreign noise.

Most demonstration rooms have the upper part of at least three of the walls made of glass. Fortunately there still remains ample surface which can be treated for reverberation and which will go a long way toward improving tonal reception conditions. The ceiling, for example, may be completely covered with a sound-absorbing material. There are a number of different styles of such felt-like

*Proper use of sound absorbing materials one of main factors to be considered*

compositions now on the market. In many cases these are finished like plaster and may be tinted. This same material should also be used against the panels below the glass on the side walls. If sound absorbing fabric is placed on the surface of the inside wall of the room it will do double duty by reducing the intensity of sound wave reflections and preventing the reception of sounds from the outside. Do not forget the floor. By all means cover it with a soft rug or a lined carpet.

THE accompanying floor plan and cross-section elevation suggest correct proportions for a demonstration room that is properly constructed from an acoustical point of view, according to the technical department of one of the largest concerns in the country manufacturing sound correcting materials.

To line properly a room 10 ft. x 12 ft. would require 39 1/2 sq.yd. of half-inch felt or other sound absorbing material, used as follows: Ceiling, 13 1/2 sq.yd.; two side walls, 13 sq.yd.; back wall, 9 sq.yd.; front wall, 4 sq.yd. Special composition material with one side finished to imitate plaster costs approximately \$2.60 per square yard. A smaller room, say 9 x 10, may be built with equally satisfactory acoustical results. In that case but 30 sq.yd. of wall and ceiling material would be required.



Demonstration room draped with sound-absorbing material.

# Practical SERVICE Methods

## R.M.A. Service Manual

"Better Radio Reception" is the name of the new manual on interference published by the Radio Manufacturers' Association, Inc. It is a 61 page, 6x9 in. booklet, paper covered. This manual was prepared upon the conclusion of a survey covering the entire United States, and contains a classification of all the little items that conspire to make radio hard on the ears. It takes up in detail every known source of radio interference, and explains how each case may be cured by the application of ordinary materials and a little work. Part of the book is given over to a discussion of what may be done to avoid various types of interferences so well known to most radio listeners.

We highly recommend this book to our readers, and feel confident that it will be the means of setting a great many dealers on the right track to cure troublesome interferences. Copies may be had from the office of the R.M.A. executive vice-president, Bond P. Geddes, 1265 Broadway, New York City, at 25 cents per copy.

## Set Variable Resistances and Leave Them

Variable resistors on a power unit are not intended for constant fiddling. They should be set to definite values by the service man, at the time the radio power unit is installed, and left that way until tubes are changed or other alterations take place. The service man should instruct the customer along these lines, to avoid no end of trouble and many unnecessary service calls.

## Test Batteries and Power Units Under Load

In testing any battery with a voltmeter the battery should be connected to the receiver on which it is to be used and tested with the receiver turned on to give an accurate test of the actual voltage being delivered to the set. Occasionally batteries will test O.K. when not connected because the high grade voltmeters have a very low current drain. When the battery is actually connected to the set with the set

Conducted by  
H. W. BAUKAT  
Technical Editor

turned on it may prove defective or of insufficient power.

This also applies to power units. They should be tested when connected to the set with the set turned on and such a reading with an accurate high resistance voltmeter will show the power being delivered.

## Power Unit Changes Tuning

When a receiver is operated with a socket power unit, broad tuning may be caused by the fact that the power line will act as an antenna and ground system bringing the signal in through the power unit which will add to or subtract from the signal received in the normal way through the regular antenna.

The effect of this is apparently to broaden the tuning that sometimes causes interference from local stations. Under these circumstances the broad tuning is not in the set but is due to the power line pick-up. This difficulty may be eliminated by reversing the plug in the socket.

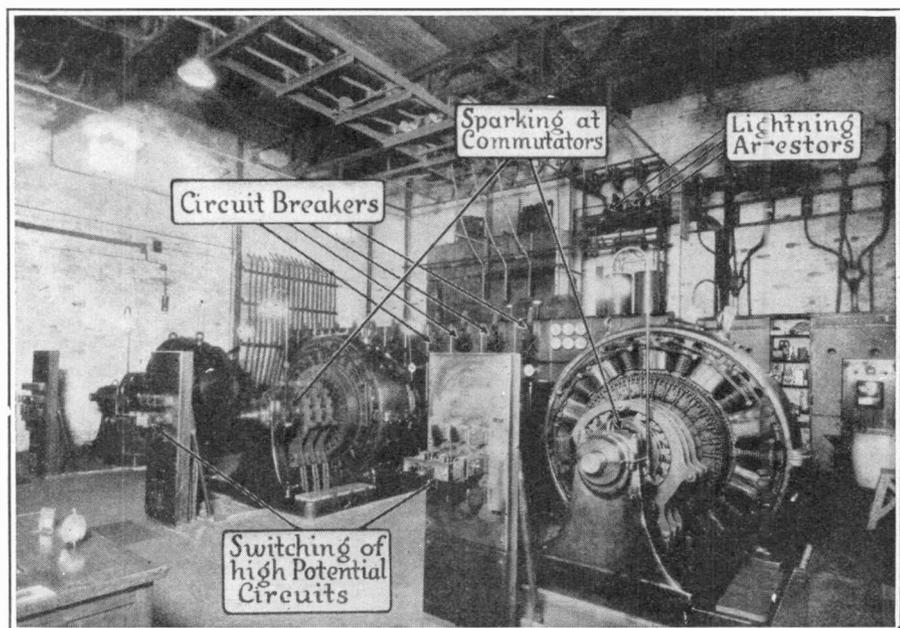
## Regulating Filament Voltage of A.C. Tubes

Many of the new alternating-current tubes are operated directly by a.c. current supplied from a small transformer. Many times the service man will run up against a case where perhaps the wrong transformer is being used or one of higher voltage than that required by the tubes. The voltage cannot be measured except by means of an a.c. voltmeter. It is possible, however, to get some idea of what voltage is required by varying the a.c. voltage and noting the general operation.

If the transformer voltage is higher than that required by the tube being used it may be reduced very easily by placing an ordinary resistance unit, such as a rheostat, in the primary circuit of the transformer. This circuit is the high-voltage side and the rheostat should be mounted in such a manner that no one can come in direct contact with it, otherwise a severe shock might be obtained. It must also be remembered that resistance in this circuit does not have the same effect as when placed in the secondary or low-voltage side of the transformer.

Suppose the voltage applied by the

## Local Forms of Interference

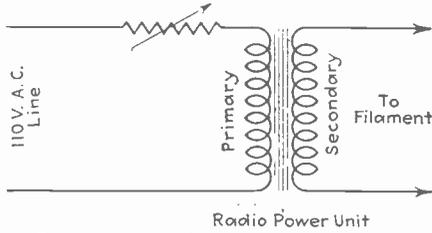


Showing interferences caused by dynamo electric machinery and associated control apparatus

transformer is 2 and the line voltage is 120. The voltage ratio is then 120 to 2 or 60 to 1. On the low-voltage side considerable current may be drawn, say 10 amperes, for all the tubes and if a rheostat were used in this circuit it would have to carry the full 10 amperes. On the other hand the current taken by the primary from the line will be 1/60th of 10 or 1/6th ampere and the rheostat in this circuit need not be of high current-carrying capacity but may be one of the small current-carrying capacity rheostats common to any service man and which may be obtained in almost any radio store.

A rheostat placed in the primary side requires more resistance as may easily be seen. The rheostat produces a voltage drop in accordance with the current flowing. That is, if .166 amperes were flowing (about 1/6 ampere) then, according to Ohm's law where voltage equals current times resistance, 6. ohms would be required per volt drop.

It must be remembered that the voltage ratio is 60 to 1 and that to produce a given change in the low-voltage winding this must be taken into consideration. Suppose it was desirable to change the primary volt-



Connecting a rheostat in the primary side of the filament transformer gives good regulation of the secondary voltage.

age by 6 volts (60 times .1). This would require a rheostat change of 6 volts divided by .167 amperes, or approximately 37 ohms. It is obviously impossible, therefore, to use a low-resistance rheostat in the primary but a 50-ohm rheostat of the ordinary type will, as a rule, give sufficient regulation for the alternating-current tube of the high-current type because a very small change of voltage in the secondary will cause considerable change in the operation of the tube.

Placing a rheostat in the primary also makes an excellent method of regulating the voltage of B-power devices, though, as said before, it is necessary to take all the precaution necessary when dealing with the line current.

## Interference Finder Battery and By-Pass Condenser Connections

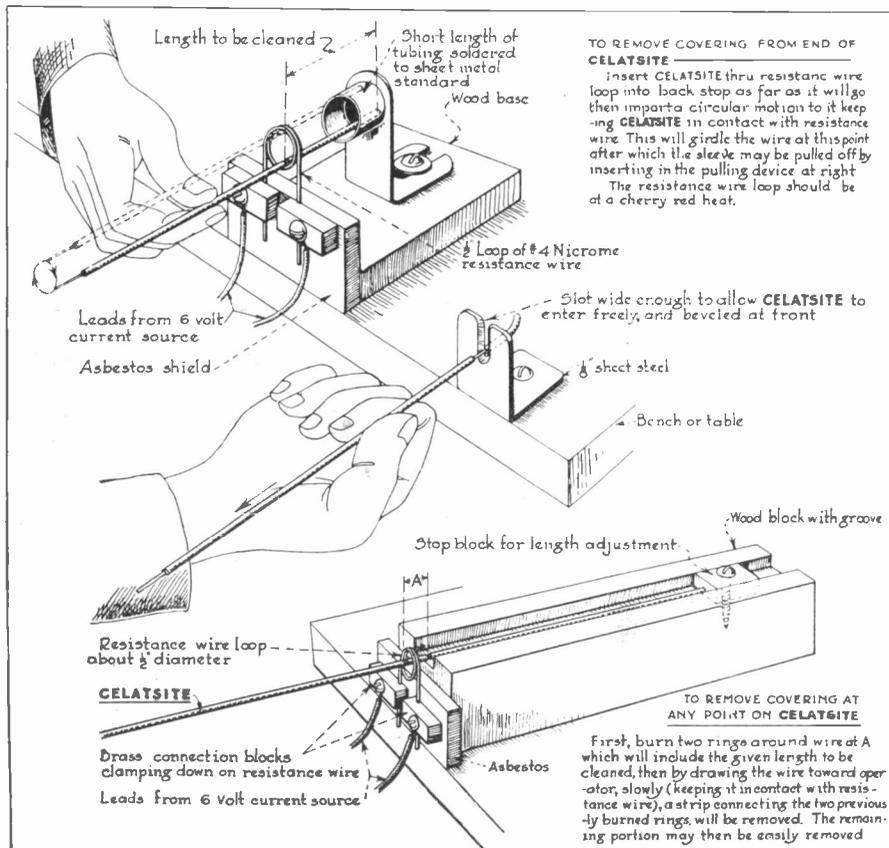
There seems to be some confusion in the minds of those who are building the interference finder published in this department in the June 1927 issue regarding the connections of the .001 mfd. fixed by-pass condenser. It is to be connected from the positive filament terminal of the detector tube socket to the end of the choke coil, as shown in the diagram, which is also the plate primary connection of the first audio transformer. The minus A and minus B of the batteries should be connected together.

## Two Old Ways of Determining Polarity

Because of the wide-spread use of socket power units, the following information will be found interesting and useful, serving whenever a voltmeter is not readily obtainable. Polarity, as you know, is the differentiation between the positive and negative poles. The first method is by use of an ordinary potato. Slice the potato in half and insert two bare copper wires about 1/2 inch into the raw potato about an inch apart. Upon energizing the wires, the negative wire will discolor the potato and the positive wire will not.

The second is a salt-water test, and is a very easy method of determining polarity. Make a saturated solution of salt water with ordinary table salt in a drinking glass. Insert in the fluid the bare ends of the two wires about an inch apart. The current flowing between the wires will set up the action known as electrolysis and bubbles will rise from the negative wire. By this method you can easily determine which is the negative and which the positive terminal on the power supply.

## How to Remove Covering from Celatsite



## A Simple Volume Control for Any Set

With the various methods recommended for controlling the volume of the usual radio receiver, none is simpler nor more efficient than that of placing a variable high resistance in the antenna circuit. The main point about this method is that it can be applied to any existing set, without changing a single thing within the set itself. Another point is that, with sufficient resistance, the

volume can be reduced down to a whisper, without affecting the tone quality. This method is especially useful during bad static spells, since the entire reception level—signals and static alike—is reduced as a unit until just the desired degree is attained. The resistance should be one of from virtually zero to several hundred thousand ohms total, finely adjustable rather than in marked steps. Furthermore, the resistance should be noiseless, since there is no more prolific source of "static" in a circuit than a faulty resistor.

### Try This One

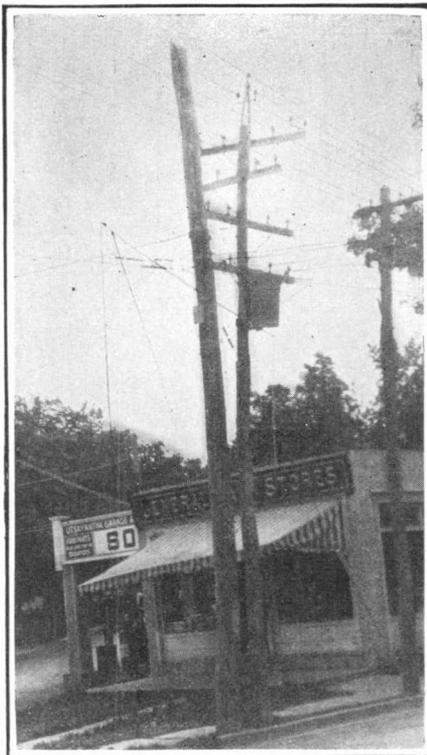
Summer radio reception in Texas without static is the claim of John Palmer, 2328 Boulevard, Galveston, who has been experimenting at home with his own set. As the result of switching wires, he finds that he now enjoys better reception of far western stations in summer than he formerly did in the cold of winter.

He uses a six-tube Kolster receiver with a ground connection consisting of a 10-foot steel rod driven into the earth as close to the set as possible, allowing only a short lead. One night he disconnected his outside aerial and discarded it because of the roar of static along the Gulf of Mexico. He then placed his ground wire on the aerial binding post, leaving no outside wire on the ground binding post. A .005 mfd., fixed condenser was placed in series with the ground lead to bring down the tuning.

The result startled him. He heard local stations with practically no static. He tuned for distance and found that the set tuned sharper and yet had plenty of volume without static.

### Glow Tube Requires Considerable Current

Few radio laymen appreciate the fact that the glow or regulator tube is a variable by-pass proposition. For its proper operation, it requires a minimum current passing through it all the while. Then, according to the load shunted around it, the glow tube by-passes more or less current in keeping the voltage at a fixed value. In properly design B-units, the glow tube has a definite place. Applied to existing B-units, as an extra, it usually increases the current drain sufficiently to saturate the limited choke coils, resulting in excessive hum from the heretofore silent device. Hence a glow tube should be



### Reception Poor Here

*When trying to receive under such adverse conditions as are shown above, do not blame the receiver as there is little that can be done besides shifting the antenna in various positions.*

added only if the B-unit is known to have ample chokes for the extra current drain, which usually amounts to 20 to 30 milli-amperes.

### Electric Receiver Service School

The first service school system for all-electric radio receivers to be established in the United States was recently announced by Splittorf Radio Corporation, 392 High St., Newark, N. J.

Ten men, experts in the servicing of electrical apparatus, went to strategic jobbing centers of the country to establish schools for the instruction of the wholesale element of the trade and their own servicemen in the proper handling of the new-day electrical radio apparatus. From the jobbing houses the system will be extended out to the dealer trade and to the servicemen of the dealers carrying this type of equipment. Splittorf jobbers will make available to the radio dealers handling the latest models of all-electric sets all the information gleaned at first hand from men skilled in the art of making adjustments and repairs to the electric section of the compact receiving outfits.

### Simple Device Compares Tubes Instantaneously

Although the radio dealer may tell the set owner that the new tubes will make his set much better, it remains for him to demonstrate this fact to the customer.

In order that the ear may notice change in quality it is necessary to switch from one tube to another as quickly as possible.

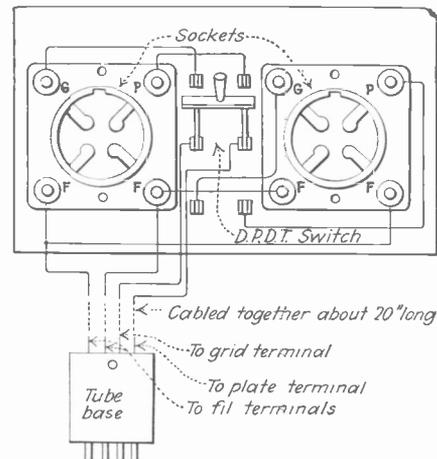
The Clark Electric Company of Danville, Va., recognizes this fact and has made up several of the units shown in the accompanying diagram. The total cost of each was approximately 75 cents. This surely is negligible when compared with the \$50 worth of tubes they have been instrumental in selling.

If a detector tube is to be compared both the old and new tubes are put in the sockets of the device and the dummy plug inserted in the detector tube socket in the set. Instantaneous comparison can be had by throwing the switch either one way or the other.

If used with the new amplifier tubes, one of the new adapters, which have special provisions for adding B and C batteries, is used in the socket in which the new power tube is being demonstrated.

From experience, the Clark Electric Company tells us, "the detector test should be made on a signal that is barely audible with the old tube. The amplifier tube comparison should be made with a good strong signal that is loud enough to overload the old tube. This makes the necessity for using the newer type tubes much more obvious to the customer."

The base on which the two sockets and double-throw switch are mounted measures about 4 in. x 8 in. and can easily be made from a piece of bakelite or hard wood.



The above arrangement makes possible quick comparison of two tubes operating under similar conditions.



# What's New in Radio and

This editorial section is prepared purely as a news service, to keep readers of "Radio Retailing" informed of new products.

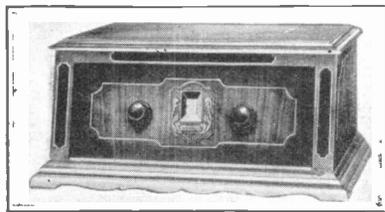
## Battery Console Table

The Ehlert Radio Furniture Company, 2468 Lincoln Avenue, Chicago, Ill., is manufacturing a battery console table with all visible parts of solid walnut. The matched panels are of butt walnut. No. 1700 has top 20 in. x 31 in., stands 32 in. high and has compartment space inside 14½ in. x 27 in. and 12 in. high. Intended retail price, \$44.50. No. 2075 has top 20 in. x 37 in., stands 32 in. high and has compartment space inside 14½ in. x 33 in. Intended retail price, \$54.50. They also make a bench, 11 in. x 18 in., to match the last named console. Intended retail price, \$7.50.—*Radio Retailing*, December, 1927.



## Six Tube Console Receiver

The King Manufacturing Corporation, Buffalo, N. Y., is making a six tube, completely shielded console model receiver called the "Chancellor." This receiver has a single dial control and built-in Peerless cone reproducer, with ample space for batteries. Intended retail price without accessories, \$190. This company also makes the "Chevalier," a High Boy model six tubes, completely shielded, single control, intended retail price without accessories, \$210; the "Viking," console style, six tubes, single dial, intended retail price without accessories, \$140; the "Crusader," table model, six tubes, completely shielded, intended retail price without accessories, \$115; and the "Baronet," six tubes, single control, completely shielded, intended retail price without accessories, \$70.—*Radio Retailing*, December, 1927.

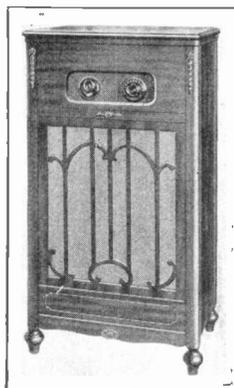


## Six Tube Receiver

The United States Electric Corporation, WorkRite Division, 1812 East 30th Street, Cleveland, Ohio, is making a 6-tube receiver in a panelled walnut cabinet which is wired for either socket power units or batteries. The set is controlled from two knobs on the panel—one for the combination switch and volume and the other for the drum dial. It is built with an all-metal chassis and has fully shielded radio frequency coils. The dimensions are 22 in. long, 15 in. wide and 10 in. high. The intended retail price is \$95.—*Radio Retailing*, December, 1927.

## Console Reproducer for Standard Receivers

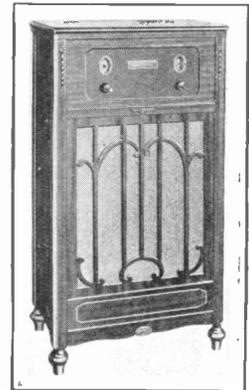
Newcombe-Hawley, St. Charles, Illinois, has placed on the market a new line of console reproducers with ample space provided for the incorporation of various popular standard type receivers, as well as batteries or power units. Models AK5-61 and AK6-61 are designed especially for Atwater Kent Models 35 and 50 and can convert these models into compact console receivers that require small floor space. They measure 44½ in. high, 24½ in. wide, and 16 in. deep. Each console reproducer is provided with a special panel, cut to fit the Atwater Kent receiver indicated.



The outstanding feature of these consoles, as well as all the consoles to follow is the Newcombe-Hawley 86 in. tone chamber. The intended retail price is \$82.50. Models AK2-61 and AK-3-61 are designed for Atwater Kent Models 30 and 33. The dimensions are the same as with the previous models, and the retail price identical.

The console reproducer model RCA-61 is designed especially for Radiola 16. This console also has the same measurements as the above. The panel opening, which is slightly smaller than the Radiola 16 panel, presents a very pleasing appearance when the receiver is in place. The intended retail price is \$82.50. Model RCA-60 is designed especially for Radiola 17. This also measures 44½ in. high, 31½ in. wide, and

16½ in. deep. The intended retail price is \$80. Model C-60 designed especially for the Crosley Bandbox, measures 44½ in. high, 24½ in. wide, and 16 in. deep. The panel is provided with a special opening for the receiver, and the panel plate of the Bandbox is transferred to the console panel. The intended retail price is \$82.50. Model C-60 is designed for Crosley receivers. This console



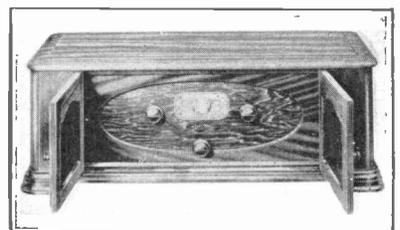
measures 44½ in. high, 31½ in. wide, and 16½ in. deep. The panel is arranged the same as Model C-61. The intended retail price is \$80.

Model Z-55 is designed for Zenith model 15 and 15-E receivers. This measures 34 in. high, 34½ in. wide, and 16½ in. deep. The intended retail price is \$75. Model Z-53 has been designed for Zenith Model 11 and 11-E receivers. This measures 33 in. high, 27 in. wide, and 15 in. deep. The receiver in this case sets on top of the tone chamber and the intended retail price is \$65. This completes a very extensive line which should meet with favor in the trade.—*Radio Retailing*, December, 1927.

## Six and Seven Tube Receivers

The Browning-Drake Laboratories, Brighton, Mass., is making a six-tube model, No. 6-A, using one stage of neutralized radio-frequency followed by a variable reactive detector. It has a three stage all-frequency audio amplifier, using four tubes. The receiver is completely shielded, and has a single illuminated drum control. The audio amplifier uses one High Mu tube for its first stage, two '01-A tubes in parallel for the second stage, and a power tube for the third and last stage. The cabinet is of walnut with Duco finish.

The seven-tube model, No. 7-A, has two stages of neutralized radio-frequency coupled together with the Browning-Drake slot-wound primary transformers. It has three tuned circuits, single dial control, and is completely shielded. This set utilizes the '01-A type tube in parallel for the second stage of audio and is enclosed in a two tone mahogany or walnut cabinet.—*Radio Retailing*, December, 1927.

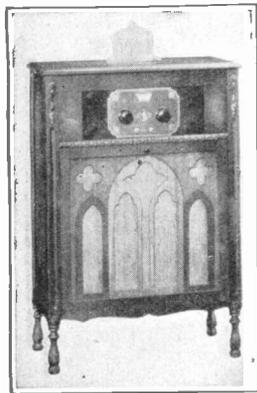


# Where to Buy It

News of the latest products gathered by the editors

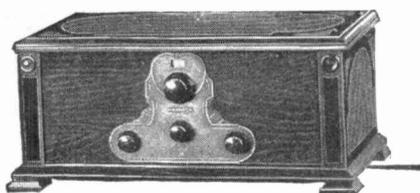


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## Six Tube Receiver

The Minerva Radio Company, 154 East Erie Street, Chicago, Ill., is placing on the market several all-electric models. Model 5, illustrated, is made of walnut, decorated with carvings and overlays. The receiver has six-tubes, and utilizes single control with illuminated dial readings. Intended retail price complete with tubes, \$275. Model 14 is console type of walnut with maple hand-designed overlay. Same receiver as above. Retail price with McCullough tubes, \$275. Model 21, table type, is \$175 complete with tubes. This company also makes a chassis, including filter box, which lists for \$165, complete with tubes.—*Radio Retailing*, December, 1927.



## One-Dial Electric Receiver

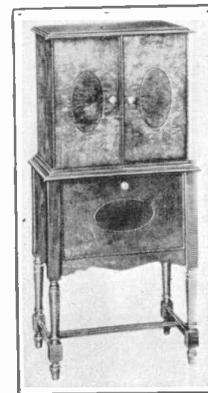
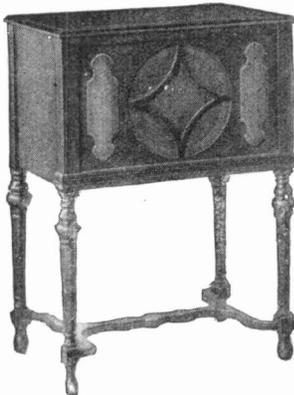
The Monarch Company, 1270 Ontario Street, Cleveland, Ohio, is building an all-electric set operating direct from house current of 110 volts, 60 cycle current and using standard 01-A tubes. This receiver uses the Loftin-White circuit. It comes in two models—table-cabinet style, illustrated, made of imitation walnut, which is 10 inches high, 21½ inches long and 12 inches deep, and console style, model 18, has a built-in 96 inch air column horn with Utah speaker unit. The power pack fits into the cabinet and all that is required additional is a ground wire and tubes.—*Radio Retailing*, December, 1927.

## New Electric Sets

The Steinite Radio Company, 506 So. Wabash Ave., Chicago, Ill., is making a new electric set manufactured in three models which are priced at \$100, \$135 and \$165. The set is complete in one cabinet having no outside attachments. The circuit uses five '99 and one '12 type tubes. A type '80 rectifying tube is also used.—*Radio Retailing*, December, 1927.

## Table Cabinet Speaker

The Electrical Research Laboratories of Chicago, Ill., has placed on the market the illustrated table cabinet speaker. This speaker is for use with table model receivers and has a rubbed and polished antique effect. The top, ends and front are high-grade American walnut with Zebrana overlays. The top measures 15 in. x 23 in. The cone and power supply compartment is 21 in. wide, 12 in. high and 13 in. deep. This model contains a built-in "Concert Grand" cone speaker. The intended retail price complete with the speaker is \$45.—*Radio Retailing*, December, 1927.

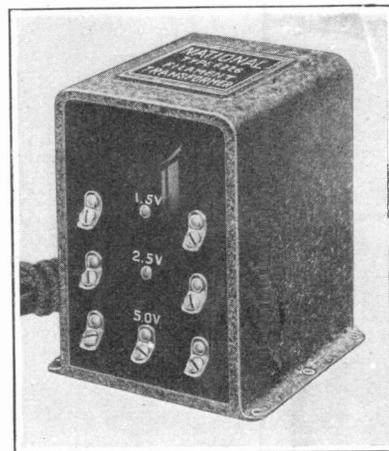


## A. C. Receiving Set

Pfanstiehl Radio Company, 11 South LaSalle Street, Chicago, Ill., is placing on the market a console of the secretary type made of burl walnut. This model, No. 34-322, is entirely self-contained with power converter, speaker and output filter built-in. The intended retail price is \$312.50, without tubes, or \$340 complete. They also make the "Pfanstiehl Fifty," an a.c. set, which is self-contained, intended retail price is \$162.50, complete with a.c. tubes; and Model 32, table model, seven-tube Over-tone in genuine walnut cabinet with mahogany panel. Intended retail price, \$120.—*Radio Retailing*, December, 1927.

## Console Receiver

The All-American Radio Corporation, 4201 Belmont Avenue, Chicago, is manufacturing a new line of 6-tube receivers in three cabinet styles. The most elaborate of these is the "Console," of Colonial design, available for either alternating current or battery operation. It is designated as Model 99 for a.c., and 66 for batteries. Except for the difference in power supply, the chassis of the two models are the same. The circuit is of three stages tuned radio frequency and two stages of audio-frequency amplification. The chassis, of rigid steel construction, is housed in a drawer and is readily accessible. The batteries or power unit and reproducer are in a compartment below. The cabinet and receiver panel are finished in blended walnut, with the three controls grouped on a harmonizing escutcheon plate. List price: battery-operated, \$200; A.C.-operated, \$225.—*Radio Retailing*, December, 1927.



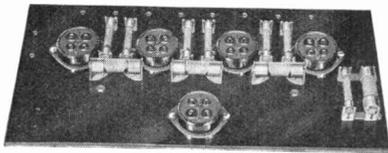
## Filament Lighting Transformers

The National Company, Inc., Malden, Mass., is now producing filament transformers to be operated on 110 volt, 60 cycle current, for the new a.c. tubes. Model M-226 has 1.5, 2.5 and 5 volt taps. The retail price is \$10. The power transformer is a heavy duty transformer having 7.5 and 5 volt secondaries which are intended to supply the filaments of '10 and '71 type tube. Overall dimensions are 4½ in. x 4 in. x 4½ in. This transformer is made in two types—type R having a 300 volt secondary each side of the center for the Raytheon BH or '80 type tube. The retail price is \$12.50. Type U has both 300 and 230 volts each side of the center and the retail price is \$14.50.—*Radio Retailing*, December, 1927.

# What's New in Radio and Where to Buy It

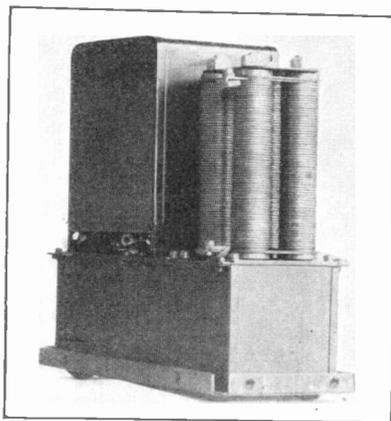
## Lynch Five-Tube Deck

Arthur H. Lynch, Inc., 1775 Broadway, New York City, makes the illustrated five-tube receiver deck. This deck is provided with mounting holes for 10 binding posts and may be adapted to practically any circuit that the builder wishes to use. The deck itself is made of Micarta and measures 6 in. x 12 in. It is provided with five of the latest Eby type sockets with special prongs that make direct contact with the resistor and condenser clip which hold the component parts of the resistance coupled amplifier in place. With this deck as a basis, construction of the remainder of the receiver is comparatively simple and wiring is accomplished with great ease. The intended retail price of the deck complete with socket resistors, coupling condensers, bridge condenser, is \$12.50.—*Radio Retailing*, December, 1927.

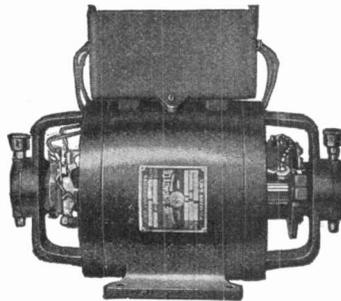


## New Battery Charger

The new "Rectox" trickle charger, developed by the Westinghouse Electric and Manufacturing Company, Pittsburgh, Pa., is a dry type rectifier used for charging the A batteries. The Rectox charger consists of a two winding transformer, which steps the voltage down from 115 volts to about 17 volts; and a stack of copper oxide-rectifying elements which convert the alternating current into direct current. The new rectifying element consists of stacks of alternate disks, first a disk of copper then a disk of lead. One side of the copper disks is oxidized. This combination of lead and copper allows current to flow freely in one direction, but when the current reverses, an electronic action takes place which stops the flow instantly. There are two stacks of rectifier elements so connected that the battery is provided with current through one stack during one half cycle and through the other stack during the next half cycle. Thus the Rectox provides full wave rectification. To provide for safety to the apparatus a fuse is placed in the direct current circuit to prevent damage due to accidental reversal of battery polarity.

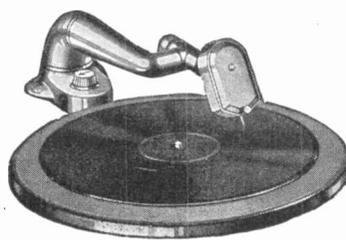


The maximum charging rate of the new Rectox is three-fourths amperes to a 6-volt lead acid type storage battery, but it is also provided with a tap so that a charging rate of four tenths amperes may be obtained. The standard outfit is designed for operation on 115 volts, 50-60 cycle circuits. A special design is furnished for 25 cycle circuits.—*Radio Retailing*, December, 1927.



## Dynamotor for A.C. Sets

A new device has been perfected by the Electric Specialty Company, 246 South Street, Stamford, Connecticut, for changing direct current into 60 cycle, alternating current to demonstrate and operate alternating current radio receiving sets in districts where direct current only is available. The device is a dynamotor which is supplied with a filter mounted on the machine. The dynamotor operates at 1,800 r.p.m. and has certain electrical and mechanical features so that with the filter provided there are no objectionable noises. The machine is regularly furnished with ball bearings, which gives very quiet operation with a minimum amount of attention. The machines are small and compact, filters are built-in and connected. Suitable wires are brought out at the motor and generator end so that they can be installed by anyone who is a little familiar with such apparatus. Type LF3 dynamotor, complete with filter, delivers 350 watts and is amply large for the largest combination phonograph and radio receiver, or for several receivers of average size. The retail price is \$99.00. Smaller or larger models are available to meet all needs with prices ranging from \$48 to \$121.—*Radio Retailing*, December, 1927.



## Electric Phonograph Pick-up

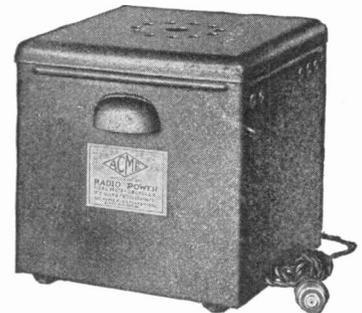
The Electrical Research Laboratories, Chicago, Ills., makes the illustrated electric phonograph pick-up. With this instrument an old type phonograph can be quickly converted into a new electrical model in conjunction with the audio-frequency system of any radio receiver. This device is furnished complete with electromagnetic pick-up, tone arm and volume control and detector socket plug. Intended retail price is \$20.—*Radio Retailing*, December, 1927.

## Correction

Model 7AC-2 receiver made by Charles Freshman, Inc., New York City, was listed erroneously in the September issue on page 102 as \$54.70. This price is effective for the model 7F-2. The 7AC-2 is an electric set combined with a speaker table and lists for \$147.50, complete with tubes, ready to operate.

## A and B-Power Unit Combination

The Acme Electric & Manufacturing Company, 1444 Hamilton Avenue, Cleveland, Ohio, is making an A and B-power unit with a B-power supply of 40 milliamperes at 180-volts. The A-unit consists of a U. S. L. Type DXG-307 gravity ball, glass jar battery. The battery is automatically charged by means of a dry type charger. Overall dimensions are 9½ in. high, 12 in. long, and 9½ in. wide. As an alternative to the wet battery, a dry storage battery can be furnished if so desired. This type of unit requires the addition of a little water every six months. The dimensions are the same in each case. Either a 4-volt unit or a 6-volt unit may be had. The intended retail price in either case, complete with tube, is \$59.50.—*Radio Retailing*, December, 1927.

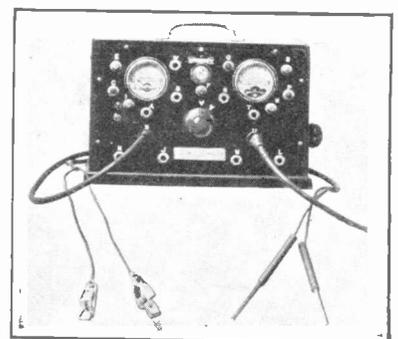


## Seven Tube, Single-Dial Receiver

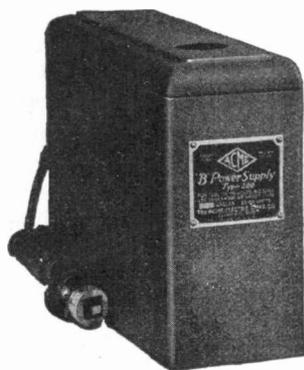
The Reichman Company, 1725 West 74th Street, Chicago, Ill., is placing on the market a seven tube, single dial receiver in a cabinet of walnut. The console horn is of the long tone-arm Orthophonic type equipped with the Thorola unit. The set has a master tuning knob and a horizontal sliding scale. This scale is illuminated and calibrated in hundredths and in wave lengths. Besides the main control there are two auxiliary controls.—*Radio Retailing*, December, 1927.

## Trouble Shooting Device

The Kietzman Electrical Manufacturing Company, 234 North Central Street, Gilman, Ills., placed on the market the illustrated testing device. This is equipped with two meters having various scales in volts, amperes and parts thereof so that radio circuits and equipment may be tested in trouble shooting. This device may also be used on other electrical equipment such as motors, automobile ignition systems, etc.—*Radio Retailing*, December, 1927.



# Latest Products Gathered by the Editors



## B-Power Unit

The illustrated B-power unit is being made by the Acme Electric & Manufacturing Co., 1444 Hamilton Avenue, Cleveland, Ohio. This unit, known as Type B-280, has a capacity of 40 milliamperes at 180-volts. It is designed for 110-volt, 60-cycle, current and uses an '80 type tube.

Voltages of 22½, 45, 67, 90, 135, and 180 can be obtained from it. There are no variable controls on the unit. The case has an olive brown finish, and is 7½ in. high, 11 in. long, and 3¾ in. wide. The intended retail price, complete with tube, is \$27.—*Radio Retailing*, December, 1927.



## Filter Condenser

A new filter condenser is being made by the Pilot Electric Manufacturing Co., Inc., 323 Berry St., Brooklyn, N. Y. The special feature of this filter condenser is that no paraffin, beeswax, or oil is used in the manufacture, but instead, the separating layers of paper are chemically impregnated. An operating life of ten years is guaranteed if kept within the rated working voltage. Made in 2 mfd. capacity. The use of these condensers in "gangs" is made possible by an adjustable clamp.—*Radio Retailing*, December, 1927.

## New Amplion Speakers

The Amplion Corp. of America, 531 West 37th St., New York City, is now placing on the market the illustrated "Lion" model No. AC-21, 14 in. cone speaker which is mounted on an 18 in. sound board. The height, including the bronze base, is 20½ in. This speaker contains a new balanced armature unit with straight bar magnets made of the finest grade of English Tungsten steel. The intended retail price is \$25. The Amplion "Mural" model AC-24, which is the same as the Lion but equipped with a brown silk picture cord for wall decoration, has an intended retail price of \$25. The "Colonial" cone, No. AC-12, has the same exterior as before, but is equipped with a new unit and has an intended retail price of \$35. The "Amplion Shield," No. AC-27, is a floor model and has embossed walnut panelling, attractively curved, combining grille-front and back. It is a 16½ in. cone with a height of 22 in. The intended retail price is \$67.50. Another model is the "Amplion Fireside," No.

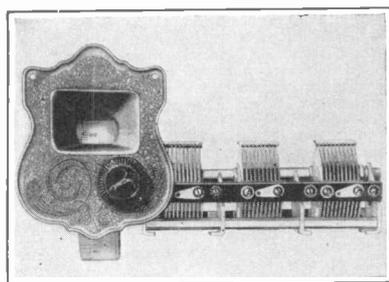
AC-30, which has a height of 36½ in. This model also has embossed walnut panelling, attractively curved, combining grille-front and back. The cone is 16½ in. and the unit is equipped with a 20 ft. cord. The intended retail price is \$97.50.—*Radio Retailing*, December, 1927.

## Air Cooled Power Rheostat

Designed and made specially for high current carrying capacities. This rheostat has a large refractory base, 2¼ inches diameter, is a single hole mount and is made by De Jur Products Company, 199 Lafayette Street, New York. Resistance element is wound on India Mica imbedded in grooves, and is covered with a high heat refractory cement, making the element permanent and everlasting, tightly fastened to the base. The contact arm rides smoothly over the surface of the resistance. Soldering lugs are supplied for convenient connections. Made in the following ohmages as standard: 2, 3, 5,



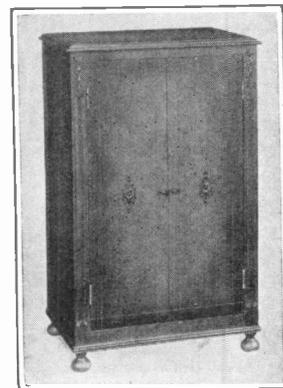
6, 10, 15, 20, 30, 50, 100 and 200 ohms. This rheostat can also be made up with an extra connection and used as a potentiometer in any of the above ohms. Furnished complete with Bakelite knob; list price, \$2.50.—*Radio Retailing*, December, 1927.



## Drum Control

The United Scientific Laboratories, Inc., 80 Fourth Avenue, New York City, is placing on the market a drum control to be known as the Scientific Drum Control tuning unit. This unit is designed for use in circuits requiring three ganged condensers.

The escutcheon shield is made of bronze and the drum dial of finest pressed steel, calibrated 0 to 100 with clear, bold figures and markings. The drum action is powerful and smooth and develops no backlash. Type UXB United Scientific .00035 mfd., balanced three ganged condenser is used. This unit comes complete, ready to be installed on sub-panel of receiver. Intended retail price, \$11.—*Radio Retailing*, December, 1927.



## Nine-Foot Air Column Console Speaker

The Borkman Radio Corporation, 230 East Ohio Street, Chicago, Ill., is making a console speaker in genuine walnut veneer, equipped with a nine foot horn and special, large, balanced-diaphragm, six-octave "Velvet" unit. These Console reproducers have ample room for A and B-batteries or power supply units. Model 30, illustrated, is 34 in. high, 27 in. wide and 18 in. deep and has an intended retail price of \$70, complete.—*Radio Retailing*, December, 1927.

## Combination Rheostat and Battery Switch

This is a rheostat which acts as a battery switch and also as a volume control, thereby eliminating the battery switch from the panel. It is designed for one hole mounting, and has an air cooled metal frame with a Bakelite metal knob. The metal frame, according to the maker, will not bend or warp. It is being manufactured by the De Jur Products Company, 199 Lafayette Street, New York City.—*Radio Retailing*, December, 1927.

## B-Power Unit

The Mayolian Corporation, 1668 Webster Ave., New York City, has placed on the market its new B-power supply known as "Six-Fifteen." This delivers 5 voltages which are 22, 45, 67, 90 and 150. It will handle up to eight tubes. There is a built-in voltage stabilizer which is said to insure correct voltages on all tubes under all operating conditions. One wire-wound adjustment compensates for all conditions of power line supply. It is finished in a green Duco and has an intended retail price of \$25, without the tube.—*Radio Retailing*, December, 1927.

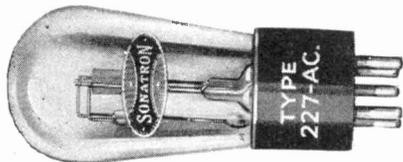


# What's New in Radio and Where to Buy It

## A. C. Tubes

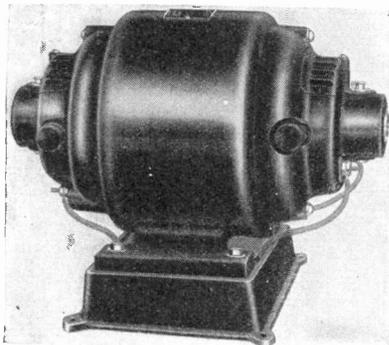
The Sonatron Tube Company, 108 West Lake Street, Chicago, Ill., announces two new Alternating Current tubes—Nos. X-226 A.C. and Y-227 A.C. The X-226 A.C., for use in R F and A F amplifier circuits, takes a current drain of 1.05 amps. at 1.50 volts, and operates with a plate voltage of 90 to 135, to a maximum of 180 under full power. The standard four-prong UX base is used.

Y-227 A.C. is designed for use as a detector in a receiver using X-226 A.C. tubes as amplifiers; though the Y-227 itself may be used as an amplifier tube, particularly in first audio stage. It is a heat-principle tube, self-stabilizing. Current drain in this type is higher than in the X-226 A.C., 1.75 amps. at 2.5 volts being required for perfect performance. A five-prong socket base is used.—*Radio Retailing*, December, 1927.



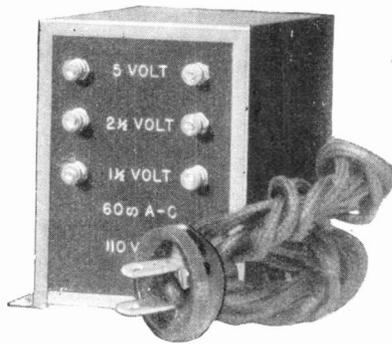
## Rotary Converter with Filter

The Janette Manufacturing Company, 553 West Monroe Street Chicago Ill., announces a new filtering device on their rotary converters. The new filter makes the converters remarkably successful in changing direct current to alternating for A.C. radios and combination sets. Three types are made: a heavy-duty machine for dealer demonstrations; a converter with filter for home radio use, and a converter without filter for talking machines only.—*Radio Retailing*, December, 1927.



## A.C. Console and Table Sets

A new line of Sparton radio sets is announced by the Sparks-Withington Company, Jackson, Mich. The AC-7 is a socket-operated console set which lists at \$375. According to the manufacturer, this "is a superbly selective set of rare tone and inspiring volume." Socket-operated sets of comparable quality but of lower price are the "Model 63 Electric" and the "Model 62 Electric," priced at \$215 and \$188 respectively. For use with these latter two sets is the cabinet speaker, a combined console and speaker, at \$55. The console alone, without speaker, is \$35. In the lower-priced field, are models 6-26 and 6-15, battery-operated sets which list at \$88 and \$68 respectively.—*Radio Retailing*, December, 1927.



## Audio- and Filament-Transformers

The Bremer-Tully Manufacturing Company, 520 South Canal Street, Chicago, Ill., is manufacturing two new types of transformers. The first type is an audio-frequency transformer made in two models. Model 3-31 for the first stage and model 2-22 for the second stage. The retail price is \$6 each. The second type is a filament transformer designed for use with the new a.c. tubes, and has three separate windings. These windings are 1 1/2, 2 1/2 and 5 volts. This transformer is designed to operate on 110 volt, 60 cycle current. The retail price, with cord and receptacle, is \$7.50.—*Radio Retailing*, December, 1927.

## New Raytheon Tubes

The latest addition to the family of gaseous rectifiers made by the Raytheon Manufacturing Company, Kendall Square Building, Cambridge, Mass., is the Raytheon H, a full-wave rectifier with the necessary increase in working voltage to supply the plate requirements of the '10 type power tube. The output voltage is 500 and 125 milliamperes. The input voltage is from 500 to 550 volts.

An improved type of voltage regulator tube or glow tube, is found in the Raytheon R. This is of the same size and general appearance as the BH rectifier, has a standard UX base, and an additional contact is made with the brass shell or side pin in connecting the third element or starting anode of the tube. Internally, it has a large cylindrical cathode as well as a center anode. In addition, it has a starting anode rod placed quite close to the inner wall of the cathode. With the starting anode properly connected, the running anode will operate with a starting voltage of 90. Only 2 or 3 milliamperes of current are required for the starting anode to maintain the necessary minimum ionization of the gas at all times in the tube for proper voltage regulation. This tube will carry up to 60 milliamperes of current and then maintains a voltage of approximately 90 across its terminals for the automatic regulation of the 90, 45, and 22 1/2 volt taps.

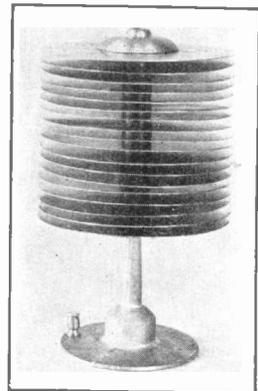
The BH has also been greatly improved although the improved model is very similar to the old type. It is interchangeable, not only with the old BH but with the B type. The new BH has an output of 125 milliamperes at 200 volts.—*Radio Retailing*, December, 1927.

## A and B-Power Control

Swan-Haverstick, Inc., Trenton, N. J., is making an automatic A and B-power control for use with any trickle charger and B-power unit. It is entirely controlled from the switch on the radio set and has an intended retail price of \$4.—*Radio Retailing*, December, 1927.

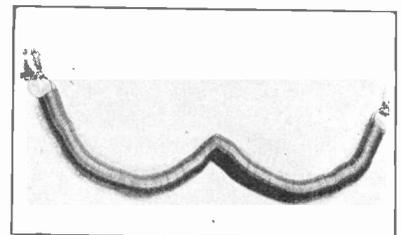
## Disc Antenna

A disc antenna is being made by the Bergquist Manufacturing Company, Lindstrom, Minn. The construction of this device is clearly seen in the illustration and it is designed to set on top of the receiving set or at any other convenient place. According to the manufacturer it is non-directional. It is made of aluminum and is adjustable. Intended retail price is \$7.50.—*Radio Retailing*, December, 1927.



## Spring Antennae

The Mack Company, Inc., 44 No. 4th St., Philadelphia, Pa., is making spring antennae as shown in the illustration. Two types are made, the first, model No. 20, designed for a stretch of from 20 to 60 ft. and the second, No. 60, for a stretch of from 60 to 125 ft. Among the features claimed for these antennae are, two to five times as much capacity as an ordinary antenna and four to ten times as much inductance. The intended retail price of No. 20 is \$4 and No. 60 \$2.50. The company also makes a spring indoor aerial, the intended retail price of which is \$1.—*Radio Retailing*, December, 1927.



## Electric Phonograph Pick-Up

The Amplion Corporation of America, 531 West 37th Street, New York City, is marketing an electric phonograph pick-up called "Revelaphone." This device is so constructed that the needle is applied to the phonograph record at exactly the right angle. It is equipped with a twenty-foot cord which makes it possible to have the phonograph and the radio in different parts of the room. The instrument is finished in antique bronze and is easily attached to any make of phonograph without disturbing the tone arm. Intended retail price, \$15.—*Radio Retailing*, December, 1927.



# Latest Products Gathered by the Editors

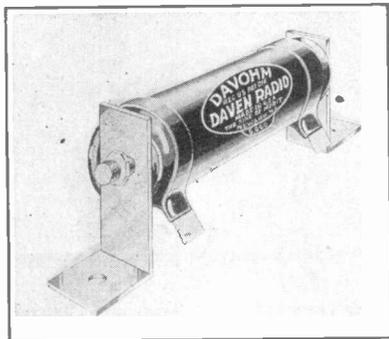
## Wire-Wound Resistors

The widespread demand for a series of accurately rated, wire-wound, fixed resistors, equipped with mountings, that will provide correct voltage regulation for home-made A, B and C power units and power amplifiers has brought about the development by the Daven Radio Corporation of Newark, N. J. of two new complete lines of heavy current resistors.

One is a thoroughly insulated power resistor, for use in power packs delivering up to 450-500 volts. This series ranges in values from 500 to 25,000 ohms, with actual heat dissipation in excess of fifteen watts.

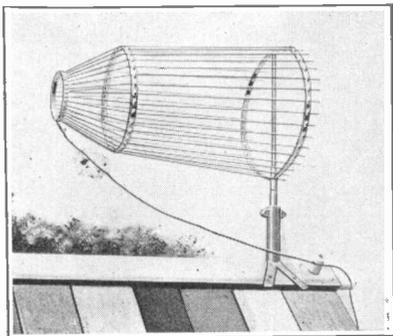
Ruggedly constructed, these voltage regulators pass, according to their size, from 27 to 150 milliamperes, which is ample for all standard units employing 71 to 110 power tubes. Special tapped units are designated as "Davohm 171" and "Davohm 210." A desirable innovation in this model is the inclusion of mounting rods and supporting brackets, "Resistroprops," which prevent sagging of the resistors under heat and which provide for rigid, easy assembly. A smaller series of resistors, wound on glass and comparable in size to the Daven Glastor, or the ordinary grid leak, are made in sizes from 100 to 5,000 ohms, in 100 ohm gradations up to 1,000 ohms, in 500 gradations up to the maximum of 5,000 ohms.

These Glastor-type resistors are intended for power-packs delivering up to 180 volts, and for all purposes where a unit is not required to dissipate more than two watts. This model resistor may be mounted in the conventional gridleak clips.—*Radio Retailing*, December, 1927.

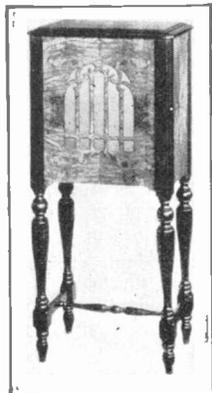


## Compact Antenna

The "Stanley Aerial," a compact, single-mounting unit of tin-dipped copper wire, is manufactured by the Stanley Engineering and Sales Company of 70 Monroe Street, Lynn, Mass. It has been particularly effective for apartment-house use. In addition to this, its one-point mounting prevents the usual property damage that accompanies the installation of antennas. A few minutes only are required to erect this antenna. It is thoroughly rigid and can be locked in any direction desired.—*Radio Retailing*, December, 1927.



*Radio Retailing*, December, 1927



## Floor Type Dynamic Speaker

A dynamic speaker known as "The Aristocrat" model is being made by the Magnavox Company, 4250 Horton Street, Oakland, Calif. This model, illustrated, is made in both a 6-volt and 110-volt direct current type. It comes complete with cords and plugs and requires no tubes. The mahogany legs and corners are two tone finish. The panels are of butt burl walnut. Overall measurements are 16 in. wide, by 11½ in. deep, and 36 in. high. The intended retail prices are \$85 and \$90 respectively.

The "Beverly" model is a table type design with the same unit and measures 17½ in. wide, 9¾ in. deep and 10½ in. high. The intended retail price of this design is \$75 for the 6-volt model and \$80 for the 110-volt model.—*Radio Retailing*, December, 1927.

## Flat Extension Cord

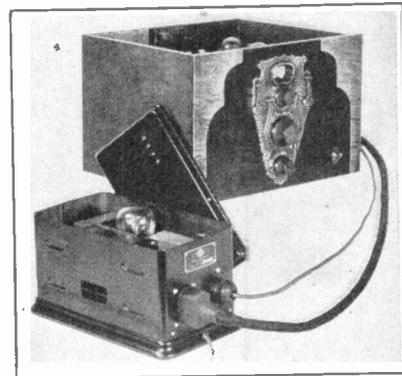
The Belden Manufacturing Company, 2300 South Western Avenue, Chicago, Ill., has developed a flat, rubber insulated extension cord for running under the rug, to provide convenient and safe outlets in any part of the room. The "Belden Flat Floor Cord," as it is called, provides an ideal connection for floor and reading lamps, fans, heaters, electric phonographs, irons, and radio power units, and cannot be noticed under the rug. The soft rubber gives and does not cause the rug to wear. A four-foot cord connects the flat cord to the house outlet. A feature of the cord is the Belden soft rubber plug which will not break and cannot be crushed. The other end of the flat cord is fitted with a receptacle for a standard plug. Intended retail price, 6 foot cord, \$1.45; 12 foot cord, \$1.65; 12 foot cord, \$1.85.—*Radio Retailing*, December, 1927.

## A-Power Unit

The Majestic A-current supply has been placed on the market by Grigsby-Grunow-Hinds Company of Chicago. This A current supply furnishes full strength and continuous A-power direct from the light socket for radio sets of from 5 to 8 tubes, including a power tube. It is absolutely "dry" in construction, using no acids or liquids whatever. The maximum output is 2½ amps. at 6 volts. A receptacle is provided on the front panel for plugging in B-supply, so that both A and B units are operated with one light socket connection. There is a switch in cord of A-unit which controls both sources of power supply. It is essential that the switch on the set be left turned on at all times. The rectifier used is of the dry plate type. The intended retail price is \$39.50.—*Radio Retailing*, December, 1927.

## A. C. Power Pack

The new a.c. Power Pack, recently brought out by the Webster Company, 848 Blackhawk St., Chicago, Ill., makes it easy to convert battery sets into the latest improved a.c. tube receivers. The Webster unit has been developed, using as a basis the well known Webster B unit, provided with transformer windings for filament lighting of the radio and audio tubes as well as the detector tube and 71 power tube in the last stage. The unit provides all the a.c. and d.c. voltages as well as the necessary grid bias for the power tube. There are two separate windings for the 25 tubes, one for the radio-frequency group and one for the audio. This is to prevent voltage variation in the audio filaments when adjusting the filament voltage of the radio-frequency stages. These units are also made for supplying the current for a.c. tubes requiring 15 volts on the filament, such as the Arcturus as well as those requiring 3 volts such as the Sovereign and Kellogg. All circuits are brought out through multi-plug connection and the receptacle for the receiver switch connection. The unit itself is mounted in a case no larger than a Webster compact B unit and is one of the most substantially made and efficient units for convenient mounting in any receiver now on the market.—*Radio Retailing*, December, 1927.



## A-Power Unit

The France Mfg. Co., 10325 Berea Road, Cleveland, Ohio, is making an A-power unit for replacing six volt radio A-storage batteries. A dry-disc rectifier and electrolytic filter are employed and the unit operates only while set is in use, consuming no more current than the average house lighting bulb. It is 6½ in. x 6½ in. x 9¼ in. high, and is furnished with both a.c. and d.c. leads. Installation requires but a few minutes. Intended retail price, 110-115 volt 50-60 cycle model, \$32.50. Price of model for replacing four volt battery to be announced later.—*Radio Retailing*, December, 1927.



# What the Trade is Talking About

## Patents Interchange Committee To Consider Amendments To RMA Constitution

A sub-committee of the Patents Interchange Committee of the Radio Manufacturers Association, has been appointed by A. J. Carter to consider necessary amendments to the constitution and by-laws of this organization in the belief that its successful participation in and solution of the present patent situation will require this preliminary action.

The personnel of this sub-committee is as follows: T. K. Webster, Jr., The Ekko Company, Chicago, Ill., chairman; Wm. Sparks, Sparks-Withington Company, Jackson, Mich.; H. C. Forster, Utah Radio Products Company, Chicago, Ill., and C. C. Colby, Samson Electric Company, Canton, Mass.

The Patents Interchange Committee at the suggestion of C. C. Hanch, who has been retained in a consulting capacity, has issued to all members of the R. M. A. a "patents questionnaire." As soon as the present nature and ownership of the patents now held by the individual members of this association has been analyzed, it is the intention of Mr. Hanch to submit definite suggestions to the patents committee directed toward the solution of this problem.

## McGraw-Hill and A. W. Shaw Companies Form Subsidiary

Incorporation of a subsidiary to publish four long-established national circulation industrial publications just acquired was announced last week by the McGraw-Hill Publishing Company and the A. W. Shaw Company of Chicago. The subsidiary is the McGraw-Shaw Company, and the papers affected are *Factory, Industrial*

*Management, Industry Illustrated and Industrial Engineering.*

Under the announced publishing plan, the first two papers will be combined as *Factory and Industrial Management*, starting with the January issue. The third paper will be consolidated with *Industrial Engineering*, a McGraw-Hill publication established in 1882, starting with the December issue.

Mr. McGraw is chairman of the board of the new company and A. W. Shaw, of Chicago, is president. Malcolm Muir, vice-president and director of sales of the McGraw-Hill publications, and Wheeler Sammons, president of the Shaw company, form the management committee.

## Hazeltine Licenses Grebe

A. H. Grebe & Company, Inc., Richmond Hill, N. Y., has recently been licensed under all patents covering radio apparatus owned by the Hazeltine and Latour Corporations. Coincident with the signing of this license agreement, all litigation between the companies was terminated.

## Federal Radio Commission Clears Select Channels

A comprehensive plan to set aside the broadcasting channels from 600 kilocycles to 1,000 kilocycles, as a band to be maintained free of heterodynes, whistles and other radio interference for trans-continental reception, was put into effect December 1, by the Federal Radio Commission.

The initial step in this plan required the transfer of 69 stations within the present restricted channels. This action will clear 26 channels. Some ten additional channels scattered within the non-heterodyning band will be cleared by co-operation among broadcasters, or by public hearings.

## Thompson Company Reorganizes

The Thompson Radio Company, 66 York Street, Jersey City, N. J., has been reorganized, the present owners having bought out the R. E. Thompson Manufacturing Company, the R. E. Thompson Corporation and the Wireless Improvement Company. The company is licensed to use the Hazeltine neotrodyne circuit, the Lektophone Corporation patents and the Boyd Phelps patents. It also has an agreement with Westinghouse Electric and Manufacturing Company for the use of the Armstrong regenerative patent rights and the Farrand Manufacturing Company for the use of patents on the coupling of vacuum tube circuits.

In charge of the new organization are Alfred Zipser and Otto Martini. Mr. Zipser was general manager of the Freed-Eisemann Radio Corporation from 1922-1925. Mr. Martini was formerly associated with the Wireless Improvement Company.

EFFECTIVE MONDAY, NOVEMBER 21, Chicago's broadcasting stations, all of which have been silent on Monday nights for four years, resumed regular program service. Chicago was practically the only city in the country which had a silent night. It was felt that the interests of the public in the Chicago territory would be better served if Chicago stations were on the air every night.

## New Hazeltine Patent

A United States Letters Patent broadly covering all of the essential features which make the modern tuned radio-frequency receiver a satisfactory operating device was issued to the Hazeltine Corporation

# Admiral Bullard, Chairman of Federal Radio Commission, Dies

Rear Admiral William H. G. Bullard, chairman of the Radio Commission and a pioneer in the development of radio communication in the United States, died suddenly of heart trouble at his home in Washington, D. C., November 24, a martyr to his efforts in the cause of radio. His end came after a picturesque career, thirty-six years of which were spent in the navy.

He was the second member of the Commission to die since its inauguration March 15, the other being Colonel John F. Dillon, who died in September. A third member, Commissioner Bellows, resigned a few weeks ago, leaving of the original membership of five Orestes H. Caldwell and Judge E. O. Sykes, the latter being Vice Chairman, who will preside until a new Chairman is chosen.

While it is within the power of the commission to choose a Chairman, it is believed it will await the action of President Coolidge in appointing a successor to Admiral Bullard, who represented the second radio zone, comprising Pennsylvania, his home state, Ohio, Michigan, Virginia, West Virginia and Kentucky.

Under the Federal Radio act, the Radio Commission was to serve for one year in



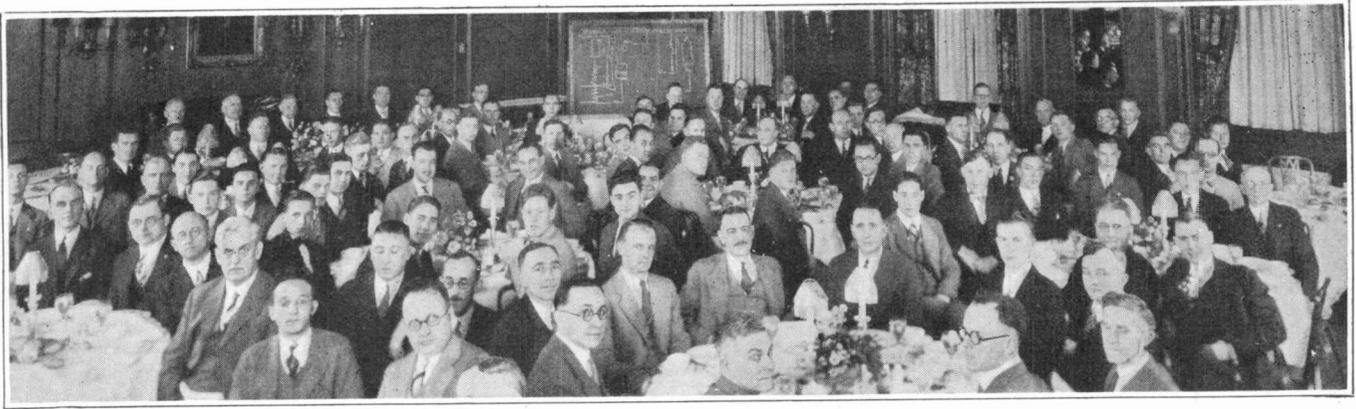
Late Rear Admiral W. H. G. Bullard, Chairman, Federal Radio Commission

its full capacity or until next March, after which it was to become advisory to the Secretary of Commerce. A movement is under way in Congress to have the term of the Commission, as now constituted, extended another year. In any event, it is believed the President will fill the new vacancy as soon as he can canvass the field.

One of the outstanding problems left unsolved by the death of Admiral Bullard was the petition of certain press associations and metropolitan newspapers for permission to use low wave lengths for point-to-point service. A hearing on their applications was scheduled for Jan. 3, 1928, by the Admiral.

He was one of the principal members of the American delegation to the International Radiotelegraphic Conference, which is winding up its sessions here, and his double tour of duty as delegate and as Chairman of the Radio Commission is believed to have hastened his death.

Admiral Bullard is survived by his widow, Mrs. Beirne Saunders Bullard, formerly of Baltimore, whom he married in 1889, and one son, Lieut. Commander B. S. Bullard, U. S. N., both of whom resided in Washington.



## Western New York R. C. A. Dealers Convene at Buffalo

An unusually large number of R.C.A. dealers from western New York and Pennsylvania recently gathered at the Hotel Statler, Buffalo, N. Y., as the guests of Curtis N. Andrews, R.C.A. distributor in that territory. The meeting was presided over by Mr. Andrews. Among those who came from

the New York office of the Radio Corporation to address the meeting were E. A. Nicholas, district sales manager, John J. Isreal, service representative and M. L. Bergin, in charge of Radiotron sales. The meeting concluded with a banquet in the evening.

on November 8. The new patent is numbered 1,648,808.

The patent covers the Neutrodyne development of Professor Louis A. Hazeltine, which some years ago resulted in completely changing the design of broadcast receiving apparatus and made the tuned radio-frequency receiver the standard type of radio receiving set. There are in all twenty-one claims of the patent, among which are: A radio-frequency amplifier with a step-up ratio between the primary and secondary coils of the interstage coupling transformers whereby the input conductance of each transformer at resonance is substantially greater than the plate conductance of the preceding vacuum tube; a multi-tube tuned radio-frequency amplifier with step-up ratio coils and means for maintaining the amplifier stable for any frequency throughout the frequency range; the placing of apparatus, together with the reversal of the primary relative to the secondary in the coupling transformer, to provide natural capacity so that at least partial neutralization is obtained; and the use of coils and condensers electrically alike so that there are like dial readings, or, more specifically, like condenser settings, for all stages.

### Trade Commission Renews RCA Hearings

Hearings in the Federal Trade Commission's investigation of the alleged trust created by the General Electric Company and allied companies in the radio and electrical industries, were renewed in New York October 31.

Testimony tending to prove the alleged illegality of Clause Nine of the agreement between the Radio Corporation of America and its radio patent licensees was ordered stricken out by the Commission on the grounds that it was not part of the original complaint on which the investigation was based three years ago.

New complaints, however, have been made by several tube manufacturers, and it is expected that hearings specifically on Clause Nine will begin in the near future.

H. F. HOPKINS, formerly sales and advertising manager of the Borkman Radio Corporation, has resigned his office with that company, to take up his new duties as President of the Acoustical Development Corp., 230 E. Ohio Street, Chicago, Ill.

### Harold A. Lafount Appointed West Coast Commissioner

President Coolidge has appointed Harold A. Lafount as a member of the Federal Radio Commission to represent the Fifth Zone as successor to the late Colonel John F. Dillon. Mr. Lafount, who has been a prominent business man in Salt Lake City, Utah, for a number of years, took the oath of office on November 21.

### R.M.A. Engages Hanch

Charles C. Hanch, formerly director of the National Automobile Chamber of Commerce, has been engaged by the Radio Manufacturers' Association to co-operate with the R.M.A. Patents Committee in studying the possibilities of patent cross-licensing in the radio industry.

Mr. Hanch played a leading part in working out the cross-licensing agreement now in force in the automobile industry.

CROSLEY RADIO CORPORATION, Cincinnati, Ohio, has reduced the price of the No. 602 a.c. operated Bandbox, with power unit, from \$125 to \$110. This reduction became effective November 1.

### Radio Commission Will Hear Short-Wave Applications

The Federal Radio Commission will hold a general public hearing to consider applications for licenses submitted by concerns and individuals in the United States who desire to communicate on short waves. This hearing will be held at 2:00 p.m. on Tuesday, January 10, 1928, in the Commerce Building, Washington, D. C.

The Commission has received so many applications for construction permits to build short-wave radio transmitters for various forms of communication including commercial, limited commercial, relay broadcasting and point-to-point service, that a general public hearing seems necessary. It is because the Commission foresees a great demand for these short-wave channels in many services which cannot otherwise be provided for, that a public hearing on the subject is necessary before the Commission can arrive at a definite policy for issuing such licenses in the future. The

Commission has especially in mind the necessity of assigning sufficient short-wave channels for the use of aerial navigation, which is increasing rapidly and for which development suitable communication channels must be reserved.

Any parties interested in radio service may appear at the January hearing, if they so desire, to advise the Commission as to their future needs for communication channels in the short-wave bands.

### Federal Radio Service Positions Open

Applications for the appointment of associate radio engineers, assistant radio engineers and junior radio physicists throughout the United States are being received by the Civil Service Commission at Washington, D. C., and must be on file not later than December 27.

The examinations for engineers are to fill vacancies in various branches of the service and a probationary period of six months is required. The duties will be in connection with original research or investigation, or design and construction, in radio engineering. The examination for physicist is to fill vacancies in the United States Naval Research Laboratory, Bellevue, D. C., in the Bureau of Standards, Department of Commerce, and in positions requiring similar qualifications.

Competitors for the radio engineer positions will not be required to report for examination at any time but will be rated on their education, training and experience. Applicants for the position of radio physicist, however, will be required to take an examination and the date for assembling will be stated on their admission cards. They will be rated on general physics, mathematics through calculus and practical questions on radio.

The entrance salary for associate radio engineers is \$3,000-\$3,600 a year and for assistant engineers, \$2,400-\$3,000 a year, depending upon qualifications of the appointee and the duty to which assigned. The entrance salary for radio physicists is \$1,860 a year.

Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the United States civil service board of examiners at the post office or custom house in any city.

## 1928 R.M.A. Trade Show Plans Are Formulated

Preliminary arrangements for the second annual trade show of the Radio Manufacturers' Association, have been made by the R.M.A. show committee headed by Major Herbert H. Frost of E. T. Cunningham Inc., New York City. The show will be held during the week of June 11-16, 1928, at the Stevens Hotel, Chicago. The first annual trade show this year drew more than 21,000 and the 1928 show is expected to draw upwards of 30,000 manufacturers, jobbers, dealers and others connected with or interested in the industry. The exhibitors are confined to members of the R.M.A. who are in good standing on February 15, 1928.

In conjunction with the trade show, the fourth annual convention of the R.M.A. will be held. Officers will be elected for 1928-29 and reports received from the standing and special committees on many matters of vital import. The R.M.A. annual banquet also will be held during that week.

Applications of members for show space can be made to the R.M.A. office, 32 West Randolph Street, Chicago, Ill.

## Federated Radio Trades Opens Chicago Office

The Federated Radio Trades Association, with offices in St. Louis and Minneapolis, has established its headquarters at 32 West Randolph Street, Chicago, Ill. H. L. Erstrom, newly elected executive secretary, is in charge. Mr. Erstrom will be glad to hear from any dealer or dealer-jobber organizations desiring to establish national association contact.

## Federal to Manufacture Ortho-Sonic in Canada

The Federal Radio Corp., Buffalo, N. Y., has been granted permission to manufacture in Canada under the name of Federal Ortho-Sonic Radio, Ltd., with headquarters at Bridgeburg, Ontario. This move is the result of the recent licensing of Federal receivers under the tuned-radio frequency, regenerative, and power device rights controlled by Canadian Radio Patents, Ltd. Federal's Canadian wholesalers include such well known firms as: Tait Radio Sales, Toronto; I. J. Haug & Sons, Regina; and the Radio & Automotive Equipment Co., Winnipeg.

ROBERT N. WATKIN of the Will A. Watkin Company, Dallas, Texas, has been appointed chairman of the Resolutions Committee of the National Association of Music Merchants. The other members of the committee are A. D. LaMotte, Thearle Music Company, San Diego, Cal., and A. L. Maresh, Maresh Piano Company, Cleveland, Ohio.

The Will A. Watkin Company recently celebrated the forty-fifth anniversary of its founding.

HENRICH'S RADIO STORE, Milwaukee, Wis., recently opened its second store at 1482 Green Bay Avenue.

A. S. COBB, formerly manager of the wholesale department of Sherman, Clay & Company, Seattle, Wash., has been appointed district manager for Brunswick-Balke-Collender Company, with home offices in Seattle. Mr. Cobb's territory will be Seattle and Portland.



## Giving Paris the O. O.

Captain William Sparks, president of the Sparks-Withington Company, Jackson, Mich., and his Zouaves were features of the recent American Legion convention in Paris. The expression of keen delight so vividly registered on the Cap's features is undoubtedly caused by the fine showing his Zouaves made. The fact that a couple of good-looking French dames were passing by when the picture was taken had nothing whatever to do with it.

## Pacific Coast Association Elects Officers

The Pacific Radio Trade Association, at its annual meeting, held in San Francisco, re-elected Ernest Ingold as president, J. W. Laughlin as vice-president, and W. J. Aschenbrenner as secretary-treasurer for the ensuing year.

The following members were elected to the board of directors: George Campe, president, George Campe Company; C. B. Clendennin, manager, National Carbon Company; Don Gilman, manager, National Broadcasting Company; Ernest Ingold, president, Ernest Ingold, Inc.; W. G. Kaemper, manager, Listenwaller & Gough; G. Harold Porter, Pacific Coast Manager, Radio Corporation of America; Eric M. Unmack, president, Westwood Electric Company; Shirley Walker, assistant to the president, Sherman, Clay & Company, and J. W. Laughlin, director KPO.

During the meeting, C. B. Clendennin, chairman of the Radio Show committee, and Arthur Halloran, on the nominating committee, gave their reports. The year's activities, including the association's work on the Radio Exposition, interference elimination and summer broadcasting, were covered by President Ernest Ingold. The report of the secretary-treasurer including the presentation of the auditor's report, showed cash on hand of approximately \$22,000.

THE UNIVERSITY MUSIC COMPANY, Seattle, Wash., recently added another radio department to its group when it opened in its new home at 47th and 14th Avenues, Northeast. This department will be under the management of Ned Douglas, proprietor of the store. A radio studio for the use of Station KFQW is a feature of this store.

## Fraudulent Advertisers Sued by Zenith

Zenith Radio Corporation, 3620 Iron Street, Chicago, Ill., has been granted a sweeping injunction by the Federal Court of Detroit, against Mark's Auto Accessories, Inc., Grand Rapids, Mich., Dave's Auto Accessories, Inc., Detroit, Mich., and John Ross Sales Company, Detroit, Mich., as the result of a suit recently instituted charging them with fraudulent advertising.

Zenith charged the defendants with advertising receivers under the trade name of "McMillan," and with stating in the advertisements that they were duplicates of the set Lieut.-Commander Donald B. MacMillan took with him on his Arctic expeditions. Zenith contended that its radio apparatus was used exclusively on this trip. This is the first of a series of suits the Zenith company has started in an effort to put an end to fraudulent advertising.

## Music Industries Ask Income Tax Relief

The Music Industries Chamber of Commerce has applied to Congress for relief from paying double taxation on income from installment sales. A delegation, consisting of C. J. Roberts, president of the National Association of Music Merchants; Delbert Loomis, its new secretary, and Alfred L. Smith, general manager of the Chamber, presented its case to the Ways and Means Committee early in October.

Merchants who have been threatened with additional tax assessments under these new regulations, as well as others who have changed to the installment basis of reporting income since 1921, are urged to communicate promptly with the Chamber for advice and information.

When Congress convenes this month, a bill will be introduced to amend the 1926 Revenue Act.

## Evansville, Ind., Ordinance Protects Credit Men

An ordinance recently passed in Evansville, Ind., requires that all transfer and moving companies file with the chief of police the names and addresses, both new and old, of all persons whose household effects they have moved. The ordinance is designed to protect credit managers from people who move from place to place without notifying them of a change of address. So far as can be learned, Evansville is the second city in Indiana to adopt such an ordinance, Indianapolis having had one for a number of years.

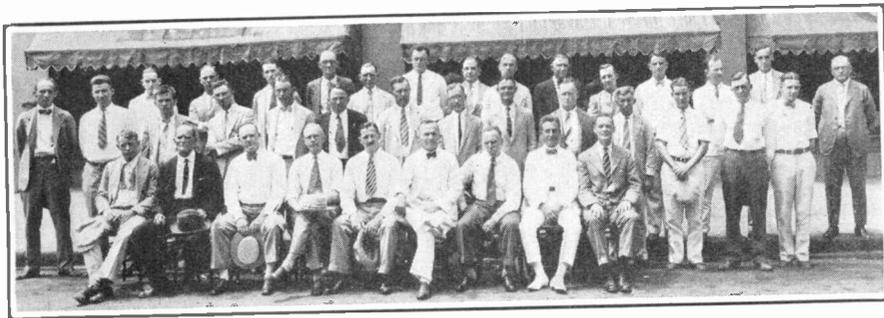
AEROVOX WIRELESS CORPORATION, 70 Washington Street, Brooklyn, N. Y., has acquired the condenser equipment of the Globe Art Manufacturing Company of Newark, N. J. The addition of this equipment greatly augments its manufacturing facilities. The Aerovox organization has also leased additional floor space in the building it now occupies and is operating three shifts a day.

H. H. BLISH, JR., of Harger & Blish, Des Moines, Iowa, has been elected president of the Des Moines Radio Merchants Association, succeeding Ed. O'Dea.

LEIPZIG TRADE FAIR, INC., 630 Fifth Avenue, New York City, has appointed Herbert A. Johnson to succeed E. A. Boettcher as New York manager.

# News of Jobbers and Distributors

## Cotton Pickers Hold A-K Dealer Convention



The Interstate Electric Co., Eureka Park, La., co-operated with the Atwater Kent Manufacturing Company in a small but enthusiastic dealer convention held in its home city recently.

## F. D. Pitts Company Host to New England Dealers

L. C. Warner Company, Seattle, Wash., Fada distributor, had as its guests over one hundred dealers from Oregon and southwestern Washington at its annual dealers' sales assembly in Portland, Oregon. The meeting was held under the supervision of J. W. Condon, Jr., vice-president of the company and manager of the Portland branch, assisted by N. A. Hayes, sales manager of the branch.

During the first day, a business session and sales and service conferences were held followed by an entertainment in the evening. On the second day, the new merchandise was displayed. The convention concluded with a banquet in the Multnomah Hotel.

F. A. D. ANDREA, INC., Long Island City, N. Y., has recently appointed Wilcott, Prisk & Company, of Sydney and Adelaide, Australia, as distributor for New South Wales and South Australia. A. J. Veall, Melbourne, Australia, is distributor for the Victoria section of Australia, as well as Tasmania. The Canadian Cycle and Motor Agency, Ltd., covers Queensland, Australia. The last named company is the largest commercial establishment in Queensland and has 110 branch offices and agencies.

KNICKERBOCKER TALKING MACHINE COMPANY, 114 East Twenty-third Street, New York City, has been appointed Freed-Eisemann distributor for Manhattan and the Bronx, to work in conjunction with the present distributors in this territory.

C. J. BROWN, agent for Samson Electric Company, Canton, Mass., has opened new offices in the Lexington Tower Building, 369 Lexington Avenue, New York City.

THE SWANBERG ELECTRIC COMPANY, Elkhart, Ind., has been incorporated and will handle radio sets and supplies, both wholesale and retail, along with other electrical merchandise. The incorporators are Clifford E. Swanberg, Joseph M. Stutz and August E. Swanberg.

THE NATIONAL RADIO COMPANY, formerly at 6 Wells Street, Chicago, Ill., has moved to new and larger quarters at 227 West Madison Street.

FEDERAL RADIO CORPORATION'S wholesalers throughout the United States have

been calling their quarterly dealer meetings to effect closer contact between the wholesaler and the retailer. Meetings have already been held by R. E. Tongue Bros., Philadelphia; Charles Rubel & Company, Washington, D. C.; National E & A Supply Company, Peoria, Ill.; Brown-Camp Hardware Company, Des Moines, Iowa; Harry Alter Company, Chicago; B. W. Smith, Inc., Cleveland, Ohio; and Hamburg Brothers, Pittsburgh, Pa.

THE B. & O. RADIO, INC., Newark, N. J., has entered the radio field as distributor of Atwater Kent sets and Pooley and Red Lion cabinets. It is also handling Cunningham and Raytheon tubes; USL and Niagara batteries; Briggs & Stratton power units, as well as other accessories. The officers of the company are Ben J. Oppenheim, president; Harold A. Barter, vice-president and treasurer; and M. T. Hicks, secretary, all of whom have been identified with radio for many years.

THE LONG BEACH WHOLESALE RADIO COMPANY, 643 Pine Avenue, Long Beach, Cal., is the name and address of a new company recently organized by T. D. Caustic, Frank H. McKittrick and William E. Ashford.

## F. D. Pitts Company Host to New England Dealers

More than 75 Boston and New England dealers attended the radio dinner recently given by F. D. Pitts Company, New England distributor for the Kellogg Switchboard & Supply Company, at the Copley Plaza Hotel, Boston, Mass. The dinner was arranged to bring the dealers in closer contact with the merchandising and advertising plans and policies of the Pitts and Kellogg companies. L. D. Pitts, vice-president of the Pitts Company acted as toastmaster.

The speakers included L. D. Pitts and T. B. Croke of the Pitts Company, also, F. L. Oliver of the Boley Oliver Company, Kellogg distributor for the New York metropolitan district. H. C. Abbott, Kellogg sales promotion manager outlined the company's sales program for the coming season. Mac Harlan, advertising manager, explained the advertising policies and plans.

THE STEINITE LABORATORIES, Chicago, Ill., has recently appointed the Great Northern Electric Appliance Co. as distributor. The Great Northern Company has offices in St. Paul, Minneapolis and Duluth, Minn., as well as Fargo, N. D., and will cover that territory. The American Auto Supply Co., Scranton, Pa.; Larson Hardware Co., Sioux Falls, S. D.; and the Nevada Auto Supply Co., Reno, Nev., have also been added to the list of Steinite distributors.

CHICAGO RADIO REPRESENTATIVES ASSOCIATION, 1461 First National Bank, Chicago, Ill., has released the Fall, 1927, issue of its Trade Directory. The leaflet, which contains a list of the members of the C. R. R. A. and the manufacturers they represent, is available to jobbers and manufacturers.

W. F. MOGLE has purchased the interest of H. W. McClelland in the Mogle Radio Co., Regent Theater Bldg., Winfield, Kansas, and is now sole owner of the firm. The company will be conducted under the same name as before.

## This Stadium Fence Brought Results



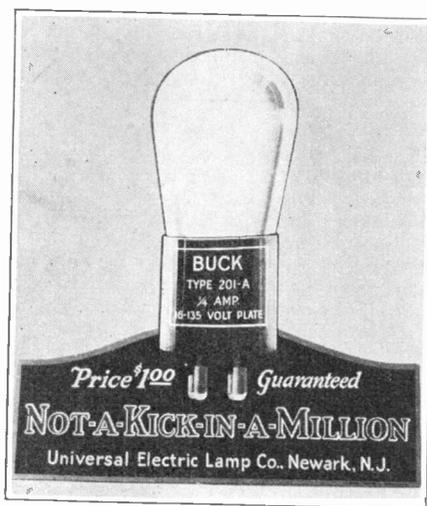
Sterling Radio Co., Kansas City, Mo., obtained good results from using the fence around the local football field to carry its message to the fans.

# New Dealer Help Material

*Aids to greater profits provided by radio manufacturers for their dealers*

THE YALE ELECTRIC CORPORATION, 60 Tillary Street, Brooklyn, New York, is supplying its dealers, free of charge, with Yale radio battery lantern slides with the dealer's name and address printed on them. It is also offering its dealers an assortment of single and double-column newspaper cuts, with space at the bottom of each for the dealer's name and address, as a tie-up with its Saturday Evening Post campaign in local papers.

## Buck Dealer Helps



The above illustrated display card is one of a group of new dealer helps offered by the Universal Electric Lamp Company, 26 Treat Place, Newark, N. J. It is 11 in. high and printed in red, yellow and black. The group also includes a large cardboard display standard illustrated with cartoons calling attention to the various types of programs which are available. This company is also offering station log cards containing suggestions for set ups and cures, with space on the front cover for your business card.

ELECTRAD, INC., 173 Varick St., New York, has just issued a small 16-page pamphlet, which contains instructions and circuit diagrams for installing the Phasatrol, the balancing device to control oscillation in all of the popular circuits, made by this company.

THE RADIO CORPORATION OF AMERICA, 233 Broadway, New York City, outlines in a booklet entitled, "Par Four," its sales helps and advertising plans for 1928. Among the dealer helps offered are blotters, wall charts, display racks, electrotypes, motion picture slides, folders and catalogues. The majority of these items are supplied without charge.

ATWATER-KENT MANUFACTURING COMPANY, Philadelphia, Pa., has issued a catalog, form 630, illustrating and describing its wealth of dealer-help display material for 1927-28. A great number of ideas is also presented in the bulletin for simple and elaborate window displays.

THE ALL-AMERICAN RADIO CORPORATION, 4201 Belmont Avenue, Chicago, Ill., is making a special limited offer to dealers, of a 46x26 in. cut-out window display and one All-American reproducer, for \$10 plus transportation charges. The display is of cardboard printed in five vivid colors with a cut-out place in the middle to provide for the speaker. Only one set is allowed to a dealer at this price.

This company is also offering its 1928 art calendars printed in an assortment of five different subjects, at a cost of 9c. each for minimum lots of 100. The dealer's business card is printed in a prominent place. Envelopes for the calendars are \$1.75 extra and strawboards are \$1.50 extra per hundred.

KELLOGG SWITCHBOARD & SUPPLY COMPANY, 1066 West Adams Street, Chicago, Ill., recently published the first issue of its new house organ called, "Kellogg Sales Helps," describing and illustrating the display material offered and explaining the Kellogg plan to allow dealers ten per cent for newspaper advertising. With the first issue a special advertising supplement was included, illustrating the newspaper advertising copy and mats prepared for use in the dealer's local paper. The copy and mats are supplied free of charge.

F. A. D. ANDREA, INC., Long Island City, N. Y., has issued a booklet explaining the distinctive features of harmonated reception. The leaflet also lists the complete Fada line with a brief description of each model including chassis views of the Fada Eight, Fada Seven and Fada Special.

## Sonatron Issues Broadside



One of the displays in a new broadside which the Sonatron Tube Company, Chicago, Ill., is offering to its dealers. The series also gives the Sonatron merchandising plan in detail.

## A Radio-Art Display



An artistic wall display of Radio-Art cabinets distributed by the Musical Products Distributing Company, 22 West Nineteenth Street, New York City.

THE ATWATER KENT MANUFACTURING COMPANY, Philadelphia, Pa., is offering a special flasher designed for attachment directly on the Atwater-Kent B-power unit. The flasher consists of a special reflector in back of a violet blue light effecting the light of a Raytheon rectifying tube. Besides catching the eye of the passerby, it calls attention to the fact that the B-power unit is automatic. The price is \$1.75 and they may be obtained from any A-K distributor.

The price of the advertising match folders has been reduced to \$3.75 per thousand, in minimum lots of 2,000. These folders should be ordered through A-K distributors, check to accompany order.

AMERICAN MECHANICAL LABORATORY, 285 No. Sixth Street, Brooklyn, N. Y., has just published a folder dealing with the control of radio receivers and radio power units. It may be had on request from the manufacturer.

UNIVERSAL BATTERY COMPANY, Chicago, Ill., has issued a new radio products catalog, No. 85-C. Other Universal dealer helps include a 16-page booklet on the care and operation of storage batteries, an assortment of envelope stuffers, mailing cards, movie slides and electros for newspaper service. These are all supplied without charge.

DE FOREST RADIO COMPANY, 139 Franklin Street, Jersey City, N. J., has published a new booklet on radio tubes, which will be mailed to anyone upon request.

# Amazing New A C radio tubes eliminate batteries by use of electric house current

**NEW RADIO TUBES TO USE ORDINARY HOUSE CURRENT FOR POWER**

NEW YORK, Jan. 3rd.—Much interest was aroused in radio circles today by the announcement that a radio tube had at last been perfected which used ordinary electric house current in the operation of its plates.

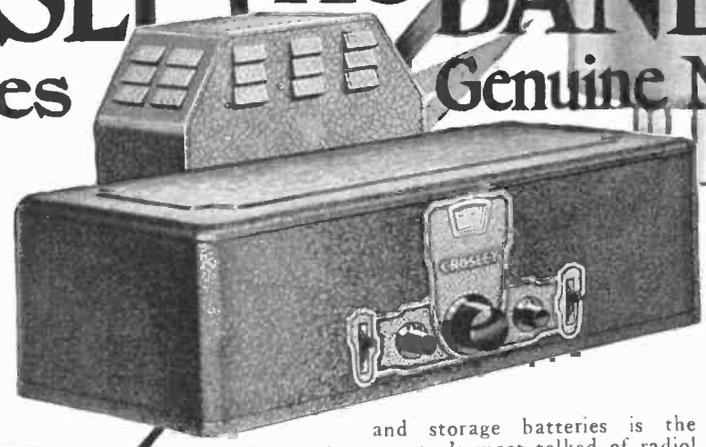
**NEW RADIO TUBE WILL OBSOLETE BATTERY POWER**

WASHINGTON, Mar. 17.—Those who from the electric industry have waited for a radio tube that would work from ordinary house current are now satisfied.

**ELECTRICAL WIZARD RUNS RADIO WITH ORDINARY HOUSE LIGHTING CURRENT**

A radio receiver was run on ordinary house lighting current.

## in the CROSLY AC BANDBOX 6 tubes Genuine Neutrodyne



**S**TORIES in regard to the coming of AC tubes which would operate from house-lighting circuits have appeared in various newspapers, arousing a climax of anticipation in the public mind last spring.

With the acquisition of a license by The Crosley Radio Corporation under a large group of patents controlled by The Radio Corporation of America, American Telephone and Telegraph Company, General Electric Company, Westinghouse Electric and Manufacturing Company, etc., the Crosley AC Bandbox is possible through the use of the new R. C. A. alternating current tubes—UX226 and UY227. These tubes utilize for their filaments and heating regular alternating current from the house-lighting circuit. The current is stepped down by means of a transformer without need of rectifiers to supply the heat necessary for the functioning of the tubes. The converter box, which is included with the Crosley AC Bandbox, can be tucked away out of sight. It is

**Now \$110 without tubes**

connected to the Bandbox by a cable and also supplies the current for the plate voltages on the tubes replacing B batteries.

Thus the Crosley AC Bandbox functions entirely from the regular house-lighting current without need of batteries, battery chargers, or any of the other usual paraphernalia which requires attention, care and early replacement.

The Crosley AC Bandbox with the new alternating current tubes is truly revolutionary, and brings to the radio user an entirely new conception of care-free radio. This AC model together with the battery type BANDBOX which works with standard power supply units

and storage batteries is the country's most talked of radio! The popularity centers around two major factors:

1. The imposing array of patents under which it is built.
2. The number and quality of the features Powel Crosley, Jr., has built in it for the price!

—And what value Crosley has added in:

1. Complete shielding of all elements.
2. Absolute balance (genuine Neutrodyne.)
3. Volume control.
4. Acuminators for sharpest tuning.
5. Single cable connections.
6. Single station selector.
7. Illuminated dial.
8. Adaptability to ANY type installation.

Today's radio must be adaptable to the home. It must fit into all kinds of conditions. Perhaps you have a bookcase corner—a desk compartment—a chest—or even a bureau drawer where it could be tucked away. Maybe you want it to be part of the furnishings, as an impressive console or credenza

cabinet. The Bandbox fits in everywhere.

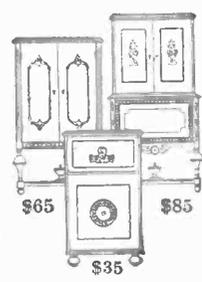
The metal outside case is easily and quickly removed.

The set is solidly mounted on a stout steel chassis. As all controls are assembled together in the front, cabinet panels are easily cut to allow their protrusion. The metal escutcheon is screwed on over the shafts and the installation has all the appearance of being built to order.

Two large furniture manufacturers have designed console cabinets in which the Bandbox can be superbly installed. (Shower Bros. Co. of Bloomington, Ind., and the Wolf Mfg. Ind. of Kokomo, Ind.) Powel Crosley, Jr., has approved them mechanically and acoustically and has seen to it that the famous Crosley Musicones are built in them so that the best type of loud speaker reproduction may be insured.

This is the kind of a radio you have been waiting for—the real direct electric set that requires absolutely no attention. What if it does run all night! Who cares? No run down batteries greet you in the morning.

Write Dept. 130 for descriptive information.



Montana, Wyoming, Colorado, New Mexico and West, prices slightly higher.

# CROSLY RADIO

THE CROSLY RADIO CORP.  
Powel Crosley, Jr., Pres.,  
Cincinnati, Ohio

**"You're there with a Crosley"**

Crosley is licensed only for Radio Amateur, Experimental and Broadcast Reception.



**R**ADIO-wise dealers know that the quality and dependability of Faradon Capacitors make them an item well worth stocking and pushing.

Amateurs and fans in your sales territory in increasing numbers are learning the advantage of asking for condensers by name—Faradon.

Put twenty years of radio manufacturing skill and experience behind your condenser sales arguments. Stock Faradon for kit and replacement business.

**WIRELESS SPECIALTY  
APPARATUS COMPANY**

Jamaica Plain, Boston, Mass., U. S. A.

*Established 1907*

***Faradon***

*The  
choice of  
men who  
know*

***Electrostatic condensers for all purposes***

# MERCHANDISING RADIO PARTS



A Section of *Radio Retailing*

December, 1927



## KITS—

*More than a Xmas  
sales booster — an  
ideal method of  
merchandising  
radio parts.*

**N**O ONE who knows anything about the parts business will deny that the great army of radio circuit hounds—those individuals who spend their leisure time trying out one circuit after another—has suffered severe casualties within the last year or two. So much so, in fact, that the great host of radio parts merchants who followed them from one circuit to another has likewise suffered a tremendous reduction in its ranks.

Likewise, no one will deny that this reduction in the ranks of the circuit-hounds as well as the parts dealers has been good for the radio parts industry. What is more, it has been good not only for the set builders and the dealers but the manufacturers as well. What has been the leading factor in this stabilizing of the manufacturing, merchandising and consumption of parts? The answer is kits, in the opinion of several leading parts dealers in the East. Kits, according to the dealers interviewed, should be considered more seriously, by those parts dealers who still insist on specializing in variometers, variocouplers, tuners and other conglomerate parts from which a radio set might be built.

As a Christmas sale item a kit is ideal. It has all the elements of a Christmas present both in the building of the set and in operating it long afterward and as for

instructive recreation for young people it far surpasses any other gift—dollar for dollar. But, Christmas sales are not the only reasons why kits make good merchandise.

A kit sale affords as large a unit sale as any other item stocked in a radio store, excluding the manufactured set—the retail prices ranging from \$20 to \$100. As a clean, merchandising item it is surpassed only by manufactured sets. Consequently the kit compares favorably with the manufactured set in the other points which go to make up the stock control problem.

Those two facts alone should be sufficient reason for pushing the sale of kits but there are others which have just as much weight. In the first place nine out of ten customers who intend to build a new set would much prefer to use a complete matched kit of parts and with a little salesmanship can be sold the whole outfit on the spot instead of possibly a few parts which he has in mind purchasing for a starter. Another is that the complete kit ordinarily costs the customer less than the total of the separate parts which he would need to build a given set.

The customer knows also that practically all complete kits are made up from circuits which have been thoroughly thrashed out in the laboratory by competent engineers and that the cost of experimenting with

conglomerate parts, which may prove financially disastrous to him, has been spread out by the manufacturer over the cost of production of a great number of items.

Last but not least, all the laborious work incident to building a set is done by the manufacturer at a minimum cost in the complete kit. Furthermore, a great deal of the work, such as engraving, is beyond the possibilities of the set builder in the first place so that the purchaser of the complete set is assured a set replete in all its artistic details as well as in its mechanical and electrical efficiency—things which do not detract one whit from the pride of the set builder in his creative ability to build a set but, on the other hand, things which go toward making a satisfied customer.

Taking all these things into consideration it is not surprising that kits have made so much progress as they now show. There now are more than forty first-class, complete kits offered to dealers by as many manufacturers again who have joined in combining some or all of their products in kits.

A great many parts dealers have taken hold of them, several to the exclusion of all other radio merchandise with the exception of accessories, but there still remains a majority of parts merchants who are not aware of the possibilities offered in this trend of the parts business.

# Resistors that Do Not Deteriorate for B-Eliminator Hookups

## BRADLEYSTAT *Perfect Filament Control*



Provides the correct control for all tubes, thus making it possible to interchange tubes without difficulty. Provides accurate stepless, noiseless control which makes it a great favorite and a very profitable, fast-selling item.

## BRADLEYLEAK *Perfect Variable Grid Leak*

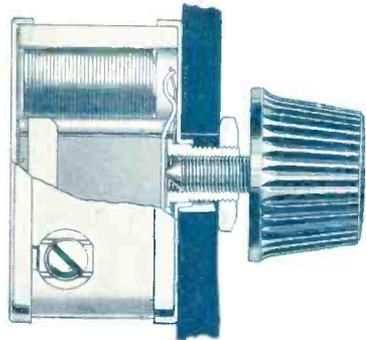


A fast-selling item that provides the ideal grid leak resistance value for every tube. With this remarkable unit best results can be had with any tube. Push the Bradleyleak to provide perfect grid leak control for your customers and secure good profits for yourself.

THE extensive use of Bradleyunits and Bradleyohms for B-Eliminator manufacturers demonstrates conclusively their superiority for this service. Push these proven units to swell your parts sales, and provide merchandise that pleases your customers, insuring profitable repeat business.

## BRADLEYOHM-E

This remarkable unit is used for plate-voltage control in a large percentage of the leading B-Eliminators on the market today. It is popular because of its exceptionally wide control, which is stepless, noiseless and completely dependable. Is not affected by moisture or atmospheric changes. Furnished in extremely wide range of resistance values.



## BRADLEYUNIT-A

This molded fixed resistor does not deteriorate in service. It is impervious to atmospheric conditions and is not affected by moisture, temperature or

age. The end caps are tinned for easy soldering and the unit is readily installed. Ideal for use in B-Eliminator hookups where a fixed resistor is required.

ALLEN-BRADLEY COMPANY  
489 Clinton Street • Milwaukee, Wisconsin

# Allen-Bradley

## PERFECT RADIO RESISTORS

# Pre-viewing the New Circuits



Current fan magazines are telling how to build the sets described on this page. Do you have the parts?

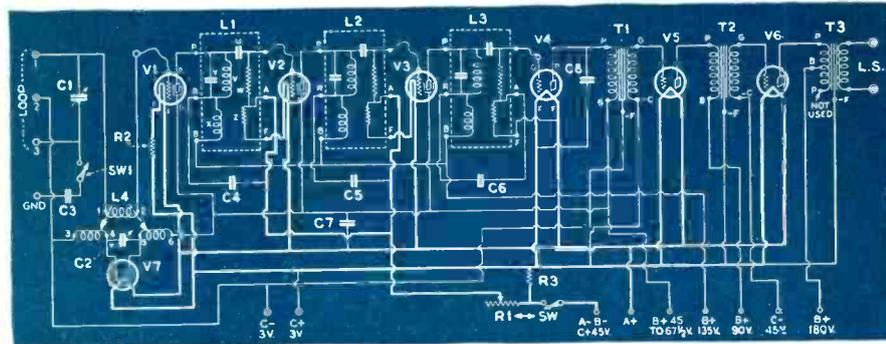
## The Tyrman Shield-Plate Superheterodyne

**I**N THE December issue of *Radio News* the construction of a seven-tube superheterodyne receiver, using three of the new shield-plate or double-grid tubes in the intermediate-frequency circuits, will be described in detail. It is believed that this is the first receiver using these tubes to be made available for home construction.

This receiver, which is known as the Tyrman Shield-Plate Superheterodyne, is the result of several months of intensive experimental work, and provides an ideal set for one who desires the utmost in sensitivity. Standard parts are used throughout with the exception of the intermediate-amplifier coupling units.

The receiver consists of a circuit employing an oscillator, a first detector, two stages of intermediate-frequency amplification, a second-detector and two stages of audio-frequency amplification. Although three stages of intermediate-frequency amplification are required in the average superheterodyne receiver it was found that two stages are ample with the new tubes.

The tubes are shown in the diagram as V1, V2 and V3, and are used in the first-detector circuit and the two intermediate-frequency stages. V4, the second detector, may be a standard '00A- or '01A-type; V5, the first audio tube, and V7, the oscillator tube, are standard '01A-type tubes; and V6, the second audio tube, is a type '71 power tube.



Either batteries or a power unit may be used for the operation of the receiver. As the three shield-plate tubes require a current of only .125 amperes each, the total current required by the filament circuits of this receiver is only 1.625 amperes, which makes the set very economical to operate. Also, the plate current is not excessive, as it is usually less than 35 milliamperes. For the grid circuit two "C" batteries are required; one of 45 volts.

The parts required for this circuit are as follows:

- L1, L2 and L3—Special impedance units for intermediate circuits.
- L4—Oscillator coupler.
- T1 and T2—Audio transformers.
- T3—Output transformer.
- C1—.0005 mfd. variable condenser.

- C2—.00025 mfd. variable condenser.
- C3—.0001 mfd. fixed condenser.
- C4—C7—1 mfd. by-pass condensers.
- C8—.0005 mfd. fixed condenser.
- R1—SW—15 ohm switch-rheostat.
- R2—15 ohm fixed resistor.
- R3—1 ohm fixed resistor.
- V1, V2 and V3—'22 type vacuum tubes.
- V4, V5 and V7—'01A type vacuum tubes.
- V6—'71 type vacuum tube.
- SW1—S.P.S.T. switch.
- 1—Tapped loop-antenna.
- 4—UX sockets with shields.
- 3—UX sockets with type '22 shields.
- 1—Double vernier drum dial.
- 1—Front panel.
- 1—Sub-panel.
- 1—7-wire battery cable.
- 8—Binding posts.
- 2—Brackets, hook-up wire and necessary hardware.

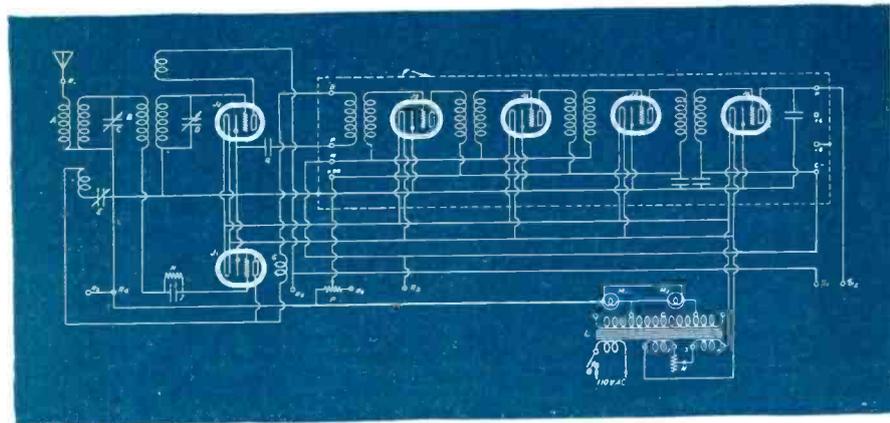
## Popular Radio's New A. C. Superheterodyne

**M**ANY experimenters and set builders have been deterred from building a receiver employing the superheterodyne principle because of the unusually high operating expense in "B" batteries and the "A" battery drain for so many tubes. The number of valves for use in such a circuit is an average of eight, although the superheterodyne principle has been used with as low as four and as high as fourteen vacuum tubes.

In the December issue of *Popular Radio* a new superheterodyne, is described which uses A C valves throughout and entirely eliminates the problem of battery drain, as all of the power is drawn from the lighting lines and no batteries are needed, except a 4½-volt "C" battery. It is claimed that this set is the first of its kind and operates admirably.

The complete receiver includes an intermediate-frequency pack, in combination with a heater transformer for supplying the heating current to the six A C valves, a metal chassis and a metal front panel but no audio-frequency amplifier. For this part of the set the LC-28 Unipac is recommended, as the a. c. superheterodyne has been especially designed to work in conjunction with it.

The intermediate amplifier is an Arlington time-signal amplifier, manufactured complete, and contains the apparatus in-



cluded in the dotted enclosure. It was found that this amplifier performed admirably the functions of the intermediate amplifier ordinarily used in superheterodynes by merely adding an oscillator.

The list of parts necessary for building this set is as follows:

- A and B—Inductance coils with mounting sockets.
- C and D—.00035 mfd. variable condensers.
- E—Midget variable condenser.
- F—One complete 112 kilocycle amplifier.

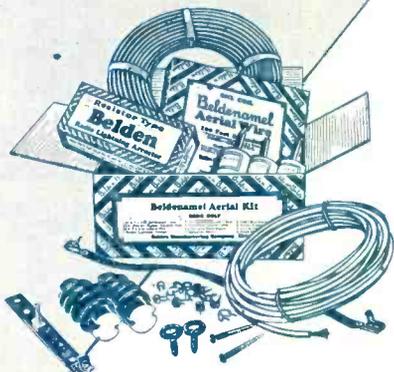
- G—High-frequency choke.
- H—2 megohm grid leak.
- I—.00015 mfd. grid condenser with grid leak clips.
- J1 and J2—UX type sockets.
- L—Filament lighting transformer.
- M1 and M2—Pilot lights.
- N—½ ohm rheostat.
- O—110 volt, a.c. switch.
- P—6000 ohm potentiometer.
- Q—5 mfd. fixed condenser.
- R1—R6—Binding posts.
- S1 and S2—Tip jacks.
- 1—Chassis unit.
- 2—Vernier drum dials.
- 1—Panel.
- Hook-up wire and necessary hardware.

## Push the Well-Known Belden Line For Greater Radio Profits

Extensive Belden advertising in the Saturday Evening Post, American Boy, Radio News, Radio Broadcast, Popular Science Monthly, Citizens Radio Call Book, and leading newspapers in many large cities, is popularizing the complete Belden line of radio accessories. Use window displays of the attractive Belden orange cartons to tie your store in with this extensive campaign.

### Beldenamel Aerial Kit

Because of the Beldenamel Aerial Wire, and the Belden Resistor Type Lightning Arrester, the Beldenamel Aerial Kit is a remarkably popular item. From the Beldenamel Aerial Wire to insulated staples, it includes every item required for constructing a first class aerial. The Beldenamel Aerial Kit will make satisfied customers for you.



### Belden Lightning Arrester



There is a big demand for the Belden Resistor Type Lightning Arrester. The design is of the latest and most approved type. It has no air gap. It has been tested and approved by underwriters. Easy to install and thoroughly reliable. It can be used inside or outside.

### Belden Indoor Aerial and Loop Wire



Indoor aerials are becoming more and more popular. Belden Indoor Aerial and Loop Wire answers perfectly the demand for an attractive flexible wire for inside use. It may be run around a window or over the molding so that it is hardly noticeable. This same wire is also ideal for winding loops. The non-stretching construction prevents sagging when on a frame.

### Beldenamel Aerial Wire

This popular item is much in demand. Belden advertising has educated the public to its unusual merit. Because of the thick coating of Beldenamel baked on every strand Beldenamel Aerial Wire does not deteriorate in service. It cannot corrode. Even after years of exposure to the weather, dirt, and soot, it is as good as new. Push Beldenamel Aerial Wire to sell other accessories such as lead-in strips, ground clamps, insulators, and lightning arresters.



### Belden Loudspeaker Extension Cord



Sell one of these convenient 25-foot radio extension cords to every customer. It permits moving the loudspeaker to any point desired. Color rubber insulation on both conductors assures faithful delivery of the signals with minimum waste. The handy bakelite connector makes the Belden Radio Extension Cord easy to install without tools.

### Belden Radio Battery Cord

Sell this handy Belden Battery Cord to replace tangled hook-up wires. It eliminates troublesome and messy connecting wires and eliminates the hazard of accidental short circuits between wires. Display the Belden Battery Cord in your window and boost your sales.



**Belden Manufacturing Co., 2308-A S. Western Ave., Chicago, Ill.**

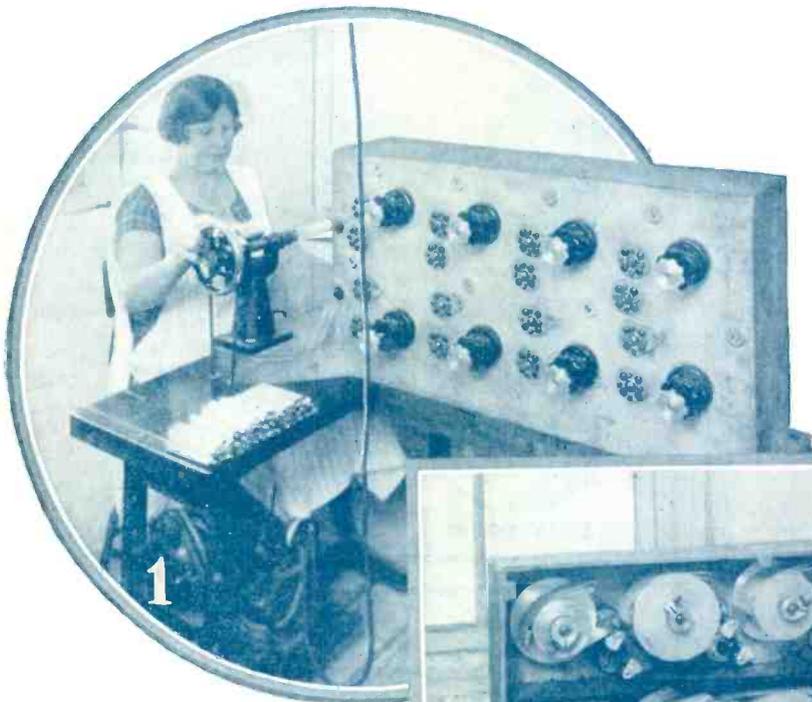
# MANUFACTURERS and MARKETS

*Devoted to the Problems  
of the Manufacturer in  
the Design and Distribu-  
tion of Radio Apparatus*

A Section of *Radio Retailing*

December, 1927

## Power Units REQUIRE High Quality CONDENSERS



**T**HE popularity of B-power supply devices has increased the consumption of filter condensers far beyond the ordinary production of this type of condenser, and in order to meet this demand, a number of American manufacturers have installed equipment for the production of filter and by-pass condensers. While the manufacture of this type of condenser is apparently simple to those experienced in its construction, there is a great amount of detail which is overlooked by the average. Each step must be carefully followed and the finished products thoroughly tested to insure the efficient operation of the power unit in which the condensers are used.

In anticipation of this condition, the Leslie F. Muter Company, Chicago, Ill., has installed some very fine machinery for the production of filter condensers. The importance of the proper paper and correct grade of foil has been carefully considered as well as the use of a thoroughly tried paraffin with which to seal the condensers during manufacture.

Photograph No. 2 shows one of the special power winding machines which has been installed. The spindle on which are placed the rolls of condenser paper and foil can easily be seen. These spindles are set on ball bearings as well as the foil and paper guide so that the machine will operate with a minimum amount of friction and

give a uniform tension in the condenser windings. Resting on the top of the rolls of condenser paper and foil are tensionators which also assist in keeping the paper and foil at the proper tension. This machine is completely inclosed as a further precaution in keeping any foreign particles away from the paper and foil during the winding operation.

**T**HE machine is operated by a direct current motor controlled by a rheostat which is operated in turn by a treadle. A revolution counter is located at the middle of the winding mandrel which informs the operator at all times as to the exact number of turns in the condenser.

Photograph No. 1 shows another view of the winding machine from the right side as well as an operator winding a condenser

on the mandrel. The eight large handles on the side of the machine are used to properly align the spindles on which are mounted the foil and paper. The sixteen small studded projections are used to properly align the ball-bearing guides for the paper and foil.

From the winding machine the condensers go through an impregnator and vacuum dryer where they are placed on trays in a single layer to give as much heating contact as possible. The dryer chamber is heated about one hour with the door slightly open to assist radiation. The door is then clamped tightly shut and the vacuum pump started.

This vacuum is maintained for a period of four hours which should remove any trace of moisture which may have remained after the baking operation. After the bak-



## Acme Celatsite Battery Cable

A rayon-covered cable of 5, 6, 7, 8 or 9 vari-colored Flexible Celatsite wires for connecting batteries or eliminator to set. Plainly tabbed; easy to connect. Gives set an orderly appearance.

**Acme Flexible Celatsite**  
A cable of fine, tinned copper wires with non-inflammable Celatsite insulation. Ideal for sub-panel or point-to-point wiring. Strips easily, solders readily. Nine beautiful colors; sold only in 25 ft. coils, in cartons colored to match contents.



**Acme Solid Celatsite**  
Tinned copper bus bar hook-up wire with non-inflammable Celatsite insulation, in 9 beautiful colors. Strips easily, solders readily, won't crack at bends. Sizes 14, 16, 18, 19; 30 inch lengths.

**Acme Spaghetti Tubing**  
Oil, moisture, acid proof; highly dielectric—used by leading engineers. Nine colors, for wire sizes 12 to 18; 30 inch lengths. (We also make tinned bus bar, round and square, in 2 and 2½ ft. lengths.)

**Acme Loop Antenna**  
Sixty strands of No. 38 bare copper wire for flexibility, 5 strands of No. 36 phosphor bronze to prevent stretching. Green or brown silk covering; best loop wire possible to make.

**Acme Stranded, Enameled Antenna**  
Made of seven strands of copper wire thoroughly enameled, then twisted into a firm cable. This type of antenna resists corrosion and presents maximum surface to the incoming wave, thus greatly improving the signals. Made in size to equal Nos. 14 and 16 solid enameled antenna wire. (We also make solid and stranded bare, and stranded tinned antenna.)

*Send for Folder*

Dealers—Write Dept. E for catalog inserts and discounts

**THE ACME WIRE CO.**  
Main Office and Works, NEW HAVEN, CONN.

*Branches at*  
New York, 52 Vanderbilt Ave.; Chicago, 427 West Erie St.  
Cleveland, Guardian Bldg.

**ACME WIRE**  
MAKES BETTER RADIO

# FROST-RADIO

DE LUXE RADIO APPARATUS

## Why?



FROST-RADIO

Why is it that more than 160 leading set manufacturers use Frost-Radio Parts in building their receivers?



FROST-RADIO

Why do over a hundred of these manufacturers seek our counsel in obtaining units best suited to their needs?

Why do these manufacturers ask Frost-Radio how they can best accomplish certain results in designing their circuits?

Why do hundreds of thousands of amateur and professional set builders order Frost-Radio Parts in increasing quantities each year?

The answer to these questions lies in the sterling quality of Frost-Radio, its superiority to other makes, and the remarkable recognition which has come to our engineering work in the radio field.

*A splendid line for you to handle, Mr. Dealer.*



FROST-RADIO

**HERBERT H. FROST, Inc.**  
Main Offices and Factory  
ELKHART, IND.  
Chicago New York



FIXED PAPER

## CONDENSERS

For

Inductance—Filters  
By-Pass—Compacts  
Interrupters  
Power Factor

We meet the needs of  
Manufacturer, Dealer  
and Jobber

**BROWN & CAINE**  
INC.

ESTABLISHED 1911

2317-19-21 Calumet Avenue

CHICAGO

*Branch Offices*  
Atlanta  
Denver  
Cleveland  
Los Angeles  
Kansas City  
Portland



ing the condensers are stacked individually with a metal plate between each one and after the tops are bolted on, they are pressed in a hydraulic press to a pressure of 2,000 lb. per sq.in. This operation insures that the capacities of the finished condensers are all uniform. The condensers are then baked again for a brief time to remove the moisture which they may have picked up during the pressing operation and the paraffin is drawn over from the liquor tank through a valve between the two tanks so that it fully covers all of the condensers in the impregnating tank.

The vacuum is continued for two hours and frequent inspections are made through peep holes in the impregnator cover until there is no trace of air bubbles coming to the surface of the paraffin in the impregnating tank. A pressure of 100 lb. is then applied to the impregnating chamber for a period of 1 hour after which the chamber is cooled to 160 degrees F. The paraffin is then returned to the liquor tank.

This last operation forces the paraffin into the condenser and the cooling set to prevent what is termed as "bleeding," as it is very important to have a uniform layer of paraffin between each layer in the condenser. From here on the condensers go through a series of tests and assemblies until they are in their final condition ready for marketing. This is but a brief picture of the many details which must be carefully taken into consideration in the manufacture of the modern condenser.

## World Using 18,000,000 Receiving Sets

Approximately 90,000,000 of the 1,000,000,000 people living within the world's constant radio reception area receive radio broadcast programs, in some form according to a report on potential markets for receiving sets by Lawrence D. Batson, Electrical Equipment Division, Department of Commerce.

About 18,000,000 receiving sets are now in use, according to Batson, who estimates that 200,000,000 sets would be required to service all of the people within the constant reception area on a basis of five members to each family.

Fifty-seven foreign countries now maintain regular broadcast service with Canada, Cuba, Russia, Sweden, Australia, Germany, United Kingdom, Argentina, and Mexico ranking first in order of number of broadcasting stations maintained and regularly operated.

## New Radio Patents

OCTOBER 11 TO NOVEMBER 8

- 1,645,557. Otto Von Brenk, Berlin, Germany. Assignor to Gesellschaft fur Drahtlose Telegraphie m. b. H., Berlin, Germany. Arrangement for Generating Electric Oscillations.
- 1,645,904. Percy Gavin, National Sanatorium, Tenn. Electron-Discharge Device.
- 1,645,922. John Robert O'Brien, North Melbourne, and Wilfred Revell, Melbourne, Victoria, Australia. Assignor to Edmund George Barker and George Albert Rawson, trading in partnership as Barker & Rawson, Melbourne, Australia. Sound-Reproducing Machine.
- 1,645,941. Ralph T. Williams, Chicago, Ill. Assignor to Bodine Electric Company, Chicago, Ill. Radio Tuning Inductance.
- 1,646,152. Jackson O. Kleber, Pittsburgh, Pa. Radio-Circuit-Testing Instrument.
- 1,646,201. Eert U. Iwwerks, Kansas City, Mo. Sound-Reproducing Device.
- 1,646,236. William Dublier, New York, N. Y. Assignor to Dublier Condenser Corporation. Variable Condenser. Design 73,710. Edward F. Pooley, Philadelphia, Pa. Assignor to The Pooley Company, Philadelphia, Pa. Radio cabinet.

- 1,646,438. Herman A. Affel Brooklyn, N. Y. Assignor to American Telephone and Telegraph Company, Harmonic Generator.
- 1,646,439. Herman A. Affel, Ridgewood, N. J. Assignor to American Telephone and Telegraph Company. Harmonic Generator.
- 1,646,443. Warren B. Burgess, Boston, Mass. Compensation for Radio-compasses.
- 1,646,444. Allen Carpe, New York, N. Y. and Ralph W. Deardorff, Kensington, Calif. Assignors to American Telephone and Telegraph Company. Protection Circuits.
- 1,646,471. Arno Zillger, Narberth, Pa. Assignor to Music Master Corporation, Philadelphia, Pa. Station-Recording Means for Radio Receiving Devices.
- 1,646,626. Herbert E. Metcalf, San Leandro, Calif. Assignor to The Magnavox Company, Oakland, Calif. Vacuum Tube.
- 1,646,633. Robert T. St. James, Chicago, Ill. Assignor to Chicago Miniature Lamp Works, Chicago, Ill. Process for Exhausting Detector Tubes.
- 1,646,648. Leo Knigoff, New York, N. Y. Radio dial.
- 1,646,662. William C. Roe, Pittsburgh, Pa. Frequency Changer. Design 73,741. Paul Drew and Lester C. Zabriskie, Ridgewood, N. J. Radio Speaker.
- 1,647,212. George Crisson, East Orange, N. J. Assignor to American Telephone and Telegraph Company, Vacuum-Tube-Echo Suppressor.
- 1,647,216. Lloyd Espenschied, Queens, N. Y. Assignor to American Telephone and Telegraph Company. Amplifying Circuit.
- 1,647,238. William H. Manthorne, Bayshore, N. Y. Assignor to Bell Telephone Laboratories, Inc. Electron-Discharge Device.
- 1,647,253. Henry S. Satterlee, New York, N. Y. Sound Amplifier.
- 1,647,264. Anthony C. Bove, Brooklyn, N. Y. Radio desk.
- 1,647,283. Abraham Esau, Jena, Germany. Arrangement for Improving Short-Wave Radiation Into Space.
- 1,647,290. Arthur Haddock, East Orange, N. J. Assignor to Western Electric Company, Incorporated, New York, N. Y. Antenna-Switching Relay.
- 1,647,349. Harald T. Friis, Red Bank, N. J. Assignor to Western Electric Company, Incorporated, New York, N. Y. Radio Signaling Apparatus.
- 1,647,372. Jackson H. Pressley, Oceanport, N. J. Long-Wave or Intermediate-Frequency Transformer.
- 1,647,503. Theodore Willard Case, Auburn, N. Y. Assignor to Case Research Laboratory Inc., Auburn, N. Y. Reproducing Amplifier.
- 1,647,609. William F. Cotter, Buffalo, N. Y. Assignor to Federal Telephone Manufacturing Corporation, Buffalo, N. Y. Heterodyne Receiving System.
- 1,647,617. Thomas R. Griffith, Dover, N. J. Assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y. Electron-Discharge Device.
- 1,647,634. Kenneth S. Johnson, Jersey City, N. J. Assignor to Western Electric Company, Incorporated, New York, N. Y. Electric Wave Filter.
- 1,647,736. Francis C. Kollath, Chicago, Ill. Amplifier. Design 73,815. Harry E. Zoll, Philadelphia, Pa. Radio cabinet. Design 73,816. Arthur Dorsey, New York, N. Y. Assignor to Martin-Copeland Co., Providence, Rhode Island. Radio Dial Plate.
- 1,647,988. John F. Farrington, New York, N. Y. Assignor to Western Electric Company, Incorporated, New York, N. Y. Wave Modulating.
- 1,647,996. Frederick L. Hunter, Jr., Towaco, and Sylvester W. Crowley, Weehawken, N. J. Assignor to De Forest Radio Telephone & Telegraph Co., Jersey City, N. J. Electron-Discharge Device.
- 1,648,006. John Peter Schafer, Richmond Hill, N. Y. Assignor to Western Electric Company, Incorporated, New York, N. Y. Rectifier and Modulator.
- 1,648,226. Arthur William Harris, New York, N. Y. Assignor to Amplion Corporation of America, New York, N. Y. Sound-Reproducing Instrument.
- 1,648,312. Kenneth H. Kingdon and Irving Langmuir, Schenectady, N. Y. Assignors to General Electric Company. Electron-Discharge Device.
- 1,648,458. George M. J. Mackay and Ernest E. Charlton, Schenectady, N. Y. Assignors to General Electric Company. Electron-Discharge Device and Method of Operating the Same.
- 1,648,521. Agnar Wikstrom, Boston, Mass. Assignor to Flash Radio Corporation, Boston, Mass. Radio Receiving Set.
- 1,648,592. Leroy R. Ruoff, Syracuse, N. Y.

- Assignor of one-fourth to Howard P. Denison and one-fourth to Eugene A. Thompson, Syracuse, N. Y. Wireless Apparatus.
- 1,648,644. Earl V. Hughes, Peru, Ind. Assignor to Wasmuth-Goodrich Company. Combination Radio and Phonograph Apparatus.
- 1,648,668. Walter Westphal, Los Angeles, Calif. Radio Speaker.
- 1,648,682. John Hays Hammond, Jr., Gloucester, Mass. Varying-Frequency System of Radio-Signaling.
- 1,648,689. August Hund, Bethesda, Md. Assignor to Wired Radio, Inc., New York, N. Y. Condenser Transmitter.
- 1,648,711. Ernest F. W. Alexanderson, Schenectady, N. Y. Assignor to General Electric Company. High-Frequency-Signaling System.
- 1,648,808. Louis A. Hazeltine, Hoboken, N. J. Assignor to Hazeltine Corporation. Wave Signaling System.
- 1,648,835. Paul Ware, New York, N. Y. Assignor to Ware Radio, Inc. Two-Way Radio Communication System.

## Would Require Radio Sets to Be Labelled "Poison"

Objection to certain provisions of the "Lye Law" which was passed by Congress March 4, 1927, has been made by the National Electrical Manufacturers' Association, the Electric Storage Battery Company of Philadelphia, and the Fansteel Products Corporation, of North Chicago, Ill. Briefs of complaint have been filed with the Secretary of Agriculture and the Secretary of the Treasury.

According to the complainants, under a strict and legal interpretation of the bill, any article containing a storage battery would have to be labelled prominently, "Poison." While the bill is directed primarily against the use of lye and other common household poisons without the container having the word "Poison" prominently displayed, provisions of the law can be interpreted so that it would be necessary to have the word "Poison" legibly displayed on the exterior of a radio set, automobile, or other devices using storage batteries.

The complainants are pleading to have the bill amended so that its provisions would not apply to batteries.

## Argentina Believed Most Advanced Country in South America in Radio

Argentina is believed to have had the greatest radio development of any South American country, says the Electrical Equipment Division of the Department of Commerce.

Argentina is the largest importer of radio apparatus from the United States and third largest in the Western Hemisphere. In 1926 more than \$750,000 worth of radio apparatus was imported from the United States, almost twice that of 1925, \$400,000, which again was \$100,000 more than in 1924.

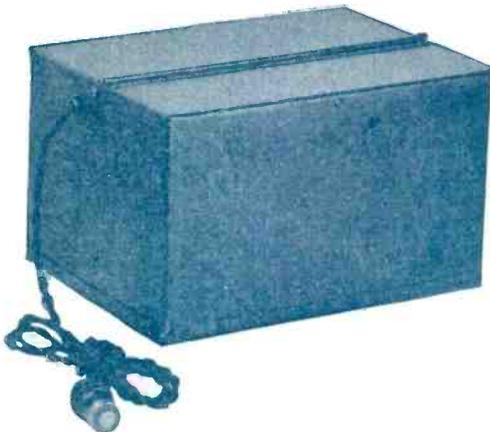
Argentina has 20 broadcasting stations, under government supervision. The climate is reported good for radio reception and Buenos Aires as well as several other stations in the interior of the country are reported heard in all inhabited parts.

About 150,000 sets are in use in this Republic, the majority being concentrated about Buenos Aires. Of the first 100,000 sets sold in this country probably 75 per cent were of the crystal type, since which time, due to lower prices offered by European makers, the tube sets are having the greatest sale. They appear to consist of one, two, five and eight tubes, straight regenerative and three-circuit regenerative sets.

The American makes of complete sets

**SM**

# Electric Phonograph and Radio Amplifiers



The Silver-Marshall 678 light socket amplifier with cover of tube compartment turned back, showing UX-226, UX-210 and UX-281 tubes, and input, output and radio set B supply binding posts.

HERE is a double barreled proposition which every dealer in the radio and phonograph field is going to make money on this winter.

Silver-Marshall, Inc., famous for the finest toned radio amplifying equipment money can buy now offers a standard model amplifier for electrical phonograph operation—a replacement unit that will not only enable record amplification without equal for tone quality but a unit which at the same time serves as an audio amplifier and “B” power supply for any radio that your customers may now have or are going to buy. Thus, besides giving record amplification equal to that of expensive phonographs, it will bring any radio set up to 1929 efficiency with distortionless tone reproduction which has no superior.

The S-M type 678 is a complete two stage phonograph or radio amplifier operating directly from any 110 volt, 60 cycle house light socket. It uses the new RCA tubes—one UX-226 A.C. amplifier, one UX-210 super power amplifier, and one UX-281 high power rectifier. This 678 amplifier will provide volume and tone quality unconditionally guaranteed equal or better than that of standard electric phonographs. To operate, it needs only a standard electric sound box (pick up), (or for radio set use, the simple plug-in adaptor provided), the three tubes, and any good loud speaker, either cone or exponential horn. Type 678 amplifier is completely enclosed in a crystalline brown steel case, 12 1/4-in. long, 8 1/2-in. high over carrying handle, and 8 1/2-in. wide, weight 35 lbs. A hinged cover is provided over tube compartment and ample ventilation is assured for operation in phonograph cabinets. There is nothing to get out of order—to install simply connect pick-up or adaptor and loud speaker, insert three RCA tubes and turn on the power—there's not an adjustment of any kind to make.

The S-M 678 amplifier, at \$78.00 list, less tubes, opens up a tremendous field for phonograph manufacturer, jobber and dealer alike, for with a \$20.00 list additional investment for reproducer adaptor and electric sound-box, any old mechanical phonograph can be given all the improvements of the finest electric record reproduction. And in addition, S-M 678 provides “B” power for any radio set, and complete audio amplification through the standard adaptor easily plugged into any radio. It will improve any set at all no matter how expensive, for the reproduction of the 678 amplifier is truly marvelous.

Another new S-M money maker is the 675 power unit, which furnishes “B” power to any radio set at 45, 90, 135 and 150 volts, as well as “A” and “C” power when A.C. tubes are used. The 675 power unit allows a UX-210 super amplifier Radiotron to be installed in any radio at all with special adaptor and it is now the general knowledge that the only path to distortionless reproduction is to use a UX-210 tube. Appearance same as 678 amplifier. Price, less one UX-281 rectifier tube, \$58.00.

Send for data

SILVER-MARSHALL, Inc., 870-A West Jackson Blvd., Chicago, Ill.



Are You Selling

## “BRAIDITE”



The New Hook-Up Wire  
Now the Choice of Both  
Fans and Professionals.

Braidite has so many exclusive features that it is fast replacing the old hook-up wires on the market. The way you can push back the insulation, solder the connection and then let the insulation slide right back into place, leaving no sections of exposed wire, enables the builder to work fast and efficiently. Braidite is made in red, green, yellow, brown and black.

25 ft. solid copper core, 11¢ per carton, 30¢. 25 ft. stranded copper core, 11¢ per carton, 35¢.

(Order a sample carton today)

**DEALERS, JOBBERS  
AND MANUFACTURERS**  
Write or wire today for complete catalog and discounts.

**“Corwico” Products**

- Antenna Wire (Solid, Stranded and Braided)
- Complete Aerial Kits
- Magnet Wire
- Battery Cable
- Bus Bar Wire
- Hook-Up Wire
- Lead-in Wire
- Annunciator Wire
- Loop Aerial Wire
- Litz Wire
- Flexible Wire

**CORNISH WIRE COMPANY**  
30 CHURCH STREET, NEW YORK CITY

# DeJUR

**RESISTANCE SPECIALISTS**

MANUFACTURERS OF ELECTRICAL AND RADIO RHEOSTATS, CONTROLLERS AND REGULATORS SINCE 1912

HIGH  
HEAT  
—  
HIGH  
OHM



HIGH  
WATT  
—  
AIR  
COOLED

## POWER RHEOSTAT

“With the Element That Cannot Burn Out”  
For Socket Power Sets and Eliminators

Designed and made specially for high current carrying capacities. Large refractory base 2 3/4-in. diameter. Single hole mount. Resistance element of best quality resistance wire (having lowest rising temperature co-efficient) wound on best grade India Mica imbedded in grooves, and covered with a high heat refractory cement, making the element permanent and everlasting, tightly fastened to the base.

Made in the following ohmage as standard:  
2-3-5-6-10-15-20-30-50-100-200 Ohms. Also made up with an extra connection and used as a Potentiometer in any of the above ohms. Furnished complete with Bakelite knob.

TO DEALERS AND JOBBERS

Write for new catalog of complete 1927-1928 Line

TO MANUFACTURERS

Let us figure on your requirements. Send us specifications

## DeJUR PRODUCTS Co.

199 LAFAYETTE STREET, NEW YORK CITY

do not appear to have encountered any serious competition from Germany, France and England. Argentinian competition consists of simple regenerative and three-circuit regenerative sets assembled from imported parts, a good share of the latter coming from the United States.

About the only British radio article met with in Argentina is a speaker whose high price limits its sale. Head phones are the most important article imported from Germany and they appear to sell well on account of their high quality at a reasonable price.

The most popular type of set appears to be the three-tube set which sells at about \$107 United States currency. This price includes tubes and speakers but not batteries. There is a gradually increasing demand for the finer and more expensive sets and the volume of business is practically divided equally between the better complete sets and parts and accessories.

### What the World Wants

Listed below are some specific inquiries for American goods received in the Department of Commerce, Bureau of Foreign and Domestic Commerce, at Washington, D. C. To obtain confidential information, it is necessary only for American exporters to apply to the nearest office of the Bureau or at Washington, giving the number or numbers of the inquiry or inquiries in which they are interested. An asterisk (\*) indicates that the inquirer would act as both purchaser and agent.

Germany—28099.—Batteries, storage. \*28041—Radio sets, loud speakers and parts. \*28025—Radio sets and parts.

Czechoslovakia—\*28105—Radio sets and parts.

Turkey—28197—Wireless transmission apparatus.

India—28280—Radio receiving and transmitting sets and parts, batteries, tubes, and accessories.

France—28279—Radio sets and parts.

Australia—27856—Radio sets and parts.

Spain—27958—Radio sets and parts.

Iceland—27962—Radio sets and parts.

### Remote Control for Radio Receivers

Recent developments in devices for tuning and controlling the volume of radio receivers at a distance from the set have been announced by the Algonquin Electric Company, Inc., 245 Fifth Avenue, New York, which indicate a new trend in promoting greater convenience. Two types of remote control equipment, one mechanical and one electrical, have been placed on the market, which can be applied to single control receivers.

The mechanical type is installed by removing the control dial or knob. A flexible shaft, such as that used in speedometer cables, is attached to the control. The other end of the flexible shaft is placed at a point convenient to the set user. Obviously, there is a limit to the length of the mechanical control shaft and the number of corners which can be negotiated successfully. In many instances, however, it may be installed advantageously.

The electrical remote control device has no limitation as to the distance which may separate the set from the control point. The receiver may be installed at any convenient place in the home and readily manipulated from any convenient point in living-room, library or study.

### Magee Gets the Fur-lined Chafing Dish



It's nice to be a winner. Flashlights, roaring crowds, silver cup and everything. "Clay" Irwin presents F. A. Magee with a slight token of attainment. "F. A." is the new R.M.A. "champeen" golfer. The serious minded gentleman in the center is John Tully, recently elected chairman of the permanent R.M.A. Golf Tournament Committee.

### Magee is R.M.A. Golf Champion

To F. A. Magee, president of the Traveler Manufacturing Corporation, Chicago, goes the honor of being the first National Golf Champion of the Radio Manufacturers' Association. Magee bested H. G. Vollmer, during the finals in the R.M.A. golf tournament played at the Calumet Country Club during the week of the Chicago Radio Show, by the narrow margin of one point. The winner turned in a card of 75 and was presented with a silver cup by "Clay" Irwin on the closing night of the show.

Interest in this tournament has been so intense that, following the completion of the "finals" a permanent organization of golf enthusiasts, within the ranks of the R.M.A. was effected. John C. Tully, president of Bremer-Tully Manufacturing Company, was elected chairman. The other officers are:

Paul B. Klugh, of Zenith Radio Corporation, Chicago, vice-chairman; Harry Simpson, of Maring Wire Company, Chicago, secretary; H. O. Larsen, of the Ekko Company, Chicago, treasurer.

Other members are: Albert Newcombe, Newcombe-Hawley, Inc., St. Charles, Ill.; Henry Forster, Utah Radio Products, Chicago, and Theo. Sheldon, Carter Radio Company, Chicago.

Present arrangements provide for qualifying contests to be held in various sections of the country during 1928, with the final championship contest at Chicago during the week of the R.M.A. Fall show.

### Recommendations for Electric and Radio Exhibitions

The National Electrical Manufacturers' Association has prepared and adopted the following recommendations for electric and radio exhibitions, in order that such exhibitions may promote to the maximum the use of equipment, with a minimum of economic loss and internal friction. The association's committee on this subject be-

lieves that these recommendations will be of definite assistance in the arrangement and administration of electric shows and exhibitions and strongly urges their use as guiding principles.

1. For the fullest co-operation, exhibitors as a whole should have representation in the management of the show equal to that of the local management.

2. Class and nature of exhibits should be determined by the show management. Concessions for sale of novelties, candy, toys, etc., should be prohibited as they detract from the educational value of exhibits.

3. Souvenirs represent waste and extravagance of a character which the industry is trying to prevent. They are not beneficial in promoting the main educational object of shows. Their distribution at shows should therefore be prohibited.

4. Exhibitors should not be asked to give financial support through advertisements or in any other way to programs and catalogues. These, if issued, should not contain any individual or group names other than those of the exhibitors.

5. Passes should be issued to officers, official representatives and attendants of companies exhibiting, the number to be based equitably on the space occupied.

6. Exhibitors should have trade tickets at one-half the regular admission price, settlement to be made on the basis of the tickets actually turned in at the gate.

7. The show management should strive to make the character of the exhibit such as will reflect credit upon the electrical industry and at the same time keep the expense within reasonable limits. Any surplus after payment of legitimate expenses should be returned to exhibitors in proportion to the amount of space used.

8. The show management should have the right to discontinue and remove any exhibit which in its opinion is objectionable to exhibitors, the public or the industry.

9. Radio speaking devices of any description should not be used by exhibitors unless such devices are enclosed in suitable sound-proof booths or other enclosures approved by the show management, and which will entirely prevent objectionable noises and discord, annoying to other exhibitors.

10. In combination electrical and radio shows, electric motors, vacuum cleaners, washing machines, X-ray apparatus, spark coils and other devices which tend to create electrical and sound vibrations, should not be permitted to operate during the periods of broadcasting when radio exhibitors are anxious to demonstrate the receiving qualities of their apparatus.

11. The exhibitors should have the right to publish any speech, address or other matter that is broadcast direct from the show through the medium of any broadcasting station.

12. For the amount paid for space the show management should provide the following service to exhibitors: insurance against fire and theft; reasonable protection against fire and theft; watchman day and night; clean aisles and thoroughfares (not including exhibits); store boxes and other containers delivered in good order for return shipment.

13. Information concerning shows in which Member Companies are asked to exhibit should be sent to Nema headquarters.

### Indian Broadcasting Stations Plan Improvements

The new program of the Wireless Branch of the Indian Posts and Telegraphs Department calls for extensive improvements. Seven inland stations, at Delhi, Allahabad, Lahore, Quetta, Peshawar, Mhow and Nagpur, are being remodelled. Modern continuous-wave transmitters and similar receivers are being installed.

At Karachi the 30 kilowatt spark transmitter is being dismantled and replaced by a six kilowatt valve set for continuous wave and interrupted continuous wave signalling and telephony. A new receiving station is to be erected near the aerodrome, including a direction-finding set for ships and aircraft.

The Bombay station on Butcher Island is being dismantled and a new coast station at Santa Cruz has been built. This plant will include a six kilowatt valve transmitter, a five kilowatt spark transmitter and a direction finding receiver.

# Is This Muter Advertising Working for YOU?



*Does the 20<sup>th</sup> Century  
come thru Your Speaker?*  
**The New Muter  
AUDICHOKE**

prevents feed back through the common B supply—thus eliminating shrieking whistles, howling, motor-boating and other troubles due to audio frequency regeneration.



This excerpt from current Muter Consumer Advertising shows what the Muter Company is doing to enlarge retail turnover and retail profits. The new Audichoke is an advanced product and is being backed by aggressive advertising to promote consumer demand—demand that has already been developed for other Muter specialties: Muter Clarifier, "B" Power Unit, Double Impedance Unit and the whole Muter Line. Be sure to get your share of retail profits on Muter Products.

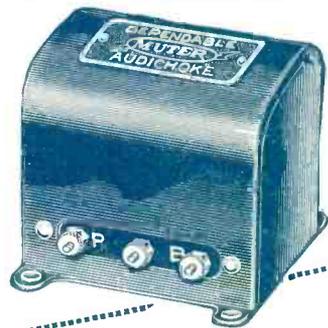
*Send Coupon for Details of the New  
Audichoke and Complete Muter Catalogue*

**LESLIE F. MUTER COMPANY**  
76th & Greenwood Ave., Dept. 6038-T, Chicago, Ill.



**Dependable  
Products**

*The complete  
Quality Popular  
Priced Line*



LESLIE F. MUTER CO.,  
76th & Greenwood Ave., Dept. 6038-T, Chicago, Ill.  
Send details of New Muter Audichoke and catalogue of complete Muter Line.

Name .....

Address .....

City .....

Jobber's Name .....

State .....

## NEW!



### EBY U. Y. SOCKETS With 3 Big Features

- (1) A guide for the prongs.  
A simple turn of the tube in the grooved top of the socket insures a quiet, smooth insertion.
- (2) New Bi-metallic Prongs.  
Phosphor-bronze for perfect spring action and tinned copper for perfect contact and conductivity.
- (3) Easy Mounting above or below Bakelite, wood or metal.



Another step in the transition from cushion to rigid sockets. Nobody uses cushion sockets with the AC tubes.

List price 50c.

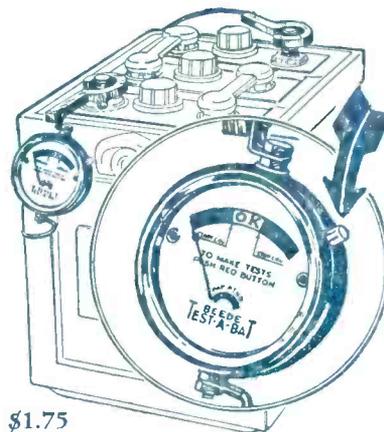
**THE H. H. EBY MFG. CO., INC.**  
4710 Stenton Ave., Philadelphia, Pa.

### You Can Always Sell a Test-A-Bat. Making a Fair Profit and A Good Friend Whenever You Sell a New Set Whenever You Sell a New Battery Whenever They Ask For a Hydrometer

They'll thank you for the advice for they need only press the button to see if the A battery is O.K. Simple to attach, simple to use.

**SAFE  
ACCURATE  
CONVENIENT**

Far superior to Hydrometers—No Risk of Acid Drippings—Simple and Easy to Use—No Need to Move Battery—Always on the Job—Readings Guaranteed to Be Accurate.



\$1.75  
LIST

**BEEDE ELECTRICAL INSTRUMENT COMPANY**  
Manufacturers of Radio Meters of All Descriptions  
136 Liberty Street, New York City



- 1—Allows you to cut in at will on your loud speaker and make announcements personally through it.
- 2—Allows you to hook up phonograph with loud speaker.
- 3—Allows regular use of radio loud speaker. (Any of these three steps with the simple throw of a switch.)



## WONDERPHONE Throw-a-Switch Announcer

THE purpose of this set is to enable the Radio and Phonograph Dealers to readily make announcements through the amplifier and speaker of radio or phonograph. It consists of a Wonderphone High Power differential type microphone and a control box having a cord with an adapter for slipping over the prongs of the detector tube, for attaching to the radio set. Three pin jacks are provided in the side of the control box to receive the microphone cord. Two additional pin jacks are also provided to receive the terminals of a magnetic pick-up for

playing phonograph records, where desired. The control box is also provided with a volume control, and a 3 position key type switch for turning off the radio program while using either the microphone or phonograph pick-up with the radio set. As this set can be quickly attached to the radio and the radio or either type of transmitter can be instantly switched on or off at will, it makes an ideal arrangement for the Dealer who wishes to take advantage of the direct advertising possibilities of such a combination.

Since announcement in November Radio Retailing overwhelming national demand from dealers has proved real need of this device. Write or wire for complete information. Desirable territories are open for responsible distributors.

Made by the  
**Universal High Power Telephone Co.**  
Seattle, Wash.

## DEPENDABLE PLATE POWER



Type 445 Plate Supply and Grid Bias Unit

Four "B" and one C voltage (for the power tube) are provided. The "B" voltages and the C voltage are adjustable by means of a wire wound voltage divider with clamps which may be set when the proper voltage is determined.

The type 445 Unit uses a UX 280 or CX 380 double wave rectifier tube and supplies 180 volts plate and 40 volts grid bias. Meets Underwriters' requirements.

Type 445 Plate Supply and Grid Bias Unit..... \$55.00

Licensed by the Radio Corporation of America for radio, amateur, experimental and broadcast reception only, and under the terms of the license this unit may be sold only with tubes.

**GENERAL RADIO CO.**  
CAMBRIDGE, MASS.

## A Christmas Carol

Coming thru the air may be absolutely ruined by the rattle and scratching in your loud speaker.

The SCANLAN SPEAKER CHEST—an output transformer—will completely eliminate all noises. It revitalizes old speakers and brings back the rich, mellow tone that enhances the reception of good music.

The SCANLAN SPEAKER CHEST is very simple to install. Hook the speaker chest into the set and your loud speaker into the chest. Obtainable in four finishes—antique bronze, antique brass, antique silver and walnut. Complete with silk hook-up cord ready for service, \$10.00.

Write for full particulars regarding our profitable jobbers' Sales Plan

**SCANLAN ELECTRIC MFG. CO.**  
1115 North Franklin Street, Chicago, Ill.

## SCANLAN SPEAKER CHEST



## A Complete Line of AERIAL NECESSITIES

Every radio set owner needs an efficient ground and aerial.

Your customers will find in the Amoroso Aerial Kits everything necessary for an efficient installation.

STYLE "A" \$3.50  
STYLE "B" \$2.00



The NIFTY LEAD-IN is completely weather proof and well insulated with rubber.



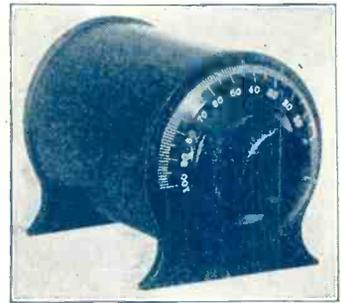
The Amoroso Radio Clamp is made of copper with a clip of nicked brass. The flanges are bent so as to give added strength and prevent the clip from turning. An exclusive feature. Ask about these clamps.

**AMOROSO**

MANUFACTURING CO.  
BOSTON, MASS.

"When a station is hard to get and it is a distant hit"

use a  
**REESONATOR**



Five Reasons Why the Reesonator is the Fastest Selling Radio Accessory on the Market:

**\$4.75**

1. It is equal to three additional radio frequency stages in power.
2. It will increase the volume from three to twenty times.
3. It will decrease A and B battery consumption 35 per cent.
4. It will greatly decrease interference as it brings the antenna and machine to absolute resonance or balance at any wave length.
5. Can be sold on a money back guarantee.

Especially designed, for use on single dial Atwater-Kent models 30-32-35 and Crosley Bandbox machines.

ACT QUICK—

Write today for exclusive territory proposition

Dealers and Jobbers Wanted Everywhere

F. & H. RADIO LABORATORIES  
Fargo, N. Dak.

## Halldorson Overtone Audio Transformer

Rich Tone Quality



An audio transformer of normal size and price with a rich tone quality is secured in the Halldorson Overtone. A special core design insures the highest degree of efficiency.

THE HALLDORSON COMPANY, 4745 N. Western Ave. Chicago

## DEPENDABLE COIL SERVICE for Radio Manufacturers

- Battery Charger Coils
- Eliminator Chokes and Transformer Coils
- Coils for Loudspeakers
- Audio Transformers and Impedance Amplifiers
- Honeycomb Inductances

Send us your specifications for our quotation and shipping date. Service prompt.



UNIVERSAL WINDING CO.  
PROVIDENCE, R.I.

**Mr. Dealer—**  
**More Sales—More Profit**

If You Buy From  
**MIDLAND WHOLESALE CO.**  
5116 Ravenswood Ave., Chicago, Ill.

Distributors of all standard and nationally advertised radio, electrical and hardware merchandise.

Lowest Wholesale Prices  
RADIO Electrical Supplies

Write for THIS FREE BOOK

GUARANTEES SATISFACTION OR YOUR MONEY BACK

STEADY.....as a River's Current.....SILENT.....as a Sunset

GREENE Leadership in advanced Design insured GREENE Leadership in SALES.

A GREENE "A" or "B" Unit for Radio Sets of every size.

PRICES: East of Rockies, begin at

\$27.50



"THEY copied all they could follow,  
But they couldn't copy our minds;  
So we left them sweating and stealing—  
A YEAR AND A HALF BEHIND"

APOLOGIES TO KIPLING

# Now as GREENE sales set new records IMITATORS Copy!—

FOR batteryless light-socket Radio, GREENE Leadership in advanced Design and Value was never more apparent.

Even as other Power Unit builders adopt and boast of features pioneered by GREENE, the super-performance of genuine GREENE Units remains unrivalled.

In several scientific construction essentials, GREENE Units are made *Imitation-Proof*. This enables any Radio Receiver powered the GREENE-BROWN way, to *out-perform* other Sets costing as much as *twice* its price.

For Radio Selectivity, Volume, Tone and Clarity *utterly beyond belief*—until your own ears prove it—try a GREENE Unit over-night, in any test. If it doesn't sell itself to You—DON'T KEEP IT!

SOLD WITH AN ABSOLUTE GUARANTEE

## GREENE

### POWER AB UNITS

*Better than Batteries*

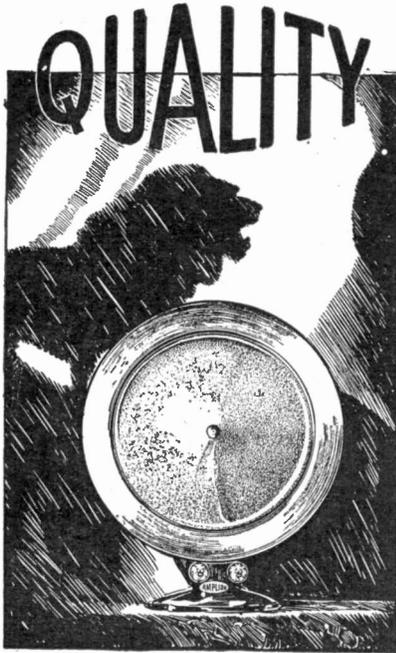
Greene-Brown Manufacturing Company  
5100 Ravenswood Ave., Chicago, Ill., U. S. A.

## 6 Famous GREENE Features now widely Imitated

1. COMPACT SHAPE: *Greene was First! Greene Units take up less space than batteries.*
2. SINGLE DIAL CONTROL: *Greene was First! A current-line control and "on" or "off" switch, all-in-one.*
3. FIXED VOLTAGES: *Greene was First! Terminal posts designed for actual current draw of every set.*
4. SIMPLIFIED INSTALLATION: *Greene was First! Any customer can connect a GREENE. Dealers need not install.*
5. NO ADJUSTMENTS: *Greene was First! No variable regulators to adjust. FOOL-PROOF operation. No skill required.*
6. COMPLETE WITH TUBE: *Greene was First! List prices include Tube. No extras. Nothing else to buy.*

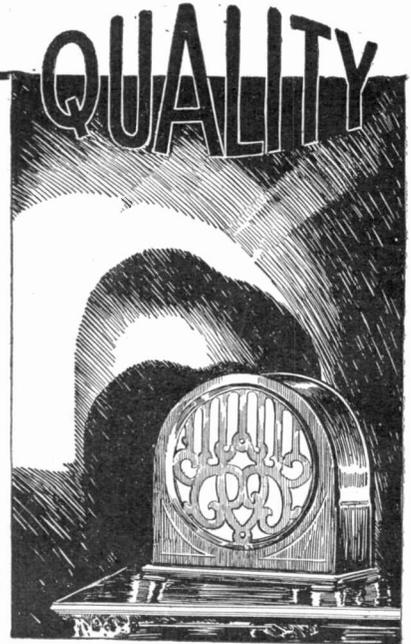
Thus, GREENE consistently leads the way—influencing engineering and selling habits of the Power Unit industry.

TOMORROW'S RADIO POWER FOR TODAY'S ENJOYMENT



LION CONE  
AC-21—\$25

A beautifully blended bronze finish Cone, 14 inches in diameter, mounted on an 18-inch walnut soundboard. Height 20½ inches, including bronze moiré base. New balanced armature unit with straight bar magnets of the finest grade English Tungsten steel.



COLONIAL CONE  
AC-12—\$35

Handsome two-tone mahogany cabinet, 14" x 14" x 9" with a fine piano finish. New Amplion balanced armature unit, straight bar magnets of finest English Tungsten steel.

## Three Amplion Features for the Christmas Trade

The radio trade throughout the country expects December to make up for the slow moving of all radio merchandise this season.

The accumulated sales and advertising effort is bringing the public into the stores for their new radio equipment.

The Amplion Lion at \$25.00 and Colonial Cone at \$35.00 cover the most popular price range for speakers. If

you have not already ordered your supply of these two famous models for demonstration and sale you should get in touch with your distributor at once.

Past experience proves that when the rush starts, stocks are so quickly depleted that sales are lost. Be ahead of the demand this season. See that your Amplion stock is in good shape for the holiday trade.

### THE AMPLION CORPORATION of AMERICA

531-535 West 37th Street, New York

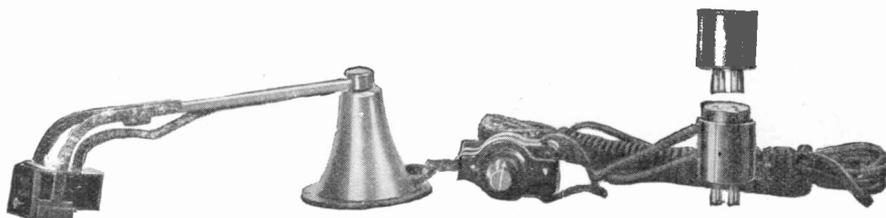
The Amplion Corporation of Canada Ltd., Toronto

# AMPLION

# EXTRA!

## THE NEW AMPLION REVELAPHONE

Easy  
to  
Demonstrate



Easy  
to  
Sell

### The lightest weight pick-up on the market—and of the highest efficiency

The new Amplion Revelaphone converts any phonograph, old or new, into the most modern reproducing instrument.

The Amplion Revelaphone is the lightest electric pick-up made—the same weight as the phonograph soundbox. This means that it does not slow up the speed of the turntable and alter the pitch of the record. Nor does it injure or wear out phonograph records; both very important points.

The magnets in the reproducing unit are made of Cobalt steel.

The Amplion Revelaphone is so constructed that the needle is applied to the phonograph record at exactly the right angle for the best tone efficiency. There is no possibility of using the attachment incorrectly. Its point of contact must necessarily be perfect.

It has a volume control to suit the requirements of the listener.

It is equipped with a twenty foot cord, making it possible to have the phonograph and radio in different parts of the room. Handsome antique bronze finish. *Send for descriptive booklet.* List price \$15.00.

THE AMPLION CORPORATION of AMERICA

531-535 West 37th Street, New York

The Amplion Corporation of Canada Ltd., Toronto

AMPLION

# A Nation Wide Cry for Socket Power at Low Cost

No wonder that the APCO Automatic "A" Charger is selling fast. Backed by national advertising and forceful dealer helps, this brand new charger is the logical answer to insistent demand for Socket Power at low cost. The famous Westinghouse large size Rectox unit and the APCO Automatic Switching feature make this item one of the season's leaders.

APCO Automatic makes a perfect socket power unit out of the storage battery. No switching, no tubes or acid jars, no noise. And capacity enough for the heaviest user.

APCO-MOSSBERG CORPORATION  
ATTLEBORO, MASS.



Price  
**\$16.50**

# “B” Is all B current alike?

“No!” say eminent radio engineers—and they tell what kind is best for good reception.

THE finer radios you sell, the better loud speakers are made, the more particular your customers are going to become about the *quality* of the reception they get.

You have probably never thought it possible to improve reception by changing the type of the “B” current producer.

In the first place, *direct* current is best suited to radio reception, because there are no gaps in the flow of the “juice.” There are no impulses to mar the even, smooth amplification of the radio waves. Only dry batteries give pure direct current; other “B” power units operate with alternating current and the finest transformers made cannot reduce it to pure d.c.

In the second place, the “B” power unit should deliver *uniform* voltage. It must be free from the fluctuations caused by other loads suddenly thrown onto the circuit or removed from it. Other-

wise the volume of the reception will vary with the strength of the current.

In selling “B” power units to your customers, you can give them both these qualities—direct current and uniform voltage—in one and the same package: Ray-O-Vac “B” batteries.

Ray-O-Vac batteries not only deliver direct current, but their voltage is smooth and uniform throughout their long life.

## Millions are learning these facts

Every month in The Saturday Evening Post these superior qualities of Ray-O-Vac

radio batteries are being explained to millions of radio owners in full-page advertisements, in color.

Similar pages, in colors, appear in The Country Gentleman, and large size advertisements in all the leading newspapers of the country tell the same story of Ray-O-Vac quality.

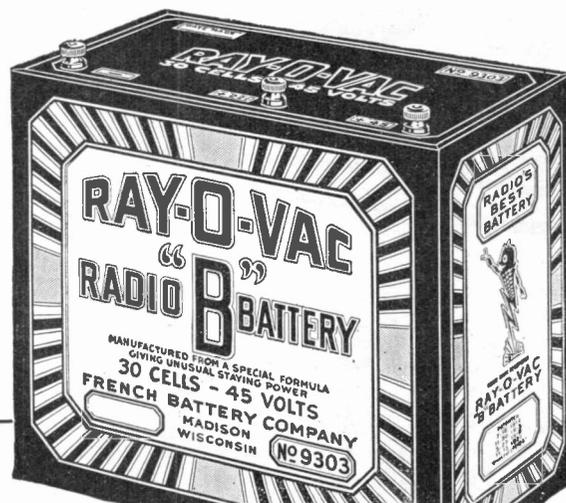
This advertising is making sales for Ray-O-Vac dealers and jobbers—all who sell Ray-O-Vac batteries.

Wouldn't you like to handle a line of batteries with the quality points of Ray-O-Vacs to talk about and with the promotional work behind them that is supporting Ray-O-Vacs?

Ask your jobber for information about the line, or write us and get full particulars.

FRENCH BATTERY  
COMPANY  
MADISON, WISCONSIN

Also makers of Ray-O-Vac “A” and “C” radio batteries, Ray-O-Vac flashlights and batteries and Ray-O-Vac ignition batteries.



# Are you tied in with this Nation-Wide Hook-Up?



A few minutes with your Weston before broadcasting time—  
NOW relaxed and hushed, you confidently await the music of the radio which follows—yet as vibrant as ever.



Do YOU recognize THIS POINTER!  
It ministers to the comforts and necessities of millions of people in a civilized world. It supplies light and lighting at your bedside and in your office. It informs its message through its... Proudly produced in New Jersey.



How do you know that your set is operating at its best?

If you are one of those who believe that the ear is a trustworthy organ, you will find that it has led you to the accurate method of tuning up your set. Spend a few minutes with your radio—and a Weston Voltmeter—before broadcasting time arrives. Check up the voltages of your set and note the difference in the power and quality of reception, simply by making the quick little adjustments that your Weston tells you are required. With this Model... Portable Weston Voltmeter corrects radio operation in a simple and also costly. You correct the tubes and batteries on a week-like working. You do not make a guess at the time—the Weston tells you the facts. Just ask your dealer.



VOLTAGE CONTROL  
The secret of good reception!

When you operate your radio for which the set was designed you secure the best reception and longest life span of tubes and batteries. Voltmeter operation is the only solution. This accurate little Pin-Jack Voltmeter with green gold case, black scale and gold pointer, the way to operate your Radio, Victor or Brunswick set. It plus a positive adjustment, is directly into the filament, as shown below, and may be left there without harmful effect on the batteries. To correct the receiver, turn the control knob until the pointer reaches the red mark on the meter dial. There you will be operating for the best reception and economy. Your radio set is extremely sensitive and will not be affected by the slightest variation.



Never a question when using a Weston

Your radio troubles instantly corrected IN 10 to 15 MINUTES

NEW WESTON METHOD OF RADIO SET SERVICING. Simply phone or write to Westons, the Model 510 Weston for 7 years. Without repeating your set of work it again will immediately correct and correct the trouble. While you are enjoying a program, this service is in progress and it is the modern and efficient way to obtain continuous service and pleasure from your radio. Try it and be convinced. WESTON ELECTRICAL INSTRUMENT CORPORATION Newark, N. J.



Never a question when using a Weston

Buy Radio Instruments which give Lowest Operating Cost

Choosing at the electrical condition of your set is essential. Then why spend money for ordinary meters which will involve greater work? Paying a little more in the beginning for radio instruments of superior construction and performance will save you many dollars in years to come. Ask your dealer to show you the Weston Radio Models—for example, the 2' and 3 1/2" A.C. panel Voltmeters, Ammeters and Milliammeters. Their special characteristics such as high resistance, low power consumption, excellent damping and high accuracy command them to your attention when in the market for small A.C. panel instruments. Write for Circular J—a useful booklet on...



Never a question when using a Weston

Why suffer the embarrassment of borrowing?

YES, you do need an accurate instrument to measure the voltage of your new A.C. tube receiver. But why bother your friend who is with the lighting company or the garage man? Own a Weston—accurately built meter yourself—the equal of the big engineering standards in design, workmanship and performance. Model 122 is the new Weston A.C. instrument designed to meet all the timing requirements of the new "A.C. Tube" sets. Made in double range ammeters and milliammeters. For sale by leading dealers. Write direct to Chester J. Weston, the complete radio line. WESTON ELECTRICAL INSTRUMENT CORPORATION Newark, N. J.



Never a question when using a Weston

You can now have Weston performance in matched instruments

If you are using three or more instruments on your transmitter for filament, voltage, plate current and plate voltage indications, it is always desirable that these voltage meters should match in size, appearance and performance. Weston now has a complete line of radio panel instruments for all transmission and reception uses. Whether you are operating D.C. or A.C. high voltage or low voltage, you can secure a matched set of instruments that will exactly meet your requirements. Moreover, these small panel instruments are moderately priced and there is no reason why you should not have the complete Weston equipment you have always wanted. No other meters can compare with them in electrical design and performance, and their use to the amateur increases in value with the rapid developments towards low wave length reception.



WESTON ELECTRICAL INSTRUMENT CORPORATION Newark, N. J.

158 Weston Avenue  
STANDARD THE WORLD OVER  
**WESTON**  
Pioneers since 1888

SET OWNERS—more and more realize the advantages of radio operation by means of the instrument control method using accurate, dependable meters.

SCORES of thousands of Weston radio instruments, such as Pin-Jack Voltmeters, Panel Instruments, Portable D. C. and A. C. Models, have long enjoyed an unprecedented demand in the popular market throughout the entire civilized world.

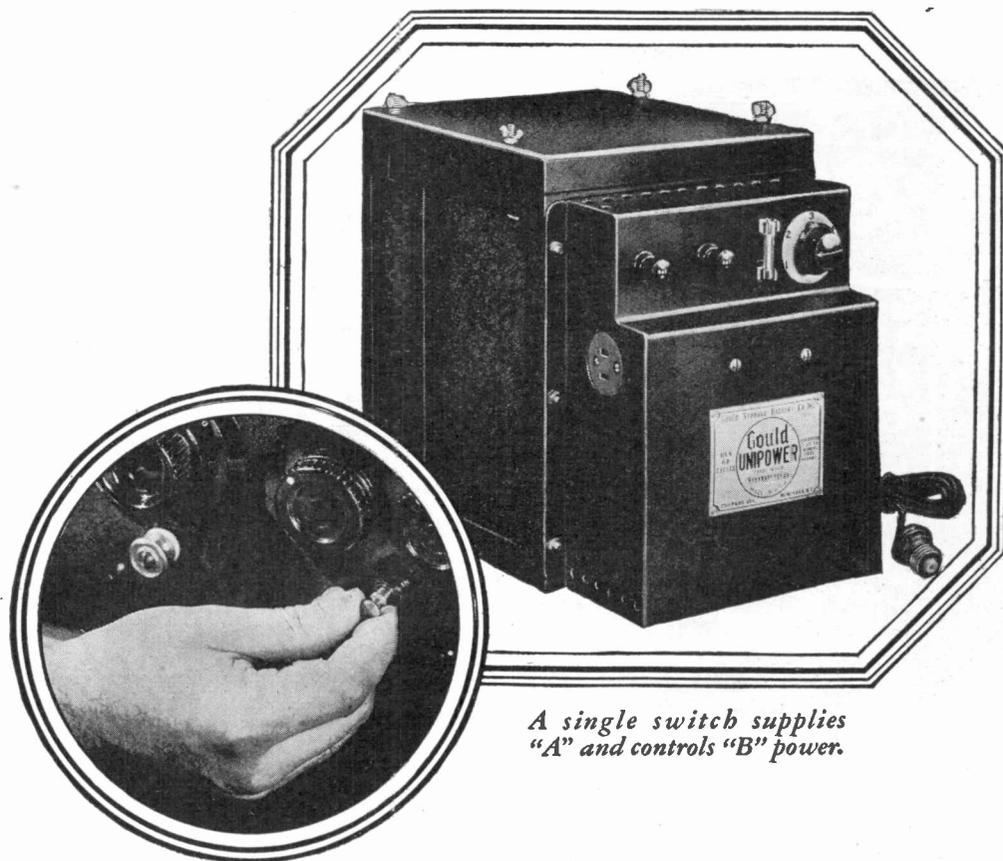
Two factors—Weston's supremacy for forty years in the specialized field of quality instrument manufacture, and its universal reputation in developing most for the dollar merchandise—account for Weston's quantity sale.

And one thing more—Weston's extensive and increasing advertising and service connections with laboratories, professional and amateur stations, set builders, clubs and millions of radio homes. Are you adequately tied in with this nation-wide radio hook-up?

It merely means a carefully selected, reasonably complete stock for frequent turnover, to meet the insistent and growing demand. Your jobber will assist and advise you. Write for Circular J.

WESTON ELECTRICAL INSTRUMENT CORPORATION  
25 Weston Ave., Newark, N. J.





A single switch supplies "A" and controls "B" power.

## The Last Word in light socket "A" power

*THE new Kathanode Unipower—the finest ever built by Gould—and it sells at new low prices.*

Time-tested principles of design are embodied in the new Unipower. But in addition it contains a striking advance in battery practice that makes this economical form of "A" power equal in most and superior in some ways to costly batteryless sets. This new exclusive feature of Unipower is the Gould Kathanode assembly (patented).

The Kathanode principle was first used by Gould in submarine batteries. It is now applied for the first time to radio.

With it, care is reduced to a minimum; service expense is practically eliminated; and richer, smoother power is attained. There are no tubes to replace, and it is practically fool-proof.

It appeals to both kinds of customers. Those who know so little about radio mechanics that they want the most reliable equipment, and those who know so much that they appreciate the superiority of the new Gould Unipower construction.

Write today for complete information and new low price list. Gould Storage Battery Co., Inc., 250 Park Avenue, New York City.

*The new*

IMPROVED

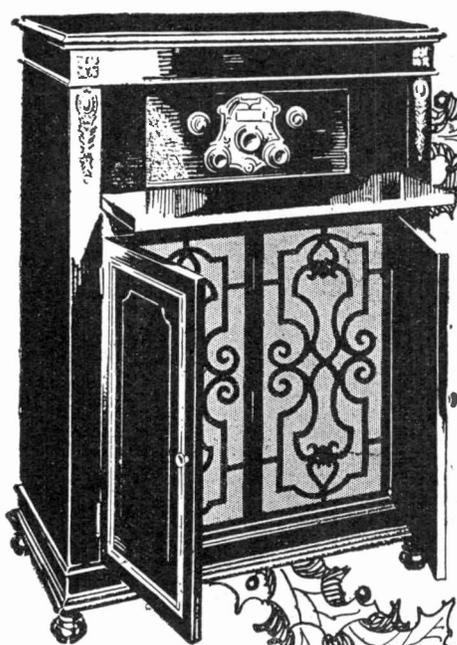
# Unipower

A GOULD PRODUCT

Price

\$35

upwards



Cleartone  
"Congressional"  
\$375.00

Our Dealers  
are assured  
Unfailing Deliveries  
on their orders for—

The New **Cleartone**  
*Electric Radio Receiver*



**Ready Now!**  
**An AC Tube Tester**  
**for \$37.50**

We are now ready to ship a Tube Tester for Kellogg-McCullough A C "Heater" Tubes. It is efficient, practical and, we believe, is the only one of its kind now available. The price is only \$37.50.

**We Can Deliver**  
**Because—**

*We are not "short" of Tubes or Parts!*

Last summer, at a big investment, we laid in stocks of tubes, condensers, etc. Our foresight is bearing fruit now—our factory output is not being hampered by lack of parts.

The New Cleartone is priced, complete with tubes, etc., at \$195.00 to \$375.00 list.

The Christmas-gift-buying season is now gaining its height! It is your big harvest time! The "high point" of your merchandising year is here! You must have quick action on the delivery of your orders—or sales might be lost!

Our dealers are not handicapped by any delay in deliveries. They are pushing their sales efforts to the limit to get the big share of this Christmas business **WITHOUT ANY FEAR OF BEING UNABLE TO GET THE SETS THEY REQUIRE!** They are getting prompt deliveries because our production is at top speed! Cleartone, as a division of The Cincinnati Time Recorder Co., has the advantage of all the facilities and resources of this organization of craftsmen, who, for thirty years, have been among the leaders in producing fine clocks, electric systems and precision assemblies.

Our dealers appreciate the advantage of having a "true electric" receiver which has been proved dependable—a receiver which sells easily and "stays sold"—a receiver which is backed by the stability of a company like The Cincinnati Time Recorder Co.

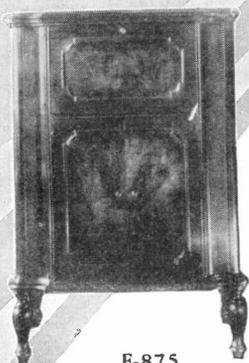
In addition, our splendid newspaper advertising pulls real buyers to their store.

Time is short—**WRITE TODAY** for full particulars.

The Cleartone Radio Co. Division of  
**THE CINCINNATI TIME RECORDER CO.**

Established 1896

Cincinnati, O., U. S. A.



F-875  
De Luxe Highboy  
Price \$375



E-860  
Junior Highboy  
Price \$165



E-850—Selective Six  
Table Radio  
Price \$99.50

{ A choice of battery, power socket,  
or A. C. operation with the new  
Radiotron or Cunningham tubes }

# Sonora

CLEAR AS A BELL

RADIO-S- P H O N O G R A P H S

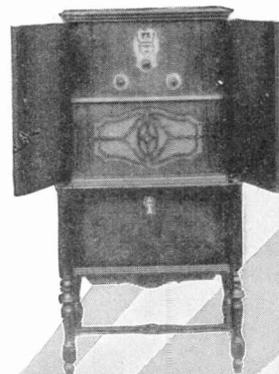
ALL MODELS SINGLE DIAL CONTROL

**P**ROFITS for you in Sonora? Listen to this. Sonora in all its 15 years of history never had such a year, such a past 18 months—sales literally booming—such pressure on production that we are working double shifts to meet demands. And, after all, why shouldn't Sonora beat all previous sales records? People are becoming more and more fastidious about radio beauty, more and more exacting about radio performance. They must have the best the market offers and they must have it at the price they want to pay.

The new Sonora radios meet all these requirements—cabinet work that in design, material and finish is without parallel—tonal quality such as they never dreamed that any radio possessed—superlative ability to pick up desired stations however distant—sensitivity that snatches every weak and wandering wave length out of the ether and carries it clear and strong to the listener.

And with all this, seven models to choose from at seven prices—a model for every taste—a price for every purse. Sell Sonora? We should say so. It's a mighty poor salesman that cannot bring Sonora's prospects to the dotted line. Your letter of inquiry mailed *today* will get you started right away with a radio franchise that carries the assurance of profit, permanency and big volume business. Sonora sells phonographs too, *the famous ones*. No other manufacturer offers a complete line of both.

SONORA PHONOGRAPH COMPANY, INC.  
SAGINAW, W.S., MICHIGAN



E-865  
Standard Highboy  
Price \$198



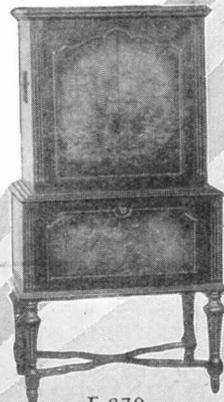
Clock Type Cone  
Speaker  
Price \$27.50



G-880—Light Six  
Table Radio  
Price \$69.50



G-885  
Light Six Highboy  
Completely A. C. operated  
Price \$250



E-870  
De Luxe Highboy  
Price \$250

# TODAY

Everyone wants an ELECTRIC Radio Set

## Majestic

"A" and "B" units will make any radio set an *electrically operated set!*

No Acids  
No Liquids  
No Hum

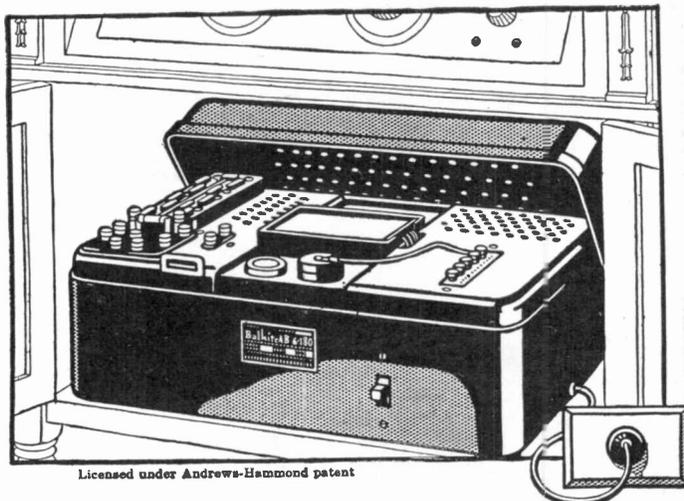


Guaranteed  
to give  
complete  
satisfaction

For big business *and* big profits *now*, electrify all the radio sets in your town with Majestic Units.

Both "A" and "B" power units *and the set* controlled by one switch. Only one light socket connection needed.

GRIGSBY-GRUNOW-HINDS CO., 4540 Armitage Ave., Chicago



# Now AC Electric Radio



Licensed under Andrews-Hammond patent

### Balkite "A"

Balkite "AB" but for the "A" circuit only. Enables owners of a "B" eliminator to make an electric installation at very low cost. \$35.



### Balkite "B"

The accepted tried and proved light socket "B" power supply. Three models: \$22.50, \$35, \$42.50.



### Balkite Chargers

Standard for "A" batteries. Noiseless. Can be used during reception. Trickle or High-Rate, 3 models, \$7.50, \$9.50, \$17.50.

Special models for 25-40 cycles at slightly higher prices. Prices are higher West of the Rockies and in Canada.

**Your customers want AC operation  
But they don't want any sacrifice in quality of reception  
Nor do they want experimental devices**

You can give your customers exactly what they want, without either of these disadvantages. By simply equipping the sets you sell with Balkite Electric "AB." It replaces both "A" and "B" batteries and supplies radio current from the light socket.

Entirely batteryless, it makes any standard receiver an AC Electric set.

This method makes possible the use of the standard type of set, and of standard type tubes, both of which are tried and proved and give by far the clearest and truest reproduction. There is no waiting

for tubes to warm up. No difficulty in controlling volume. No noise, no AC hum. No crackling, booming or blasting. Instead the same high quality of reception to which set owners are accustomed.

And there is nothing experimental about this type of installation. It consists of a combination of two of the most dependable devices in radio — Balkite and a standard radio set.

By all means sell electric operation. As shown by Balkite sales figures, that's where the volume is in radio today. But let the AC sets you sell be standard radio sets equipped

with Balkite Electric "AB." Then you'll be certain of performance. Then you won't wonder if the profit you make today will be eaten up by returns tomorrow. The profit on each sale will be clean.

Two models — \$64.50 and \$74.50.

Ask your jobber. Fansteel Products Co., Inc., North Chicago, Ill.

### Chicago Civic Opera

on the air Thursday Evenings, 10 P. M. Eastern time. Stations WJZ, WBZA, WBZ, KDKA, KYW, WGN, WMAQ, WBAL, WHAM, WJR, WLW, WENR, WCCO, 10:30 P. M. WEBH, KSD, WOC, WOW, WHO, WDAF.

BALKITE HOUR

# Balkite ELECTRIC AB

↳ contains no battery ↳

# New Radios for Old

Every set you now have in stock can be sold as the most modern electrified receiver, using A-C current from light socket connection, by making the few changes in wiring needed for the installation of

## ARCTURUS A-C TUBES

The swing toward A-C operation has caught many dealers and distributors stocked up with D-C sets. There is an unusual margin of profit in the sale of these sets once they have been transformed into modern electrified receivers. With a few simple changes in wiring and the installation of a 15 volt toy transformer, your service man can install Arcturus A-C Tubes in the set you now have in stock.

### Send for Details

We shall be glad to send you complete changeover instructions for the sets you have in stock. Merely drop us a line, giving the makes and models of these sets and directions will be sent you promptly.

The nation-wide chain of authorized Arcturus Service Stations is now being organized. Our national advertising is sending changeover business to the authorized Service Station. Get your share of the increased business and increased profits that many prominent dealers have been getting from the changeover of D-C sets to A-C operation with Arcturus A-C Tubes.



## For the Technical Man

The unique advantages which we claim for Arcturus A-C Tubes are directly traceable to unique features of construction and exceptional operating characteristics.

The exceptional long life of Arcturus Tubes is due to the enormous electron supply resulting from the heater operating at a low temperature.

The highly efficient cathode is responsible for the unusual sensitivity of Arcturus A-C Tubes, and for the exceptional volume and tone quality which their use insures. This cathode produces:

1. A high amplification factor

- (10.5).
2. A low plate impedance (9,000 ohms).
3. A high mutual conductance (1160 micromhos).

Since the base of the Arcturus A-C Tube is of the standard four prong type, no additional terminals are required, making Arcturus Tubes adaptable to existing circuits with all the simplicity of D-C tubes. No center taps or balancing are required. A common toy transformer may be used. Filament voltage is the same (15 volts) for all types—detector, amplifier and power.

The freedom from hum which is one of the most important features of Arcturus A-C Tubes

is due to the use of low A-C current, only 0.35 ampere. (Disturbing electro-magnetic fields are proportional to alternating current—not voltage.) Arcturus Tubes in all stages are four element tubes with indirectly heated cathodes.

Normal variations in line voltage do not affect the operation of Arcturus A-C Tubes. The amplification factor is practically constant over a wide range of filament voltages—13.0 to 18.0 volts.

The use of a heavy carbon filament enables Arcturus A-C Tubes to withstand even an unusual overload.

**ARCTURUS RADIO COMPANY, INC.**

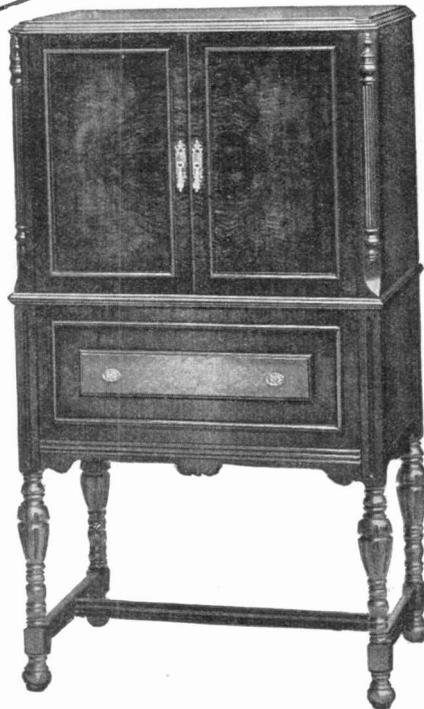
255 Sherman Avenue, Newark, N. J.

THERE is no selling argument in your salesman's vocabulary stronger than—  
"Cabinet Work by ADLER-ROYAL"

# ADLER-ROYAL



No. 101



No. 102



No. 103

ADLER-ROYAL CABINETS are being used in exclusive designs for the finer sets of nearly every nationally known Radio, for the reason that every Adler-Royal cabinet portrays the distinguishing technique of its famous artist designer, and the *visible quality-mark* of Adler-Royal craftsmen. It contributes a distinctive sales advantage to the set.

A BEAUTIFUL line of Adler-Royal stock models is now being shown by leading Radio Distributors. Write or wire your nearest jobber or this office for particulars.

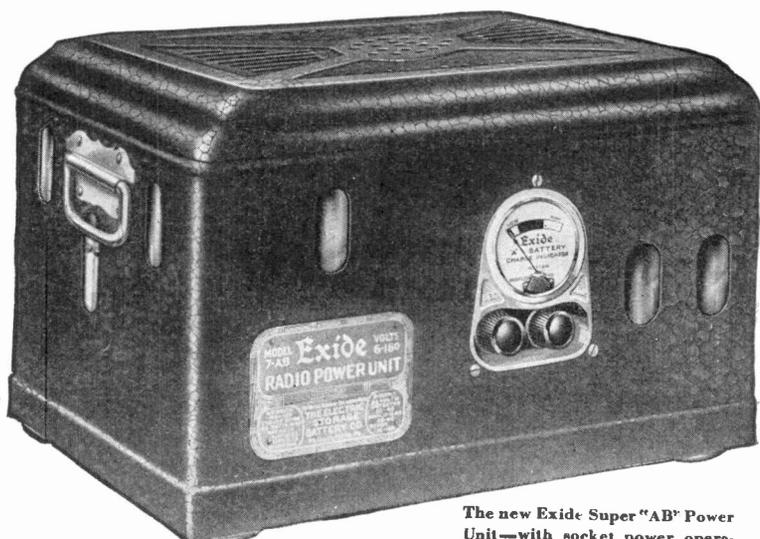
# ADLER

Manufacturing Co.  
Incorporated  
LOUISVILLE  KENTUCKY

# POWER

for

# Sets and Sales



The new Exide Super "AB" Power Unit—with socket power operation.

*Superior performance gives this unit  
a big sales appeal*



Exide Standard "A" Power Unit in 6-volt and 4-volt sizes.



Standard Exide 6-volt "A" Battery—also made in 4-volt size.

**A** UNIT alive with power—steady, vigorous—light-socket operation—the new Exide Super "AB" Power Unit has advantages that make it instantly attractive to every set owner.

Built on the most advanced principles of radio power engineering, the Exide Super "AB" Power Unit insures steady, dependable power for any set.

Exide has been supplying the best in radio power since the field was in its infancy. In this latest achievement, simplicity, utter dependability, and long life have been combined in a unit of such attractive appearance that to display it is to create an instant desire of the customer to own it.

That is why the new Exide Super

"AB" Power Unit has the power to sell. These points are being broadcast to radio fans through strong national advertising. Take advantage of this now. Let these qualities clinch sales for you. Write us at once.

### *An addition to the Exide Line*

This new accessory is the latest addition to the profitable Exide radio line. With the Exide Super "AB" Power Unit, the line comprises the Exide Super "B" Power Unit, the Exide Standard "A" Power Unit, the Exide Master Control Switch, the Exide "A" Storage Battery and the Exide "B" Storage Battery. The new unit is just as profitable as the rest of the line



The new Exide Super "B" Power Unit—ready to supply vigorous, sustained "B" power for any size set.



Exide 24-volt "B" Battery with glass cells. 6000-milli-ampere capacity. Also in 48-volt size.

# Exide

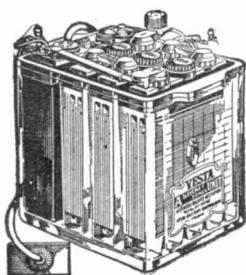
## RADIO BATTERIES

THE ELECTRIC STORAGE BATTERY COMPANY, PHILADELPHIA

*Exide Batteries of Canada, Limited, Toronto*

# VESTA

## Remarkable Profit Possibilities in This Complete VESTA Line

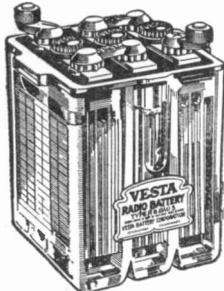


**VESTA "A" SOCKET  
POWER UNITS**

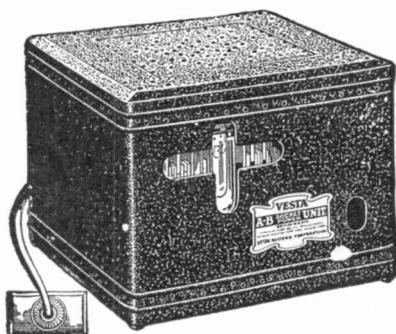
BUILT IN GLASS everything visible. Built-in hydrometer. Choice of either Balkite or Vertrex rectifiers. With or without automatic relay. High or low charging rates. For use with 110 volt, 50-60 cycle AC current. In 4 and 6 volt sizes, 50 Amp. Hour capacity. List prices \$28 to \$37.50.



**VESTA TRICKLE CHARGER**  
with Licensed  
**BALKITE RECTIFIER**  
Equipped with two taps for high and low charging rates. For use with 110 volt, 50-60 cycle AC Current. No. C-300. List price \$12.50.



**VESTA GLASS RADIO "A"  
BATTERY with  
BUILT-IN-HYDROMETER**  
Water level always in plain view. State of charge always visible. In 50 and 100 Ampere hour sizes. Positive plates are 25% oversize. Prices on request.



**Vesta Complete "A-B" Socket Power  
with Licensed WESTINGHOUSE RECTIFIER**

All-in-One. Contains "A" battery in glass case; built-in hydrometer; "B" unit; Westinghouse rectifier; Automatic relay; High and Low charging rates, automatically regulated.

No. A-B 400—"B" capacity 40 mils at 180 volts, list \$72.00  
No. A-B 401—"B" capacity 60 mils at 180 volts, list \$77.00



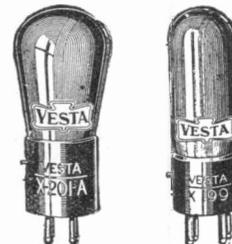
**VESTA "B" UNIT**  
Socket Power with Automatic  
Relay.

Constant and uniform Current for the "B" Circuit—with perfect control over entire Voltage in both amplifier and detector circuits. Range of adjustment for all sets.  
B-200, 40 mils at 180 volts, list . . . \$39.50  
B-201, 60 mils at 180 volts, list . . . \$44.50



**VESTA VERTREX  
TRICKLE CHARGER**

HIGH and LOW charging rates. Supplied with or without relay. Compact in handsome crystal enamelled case. Charges 6 volt batteries from 110 volt, 50-60 cycle, AC current.  
C-301 without relay, list \$15.00  
C-302 with relay, list \$17.50



**VESTA QUALITY TUBES**

There's a Vesta tube for every radio purpose. Special non-microphonic feature. These tubes will make friends for the dealer because of their pure tone and long life.

**With 8 Million Radio  
Sets in Service There is  
a Tremendous Market  
for Dealers Who Go  
After the Business of  
Bringing These Sets  
Up-to-Date With VESTA  
Power Units**

**VESTA BATTERY CORPORATION**  
2100 INDIANA AVENUE  
Chicago, Ill.

-----WRITE NAME ON THIS COUPON-----

RR 12-27

Vesta Battery Corporation, 2100 Indiana Ave., Chicago, Ill.  
Please have the Vesta Central Distributor near me submit the Vesta Dealer Plan

RADIO  
POWER UNITS

RADIO  
TUBES

AUTO AND  
RADIO BATTERIES



ENGLISH DE LUXE  
ALL ELECTRIC  
MODEL  
TEN TUBES

**S**CIENTIFIC thoroughness is the keynote of Zenith manufacture — thoroughness in design, in construction, in workmanship, in inspection and in shipment. So far as is humanly possible, mediocrity, carelessness, and faulty manufacture have been eliminated from Zenith Radio. So—Zenith is today the world's largest manufacturer of high grade radio.

Three different circuits—6, 8 and 10 tubes—battery or electric—some with antenna—some with loop—others without loop or antenna—16 Models. \$100 to \$2500.

ZENITH RADIO CORPORATION  
3620 IRON STREET - CHICAGO

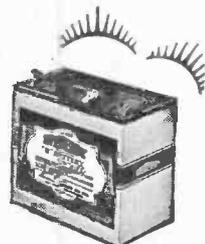
**ZENITH**  
TRADE MARK REG.  
→LONG DISTANCE←  
TRADE MARK REG. **RADIO**

*Licensed only for Radio amateur, experimental and broadcast reception.*  
Western United States prices slightly higher.

# Perfecting the gift of radio



Eveready's greatest provider of Battery Power—the Eveready Layerbilt "B" Battery No. 486.



## Radio is better

WHEN your customers give the great gift of a radio set, remember that they are giving not merely a handsome, intricate and sensitive instrument, but are also giving radio reception, radio enjoyment, radio itself. So recommend a receiver that can use the best source of radio power—batteries, for batteries perfect the performance of a radio receiver. The power they provide is pure D.C., Direct Current, which is entirely silent. Battery Power will insure the enjoyment of the listener, for battery-run sets produce exactly the tone their designers built into them.

All Eveready "B" Batteries will give the vital qualities of Battery Power. Behind Eveready Radio Batteries are 33 years of dry battery manufacture, of pioneering, invention, discovery, continual leadership. Sell Eveready Radio Batteries and ahead of your customers are hours, days, weeks and months of use, of solid enjoyment of radio at its best.

## with Battery Power

For modern receivers, recommend the Eveready Layerbilt "B" Battery No. 486, built according to a radically new design that gives it ample and even excess capacity to meet the demands of powerful sets. This battery is the longest lasting of all Evereadys. Its unique, patented construction packs the maximum possible quantity of active materials within a given space, and also makes those materials more efficient producers of current. Order from your jobber.

NATIONAL CARBON CO., INC.  
New York  San Francisco  
Atlanta Chicago Kansas City  
Unit of Union Carbide and Carbon Corporation

Tuesday night is Eveready Hour Night  
—9 P. M., Eastern Standard Time

- |                  |                  |
|------------------|------------------|
| WEAF—New York    | WOC—Davenport    |
| WJAR—Providence  | WCCO—Minneapolis |
| WEEL—Boston      | WCCO—St. Paul    |
| WFI—Philadelphia | KSD—St. Louis    |
| WGR—Buffalo      | WDAF—Kansas City |
| WCAE—Pittsburgh  | WBC—Washington   |
| WSAI—Cincinnati  | WCY—Schenectady  |
| WTAM—Cleveland   | WBAS—Louisville  |
| WWJ—Detroit      | WSB—Atlanta      |
| WGN—Chicago      | WSM—Nashville    |
|                  | WMC—Memphis      |

Pacific Coast Stations—  
9 P. M., Pacific Standard Time

- |                       |                 |
|-----------------------|-----------------|
| KPO—KGO—San Francisco | KFI—Los Angeles |
| KFOA—KOMO—Seattle     | KGW—Portland    |

**EVEREADY**  
**Radio Batteries**  
—they sell faster

# The STEINITE ELECTRIC RADIO

## uses Time-Tested Tubes!

—and Sells at America's

LOWEST PRICE

**\$100**



DEALERS appreciate the fact that there is *nothing* experimental about the Steinite Electric. It has been giving real satisfaction in thousands of homes for two years. And it uses the familiar dependable *standard tubes* which are time-tested and proven! Steinite offers true electric operation—*no batteries—no liquids—no outside attachments*—at no sacrifice of reception! Its tubes need no warming up. There is no noise—no hum—no crackle. No trouble in controlling volume—no fading of power! Steinite dealers sell without fear of come-back—without excuses, alibis and explanations.

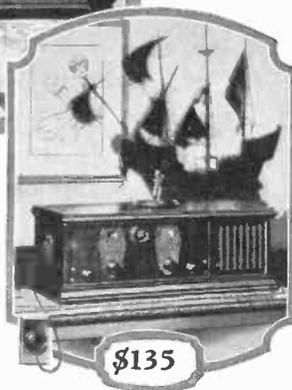
No attachments  
—complete in  
1 unit

NOW—  
write for the  
STEINITE

PROPOSITION!

The famous Steinite tone is a musician's delight—living, rich and mellow. Its performance amazes—distance with ease and without distortion! Three beautiful models in cabinets of solid genuine Philippine Mahogany. Six tubes, 2 illuminated dials.

Have you noticed Steinite's strong, consistent National Advertising?



# Steinite

There is a  
Steinite jobber  
in your territory

STEINITE RADIO COMPANY  
506 SOUTH WABASH AVE., CHICAGO

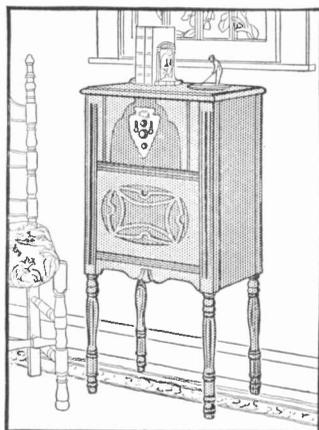
Licensed under R. C. A.  
patents and under  
Pat. No. 1014002

# Not just "Electric Radio" but Reliable A-C Radio

## BY MOHAWK

that you can sell for **\$112<sup>00</sup>** AND UP

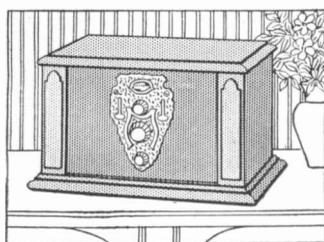
### BATTERY MODELS AS LOW AS \$67<sup>50</sup>



### The Pawnee Electric

The beautiful consolette shown above is probably the greatest Electric value in the entire radio field. Ready to operate. Completely equipped including Mohawk Pyramonic speaker. Nothing more to buy except AC tubes. One of the most popular models of all Mohawk Electrics that you can sell for . . . . . **\$152**

*Tubes additional*



### The Navajo Electric \$112<sup>00</sup>

A table model recommended for those who already have a satisfactory speaker and who want electric radio at the lowest cost and that you can sell for **\$112**

*Tubes additional*

Other Mohawk Electrics that you can sell for \$174.50, \$209.50, \$239.50 and \$319.50.

*Tubes additional*

*Prices slightly higher west of the Rockies and in Canada*

Electric radio is not new. But it remained for Mohawk, Originator of One Dial Radio, to offer reliable Electric Radio at prices which will produce volume sales.

Mohawk Electric is not a makeshift. Each Mohawk Electric receiver is a real AC set, operated by AC tubes, without batteries or any other accessory.

Nor has quality of reproduction been sacrificed in any way. The convenience of AC operation has merely been added to the standard Mohawk receivers—to the well-known standards of performance that have made Mohawk successful in the past.

As for prices, they are in keeping with Mohawk policy—they are the lowest in the field. Note this: Every standard Mohawk receiver is now available in an electric model. And the price, complete except for tubes, is only a little more than that of Mohawk battery models with no accessories. The two models shown are leaders. Other prices range to \$319.50, less tubes.

The Mohawk franchise is today more valuable than ever. Because Mohawk dealers do not have just another electric radio to sell, but Electric Radio by Mohawk, at Mohawk prices. *Wire for details!*

Mohawk Corporation of Illinois—Chicago

In Canada: Mohawk Radio Limited, 14 Temperance Street—Toronto, Canada

**BATTERY MODELS**

ranging in price from \$67.50 to \$275



Manufactured under RCA patents, Hogan patent No. 1014002 and Mohawk patent No. 1573374

# B-T Counterphase "Electric"

## DOUBLES B-T DEALERS



Counterphase "Six"  
Model 6-38

Radio's greatest A.C. value. Compact, attractive walnut cabinet. Price, less tubes \$230.00.

Less than sixty days ago Bremer-Tully began shipping A.C. receivers. Since that date the number of authorized B-T dealers has more than doubled—and no wonder! V. A. Clark of Cleveland, says:

"If you can get to the public and to the dealers an idea of how good this set is, I am sure your present factory facilities will be entirely inadequate to supply the demand."

Mr. Clark had reference to the "Six." Here's a report from Pennsylvania on the "Eight."

"I have played this machine against six other leading makes at equal or higher price and up to ten tubes and the Counterphase has outplayed and out-performed them all."

Bremer-Tully's traditional reputation is continued, and more, it is increased to higher prestige than ever before.

From every section of the country comes continuous praise for the *dependable* performance of the Electric Counterphase, using genuine A.C. tubes.

Howard Roby, La Grange, Ill., says:

"Dozens of stations were tuned in with full volume without loop or aerial. With volume full on, even with no program coming in, with my ear against the cone speaker, I couldn't hear the *least indication of A.C. hum.*"

Counterphase tone quality is unsurpassed. The 210 Audio Output System has no superior at any price. Phonograph records may be played thru this Audio system, producing superlative tone. Everything is controlled from the panel.

Four A.C. Models—\$175.00 to \$365.00

Four D.C. Models—\$110.00 to \$295.00

For many the A.C. set has been a hard problem but Bremer-Tully have always excelled on difficult products and the A.C. Counterphase again proved their superior ability most conclusively.

WHEN YOU SELL A B-T COUNTERPHASE YOU SELL SATISFACTION,—AND REPEAT ORDERS!

The B-T franchise is a bigger asset each day—write for details.



Counterphase "Eight"  
Model 8-17

Offers many distinct and exclusive features. Genuine walnut console beautifully finished. Price less tubes \$365.00.

# BREMER-TULLY MFG. CO.

520 S. Canal St., Chicago, Ill.

**Peppy Batteries always  
... if the Christmas  
list includes a General  
Electric battery charger!**

Tungar (the name of the General Electric Battery Charger) — put that on your list. For Dad, or Jack, or maybe, just for yourself. Every radio set should have in Tungar to keep batteries always pepped up.

The two-ampere Tungar has been a particular favorite because it gives both trickle and boost charging rates.

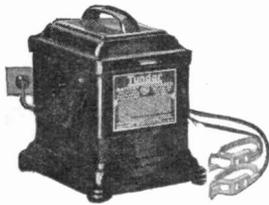
But different sets really require different chargers. Your radio dealer will tell you which is best for your set. Now that Tungar prices are lower than ever before, be sure you settle your battery charging problems for all time. And do as much for all the other radio fans on your Christmas list.

**New low prices  
East of the Rockies:**  
2-AMP TUNGAR \$14  
5-AMP TUNGAR \$24  
TRICKLE TUNGAR \$10

**GENERAL ELECTRIC**  
BATTERY CHARGER

These crates hold a 10-amp battery. In crates, 10-amp and 5-amp. An average charge runs about 4 days. It is G.E. product developed in the Research Laboratories of General Electric. The 2-amp Tungar charges 20, 40, and 60-cell batteries, but is adapted for 100-cell, 120-cell and 150-cell batteries. Tungar is made in Bridgeport, Connecticut. Merchandise Department, General Electric Company, Bridgeport, Connecticut.

*And many lists will include Tungar*



2-Ampere Tungar



5-Ampere Tungar



G-E Trickle Charger

THE dealer's best holiday bet will be to sell a battery plus a General Electric Battery Charger for socket power operation. When connected permanently, charging may be controlled from the A-C supply—a simple, easily sold method of obtaining socket power.

Tungars have been advertised for eleven years.

More than a million Tungars are in use.

They are made and guaranteed by General Electric.

Every month, 21,000,000 advertisements carry the General Electric name to the homes of America in an educational campaign. This builds acceptance for all General Electric products. In addition, national advertising of Tungars, like the page shown above, directs the consumer to the dealer for assistance and advice. Demonstrate Tungars. Sell them by their past performance—and by their General Electric name.

The Three Punch Plan should treble Tungar sales this year. Why not write us today for all the dope?



Tungar—a registered trademark—is found only on the genuine. Look for it on the nameplate.

**GENERAL ELECTRIC**

MERCHANDISE DEPARTMENT GENERAL ELECTRIC COMPANY BRIDGEPORT, CONNECTICUT

"Something wrong  
with the set?  
Sure, I'll send  
our service man  
over right away"



## Your Service Man's Time is Money ... money made or lost!

**Y**OUR service man can also sell. But, the best service man is only as efficient as the instruments he uses. Equip your service men and your store with complete portable special-purpose testing equipment that is designed for rapid servicing on all models of radio sets and power units, including the new electrically operated sets.



**Sterling "Universal Service" "B" Tester**

A complete portable testing laboratory for Power Units and all D.C. circuits up to 300 v. Voltmeter (0-300 scale) and milliammeter (0-100 scale) are used independently or in combination. Light, compact, complete with plugs and adapters. R-410, \$30.00.



**Sterling "Universal Service" Tube and Set Tester**

Used with batteries or Power Units. Tests large and small tubes including 171 type. Milliammeter shows amplifying strength of tube. Combination voltmeter tests both the "A" and "B" voltages, also locates defective circuit wiring, open transformers, poor contacts in sockets, etc. Voltmeter 0-10, 0-200 scale, Milliammeter 0-15 scale. R-412—List price • \$25.00.



**Sterling "B" Power Tester**

A high resistance, low priced meter for checking the output of any Power Unit or B batteries and other D.C. circuits up to 300 volts. A necessary unit in the radio service man's equipment.

R-415 D.C. Model, List price \$8.50  
R-417 A.C. Model, for testing line voltages and all A.C. circuits up to 150 volts, List price • \$7.50



**Sterling "Metered" Tube Reactivator**

For large and small tubes, including 300-A, 171 and all tubes having thoriated filaments. Emission meter shows tube needs reactivation, also improvement after reactivation. Handle on back. Complete with adapters. R-403—List prices, 50-60 cycle • \$12.50; 25-40 cycle • \$14.00.

THE STERLING MANUFACTURING CO.  
2831 Prospect Avenue • • • Cleveland, Ohio

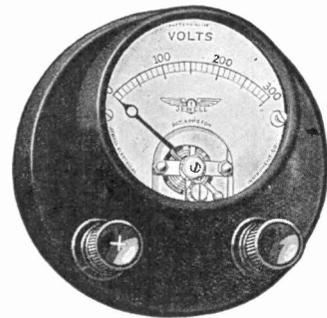
# Sterling

SERVICING EQUIPMENT



## This Jewell Instrument Sells Easy

A  
Quality  
Product



Pattern  
No. 139

This Jewell high resistance voltmeter, for the set owner sells easy because, first: it is badly needed by set owners who derive their B-voltage supply from a B-eliminator. It enables them to keep their B-eliminator taps adjusted to the correct value for best set operation. Second: it is a high grade product, and third: the price is low.

The Pattern No. 139 is 3 inches in diameter and 1½ inches high. The 0-300 volt scale is ample in range to take care of all ordinary requirements, and is silver etched with black characters. The movement is the same permanent magnet, moving coil type as on the more expensive types of high resistance voltmeters and movement parts are silvered.

Write us for a copy of descriptive circular No. 1103 and ask for a copy of our radio instrument catalog No. 15-C.

"27 Years Making Good Instruments."

Jewell Electrical Instrument Co.  
1650 Walnut St., Chicago

# Now Available at New Low Prices !

Heavy demand for these two leaders has made possible unusual economy of production—justifying these new low prices: Sentinel Bone-Dry "A", formerly \$49.00, **now \$39.00**; Sentinel Bone-Dry "ABC", formerly \$88.50, **now \$79.50**.



**T**HE Sentinel Line of Guaranteed Bone-Dry Power Units has met with such outstanding endorsement and universal acceptance that production costs have been lowered materially since their announcement. The public demand for units containing *absolutely no liquids of any kind* has meant especially increased production on the two leaders pictured here.

This demand should be an item of profitable significance to The Trade, and the new low prices decidedly good news!

Make the most of it!

# Sentinel—

## "Bone-Dry" Guaranteed RADIO POWER UNITS

*To the Set Manufacturer:—*

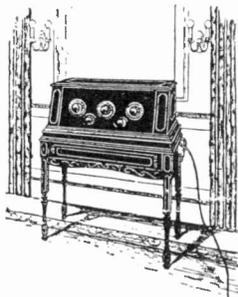
In this day of public demand for "A.C." Receivers, Sentinel's service to the set manufacturer is of growing importance. "ABC" Power Units and "BC" Power Packs are supplied to manufacturers direct, and we are glad to be of any assistance possible in direct cooperation with such manufacturers. Write for complete details.

*Announcing the "BC-Junior" at an  
Unprecedented Low Price*

The latest addition to the popular Sentinel Power Unit Line is the New "B.C." Junior—decidedly a leader in its field. The unusually low price (\$32.50 complete with tube) should make this item unusually attractive from the merchandising standpoint. Write today for complete details.

SENTINEL MANUFACTURING COMPANY, 9705 Cottage Grove Avenue  
CHICAGO, U. S. A.

**"No matter where your Set is—  
The Speaker can be  
where you want it"**



Show your customers the Cuno Radio Reel. The sale is quick and easy. Gives the speaker a 25 foot radius. Simple—reliable—only a few minutes to attach.

**RADIO  
CUNO REEL**



Model 687,  
Cuno Radio Reel

Handsomely finished in nickel and mahogany brown enamel. Complete with automatic ratchet controlled rewinding reel, 25 feet high grade cord and terminals. List price. Each ..... \$3.75



Your jobber has these in stock,—order your stock now. Unit package 5 reels, each in attractive individual box. Display card in each carton.

Millions are just waiting to be shown.

**THE CUNO - ENGINEERING CORP.**  
MERIDEN, CONN.

Manufacturers of the famous "Electric-Match"  
Cigar Lighter for autos and for household use.

Write for illustrated literature.

**A Revelation  
in Tubes!**

We announce the new A .C. 226 and 227 Tubes which operate direct from A. C. current without the use of "A" batteries.

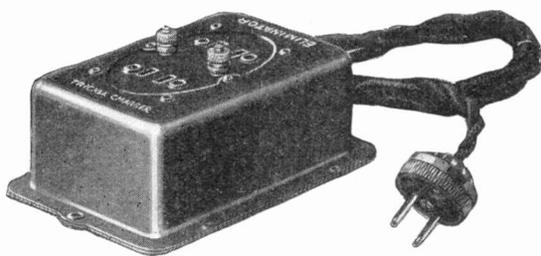
Televoval T.C.112A and 171A Power Tubes have been improved with an oxide-coated filament. This reduces current consumed from 1/2 to 1/4 amperes.

Stock, feature, sell Televoval quality tubes. All standard types, fully guaranteed. Write:



Televoval Corp.  
Televoval Building  
Dept. E-4,  
588 12th Street,  
West New York, N. J.

**TELEVOVAL  
QUALITY  
TUBES**



**This Switch Stays Sold**

It's the dependable, unfailing performance of the Reliable Automatic Power Control Switch in service, that makes it such an important item in the radio department. The Reliable is one switch that stays sold.

Our table of voltage drops and detailed electrical characteristics of this switch tell the story. The Reliable is built and tested for conditions found in actual service.

Sells at \$3.50 with a good profit for you.

Reliable Utility Type Switch is another item which moves at \$2.00.

Write for details and sample

**THE RELIABLE PARTS MANUFACTURING CO.**  
Wellington, Ohio

**RELIABLE  
Automatic Power Control  
Switch**

**A Laboratory at Your Finger Tips**

*Readrite*

PORTABLE  
AND PANEL

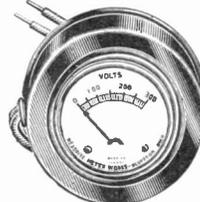
**METERS**



No. 210 Tube Checker.

**No. 210 Tube Checker**

Indispensable for dealers and service men. Quantities of tubes may be checked in a short time, and poor ones weeded out. An invaluable aid in keeping tubes constantly up to maximum efficiency. List \$7.50



No. 346 Voltmeter

**No. 346 Voltmeter**

A high resistance voltmeter for checking the voltage of B eliminators and radio B battery circuits—something that hitherto required laboratory instruments. Enables the service man or dealer to determine at once the condition of the plate circuit of all tubes. List \$5.00

*These instruments are not only of value to you; every set owner should have them. It means less worry and more profit for you.*

**Readrite Meter Works**

6 College Ave. ESTABLISHED 1904 Bluffton, Ohio

# Kellogg

## A<sup>ELECTRIC</sup>C Radio

*The First Radio using  
A.C. Tubes throughout  
including a Power Tube*



### How about 1928?

KELLOGG—who pioneered the AC tube, and one of the manufacturer-pioneers of the AC radio set—hit a market clamoring for AC radio.

1927 production was oversold long ago.

Distributors and dealers who lined up with Kellogg have profited accordingly.

Increased production for 1928 will open up similar opportunities for distributors and dealers in a few new territories that we could not offer to supply this season.

Applications for territory for 1928 are now being accepted. Early action is advisable.

**KELLOGG SWITCHBOARD & SUPPLY COMPANY**

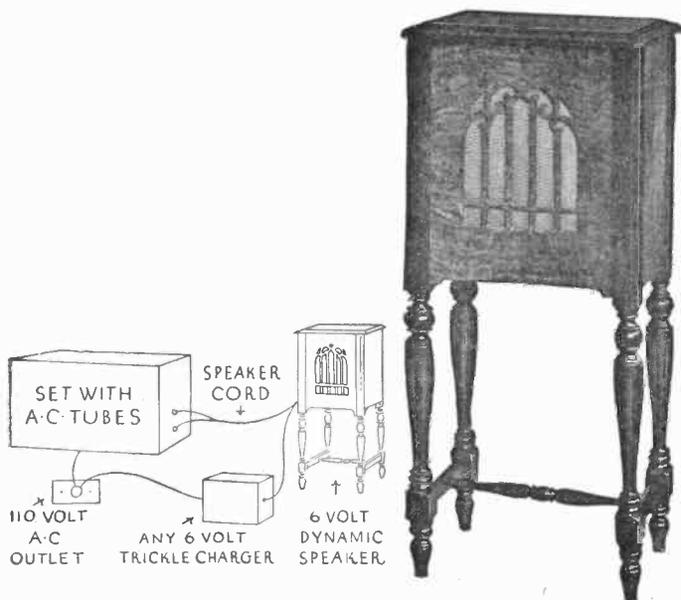
*Member R.M.A. and N.E.M.A.*

Dept. 54-79

CHICAGO



# MAGNAVOX



## Dynamic Power Speaker for new all-electric A-C Sets

Hook it up like this sketch because the 6 volt rectified output of any standard trickle charger or "A" rectifier will energize the field of the Magnavox 6 volt Dynamic power speaker unit.

Aristocrat Model speaker (complete unit), illustrated above, \$85.

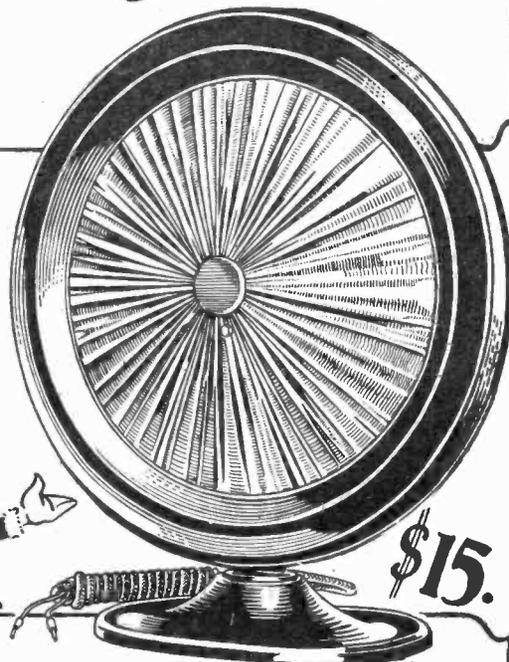
Beverly Model table type complete, \$65. Unit only, (type R-4, 6 volt) \$50. Fits any standard cabinet.

Only the Dynamic type speaker can bring out the full qualities of reproduction demanded today.

Write for speaker bulletins

THE MAGNAVOX CO.  
Oakland, California

# Larger Christmas Sales!



## The SONOCHORDE Junior

"Cash in" on Christmas radio trade—with the famous Sonochorde Junior! Wine-colored silk front, protected back—a beautiful creation that sells on sight! Sonochorde has 14 patented features that cannot be imitated! They assure both you and your customers quality and satisfaction with every sale. Line up with a winner—one that will bring you a greater holiday business. Write or wire your jobber for a Christmas stock—now!

Remember, too—Sonochorde Senior! Slightly larger and more decorative. Usual Sonochorde quality, \$25.

Order a Sample to-day!

BOUDETTE MFG. CO.  
CHELSEA, MASS.  
Dept. O



Back of the WHITE CONVERTORS is this INSTITUTION



There is going to be a big re-adjustment in the Radio accessory industry in the next few months. Those Distributors and Retailers whose connections are sound from the point of engineering ability, manufacturing efficiency and finance will be fortunate.

HERE in this home of The White Manufacturing Co., Sioux City, Iowa, White power units are made—"A's," "B's" and "AB's." They are as sturdy and substantial and lasting as the great pile of steel and cement in which they are designed, manufactured and distributed to the four corners of this great country.

White distributors and White dealers are secure in the knowledge that this manufacturing institution is well financed, well equipped and well conducted.

Our research department is a big one. Our experimental work develops new ideas constantly. It is not only abreast of these radio times but a little ahead in most things.

These things mean much to radio users *but they mean even more to radio distributors and radio retail merchants.*

**Julian M. White Mfg. Co.**  
 Makers of "A," "B" and "AB" Electric Radio Power Units  
 Sioux City, Iowa

# Can you sell a 36" Power Cone Kit for \$12.50 (List) ?

**You don't have to!**



Stand \$3.00 extra

**T**HIS kit sells itself with very little boosting. You offer the prospect a quality unit, with all materials complete. He spends a profitable evening assembling them and has a lively, true-tone cone capable of taking all the power he wants to feed it. He saves from 30 to 50 dollars!

*Get the dope and samples.*

**ACCUSTI-CONE LABORATORIES**  
11 N. 7th St. Philadelphia, Pa.

# Now! A.C. TUBES 226-227



Two New Favorites in  
"THE WORLD'S LARGEST TUBE LINE"  
33 Distinct Types

**E**VERY advantage of A. C. Tube operation is enhanced by the superlative quality built into these two new Sonatrons. Sonatron dealers are given the support of consistent Sonatron ADVERTISING and unquestioned Sonatron STANDARD QUALITY, plus Sonatron's famous 50% discount—and they are making a successful fight against the 30% evil! Your jobber carries the Sonatron line . . . if he doesn't . . . write to us!

The Newest! Sonatron 225-A to take the place of the 225 A. C. This 3-volt transformer, A. C. Heater element tube can be used in all sets wired for the 225 A. C.

**SONATRON TUBE COMPANY**  
New York; Chicago; Detroit; Windsor, Canada; Newark, N.J.

# SONATRON

Nationally Advertised  Standard Quality

# One Dollar!

I am sending my dollar. Enter my subscription to *Radio Retailing* for a year. I'm interested in having the tried and tested sales and store plans, ideas and methods of the most successful radio dealers everywhere. I can use their successful ideas on organizing, selling, financing, managing, advertising, displaying, demonstrating, servicing. Start my subscription with the next issue, please.

**RADIO RETAILING,**  
Tenth Ave. at 36th St., New York City

NAME .....

STREET .....

CITY ..... STATE .....

NAME OF COMPANY .....

BESIDES RADIO WE SELL.....

*Mail this coupon today*

## CLIP TIME OFF WIRING JOBS BY USING



Approved by the Underwriter Lab.  
Cartons of 100 - Standard Package 1000



An Insulating Cap with a split screw that bites twisted wire ends.

For Free Working Samples Sign Below and Mail

Name .....

Address .....

COLT'S PAT. FIRE ARMS MFG. CO., HARTFORD, CONN.

Only reliable products can  
be continuously  
advertised



Compare with  
**SPEAKERS**  
TWICE The Price

\$ **17.50**

Retails for slightly more west of Rockies.  
In Canada, \$22.50

The Quam Loud Speaker sells first on its superior performance—due to the patented "Stretched Reed Principle"—second, on its irresistible price. Make any test you wish, compare with any speaker at any price, and you will see why the Quam is so enthusiastically received by the public and welcomed by the dealer. Its superior tone qualities are best described by the phrase "*A Wonderful New Voice for Radio.*"

The **QUAM** LOUD  
SPEAKER

"Built on the Stretched Reed Principle"

introduces a new and startling improvement in Loud Speaker construction. Instead of a floating reed, secured at only one end, the Quam Speaker has a *Stretched Reed* like the human vocal cords.

- The result is amazingly superior to any you have heard before.
- Gives a much wider range of accurate tone reproduction.
- Picks up and reproduces the highest tones of the violin as faithfully and fully as the deeper tones of the pipe organ.
- Has unmatched range—and gives you all.
- Is free from "blasting."

The matchless quality and popular price of the Quam Loud Speaker make it highly profitable and easily salable. It is a product of a factory that has been supplying parts to America's leading radio manufacturers for years. This Speaker is beautifully and permanently made—requiring no adjustment at any time.

*Write for circular and discounts,  
or better still,  
send for a personal trial.*

Read What  
Hub Cycle & Auto Supply Co.,  
Inc., Boston, Mass., say about  
the

**Quam Speaker**

"We are receiving excellent reports regarding the performance of this fine Speaker, and would like the opportunity of satisfying our brisk dealer demand."

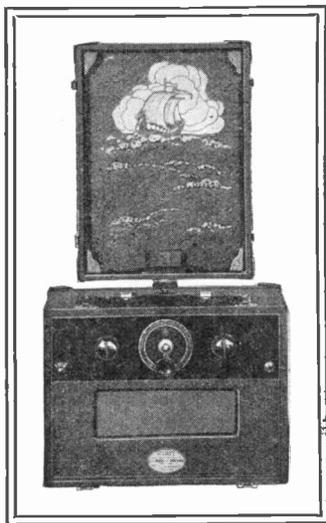
Hub Cycle & Auto  
Supply Co., Inc.,  
(Signed) James J. Nolan

**QUAM RADIO CORPORATION**

9718 Cottage Grove Ave.  
Chicago, Ill., U. S. A.

## The HYATT 6-TUBE General Utility Receiver

*Try it and you'll Buy it!*



Model A

### RADIO FACTS

The increasing popularity of portable radios is due to changing conditions.

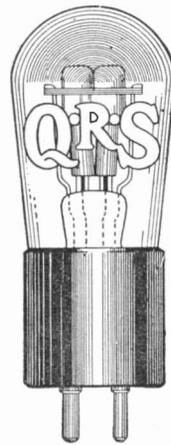
Chain broadcasting distributes the world's best programs to practically every locality, so that the use of large powerful receivers serves no real purpose.

The tone quality and selectivity of the HYATT Portable, its attractive appearance and convenience creates merchandising possibilities of which you should take advantage.

#### REMEMBER THIS

There is practically no service on a HYATT Portable, and that means more profit for you.

*Write for information on our dealer license plan.*



For Your "B" Battery Eliminator  
Ask Your Dealer for Guaranteed

**Q · R · S**  
Trade Mark  
Registered  
Gaseous

## Rectifier Tubes

Are Better

60 Milliamperes

\$4.50

85 Milliamperes

\$4.50

400 Milliamperes

With Ionizer  
300Volts for A,B and C  
Eliminators with  
Charts and Diagrams

\$7.00

Manufactured by the **Q · R · S** Company  
MUSIC CHICAGO

Established 1900. References: Dun, Bradstreet or any bank anywhere

### Radio Cabinets by UDELL



A beautiful new 32-page Catalog illustrating and describing the greatest line of Radio Cabinets in the country is ready.

*Write for your copy today.*

THE UDELL WORKS  
28th St. at Barnes Ave.  
Indianapolis

### It Won't Be Long Now

Before every good Dealer will be selling

## BUCK TUBES

201A-199-12 LIST PRICE

\$1.00 OR ONE BUCK

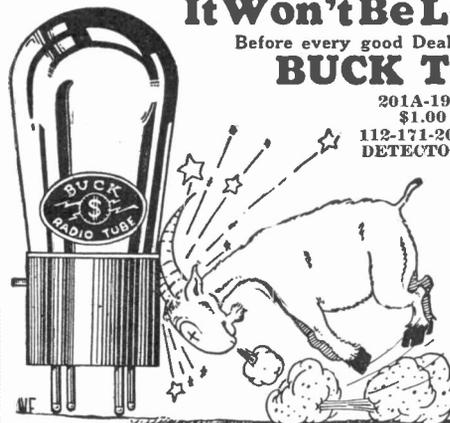
112-171-200A POWER AND

DETECTOR LIST PRICE \$2.00

OR TWO BUCKS

*Push the Best*

*Seller*



DISTRIBUTORS all over the country are busy passing the Buck to their dealers.

DEALERS are showing the consumers how to save Bucks by using Bucks.

Universal Electric Lamp Company  
Newark, N. J.

## ELKAY

TRADE MARK REG.

New! A. C. UNIVERSAL "JR. 7"

With Arcturus Tubes

Entirely A.C. when used with Arcturus Tubes—but can be changed to batteries without one single alteration in wiring. Chassis, \$92.50. A.C. Pack, \$40.00 extra. Nothing else like it on the market! Write for franchise to

The Langbein-Kaufman Radio Co.,  
Dept. M, New Haven, Conn.



# Sandar lends a Festive Air

ANYBODY who has anything to do with the Sandar Speaker during this gay and merry season has added reason for that "all's right with the world" feeling—the fans because Sandar's perfect performance and attractive appearance contribute so much to their enjoyment, and the dealers because of Sandar's unparalleled popularity.

Not forgetting that Sandar is the lowest priced — \$27.50 — licensed speaker of its size, and that the Sandar Junior, a worthy smaller edition of the Senior retailing at \$16.50, is doing its full share in providing good cheer and incidentally good profits.

You would do well to apply for a Sandar franchise, and thus cash in on the unprecedented demand it has created. Write TODAY for terms and full information.

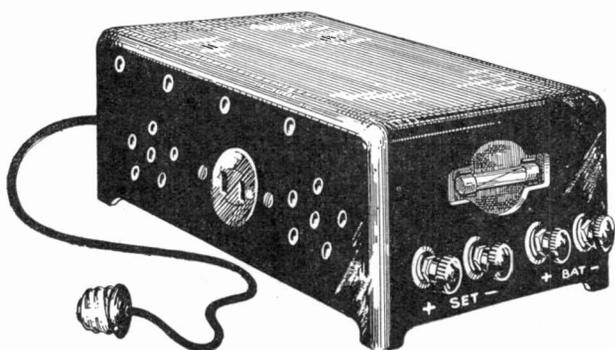
SENIOR Model \$27<sup>50</sup>  
(No. 25)  
West of the Rockies \$30<sup>00</sup>

JUNIOR Model \$16<sup>50</sup>  
(No. 21)  
West of the Rockies \$17<sup>75</sup>  
Licensed under Lektophone Patents

# SANDAR SPEAKER

SANDAR CORPORATION, Crescent Plaza Building, Long Island City, New York

# Bone Dry!



## CHARG-A-MATIC

The Automatic Charger for "A" Batteries

At last the perfect "A" charger—one that is absolutely "fool-proof"—requires no attention—and really does the work.

CHARG-A-MATIC is absolutely automatic in every respect—you can really plug it in and forget it.

CHARG-A-MATIC delivers a charge of from 1 to 1¼ Amperes until the "A" Battery is fully charged, then the charge is automatically reduced to approximately .3 Amps. If the voltage drops to around 4.9, CHARG-A-MATIC automatically resumes its full charging rate bringing the battery up to full capacity again.

Nothing to get out of order—no attention required—no tubes to burn out—no liquids to replenish—no acids to spill and stain.

CHARG-A-MATIC is the perfect "A" Battery Charger.

Mail the coupon today for complete details.

**JOHNSON MOTOR PRODUCTS CO.**  
1401 Carroll Ave.  
CHICAGO

- No Tubes
- No Liquids
- No Acids
- No Bother

**\$13.75**

JOHNSON MOTOR PRODUCTS CO.  
1401 Carroll Ave., Chicago

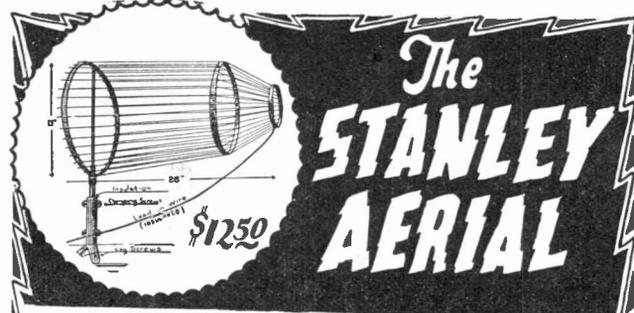
Gentlemen: Please send complete information, prices, discounts, etc. on CHARG-A-MATIC.

Name .....

Address .....

City ..... State .....

Jobber .....



### Dealers!

The Stanley Aerial needs no long-winded sales talk—its advantages are obvious. Hundreds of radio dealers have proved it a sure-fire, fast-selling item. And for you too, it will guarantee quick, profitable sales! Write today for our dealer proposition.

A super-selective unit rapidly replacing the old type. Assures clearer tone, greater volume and range. Two years of service have proved its superiority.

#### SUPER-SELECTIVE

Its high selective powers eliminate aerial interference and nearby noises. Reduces static to the absolute minimum.

#### EASILY INSTALLED

No more bother stringing up wires! The Stanley Aerial is easily attached to any type roof in a few minutes.

#### DURABLE

Made of hard rolled copper, the Stanley Aerial is built to endure. Will withstand the roughest weather and the longest use.

Order a sample today!

**STANLEY ENGINEERING AND SALES CO.**  
161 Devonshire St., Boston, Mass.



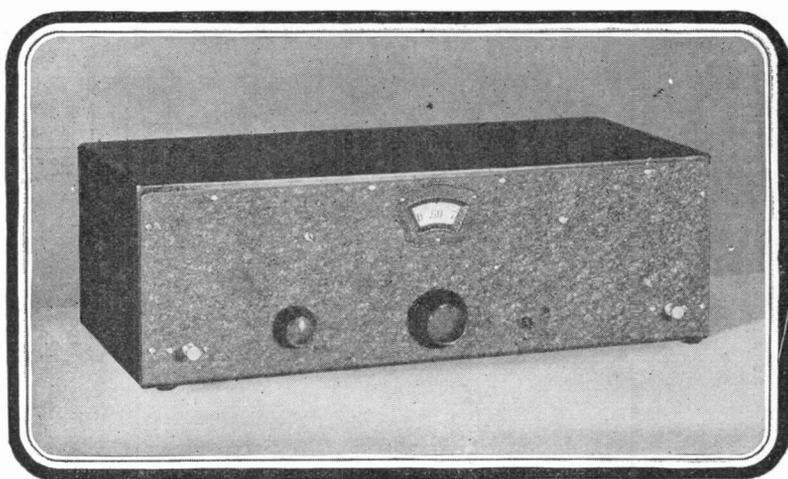
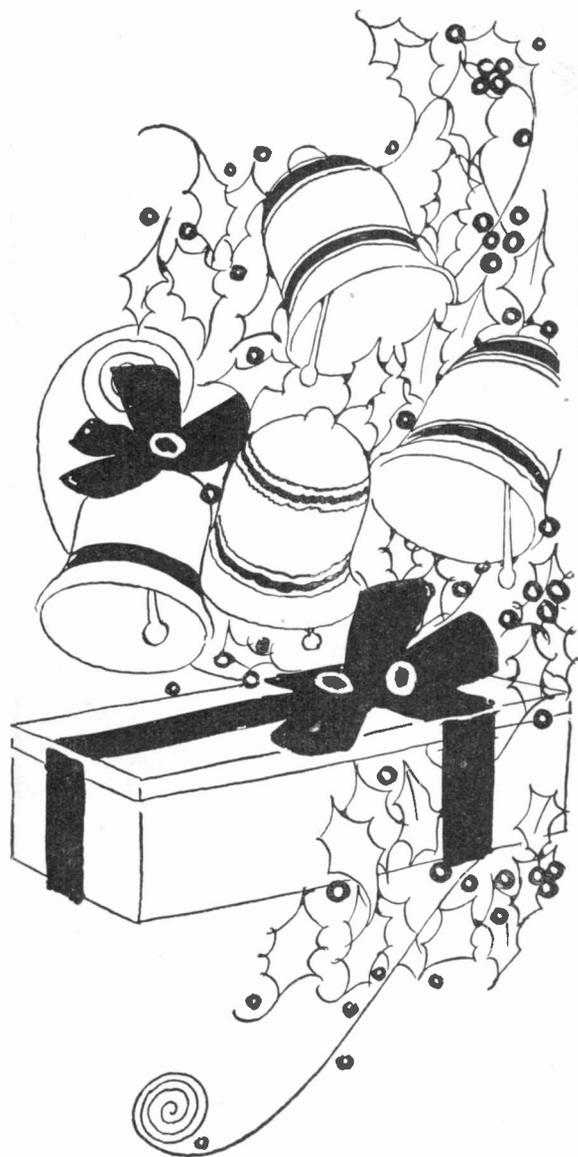
An Irresistible Combination

Ask For Catalog

The PIERSON COMPANY - ROCKFORD, ILL.

# GUTHRIE AGAIN LEADS THE WAY

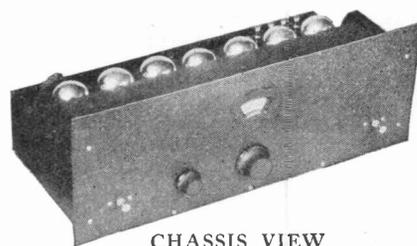
— WITH A GREATER SET  
AND GREATER VALUE!



ANTICIPATING tomorrow's radio demands, Guthrie announces a new seven tube, single dial, AC operated set that will be the pacemaker for 1928.

This new Guthrie set is designed for AC power tubes, but may be operated with batteries or battery eliminators. The dial is illuminated, the tone more mellow (push-pull amplification) the selectivity greater, the volume richer than ever before. Guthrie value again will meet and beat all competition.

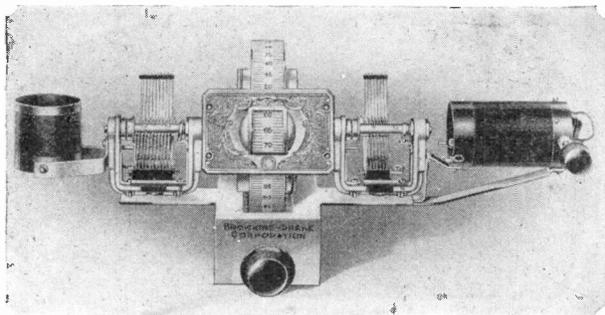
*Write or wire your jobber at once for complete information. Set up a new Guthrie for demonstration, they'll be bought—you don't need to sell them! Be ready for the holiday demand.*



CHASSIS VIEW

The GUTHRIE Company  
ELYRIA, OHIO

*Now!* the New  
**Official**  
**Browning-Drake**  
*Single Knob—*  
*Single Drum Control*  
*Tuning Unit*



*For either A.C. Tube  
 or Battery Operation*

To keep pace with the times we now offer this highly refined single mount, illuminated, single knob drum control Official Browning-Drake Kit. This is the essential part of our new two tube tuner for use with well-known power amplifiers or the new Official Five Tube Kit Set.. Either may be built for A.C. or D.C. operation.

Dealers will find this new Browning-Drake a ready seller—that once in actual use will bring nothing but praise from set builders.

Look for this



Trade Mark

We will gladly send complete details of our new Official Two Tube Kit on request. A card will do.

**BROWNING-  
 DRAKE  
 CORPORATION**  
 Cambridge, Mass.

**ATTRACTIVE RADIO FURNITURE**

Ehlert Radio Furniture is manufactured by a firm with 40 years' experience in making furniture with true regard for artistic beauty.



No. 3100 Super Excellent Radio Desk

The Super-Excellent Radio Desk here illustrated is one of the finest pieces of radio furniture in this year's showing.

This desk is now being sold for ready use with all Atwater-Kent models, Radiolas 16 or 17, the Crosley Bandbox and many other popular radio receivers. This model has plenty of room for speaker and accessories and can be had with or without an orthophonic tone chamber.

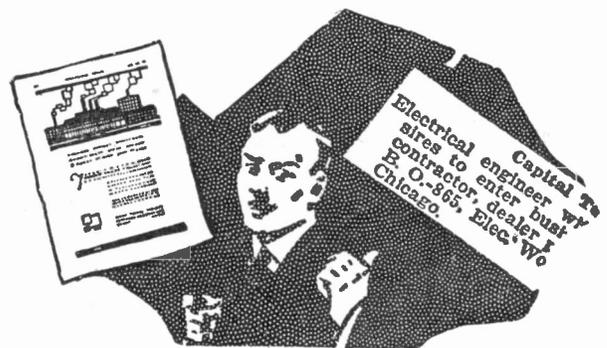
A complete stock of 29 distinctive models carried in Chicago stock ready for immediate shipment.

Ehlert popularity in the radio furniture field is increasing with leaps and bounds.



Send for catalog of complete line with full descriptions.

**RADIO FURNITURE CO.**  
 2468 Lincoln Ave.  
**CHICAGO ILLINOIS**



**Don't Overlook Opportunities**

Men who regularly keep in touch with the market through other channels often overlook the many opportunities that are to be found in the

**SEARCHLIGHT SECTION**

For Every Business Want

*"Think SEARCHLIGHT First!"*

0159

# SEARCHLIGHT SECTION

## SURPLUS STOCKS—BUSINESS OPPORTUNITIES

**UNDISPLAYED—RATE PER WORD:**  
 Positions Wanted, 6 cents a word, minimum \$1.25 an insertion, payable in advance.  
 Positions Vacant and all other classifications, 10 cents a word, minimum charge \$2.00.  
 Proposals, 40 cents a line an insertion.

**INFORMATION:**  
 Box Numbers in care of any of our offices count 10 words additional in undisplayed ads.  
 Discount of 10% if one payment is made in advance for four consecutive insertions of undisplayed ads (not including proposals).

**DISPLAYED—RATE PER INCH:**  
 1 to 3 inches.....\$6.65 an inch  
 4 to 7 inches..... 6.40 an inch  
 8 to 14 inches..... 6.20 an inch  
 Rates for larger spaces, or yearly rates, on request.  
 An advertising inch is measured vertically on one column, 3 columns—30 inches—to a page.

Radio Retailing

### POSITION WANTED

COMPETENT radio service man, available on short notice to dealer, jobber or manufacturer, anywhere, at low figure to demonstrate ability. Six years' experience as factory service man to dealers. Acquainted with manufacture of chargers, eliminators and receivers. Consolidation of firms no longer requires services. Will install aerials, have tools, meters, equipment and own car to deliver consoles. Best reference. PW-50, Radio Retailing, 7 So. Dearborn St., Chicago, Ill.

### REPRESENTATIVES AVAILABLE

**Manufacturers' Representative**  
 Young man returning to England and having an established wholesale radio house with branches in several towns wishes to represent manufacturers in radio sets, eliminators and accessories. RA-51, Radio Retailing, Tenth Ave. at 36th St., New York.

ARE you looking for a representative in Michigan or vicinity? I want a line that requires work and lots of it and that has plenty of reward for that work; age 35; large clientele and many friends now; 10 years' experience. C. A. Parkham, 149 Ford Ave., Detroit, Mich.

### Wanted

#### Manufacturer's Representative

We manufacture a complete line of radio coils and wish to obtain additional representation. Responsible representative will be given exclusive representation in his territory on regular commission basis.

RW-47, Radio Retailing  
 Bell Telephone Bldg., St. Louis, Mo.

### FREE RADIO EMPLOYMENT SERVICE

Employers in any line of the Radio industry (or in allied industries) should call on our Free Radio Employment Service when additional employees are needed. Thoroughly trained, experienced men supplied anywhere in the U. S. or Canada on 48 hours' notice. No charge for service. Send post card today for our free monthly bulletin. Address National Radio Institute, Dept. R.R., Washington, D. C.

### TECHNICAL SERVICE

(Agency)

217 Broadway, New York

#### RADIO PERSONNEL

Factory supt. . . . . to \$7500  
 Chief inspector . . . . . to 5000  
 Radio engineer . . . . . to 5000

### Superior Radio Crystals

World Famous Concert Tested Radio Crystals  
 Trade Mark for Reflex or Crystal Sets  
 Unconditionally Guaranteed

**A-1 CALIFORNIA RADIO MINERALS**  
 Reg. U. S. Harry Grant, Jr.  
 Pat. O. A. Successors to K. O. PRODUCTS CO.  
 904 Oak Grove Ave., Burlingame, California.

### WE PAY CASH

for your

#### SURPLUS RADIO STOCKS

What have you for sale?

AMERICAN SALES CO.  
 21 Warren Street, New York City.  
 Established 1919

CASH

#### SURPLUS RADIO STOCK

Send us your list and lowest cash price

EMPIRE RADIO CO.  
 216 Washington St.,  
 Boston, Mass.

CASH

We have cash for

#### Surplus Radio Goods

Write us what you have and lowest cash price.

#### Dewey Radio Company

148 Summer St., Boston, Mass.

### R.C.A. DEALERS

Send for our list of special bargains on standard replacement parts for Radiola Sets and Speakers.

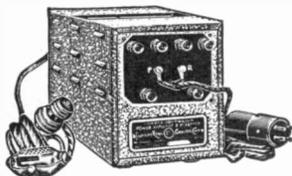
AMERICAN SALES CO.

21 Warren St., New York City

# MONEY FOR YOU—

## In These Power Supply Devices!

### TIMMONS Combination Power Amplifier and "B" Supply



List \$70.00  
 (without tubes)

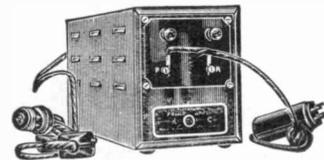
SPECIAL AT  
 \$18.50 ea.



### TIMMONS Power Amplifier

List \$45.00  
 (without tubes)

SPECIAL AT  
 \$11.50 ea.



Both of these high quality compact units use a U.X. 216B or 281 tube for rectifying and a U.X. 210 super power audio tube as an amplifier which gives distortionless and true natural reception with wonderful tone quality and volume.

Both instruments are identical in their performance as super power amplifiers. The Combination however is also a complete "B" Eliminator furnishing all the "B" current

required by the regular tubes of the set. No adjustments required and no output transformer or similar auxiliary equipment needed with either unit.

For use with alternating current 105-120 volts, 50-60 cycles. Every unit is brand new, packed in original factory sealed carton and fully guaranteed. They have been approved by Popular Radio and Popular Science Laboratories.

Terms:—20% cash with order, balance C.O.D. f.o.b. N. Y.

AMERICAN SALES CO., 21 WARREN ST., NEW YORK CITY



# NEW! An Amazing New Type Rectifying Tube

Made throughout of metal, looks like glass, cannot break, longest lasting bulb known, quiet and highly efficient, guaranteed to give full satisfaction—the ideal rectifying tube built to replace any and every glass type rectifying bulb.

**Fits Any Charger.** The new Handy Metallic Rectifier Tube can be used with all makes of chargers—two amperes or trickle—with lower spring contact or Fahnestock Clip.

**Highly Efficient.** Laboratory tests reveal that the Handy Metallic Rectifier Tube delivers a uniform non-fluctuating output with a watt consumption approximately half that of the glass filament bulb.

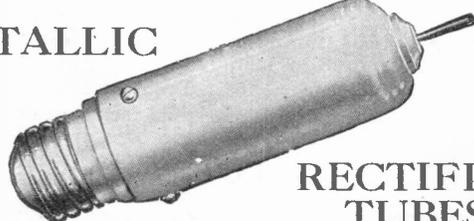
**Long Life.** There is no filament or element to wear, no gas to leak, glass to break, nor liquids to dry. While *everlasting* life is not claimed for the Handy Metallic Rectifier Tube, should it depreciate in any manner after a long period of time, it can be refilled at the factory for a very nominal cost.

**Timely and Profitable.** Here is an item carrying the full usual trade discounts that avoids loss through breakage and adjustments through come-backs. It is offered at a time when the demand is greatest for a truly efficient and economical rectifying tube. Order today through your jobber.

Interstate Electric Company  
4351 Duncan Ave. St. Louis, Mo.

# HANDY

METALLIC



\$4.00

F.O.B. ST. LOUIS

RECTIFIER TUBES

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## The Latest Addition to a Distinguished Family

When A.C. operated receivers existed only in the minds of inventive engineers, Sylvania laboratories were at work on designs for tubes actuated by alternating current. After countless experiments and tests, two new A.C. tubes are ready to bear the Oak Leaf and Flashing S of the distinguished Sylvania family. They are

**SX-226 (an AC Amplifier Tube)**

**SY-227 (an AC Detector Tube)**

The superior performance of these new members is ready to be proven in competition with any tubes in existence. Your Sylvania jobber has them *now*, ready for you to test. Write to Sylvania for Engineering Bulletin No. 2 describing these two new "tubes that never disappoint."

**SYLVANIA PRODUCTS COMPANY**  
*Emporium, Pa.*

**Sylvania**  
**RADIO TUBES**

A Radiotron  
for every purpose

**RADIOTRON UX-201-A**  
Detector Amplifier

**RADIOTRON UV-199**  
Detector Amplifier

**RADIOTRON UX-199**  
Detector Amplifier

**RADIOTRON WD-11**  
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**RADIOTRON UX-12**  
Detector Amplifier

**RADIOTRON UX-200-A**  
Detector Only

**RADIOTRON UX-120**  
Power Amplifier Last  
Audio Stage Only

**RADIOTRON UX-112**  
Power Amplifier

**RADIOTRON UX-171**  
Power Amplifier Last  
Audio Stage Only

**RADIOTRON UX-210**  
Power Amplifier Oscillator

**RADIOTRON UX-240**  
Detector Amplifier for  
Resistance-coupled  
Amplification

**RADIOTRON UX-213**  
Full-Wave Rectifier

**RADIOTRON UX-216-B**  
Half-Wave Rectifier

**RADIOTRON UX-226**  
A.C. Filament

**RADIOTRON UY-227**  
A.C. Heat

**RADIOTRON UX-280**  
Full-Wave Rectifier

**RADIOTRON UX-281**  
Half-Wave Rectifier

**RADIOTRON UX-874**  
Voltage Regulator Tube

**RADIOTRON UV-876**  
Ballast Tube

**RADIOTRON UV-886**  
Ballast Tube

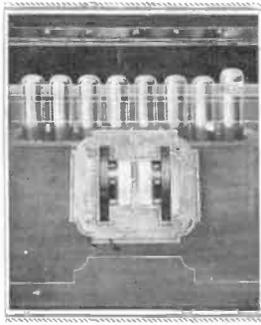
The standard by  
which other vacuum  
tubes are rated



A Radiotron  
for every purpose

- RADIOTRON UX-201-A
- RADIO UX-171
- RADIOTRON UX-199
- RADIOTRON UX-120
- RADIOTRON UX-112
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- RADIOTRON UX-112
- RADIOTRON UX-171
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- RADIOTRON UX-213
- RADIOTRON UX-216-B
- RADIOTRON UX-226
- RADIOTRON UX-227
- RADIOTRON UX-280
- RADIOTRON UX-281
- RADIOTRON UX-874
- RADIOTRON UX-876
- RADIOTRON UX-886

The standard by  
which other vacuum  
tubes are rated



A radio set is as old as  
its tubes. Radiotrons  
throughout are the best  
insurance against tube  
troubles and the best  
guarantee of long life.

If the tubes do not work properly then nothing works properly. Many a set which was thought to be a hopelessly poor set has been put in first-class condition merely by installing Radiotrons. The Radiotron is the joint product of the engineers of RCA, Westinghouse and General Electric—the world's leading authorities on things electrical.

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RADIO CORPORATION OF AMERICA · NEW YORK · CHICAGO · SAN FRANCISCO

Don't see any tubes  
with old ones.  
If your vacuum tubes  
have been all over the  
place—and are really  
troublesome—much  
better results will be  
obtained by replacing  
all the Radiotrons.  
Don't use a new tube  
with old ones.  
To keep your radio  
set in maximum  
producing efficiency,  
change all your tubes  
at least once a year.

One of the twelve striking  
color pages advertising RCA  
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During the seven years of home radio  
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Why experiment with inferior tubes  
when this fact gives you the greatest  
sales argument you could ask in build-  
ing a greater vacuum tube business.



RADIO CORPORATION OF AMERICA  
New York Chicago San Francisco

# RCA Radiotron

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