

# Radio Retailing

*The Business Magazine of the Radio Industry*

A McGraw-Hill Publication

MARCH, 1929

THE  
CURTAIN IS RISING

ON A *New*

**GREBE**  
SYNCHROPHASE

A. H. GREBE & CO.  
Incorporated  
Richmond Hill, N. Y.

Western Branch:  
443 So. San Pedro St.  
Los Angeles, Calif.

**RADIO**

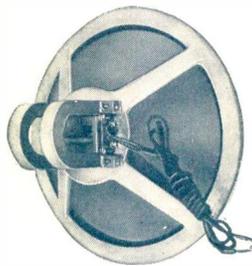
MAKERS OF QUALITY RADIO SINCE 1909

GET IT  
BETTER  
WITH A GREBE

*The New Models*

will embody all that Grebe has always stood for in design, performance and finish. To be sold at a price which the public has indicated it is willing to pay for the best in radio.

*More than the "last" word*  
*—the FUTURE word in*  
**DYNAMIC OPERATION**



*An unprecedented opportunity for*  
**MANUFACTURERS**

to equip their product with Dynamic operation that is not only far superior in performance to prevailing standards...but lower in cost, easier to install, and *trouble-proof!*

With the INDUCTOR Dynamic Speaker, Farrand has revolutionized Dynamic usage, performance and costs. All heavy, expensive parts found in ordinary Dynamic Speakers are absent.

**No FIELD COIL—No IRON COIL HOUSING**  
**No POWER TRANSFORMER—No DRY RECTIFIER**  
**No CONDENSER**

*Write at once for full details*

***Farrand***  
**INDUCTOR**  
***Dynamic Speaker***

FARRAND MANUFACTURING COMPANY, INC., LONG ISLAND CITY, N. Y.

RAY V. SUTLIFF  
Western Editor, Chicago

S. J. RYAN,  
Merchandising Counsellor

M. E. HERRING,  
Publishing Director

# Radio Retailing

The Business Magazine of the Radio Industry

O. H. CALDWELL, Editor  
WILLIAM ALLEY, Managing Editor

Editorial Staff

OVID RISO

HARRY PHILLIPS

HENRY W. BAUKAT,  
Technical Editor

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PAUL WOOTON, Washington

## Radio Retailing for MARCH, 1929

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## Dynamite !!

**E**VERY used set you take in trade is just so much dynamite until you've sold it at a profit.

Radio Retailing is now making a nationwide survey of the trade-in problem—how many used sets are being accepted—how much are dealers allowing for them?—how is the allowance determined?—how are they reconditioned and marked up for resale?—how are they disposed of?—These and many other pertinent questions on trade-ins will be answered by this survey.

The results will be published as one of the many features planned for the April issue. Watch for it. It will be well worth reading.

Member Audit Bureau of Circulations and Associated Business Papers.

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LONDON, E. C. 8, Bourville St.

Stradivarius  




"All the work of Stradivarius was marked by MINUTENESS OF DETAIL, HIGH QUALITY OF MATERIAL, and BEAUTY OF TONE, which has a distinct sympathetic quality."

—International Encyclopedia

No. 635 Stromberg-Carlson, Walnut Treasure Chest. Operates on A.C. Tubes. Price, less tubes and Speaker . . . \$185



# The Significance of a Name

**I**N every field of human attainment there is one name that stands apart — which represents the summit of achievement in that field.

You can doubtless recall one such name in pianos, in motor cars, in jewelry, and other products.

In the minds of the musically sophisticated that name in radio is Stromberg-Carlson.

To have the name Stromberg-Carlson on a radio receiver, is to possess that which most others would emulate, which the greatest number of authorities unhesitatingly accept as the standard of "sympathetic" tone—tone founded on "minuteness of detail" and "high quality of materials."

*"There is Nothing  
 Finer than a  
 Stromberg-Carlson"*

There are All-Electric Stromberg-Carlson Receivers for alternating current areas, and for direct current areas, as well as Receivers operated with batteries — a complete line suitable to every dealer's patronage.

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

# Stromberg-Carlson

MAKERS OF VOICE TRANSMISSION AND VOICE RECEPTION APPARATUS FOR MORE THAN THIRTY-FIVE YEARS

# Inauguration March 4<sup>TH</sup>

A Nation's most important event . . . . the inauguration!

. . . . All of the dignity, the impressiveness, the importance of the occasion will be brought into the homes of America's millions.

. . . . Make sure your Radio receiving set is equipped with a UTAH reproducer for Perfect Reception.

. . . . You will find just the unit to meet your requirements in size, style and price at all responsible radio dealers.

UTAH RADIO PRODUCTS CO.  
1615 So. Michigan Ave. . . Chicago

Model 65  
With 110 D. C.  
Dynamic Chassis, \$35.00  
With 110 A. C.  
Dynamic Chassis, \$45.00



# UTAH



**NOW ENTERING THE RADIO CABINET FIELD!**

# EBERT

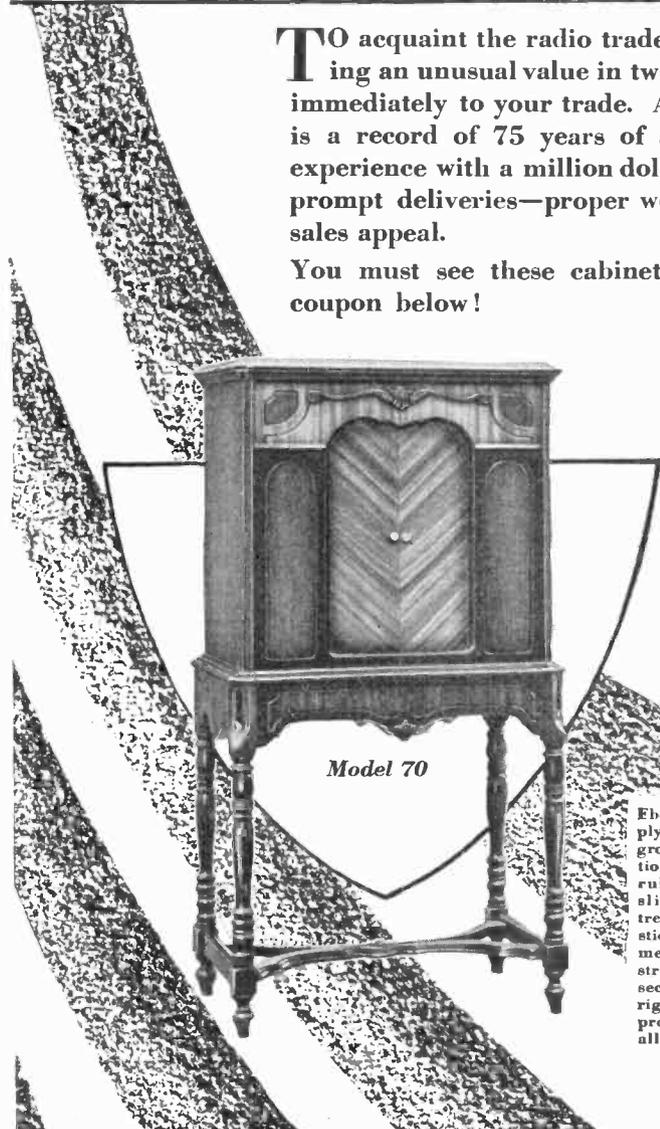
OF RED LION, PA.

**T**O acquaint the radio trade with our facilities, we are offering an unusual value in two cabinet designs that will appeal immediately to your trade. And in back of this offer, there is a record of 75 years of actual furniture manufacturing experience with a million dollar annual capacity. This assures prompt deliveries—proper workmanship—designs with real sales appeal.

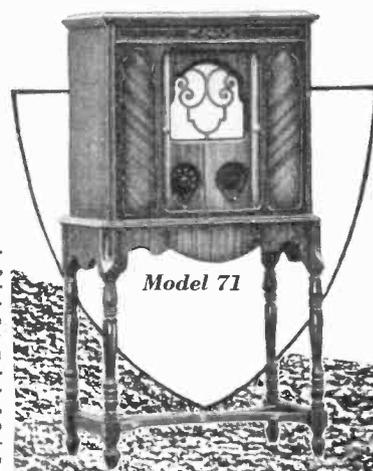
You must see these cabinets! Get the details—fill in the coupon below!

*Who is Ebert?*

Furniture manufacturers since 1854—3½ acre factory—Million Dollar Capacity.



Model 70



Model 71

*Especially Suited for—*  
ATWATER KENT MODELS 40, 42, and 46  
Crosley, Steinite, Freshman, A.C. Dayton

Ebert cabinets are made of five-ply combination walnut, tenon, groove and glue-block construction—finished by a special hand-rubbed lacquer process. The sliding doors are carefully treated to prevent warping and sticking. The speaker compartment contains a specially constructed five-ply baffle-board, securely bolted, giving absolute rigidity, assuring perfect tone reproduction. Will accommodate all types of dynamic speakers.

**\$46<sup>25</sup>**  
List

**EBERT FURNITURE CO., Red Lion, Pa.**

A. IRVING WITZ  
MARTIN J. POLIKOFF

National Sales Agents

2010 Pennsylvania Bldg.  
225 West 34th St., New York, N. Y.



The factory behind the product—established 1854

**EBERT FURNITURE COMPANY**

WITZ & POLIKOFF, Sales Agents, 2010 Pennsylvania Bldg.  
225 West 34th Street, New York City

I am interested in Ebert Cabinets for \_\_\_\_\_ Sets.  
Also please send me the facts as to how Ebert Cabinets will speed up  
the cash register for my business.

Name \_\_\_\_\_  
(If retailer, give your jobber's name below)

Address \_\_\_\_\_

Jobber's Name \_\_\_\_\_ City \_\_\_\_\_

*Back in APRIL*  
**1928 - - -**



The screen grid tube using the separate heater principle and requiring 1.75 amps at 2.5 volts.

## **CECO** announced the Type AC-22 Screen Grid Tube

using the separate heating principle and operating on 1.75 amps at 2.5 volts. It is now considered the most outstandingly successful AC amplifier and its use will be general this year.

CECo pioneered—and did its pioneering without the fanfare of trumpets. But it is pleasing to know that an increasing number of radio engineers and experts look with confidence to the CECo laboratories for each new development in the tube industry . . . a reward not measured in dollars and profits.

**But . . . to You CECo Laboratory  
Research and Developments  
mean INCREASED SALES!**

First, because your customers can feel assured that no matter what their needs may be, you can supply them with a tube of outstanding merit. Second, because in the more commonly used tubes, CECo has produced a tone quality, an enduring excellence that is peculiarly its own . . . unequalled by any other tube. And the cost is no greater! See your jobber today for complete details, prices, discounts, etc., on the CECo line.

CECO MANUFACTURING CO., INC., Providence, R. I.

Do not miss CeCo's entertaining radio broadcast each Monday evening at 8:30 Eastern time (7:30 Central time) over the Columbia Broadcasting System.

**CECO** - Millions · in use

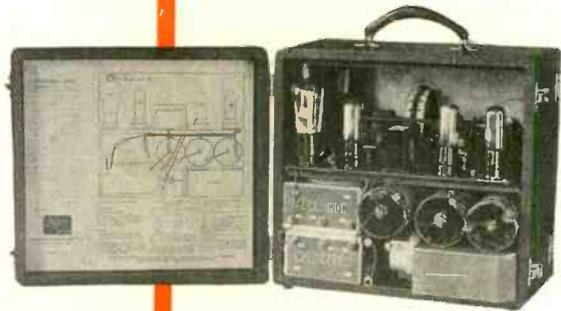
# - and their Portable Radio



Here is the answer—in advance—to the demand for a simple, rugged, efficient, light weight set which is truly and easily PORTABLE—



Single Drum Control  
"Just swing the cover open and tune in"



Self-Contained

## Screen Grid Portable Radio

**T**HIS is the set that your customers will take. One look at its beautiful appearance—one look at its shockproof construction—one lift of its light weight—one demonstration of its ability to "pull in" stations on its simple single drum control—with volume and clarity—will be enough to sell your most discriminate customers. The TOM THUMB gives to the portable radio set the dependability and "dignity" that is in demand—plus a LOW PRICE which means quick sales and GOOD PROFITS.

Also **ANOTHER** model—operating on D.C. (direct) Electric current 110 volts. Same appearance and construction as battery model but completely electrified. An ideal portable for **SCHOOLS—HOSPITALS—HOTELS—OFFICE BUILDINGS—CLUBS—ANY PLACE** where D.C. Electric current is available. **LIST \$87<sup>50</sup>**  
Less Tubes

For full information write your jobber or direct to

**AUTOMATIC RADIO MANUFACTURING CO., INC.**  
332 "A" Street, Boston, Mass.

**LIST \$57<sup>50</sup>**  
(East of Rockies)  
**LESS EQUIPMENT**



## *They Mailed the Card!*

50,000 copies of THE SONATRON NEWS, carrying a story of profound importance to every radio dealer, have brought an avalanche of replies from merchants who recognize in Sonatron *the tube line of the future*. If you have not mailed the card, do it now—the Sonatron proposition today means more in sales, profits and prestige than ever before.

### SONATRON TUBE COMPANY

1020 S. Central Pk. Ave.  
CHICAGO

16 Hudson Street  
NEW YORK

55-57 State Street  
NEWARK, N. J.



## SONATRON *on the Air!*

Every Sunday, 8:00 to 8:30 p. m. Eastern Standard Time, a Sonatron program over the Columbia Chain, from coast-to-coast! Broadcasting, added to Saturday Evening Post and newspaper advertising, is building for The World's Largest Radio Tube Line an even greater consumer demand! *Write for the Sonatron Proposition!*



# A QUALITY TUBE

with Higher Vacuum

LaSalle High Vacuum Tubes are made to the highest standards known. They are not a mass production tube—each tube is individually tested to insure uniform high quality for LaSalle users. Dealers everywhere are taking on the LaSalle line. Its quality leadership is recognized. Ask your Jobber about LaSalle Service.



**LASALLE RADIO CORPORATION**  
 (Division of Matchless Electric Co.)  
 143 West Austin Avenue, Chicago

Jobbers: Are "come-backs" on tubes seriously affecting your net profits. Returns on LaSalle High Vacuum Tubes are less than half that of any known tube. Protect your profits with LaSalle quality. Write for our proposition.

# LaSalle

**HIGH VACUUM TUBES**

*The New*

***Steinitz***

**ELECTRIC RADIO**

*has arrived....*

1920

*and what a  
Sensation!*

# Steinite — THE LINE

## ELECTRO~ DYNAMIC SPEAKER PUSH-PULL AMPLIFICATION 250 POWER TUBES



Less Tubes

**\$135**

### THE *Steinite* MODEL 40

An Eight Tube Set Including Rectifier

Two 171A Power Tubes in Push-Pull Amplification

Steinite Model 40 not only completely outclasses anything in the lower priced market, but reaches into the field of many higher priced radios. It is a receiver of new power and new beauty of tone in a full sized hi-boy cabinet with a rich hand-rubbed finish. Steinite has done wonders with the Super Electro-Dynamic Speaker built into the model 40—there is a startling reality to its tone and it reproduces with inspiring fidelity the entire musical range. Uses a 227 type tube is first audio stage, practically eliminating hum.

**NEVER BEFORE**

specifications like these at so low a price

THE makers of America's first electric radio offer a line of receivers which will take the lead at the opening gun of the season—and keep it throughout 1929! Steinite engineers, working with the tremendous facilities of a huge organization, have produced receivers of unexcelled scientific quality. Steinite's furniture designers have given these fine receivers glorious cabinets of new style and beauty. And the resourcefulness of Steinite's management has made it possible to produce these new and greater Steinities at sensationally low prices!

### A Great New Field of Sales and Profits!

To a line of radios which covers every big-volume price range, Steinite now adds another profit opportunity—The Steinite Electric Radio-Phonograph! The combination this year promises to be a big feature in radio sales—and the dealer who can offer so magnificent a piece of merchandise as the Steinite combination at only \$250 will capture the cream of this market. Nothing like the Steinite combination has ever been offered for less than \$1,000.

### And a Great Advertising Program!

The remarkable features which will maintain Steinite's reputation as America's greatest value will be presented to the buying public through a powerful and consistent newspaper campaign which has already produced a startling response in many cities. Commanding newspaper space will be used consistently—and a series of powerful and effective dealer helps has been prepared.



Price Less Tubes

#### Model 4510 Consolette

The Steinite super electro-dynamic speaker in a beautiful consolette model which will harmonize with any receiver. The same speaker chassis as is used in the table model is embodied in this speaker. The use of a 280 rectifier tube in place of the dry rectifier in these speakers is an important feature, because dry rectifiers deteriorate with use and make necessary costly replacements while the 280 may be quickly and economically placed. The 110 volt AC model is..... **\$62.50**

#### The Steinite Electro-Dynamic Speaker Model 4410 Table Type

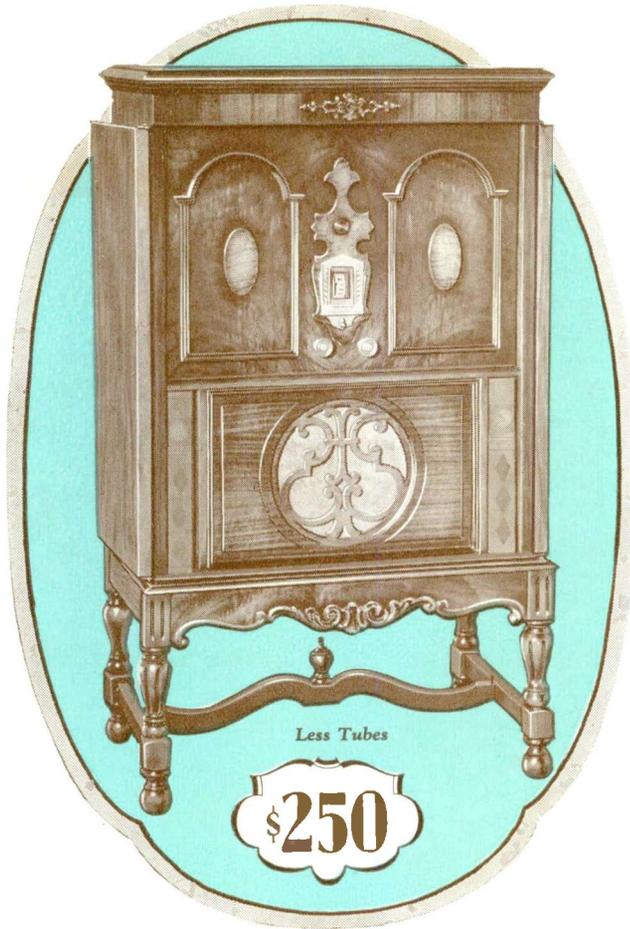
This new dynamic speaker used in the Steinite models, illustrated above, may be had in the handsome table model of fine walnut illustrated at the left. It is available in both AC and DC models. The tone of this new speaker is pure, rich and free from hum. The 110 volt AC model lists at..... **\$52.50**



Price  
Less Tubes

# That will LEAD in '29

## and a Marvelous RADIO-PHONOGRAPH Combination!



THE *Steinite*  
ELECTRIC RADIO-PHONOGRAPH  
COMBINATION

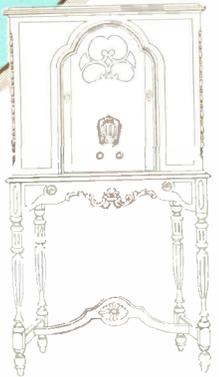
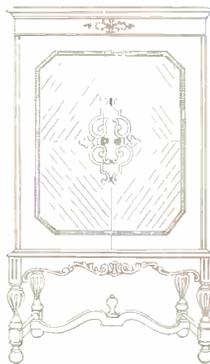
A Nine Tube Set Including Rectifier

Using the same powerful chassis as the model 50, Steinite has produced a combination which gives to recorded music the rich beauty of tone of a powerful push pull amplifying system using two 250 power tubes. This amazing instrument contains every feature which has been associated with instruments costing up to \$1,000, and it is destined to make radio-phonograph history at its sensationally low price! The cabinet is of fine walnut—the full, swinging doors are of Oriental diamond matched walnut, richly finished. Two albums embossed in colors are supplied. The noiseless electric motor has automatic stop and speed control. Only Steinite could do what Steinite has done in this new instrument—thanks to Steinite's famous one-profit manufacturing facilities!



THE *Steinite*  
MODEL 50

A Nine Tube Set  
Including Rectifier  
Two 250 Power Tubes in  
Push-Pull Amplification



The extent to which Steinite has revised all previous ideas of radio value is shown in the model 50, using the sensational new 250 power tubes in push-pull amplification! With this amazing receiver Steinite has coupled a Super Electro-Dynamic Speaker in a beautiful hi-boy cabinet with sliding doors of Oriental diamond matched walnut. Giant power and glorious tone have been brought to the moderate priced field by the Steinite engineers, who have made the 250 tube yield its utmost in the model 50. Uses a 227 tube in the first stage of audio instead of the usual 226—that eliminates hum!

THE *Steinite* TABLE MODEL

A Seven Tube Set  
Including Rectifier



\$75<sup>00</sup>

Less Tubes

This is the famous Steinite electric receiver which gave thousands of dealers a profitable business all last year. An amazingly compact, yet marvelously efficient receiver in a cabinet of Tanguile, finest of Philippine woods, finished in Duco. It is America's greatest value.

**The Weather**  
Probably snow tonight and Thursday.  
Slightly rising temperature.

Henry Shuman, U.P. Times

# CITY GETS BIG PLANT

**CRUISER BILL UP**  
Bosch, Having Ratified Ed-  
1922 Salt War Treaty, Turns  
to Big American Defense  
Measure

**CONSIDER BUILDING  
FIFTEEN CRUISERS**  
Bosch, Champion of Kellogg  
Treaty, Opposes Administra-  
tion in Effort to Get  
Warships

**WASHINGTON, Jan. 16**  
(U.P.)—Having ratified the  
big world and war treaty,  
our advanced legisla-  
tors in the administration  
of the program have  
devised some

**CITY EDITION**

## FORT WAYNE JOURNAL-GAZETTE

THE PEOPLE'S PAPER—FORT WAYNE AND NORTHERN INDIANA'S LEADING HOME NEWSPAPER

(NEWS OF THE WORLD)

THURSDAY MORNING, JANUARY 17, 1929 (BY ASSOCIATED PRESS) **20 PAGES TODAY** PRICE THREE CENTS

**STEINITE RADIO CO. Will Locate Here**

**WILL BUILD PLANT TO COST \$400,000 AND EMPLOY 2,000**

**Today**  
The President's Jack Knives  
We Have Some New Planes  
Chinese \$1,000 Each

**BLAME "FIRE BUG" FOR NORRIS CHURCH BLAZE**

**HARTZELL STUDIES PLAN TO KEEP CITY SECOND CLASS**

**DEPOSED COMMANDER**

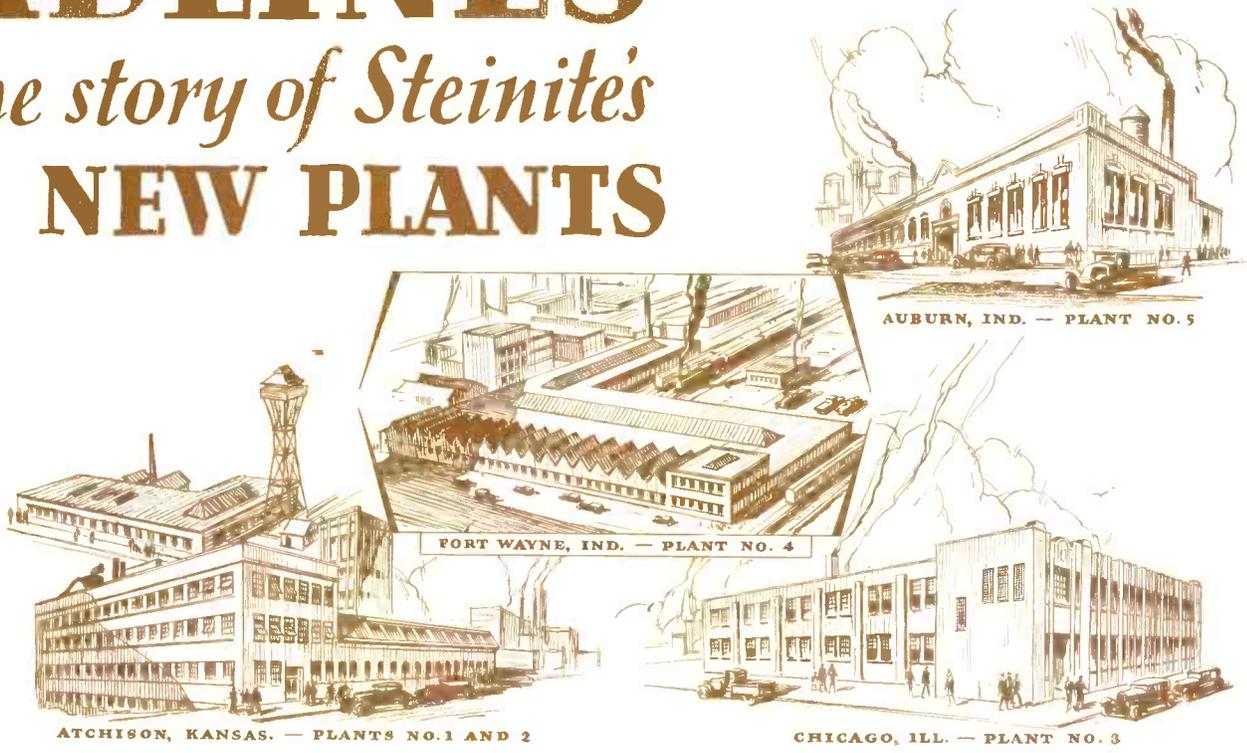
**PAYROLL \$1,000,000 YEARLY**

**Between Two and Three Thousand Persons Will Be Employed by Radio Manufacturing Concern Which Is to Move to Fort Wayne from Atchison, Kans., Soon.**

**INDIANAPOLIS, Jan. 16**—(U.P.)—Including itself from its earlier...  
**OTHERS ARE PREPARED**

# The HEADLINES tell the story of Steinite's GREAT NEW PLANTS

A program of expansion which within the past few months has added three great new units to Steinite's manufacturing facilities indicates that Steinite's production will keep pace with demand! Work has already begun on a huge unit at Fort Wayne, Indiana, which will multiply production of Steinite receivers many times.



**Steinite Radio Co.**

General Sales Office, 506 S. Wabash Avenue, Chicago, Illinois.

Gentlemen:

Please send me full details of the Steinite line and franchise. My jobber's name is \_\_\_\_\_

Name \_\_\_\_\_

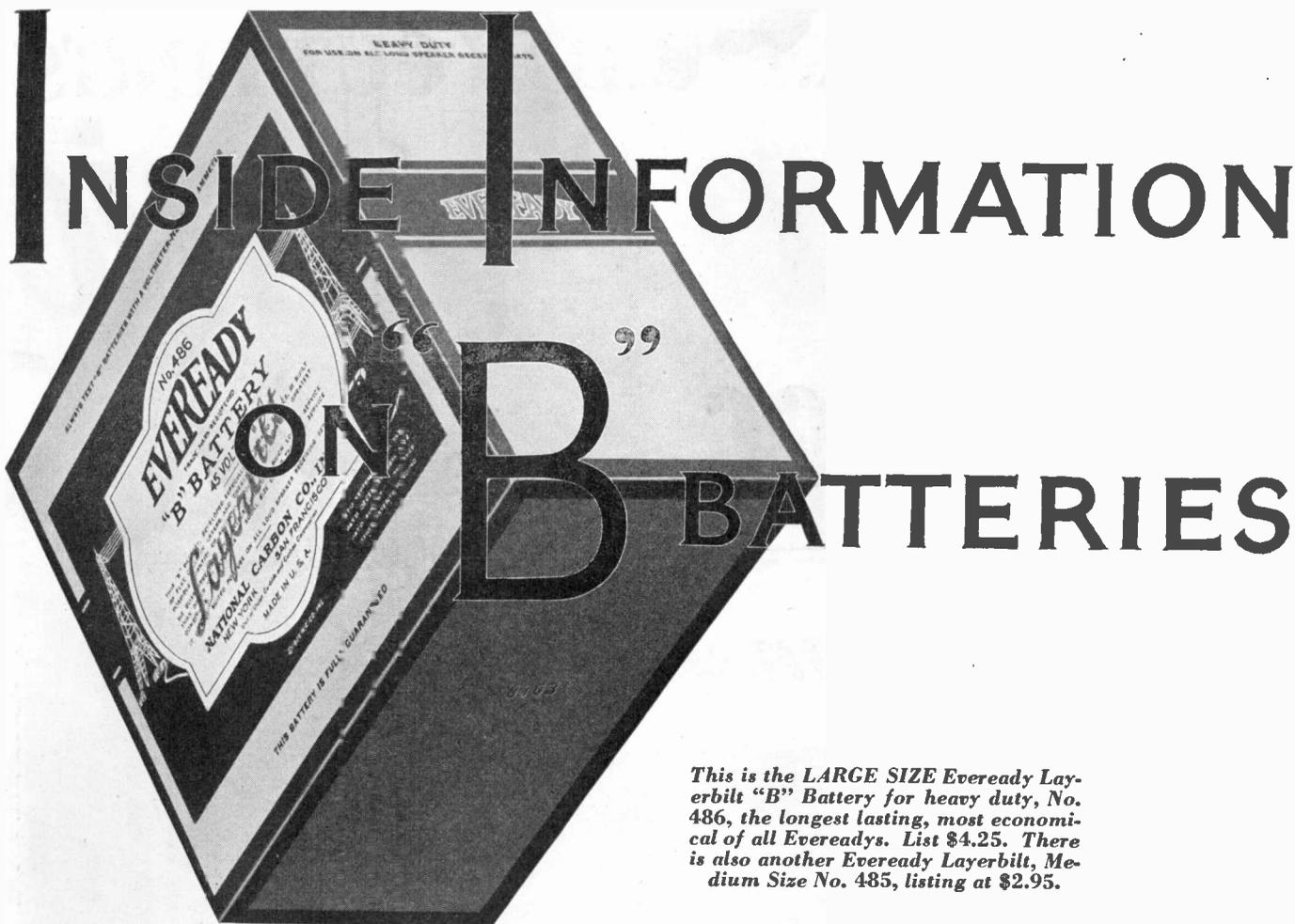
Address \_\_\_\_\_

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

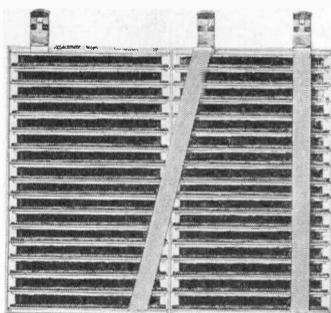
While the amazing value of the new and greater Steinite, backed by a powerful advertising campaign, builds a great consumer demand, these new plants will insure prompt deliveries to every part of the country. With units situated at such advantageous shipping points as Atchison, Chicago, Auburn and Fort Wayne, the needs of every territory will be quickly and promptly met.

**Steinite RADIO CO.**

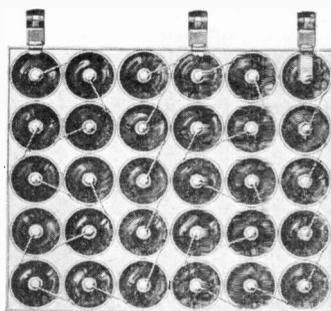
506 So. Wabash Ave. Chicago



This is the **LARGE SIZE** Eveready Layerbilt "B" Battery for heavy duty, No. 486, the longest lasting, most economical of all Evereadys. List \$4.25. There is also another Eveready Layerbilt, Medium Size No. 485, listing at \$2.95.



Here is the inside story of the Eveready Layerbilt — flat, space-saving cells making connections automatically. Only five solderings, only two broad connecting bands. Maximum reliability, maximum active materials, greatest life. Layerbilt construction is an exclusive Eveready feature. Only Eveready makes Layerbilt Batteries.



Here is the inside story about every "B" battery assembled of separate, individually sealed cells—29 fine connecting wires, 60 solderings, and lots of waste space between cells.

LOOK at the diagrams on this page and you will see why and how Eveready Layerbilts are so greatly superior. These diagrams give the real inside information about "B" batteries.

In the ordinary battery assembled of separate, individual cells, 29 fine wires are required to connect the cells together, and 60 solderings are needed. That makes 89 chances for trouble in any "B" battery of this type, whether the cells are cylindrical, square, hexagonal or any other shape.

In the Eveready Layerbilt, however, the cells are not independent, but *interdependent*. They make connection with each other automatically. Only five solderings are needed, each big, husky, and trouble-proof. There are no fine wires—only two broad bands,  $\frac{3}{8}$  inch wide.

This makes a real selling story to tell your customers. Convincing. Sales producing.

In addition, the Eveready Layerbilt construction packs more active materials in a given space, and so the battery not only is more reliable, but lasts longer.

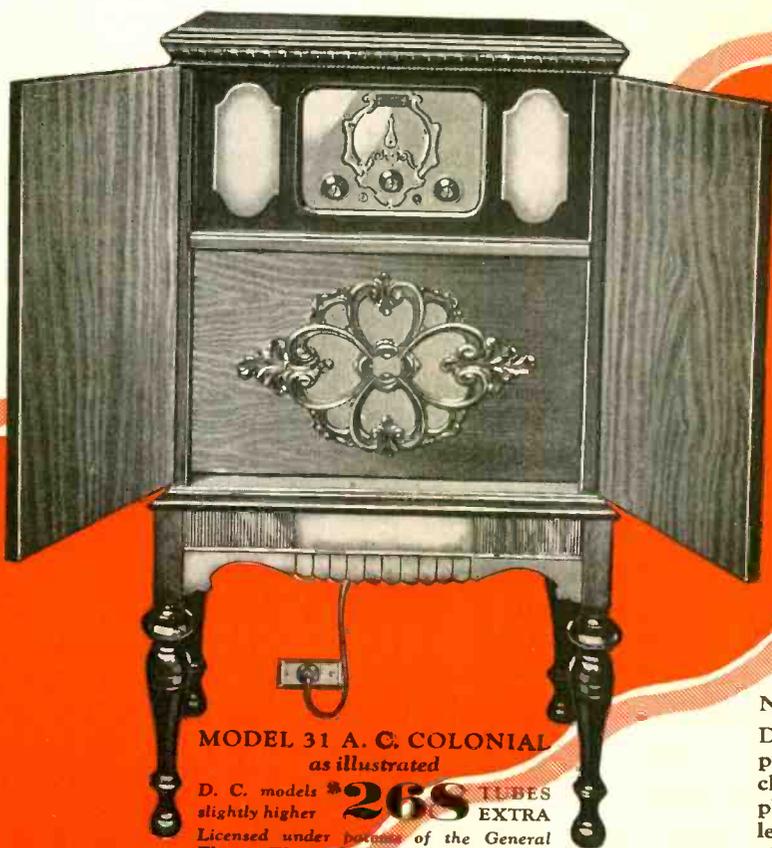
Eveready Layerbilts are the most economical of all Evereadys, the most satisfactory for you to sell because they give most satisfaction to the user. Order from your jobber.

NATIONAL CARBON COMPANY, INC., New York—San Francisco  
 Atlanta Chicago Kansas City Long Island City

Unit of Union Carbide  and Carbon Corporation

# DR. FULTON CUTTING'S *New dynamic*

## different *from all others!*



**"RADIO'S  
CLEAREST  
VOICE"**

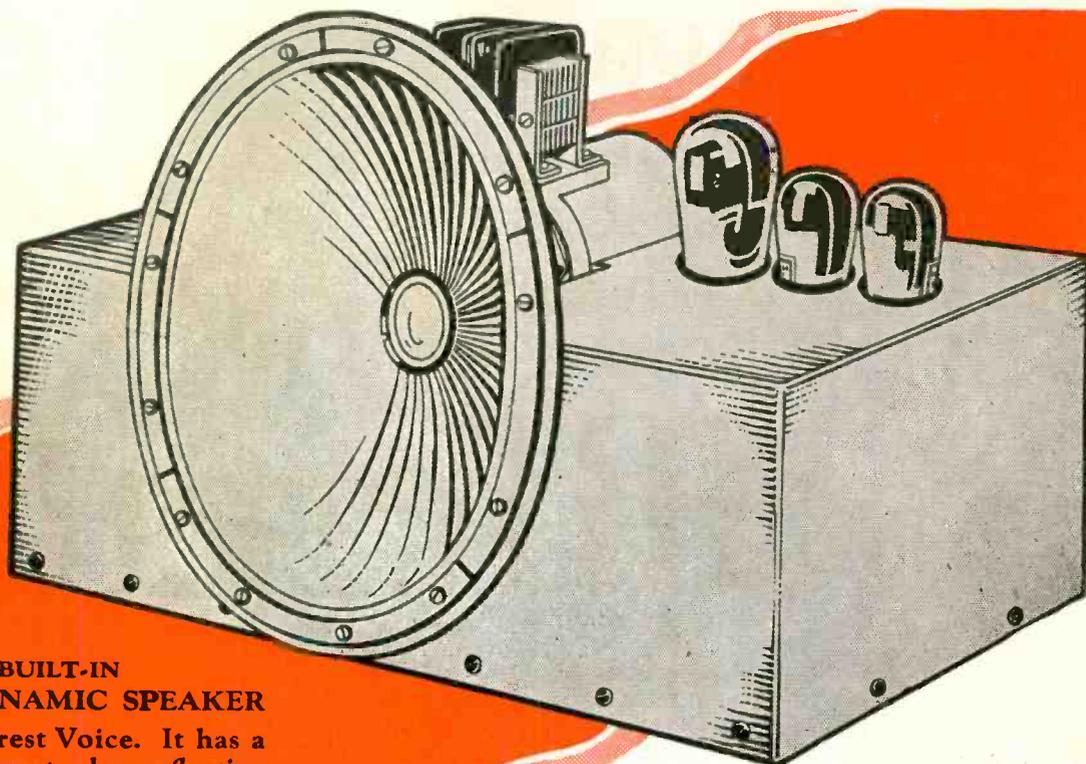
**MODEL 31 A. C. COLONIAL**  
as illustrated

D. C. models **268** TUBES  
slightly higher EXTRA  
Licensed under patents of the General  
Electric, Westinghouse and American Tele-  
phone and Telegraph Companies

### FACTS ABOUT THE NEW ALL-ELECTRIC COLONIAL

Direct-from-socket operation; push-pull amplification; bridge volume control; all-steel chassis; automatic light-line compensator; phonograph pick-up; definite, single-dial selectivity; full-vision control panel; maximum efficiency; beautiful art consoles; ALTERNATING AND DIRECT CURRENT MODELS.

# COLLO



**THE BUILT-IN  
CUTTING DYNAMIC SPEAKER**  
is Radio's Clearest Voice. It has a  
larger electro magnet, a larger floating  
cone and an especially large single turn  
one-piece voice coil.

## The RADIO SENSATION of the East...Now Extending to Other Principal Sections

With the news of Dr. Fulton Cutting's invention spreading on every hand—with a remarkable record in all of the larger metropolitan centers—with 565 DEALERS IN NEW YORK ALONE—Colonial is definitely established as one of the major factors in the future of radio.

The NEW Colonial is its own best salesman. To see its beauty of design and finish—to hear its UNUSUAL reproducing ability—is to understand the DIFFERENCE between Cutting Dynamic Reception and ordinary radio performance.

---

COLONIAL RADIO CORP., LONG ISLAND CITY, NEW YORK

# COLONIAL



*Write for further information to:*

**CONTINENTAL RADIO CORPORATION**  
*(Successor to Sagle Radio Company)*  
Fort Wayne, Indiana

Please send me detailed information on the Skyraider

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

AMERICA'S FINEST

# SLAGLE'S *Successor* Announces

## The SKYRAIDER

CONTINENTAL'S NEW HERDER OF  
ALL HEAVEN'S HARMONIES

Continental Radio Corporation, Fort Wayne, Indiana (Successor to Slagle Radio Company), announces the Skyraider — a new and finer radio. ☞ With Continental's exclusive new Technidyne Circuit, Skyraider swings listeners down the highroads of harmony to true, undistorted song and speech. ☞ Skyraider gives dealers new freedom from servicing — for Skyraider is proof against the troubles that spoil ordinary radio reception. Skyraider gives new selling help — for every Skyraider owner is a booster. ☞ Skyraider is built with a craftsmanship that mass production cannot equal. ☞ And this finest of radios is backed by an advertising program in keeping with the product.

CONTINENTAL RADIO CORPORATION, FORT WAYNE, INDIANA  
(Formerly Slagle Radio Company)

© 1929

R A D I O + M A D E F I N E R

# Ne

## The Amazing Pacent



**TYPE 106B**

New Super-Phonovox, on new balanced tone arm, complete as illustrated. Bronze finish.

**\$15.00**

**TYPE 106A**

New Super-Phonovox—bronze finish. Without tone arm. . . . . \$12.00

**TYPE 106C**

Also new Ultra Phonovox Combination . . . completely equipped. Heavy gold finish. Individually calibrated. Automatic Stop in base . . . . . \$25.00



*Write for complete information, prices, discounts, etc.*

**Compare the Super-Phonovox with**

### PACENT ELEC

91 SEVENTH AVE.

*Pioneers in Radio and Electric*

Manufacturing Licensee for  
Igramic Electric Co., Ltd.,



## Super Model

# Phonovox

**A** GAIN Pacent presents—a full season ahead, as usual—an astonishing advance in pick-up design—the electrical radio phonograph reproducing instrument that will be accepted as standard during 1930.

Never before a pick-up of such combined tone quality and volume, such sensitivity, sturdiness and durability. The Super-Phonovox represents a genuine triumph in radio phonograph engineering—an instrument of musical-and-electrical precision. If you have handled the Phonovox—if you have enjoyed the profits that have accrued to its tremendous popularity, little further need be said of the PACENT Super. You've been waiting for this. Prompt deliveries are assured. Consider these outstanding advantages:

1. No rubber bearings—assures freedom from wear, eliminates variation and maintains exquisite tone quality.
2. New balanced tone arm assures perfect contact with the record—no scratching.
3. Higher frequency range—4,000 C.P.S. down to between 40 and 60.
4. Mechanical filter—no peaks, minimum surface noise.
5. Tone box hinges backwards, facilitates needle insertion.
6. Low center of gravity—no resonance or rattle.

**any pick-up regardless of price**

## TRIC CO., Inc.

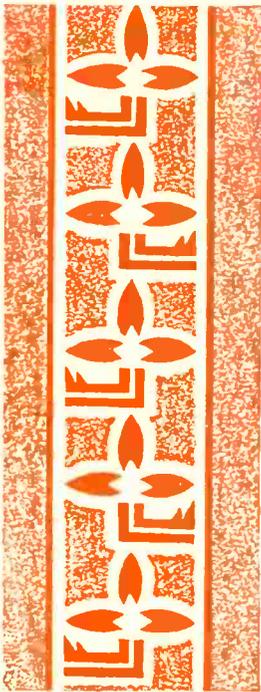
NEW YORK CITY

*Reproduction for over 20 years*

Great Britain and Ireland:  
Bedford, England

# *New* KELLOGG *Models*

*SOON TO BE ANNOUNCED*



**T**HIS news will be welcomed by all distributors and dealers as an event well worth waiting for. These models will add new glory to the nation-wide reputation of Kellogg as ▲▲



*The* **RADIO** *with the*  
*Cathedral* *Cone*

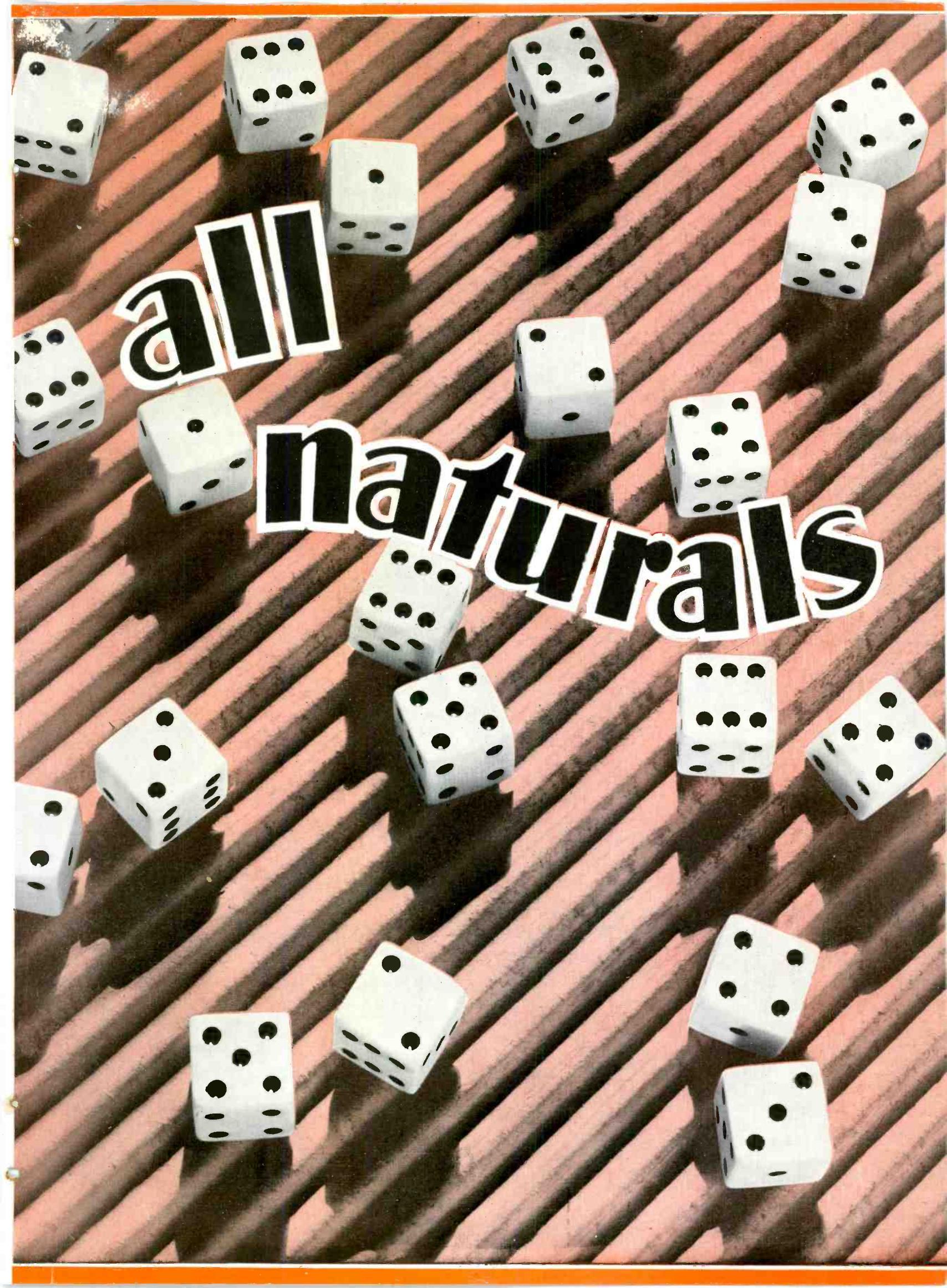
Licensed Under  
R. C. A. Patents



**KELLOGG SWITCHBOARD AND SUPPLY COMPANY**

1020-1070 WEST ADAMS STREET, CHICAGO





**all  
naturals**



*For the New*  
**TEMPLE**  
**RECEIVER**

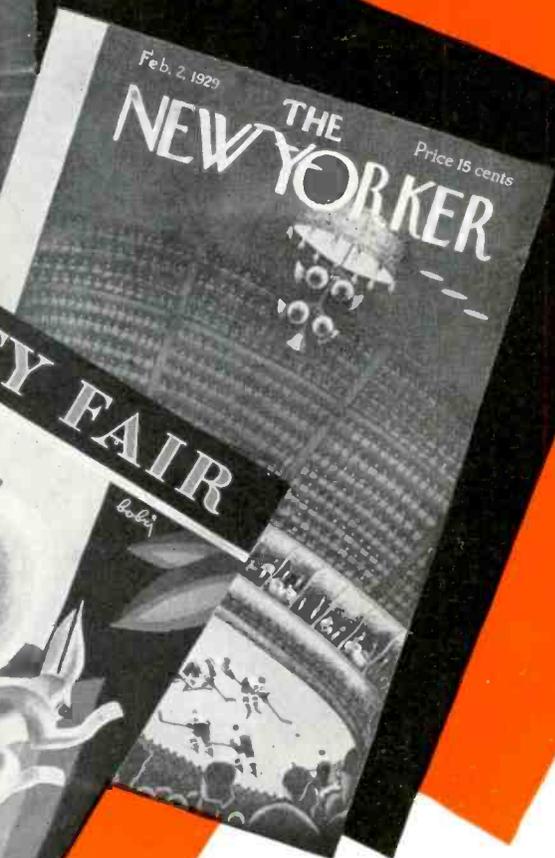
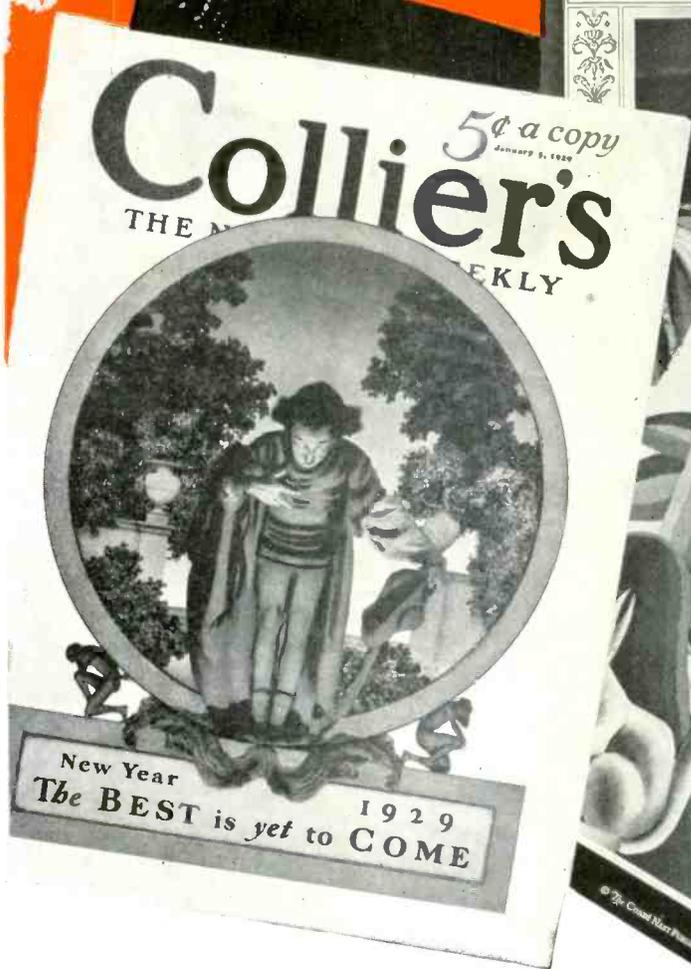
**All Winners**—An Advertising Program that rolls a “natural” every time and is... besides... *Big!* ▲ ▲ ▲

**M**AKING IT BRIEF—for we don't have to use a lot of words to tell *YOU* the significance of each of these separate points—contracts are now signed for the following:

Broadcasting campaign that ranks ace-high. “Temple Nights” start in April—Fridays, 8 to 8:30 p.m. over Columbia network.

It's a big half-hour of entertainment bound to impress radio listeners with the way Temple does things. It starts the ball rolling for Temple dealers everywhere.

Double-page spreads and large space units in the great magazines and weeklies of America—*Saturday Evening Post, Collier's Weekly, Vogue, Vanity Fair, House and*



*Garden, Life, Time, New Yorker.* In addition, the great class publications will spread to a sophisticated audience the news that here, at last, is quality plus.

Smashing newspaper advertisements at the principal shows. Large space units in the key cities of America. These will go farther to help you build profits. So will our trade paper cooperation—large in unit size and number of insertions. So will our consumer booklets of novel and interesting appeal to the radio audience, written by well-known writers, for free distribution.

Best of all—a wide profit spread in the greatest line of radio equipment. Dis-

counts that do wonders for the profit side of your ledger.

Competitor, read 'em and weep. Boy friends, read 'em and sleep.

*Over half-a-million dollars worth of advertising and publicity—created by the greatest promotion men in America—goes into making the new Temple Receiver "sell itself" this year.*

**TEMPLE**  
**TEMPLE TONE**  *Radio*

# And

## Here is the Merchandise



The small console with  
9-inch dynamic speaker  
\$149.00 (without tubes). 7-50



The large console with  
14-inch dynamic speaker  
\$189.00 (without tubes). 7-40

A beautiful combination program and receiver is soon to follow

### Irresistible in its Appeal to Eye and Ear

**Seven tubes** and rectifier. Six 227 tubes, a 250 power amplifier in the last audio stage and a 281 rectifier.

**Dynamic Speaker**—The famous Temple Dynamic operating from the output of a UX250 power amplifier.

**Tone**—Temple tone has long been a by-word in quality reproduction—it has reached a new standard in these receivers.

**Selectivity**—Ten kilocycle separation. Seventy-two stations in an evening through local broadcasts—all with good room volume.

**Competitively Priced**—In the popular-price class and sold on a basis making the Temple proposition most attractive.

*And, single control, of course.*

**TEMPLE**  
TEMPLETONE  *Radio*

**TEMPLE CORPORATION**

5253 W. 65th Street, Clearing Station, Chicago, U. S. A.

# Will the "B" Eliminator ever be eliminated?



Perhaps—in the dim and distant future. Today, fully one-half of all the sets in service are using "B" Eliminators—and, in wired homes, sets equipped with "B" Eliminators still outnumber, two to one, those not so equipped.

Every "B" Eliminator is a replacement market for a Raytheon BH Tube. Over a hundred leading makes of eliminators will take no other tube.

**Raytheon BH**  
LONG LIFE RECTIFYING TUBE



For dealers who recognize the sustained demand for this tube, and who wish to profit by it, Raytheon BH Tubes come in the display carton shown at the left. This carton of four tubes costs you \$10.80—sells for \$18.00—and makes you a profit of \$7.20. Standard shipping packages contain 3, 6 or 12 of these cartons—12, 24 or 48 tubes.

**RAYTHEON MANUFACTURING CO.**  
Cambridge, Mass.

# "De Forest AUDIONS"

conducted by Arthur Pryor  
with world-famous Guest-Artists



MARY  
GARDEN



RICHARD  
BONELLI



FEODOR  
CHALIAPIN



ALMA  
GLUCK



CHARLES  
HACKETT

## The Biggest Broadcast News of the Year!



ANNA  
CASE



FRANCES  
ALDA



RUDOLPH  
GANZ

Just look at this list of stars for March alone!  
March 3rd. Alma Gluck, Metropolitan Star (first radio appearance). March 17th. Feodor Chaliapin, Metropolitan Baritone (second appearance on the air). March 31st. Mary Garden, famous Chicago Opera Star (only radio appearance in 1929).  
And soon, others just as great: Anna Case, Richard

Bonelli, Charles Hackett, Rudolph Ganz, Frances Alda, the Russian Symphonic Choir and many others to be announced later.

Tell your customers they will enjoy the DeForest Hour and other broadcasts *even more* by installing in each socket of their radio sets the latest type of radio tubes, "high vacuum De Forest Audions."

The "De Forest Audions" program is broadcast every Sunday evening over the great Columbia Broadcasting System with its network of 42 stations that covers 87% of the country.

**DE FOREST RADIO COMPANY, JERSEY CITY, NEW JERSEY**

**SEND  
RIGHT NOW  
FOR YOUR  
BOOK**

*about*

**BOHNALITE**

**62%  
Lighter than Iron**

A group of  
advanced Light  
Alloys used in  
a wide variety  
of Industries



**CHAS. B. BOHN**  
The authority who developed  
Bohnalite—the world's  
latest light alloy

If any piece or part of any product you manufacture is made of metal you should have this book about Bohnalite. Here is an interesting handbook explaining the latest process in this new light alloy development. In it are illustrated and explained scores of metal parts ranging in size from 11 foot pieces down to

little bits as big as your finger nail. If you are interested in weight reduction and cost reduction, send for your copy of this book at once. If you represent a large institution, we will be glad to mail the book to your various department heads. Just send us the list.

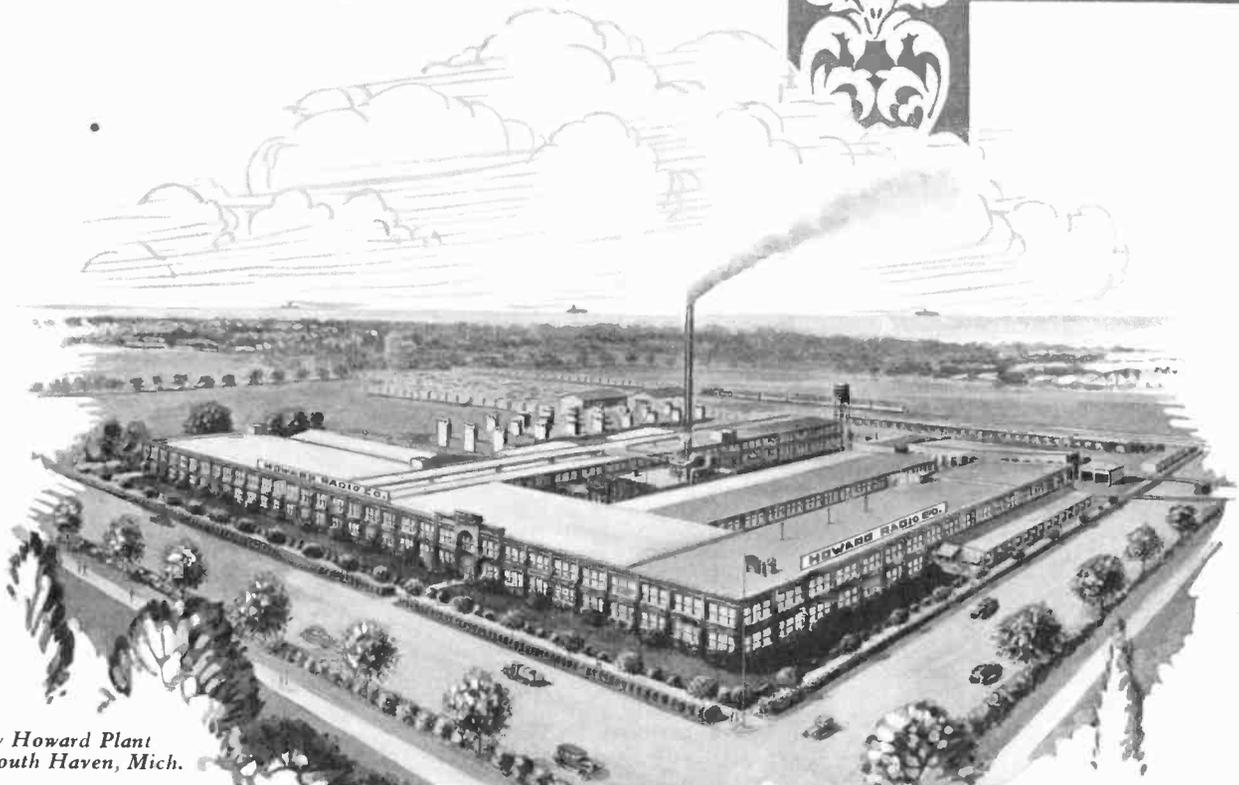
**BOHN ALUMINUM & BRASS CORPORATION, DETROIT, MICH.**

New York Chicago Philadelphia Cleveland Pittsburgh

# Now you, too, can sell the Howard

We have now provided, in one of the finest factories in the world, greatly increased facilities for the manufacture of Howard Radio Receivers and Cabinets, both under one roof. ¶Cabinets embody construction and tone principles to the highest standard of grand piano workmanship. ¶We are ready to talk with distributors and their dealers. Ask us now, please, what we can do for you.

HOWARD RADIO COMPANY  
CHICAGO AND SOUTH HAVEN, MICHIGAN



*New Howard Plant  
at South Haven, Mich.*

# HOWARD

*Licensed under Radio Corporation of America and  
associated companies; Hazeltine and Latour;  
Hogan; and Miessner.*

# New Green Diamond a Sensation



Correct design and extreme care in construction are the basis of amazing results which Howard owners everywhere report. Nine tubes arranged as follows—four Radio Frequency Amplifiers, Detector, first Audio, and two Push Pull Amplifiers with one Rectifier Tube. This combination as engineered by Howard produces both distance and marvelous tone quality.

For the first time in our history we are in position to invite inquiries from distributors and dealers because of our greatly enlarged manufacturing facilities. If your trade could appreciate a receiver of Howard quality in a fine walnut cabinet at about \$200, use the coupon below and let us give you the details.

HOWARD RADIO COMPANY  
CHICAGO and SOUTH HAVEN, MICHIGAN

# RADIO

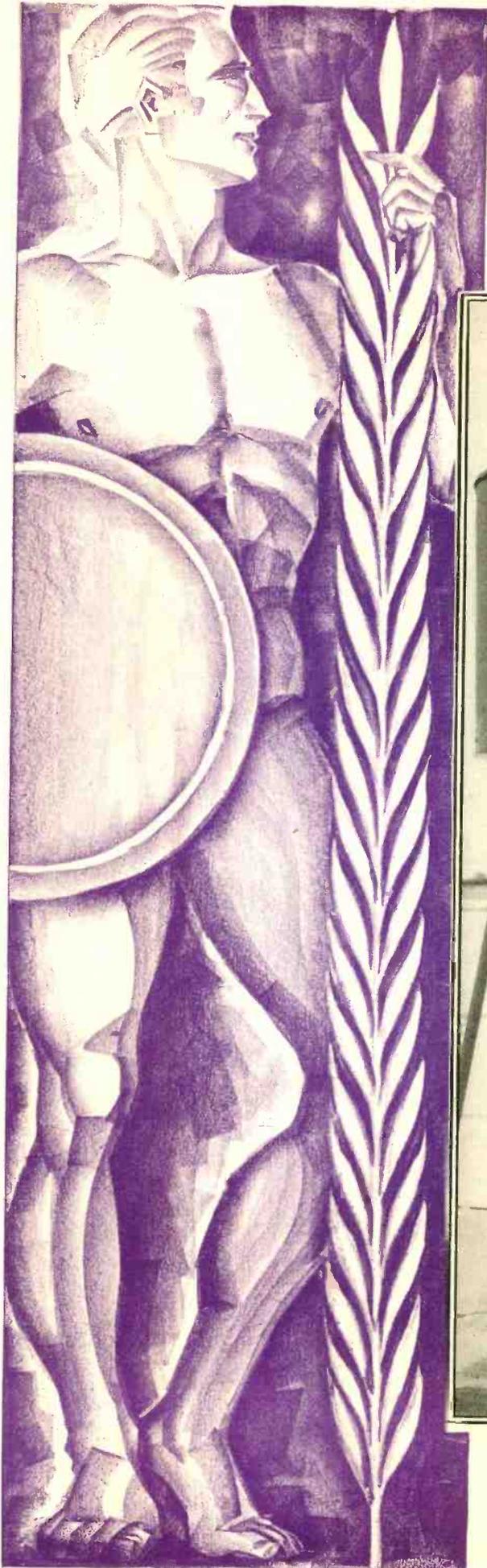
HOWARD RADIO CO., South Haven, Michigan  
Please send us further information about the New Howard

Firm Name .....

Street No. ....

City .....

State  
RR .....

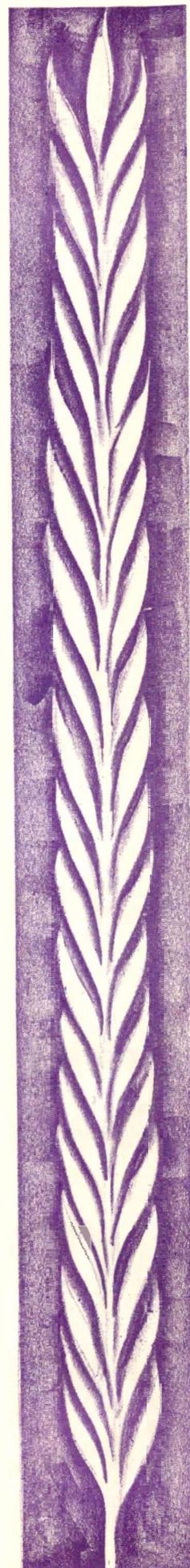


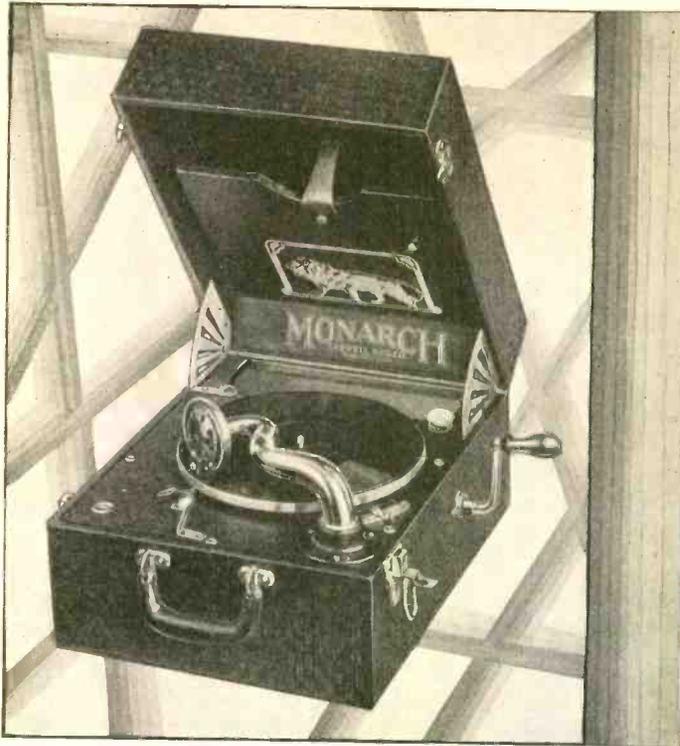


# HEROISM

**Kolster Radio Corporation is proud to have provided Captain George Fried and Chief Officer Harry Manning with the Radio Compass which enabled them to perform their heroic rescue at sea, the story of which recently filled the hearts of millions** ◆ ◆ ◆

**KOLSTER RADIO CORPORATION**  
**MAKERS OF KOLSTER RADIO**  
*and the*  
**KOLSTER RADIO COMPASS**





Monarch—A beautiful instrument embodying the latest achievements in portable phonograph construction. Marvelous volume, depth and clarity of tone. Price \$25.00.

## A FAST SELLING ... SPECIALTY FOR YOUR SLOW MONTHS

THE Caswell line gives the radio dealer a source of good steady profit during the months when radio sales slow up. Caswell Portable Phonographs actually sell themselves—on their quality, beauty and tone.

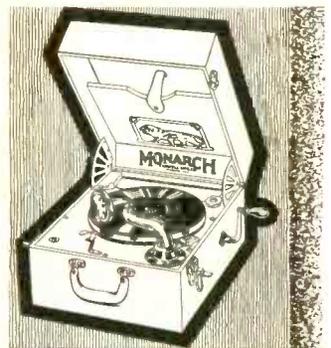
Yet, dealers who handle the Caswell line profit most by the liberal Caswell policy. To them it means the ability to offer an array of instruments of matchless value among portables—instruments that have been priced at the very lowest figures consistent with such quality. And this, of course, translated into the terms of dollars and cents means greater sales and profits.

Radio dealers who are now building with Caswell know the importance of this message. Those who are not, owe it to the future good of their business to investigate its advantages by writing at once.

CASWELL MANUFACTURING COMPANY  
10th and St. Paul Ave.  
Milwaukee, Wisconsin



Gypsy—\$20.00



Monarch—\$25.00



Aristocrat—\$35.00



No. 12—\$12.50



Melody—\$15.00

# CASWELL





EPP-

**A MOST  
IMPORTANT  
ANNOUNCEMENT!**

The Royalty  of Radio

**T**HE present position of the Colin B. Kennedy Corporation commands immediate action on the part of every radio distributor and dealer. Since the pioneer days of radio, the name Kennedy has always been highly respected. And, with this announcement it takes on an added luster . . . lends a greater prestige . . . extends greater benefits and greater profit possibilities to every enterprising distributor and dealer. From all standpoints, the Colin B. Kennedy Corporation is today in the strongest position it has ever occupied since 1919. It is substantially affiliated with the Studebaker interests of South Bend, Indiana, where its tremendously enlarged production facilities are centered. Its plant occupies eight acres—its expanded program calls for a daily production of over a thousand receivers and the employment of a thousand workers.

### • THE PRODUCT •

Kennedy electric receivers embody not only all of the very latest refinements of advanced radio engi-

# KENNEDY

*The Royalty*  *of Radio*

neering—but are designed to take full advantage of certain important radio developments that have not yet been made public.

Dr. Charles C. Lauritsen has resumed his work as Director of all Engineering activities of the Kennedy Corporation. He has won wide recognition as an eminent radio engineer—in addition to having been engaged for several years in research work at the California Institute of Technology, where his brilliant achievements have been of great interest to the scientific world.

### • THE PRICE •

Kennedy Royal Receivers are listed at prices that will carry a distinct popular appeal.

### • LICENSE PROTECTION •

All Kennedy Royal Receivers are manufactured under protective licenses, issued by RCA, Hazeltine and others.

*(Continued on next page)*

# KENNEDY

*The Royalty*  *of Radio*



## THE KENNEDY

### • MERCHANDISING POLICY •

Kennedy Royal Receivers will be marketed through a strong chain of selected, recognized distributors —on a sound basis offering a highly encouraging and profitable opportunity to distributors and dealers alike.

### • DISTRIBUTORS •

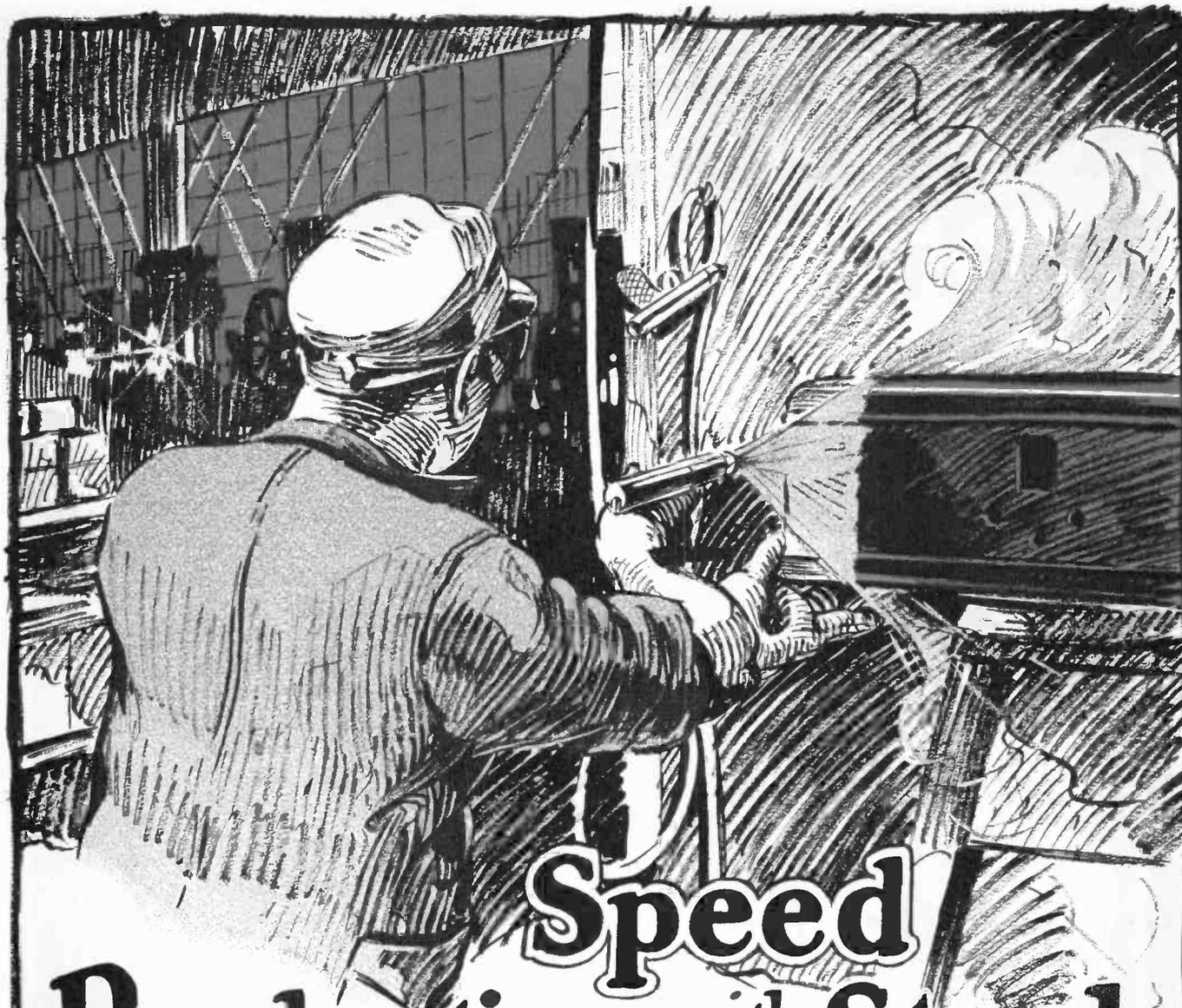
Think how much the name Kennedy has always meant in radio! Think *how much more* it means now, under the completed expansion plans for producing receivers which incorporate all the latest refinements of design and even anticipate definite future developments. It offers unusual opportunities that call for immediate action . . . . The Kennedy distributor organization is rapidly being rounded out! Telephone...Telegraph...Write—Now!

COLIN B. KENNEDY CORPORATION  
SOUTH BEND, INDIANA

# KENNEDY



*The Royalty* of Radio



**Speed**  
**Production with Steel**  
**Cabinets and Consoles**

*Economy* *Every Operation* *Appearance*  
*with Metals*  
*Keep Pace with Heaviest*  
*Demands from Receiver Manufacturers*

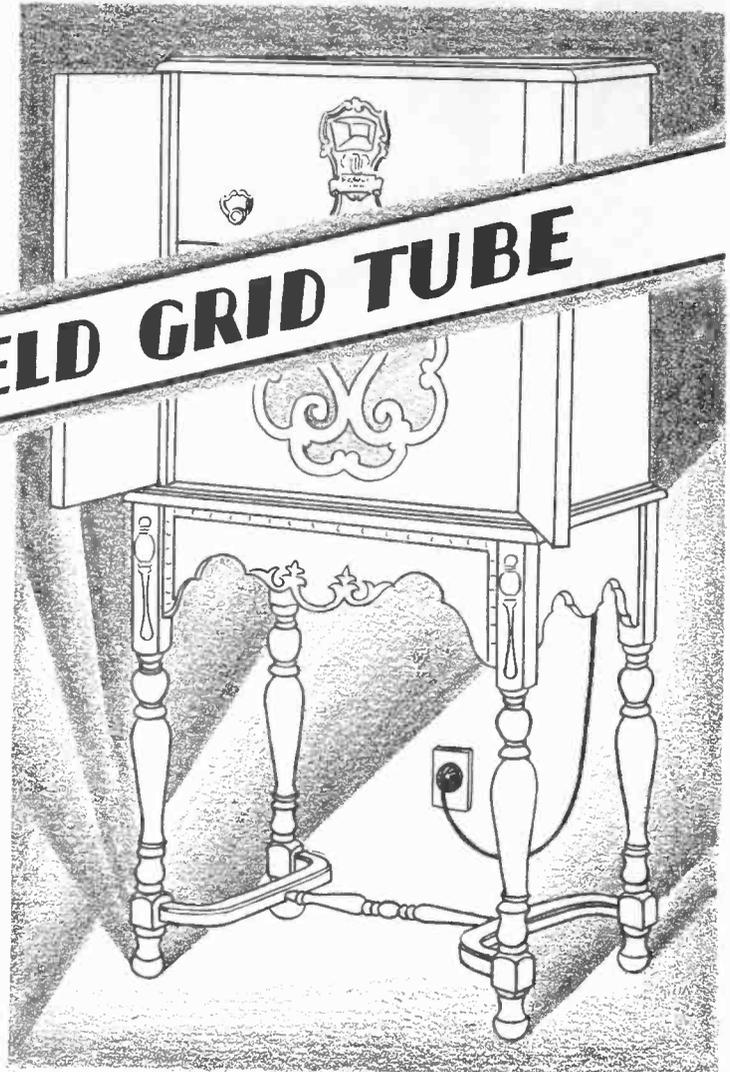
*The* **VAN DOORN COMPANY**  
*Offices 160 N. LA SALLE ST. Chicago, Ill.*  
*Factories - Quincy, Ill.*

# Federal Radio

new  
**K** models

**New A-C SHIELD GRID TUBE**

are making  
new sales records  
for  
Federal Retailers



With Federal's new "K" models, the only licensed radios using the new A.C. Shield Grid Tube, Federal Retailers are selling new power—new selectivity—new sensitivity and new distance range. Sensational performance, never before approached in a popular priced radio, is building new sales records and new profits for retailers from coast to coast.

You can profit by being the first in your community able to feature the latest innovation in radio. See your Federal wholesaler or phone, wire or write for the Federal Proposition.

**"K" TABLE MODELS**

K 10-60 60 cycle \$114.50  
K 10-25 25 cycle \$114.50

**"K" CONSOLE MODELS**

K 40-60 60 cycle \$154.50  
K 40-25 25 cycle \$154.50

with DYNAMIC SPEAKER

K 41-60 60 cycle \$164.50  
K 41-25 25 cycle \$164.50

Prices do not include tubes and are slightly higher in west

*Licensed only for Radio Amateur, Experimental and Broadcast reception.*

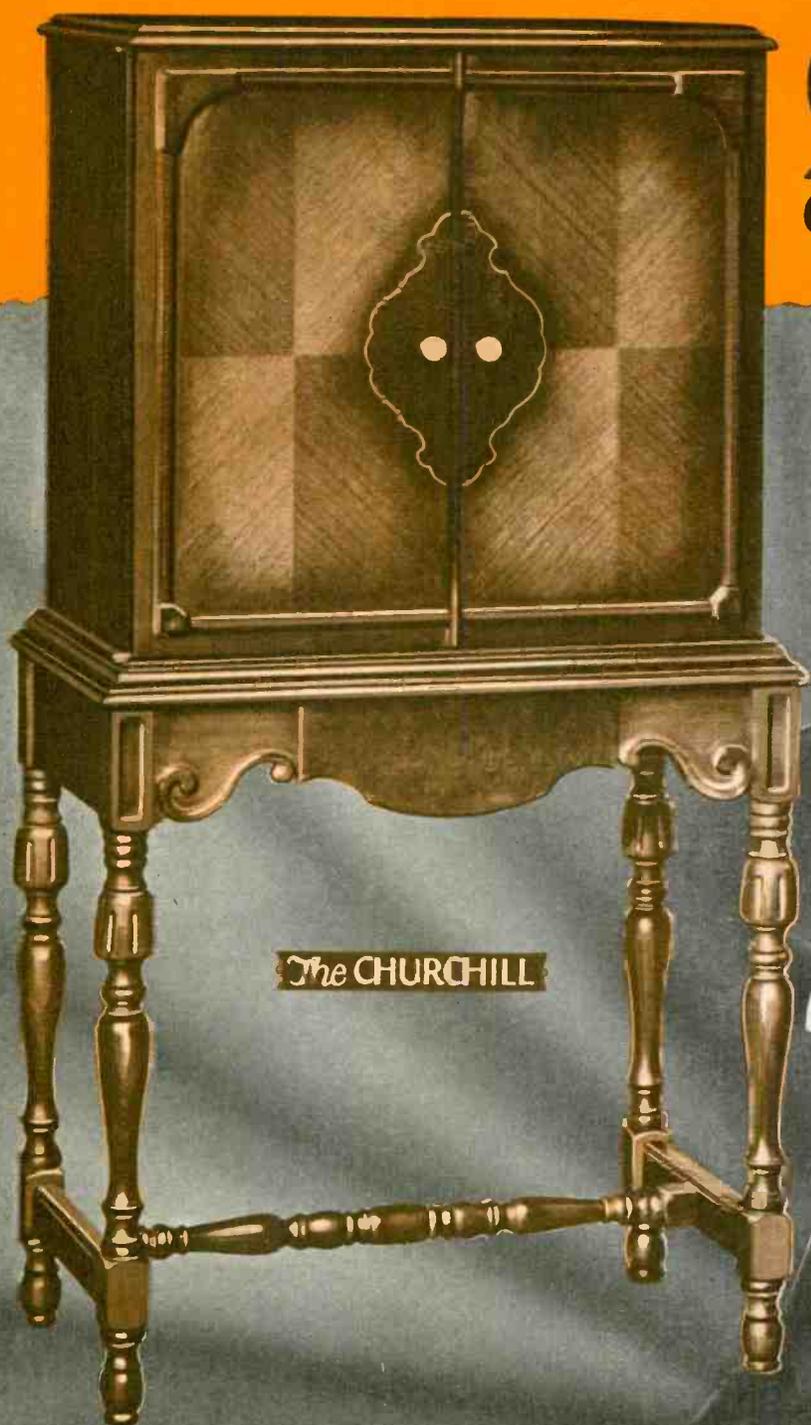
FEDERAL RADIO CORPORATION, Buffalo, N. Y.

Please send me complete details of the Federal Proposition.

Name .....

Address .....

# Cary CABINETS



The CHURCHILL

*A Letter will bring  
you amazing prices  
on this and  
other Cabinets*



**Cary Cabinet Corporation,**  
— SPRINGFIELD, MISSOURI —

**PLAIN TALK**

**BECAUSE** there was a tube shortage in 1928 the long-visioned dealer may be concerned over the possibility of overproduction in 1929.

He need not be—if he is allied with Sylvania.

Sylvania's dealer proposition this year will be doubly attractive. No increase in demand can upset the quality of Sylvania Radio Tubes. Adjustments will continue in the dealer's discretion. Protection against price declines will be guaranteed. The price cutter will buy other and inferior tubes which he can buy "at inside prices."

Sylvania Tube profits will be protected.

*And the Sylvania Foresters—every Wednesday Night on the N. B. C. System—Are Building Constantly Bigger Demand for Sylvania Radio Tubes.*

**SYLVANIA PRODUCTS COMPANY**  
Emporium, Pennsylvania

**Sylvania**  
RADIO TUBES

*There's No More*

# “Summer Slump”

*in Broadcasting*

ONE of the most significant developments of recent months which carries tremendous importance for the whole radio trade is the establishment of chain broadcasting on a twelve-months-a-year basis.

In other words, we've got the biggest and most popular chain programs definitely broadcasting straight through from January to January. That means we're going to have programs this summer equal in quality and number with winter programs.

*There's no more summer slump in broadcasting!*

Sales figures of the big broadcasting chains prove definitely that hot weather programs this year will keep radio interest at a high pitch and will keep the public listening to radio throughout the summer. Formerly there had been a definite sag in summer programs. This year, that won't be the case. The National Broadcasting Company has definitely straightened out its broadcasting curve so that its popular programs will be broadcast twelve months a year, and the Columbia Broadcasting System is putting its programs on the same basis.

Going back to 1925, the number of sponsored programs and the number of hours on the air showed a sharp decline as the hot weather increased. The big programs went into retirement during the summer along with the rest of the radio industry. By 1927, however, the summer slack was beginning to straighten, as the chain broadcasting

companies began definitely to sell their clients the advisability of broadcasting throughout the twelve months of the year. In 1928, this was fairly well accomplished.

**B**UT this year—for the first time—this fact is definite—the big popular chain programs will be continued throughout the summer. Now what does that mean to the trade?

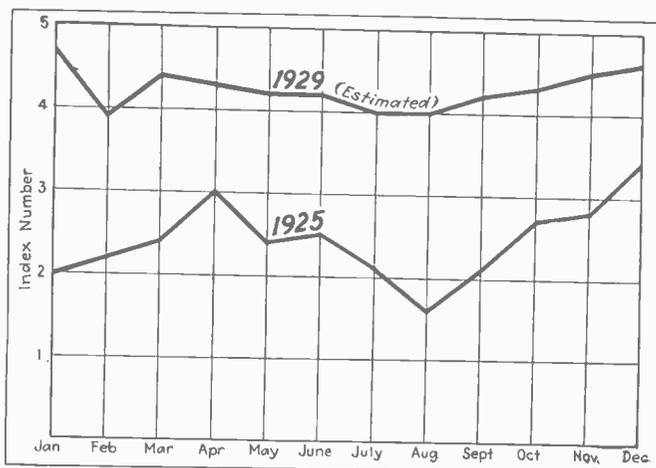
It means just this—opportunities for summer sales will be greater than ever. It will no longer be either necessary or desirable for the public to “put the set away in mothballs until September.” They will have programs during June, July and August that will make them want to listen to radio just as keenly as they do in the winter months.

And officials of the chains report that over \$23,000,000 will be spent by advertisers for chain programs alone during 1929. The NBC reports a sum in excess of \$16,000,000 and Columbia's clients will spend close to \$7,500,000 simply to entertain your customers and to make them want to buy more radio!

\$23,000,000 for chain programs this year and the best programs continued all summer long! Tell that to your customers and prospects. Merchandise it in every way possible. Put it in your windows. Advertise it. Talk it. Sell it.

No more summer slump in broadcasting! Boy, that's something to tell the world about!

*How Chain Programs Have Been Put on a Year 'Round Basis*



The lower line in the chart shows the fluctuation, month by month, in the number of chain program sponsors in 1925, when the number of chain programs fell off radically during the summer. This year, not only have the number of program sponsors practically doubled, but the falling off in summer broadcasting is negligible. The index numbers at the left indicate, proportionately, the number of program sponsors. (Chart by courtesy of the National Broadcasting Company.)

# The Problem of

By O. H. Caldwell

*Editor, Radio Retailing*  
*Former Member, Federal Radio Commission*

FOR two years past I have been in Washington as a member of the Federal Radio Commission, undertaking to serve the American public and the radio industry by putting tested engineering principles and sound equities back into the general radio situation.

It seems appropriate that with the close of this term of government service on February 23, and my return to *Radio Retailing*, some report of this public steward-

ship be tendered to my good friends in the radio industry—the dealers, jobbers, manufacturers and broadcasters whose business prosperity is bound up so indissolubly with the results of the Commission's work. Included in the report which follows are also some individual observations on future policies which, in my opinion, the radio supervising authority at Washington should follow during the remainder of 1929.

## What the Commission has Accomplished

Aside from the handling of a mass of routine administrative matters and the holding of several hundred public hearings, the work of the Federal Radio Commission has been marked by certain important constructive steps looking to the improvement of radio service generally.

In these respects, the following are some of the Commission's accomplishments to date:

### *In the broadcasting band:*

Improved radio service has been brought to millions of farm and small-town listeners through the clearing of "rural-service" and regional channels, and the authorizing of high power stations on the former.

Reception in cities and congested centers has been improved by wider separation between stations.

The damage done during the 1926 breakdown of the law (when many new stations came on or increased power, making a total of 730 broadcasters operating) has been largely repaired by adjustments of time, frequency and power, as a result of which now only 165 stations operate simultaneously (outside of the six channels devoted to local stations of 100 watts and under).

A systematic Plan or arrangement for broadcasting stations has been set up and put into effect. This Plan embodies sound radio principles, so far as it goes, and represents the consensus of engineering opinion as being the best solution in the face of the many compromises necessary.

A procedure of public hearings has been instituted by which every applicant is guaranteed a full hearing of his claims and the public is assured that the limited radio facilities available will be assigned in the public interest.

On the United States side, strict observance of the "gentlemen's agreement" between Canada and ourselves, has been re-established and is now being meticulously enforced. This agreement with Canada was seriously violated by American "pirate" broadcasters during the 1926 breakdown of the U. S. law, but all exclusive Canadian channels are now clear of any U. S. station, and on the Canadian-shared channels, the powers of U. S. stations have been so assigned as to produce no interference at the border, and with no night power exceeding 500 watts.

Regulations for the maintenance of accurate station frequency have been instituted, which will safeguard against "wandering" and cross-talk on adjoining channels, as well as minimizing heterodyning.

### *Outside the broadcasting field:*

A complete basic allocation of the short-waves has been or is being set up, consistent with the recommendations of the recent International Radio Conference and providing for the following services:

- Ship communication
- Ship to shore
- Trans-oceanic communication
- Intra-continental service
- Airplane
- Direction-finding services
- Airway beacons
- Television and picture transmission
- Amateurs
- Relay broadcasting
- Police and fire department
- Power-transmission emergency service
- Geographical surveys
- Railroad communication and signalling
- Experimental and scientific investigation.

# Radio Administration

## Some RECOMMENDATIONS for the Future Control of Radio

*THE experience of the Commission during the past two years has indicated the importance of adopting or making increasingly effective certain definite policies, and I earnestly recommend to those in charge of radio in the future, consideration of the following itemized suggestions:*

¶ In the broadcasting band, clear 50 or 60 channels for exclusive use of high-power stations as soon as possible (in place of the present 40 such clear channels). These additional clear channels will increase and improve the broadcasting service obtainable by farm and remote listeners, and will make available to millions of the public many fine stations now operating only part-time.

¶ Encourage on clear channels the highest possible powers that can be used without interference on adjoining frequencies. Probably the supervising authority should require a minimum power of 50 kw. (67 horsepower), on all such channels. Assign, so far as possible, equivalent powers on adjoining channels.

¶ Maintain present separations of 10 kilocycles between channels, and 50 kilocycles to 100 kilocycles between all stations in the same community.

¶ Encourage experiments or proposals looking toward dependable synchronizing of broadcasting stations. Aside from power increases on clear channels, such synchronizing offers the only method for increasing the service to the public over our limited number of broadcast channels.

¶ Maintain the present numerical basis of sharing the broadcasting band with Canada. Having now radio facilities totaling 20% of ours, Canada's population, (9% of ours) is certainly liberally provided for. Moreover, personal inspection has revealed that Canadian listeners prefer United States stations to their own, and would themselves protest any interference with or loss of United States stations, which have become their

favorites. Rearrange, when possible, Canadian channels into several continuous bands or groups.

¶ Secure the elimination of the wasteful "zone" system required under the 1928 Davis-Dill amendment as soon as possible. This zoning plan is indefensible on any geographic basis, and creates limitations and inequalities of broadcast service far more serious than those it is designed to correct.

¶ Eliminate the many destructive "restrictive" equalizing features imposed by the Davis-Dill amendment. While the equalizing of mutually-available facilities is sound,—it is folly merely for purposes of abstract equalization, to prevent regions or communities from employing facilities available in nature only to them, though unusable elsewhere, and the use of which produces no interference elsewhere.

¶ Adopt the most liberal policies to authorize and encourage experimentation and tests. It is upon such experimentation that the whole radio art has been created and developed. In other fields of science and engineering, experiments may be conducted freely, but in radio governmental permission must first be obtained before starting most experiments. For this reason, a sympathetic attitude should be taken toward experimenters at all times, even when it is not evident that the purpose in view will be attained, for valuable information other than that sought may be revealed.

¶ Reserve adequate places in the spectrum for prospective *new* services, such as television and picture transmission. While television is still in the laboratory, it may shortly develop a public demand that will equal that of aural broadcasting. However, in the event of retarded development, the television reserve of channels will be valuable for other uses. But above all, it should be remembered that a broadcasting use of a channel (either visual or aural) where impulses go out to thousands or millions of receivers, is always a higher use of such channel than to devote it merely to point-to-point communication between only two parties.

# “Specialty

Prospect..... Address..... Phone.....  
 Secured through.....  
 Business or Occupation..... Address.....  
 Size of family..... Girls and ages..... Boys and ages.....  
 Interested in..... To trade in..... Value..... Offered.....  
 Date of first interview..... Who interviewed.....  
 Reason for not getting order in first interview..... Should prospect be circularized.....  
 When do you think prospect can be closed?  
 Principal difficulty to overcome in closing.....  
 Credit Report.....  
 Remarks.....

**DAILY REPORT OF COMMISSIONS DUE**

CREW No.	DEALER																DATE
CREW MANAGER	Model No.				Model No.				Model No.				Model No.				ACCESSORIES
	Place	Supt	Ins.	Sale O. W.	Place	Supt	Ins.	Sale O. W.	Place	Supt	Ins.	Sale O. W.	Place	Supt	Ins.	Sale O. W.	
SALESMAN	Model No.				Model No.				Model No.				Model No.				ACCESSORIES
	Place	Ins.	Sale	Place	Ins.	Sale	Place	Ins.	Sale	Place	Ins.	Sale	Place	Ins.	Sale		

**CREW MANAGER'S DAILY REPORT**

DEALER		CAMPAIGN NO.	CREW MANAGER	DATE		
SERIAL NO.	NAME	SALESMAN INSTALLING	INSPECTOR	SALESMAN SELLING	DEPOSITS	REMARKS
Set	Name					
Speaker	Address					
	Town					
Set	Name					
Speaker	Address					
	Town					
Set	Name					
Speaker	Address					
	Town					
Set	Name					
Speaker	Address					
	Town					
Set	Name					
Speaker	Address					
	Town					
Set	Name					
Speaker	Address					
	Town					
Set	Name					
Speaker	Address					
	Town					

I hereby acknowledge the return of the above listed sets (serial numbers) returned to my stock from demonstrations—for other sets not listed I have signed customer's receipts. Dealer..... BY CREW MANAGER.....

Some of the forms used to record the progress of a specialty sales campaign. Top—Prospect's record. Above—Daily report of sales and commissions due. Left—Crew manager's daily report of installations, demonstrations and sales.

**W**ILL the radio trade eventually find it necessary to make widespread use of "specialty selling" methods in order to keep radio sets at the high levels reached in 1928? Certainly, if radio is ever to be taken out of the class of "peak and valley" merchandising, sales campaigns carried on outside of the store will become essential.

By William Alley

The industry is now experiencing a decided slump, after the unprecedented activity of last year. Who can deny that this present slump could be alleviated and sales continued on a much more satisfactory scale if the trade and industry both were keyed up to put intensive sales campaigns into practice?

Similar trades have long since adopted the "specialty selling" plan when sales have shown indications of slipping. House-to-house canvassing and home demonstrations have sold many varied items of merchandise when

all other methods have failed. Particularly with an article as seasonal as radio, selling in the customer's home by well organized sales crews is the one tried and proven way to take the slump out of the yearly sales curve.

The industry has set itself a quota of 3,000,000 sets this year. If 3,000,000 sets, or anywhere near 3,000,000 sets, are to be sold before next December 31st, radio retailers, distributors and manufacturers will have to work hand-in-hand more closely than they have ever done before, in organizing and carrying out house-to-house sales campaigns.

The dealer who is uninitiated in house-to-house selling may be doubtful about putting such a plan into practice; the dealer who has tried it and failed is "positive that it's simply bunk"; but the thousands of dealers who have done it and made money on it prove definitely that unusual sales results can be obtained.

# Selling—

Four months a year the public "comes in to buy"—in the other eight months the dealer must "go out and sell." This article takes an outside sales campaign apart and shows how it ticks.

## the Answer to Sales Slumps

A typical, easily understood plan and one which can be followed by the great majority of dealers is recommended by the Atwater Kent Manufacturing Company. Although this plan is one in which the manufacturer, the distributor and the retailer co-operate, the dealer himself can easily adapt it for his own use without the co-operation of the manufacturer, although the distributor, of course, should play an important part in the plan.

### How to Do It

IN THE Atwater Kent plan, taking it from start to finish, it is suggested that the intensive campaign last three or four weeks but that the dealer retain two or three canvassers permanently, working constantly in the field. The main campaign is directed by distributors' representatives and this one instance alone is the only point in the campaign which cannot be adapted by any dealer with the intelligence and initiative to do the job.

The dealer advertises for experienced house-to-house salesmen. A crew of seven is selected, out of which the most experienced is chosen as crew manager. It has been found that one crew manager cannot handle more than six salesmen advantageously. The crew manager is paid a straight commission of 12 per cent on his own sales and an overriding commission of 2 per cent on all sales made by the men under him. Each individual salesman receives a straight commission of 10 per cent.

Thus the dealer's selling expense is fixed at 12 per cent.

The men work in groups, meeting at the store in the morning. A delivery truck is loaded with sets and the men go with the truck to a residential section, covering the entire town, neighborhood by neighborhood. The men solicit every home in the locality in an attempt to get a set in on demonstration. They work only in the mornings and early evenings, experience having shown that the afternoon is the worst part of the day to find anyone at home.

No sales talk is made at the first interview. The salesman confines his efforts to securing permission to install the set and make a home demonstration that night or the next. When the salesman gets permission to make the demonstration, the set is carried

Date	
Set No.	Speaker No.
Inspector	
Performance	
Cust. Reaction	
Credit	
Call Back	
Sold	By
Pulled	By
Trade In	

**REVERSE SIDES**

SALESMAN \_\_\_\_\_ Date \_\_\_\_\_

Received from \_\_\_\_\_

One Model No. \_\_\_\_\_ Atwater Kent Radio Set No. \_\_\_\_\_

One Model No. \_\_\_\_\_ Atwater Kent Loud Speaker No. \_\_\_\_\_ (complete with tubes)

These are the property of the above dealer and may be removed at any time. This receipt only obligates the signer to the safe return of the material signed for.

Value \$ \_\_\_\_\_

Signed \_\_\_\_\_

Above and at left—Receipt which the prospect signs upon installation of a set for demonstration. It is explained that this is merely a receipt and does not carry any obligation to buy. The reverse side is used to report results of demonstration.

Morgantown, W. Va. \_\_\_\_\_ 19\_\_\_\_

**S. A. PHILLIPS MUSIC CO.**

To \_\_\_\_\_ Dr.

To Commission and Bonus on \_\_\_\_\_ Sold

To \_\_\_\_\_

Address \_\_\_\_\_

Date of Sale \_\_\_\_\_ Amount \$ \_\_\_\_\_

Less Trade in Allowance \_\_\_\_\_ \$ \_\_\_\_\_

Net \$ \_\_\_\_\_

Cash Rec'd \_\_\_\_\_ Con't runs \_\_\_\_\_ Mo.

Total Com. \$ \_\_\_\_\_ Com. due \$ \_\_\_\_\_ to date

Total Bonus \$ \_\_\_\_\_ at \_\_\_\_\_ % on \$ \_\_\_\_\_

**AGREEMENT**

Contingent upon the customer fulfilling the terms of sale as evidenced by the conditional sales contract covering the above sale, and conditional that this writing shall and does hereby become a part of the working agreement now existing between the parties hereto, the S. A. Phillips Music Company does hereby accept and acknowledge same for payment in the amounts shown above, upon the terms and conditions of said working agreement.

S. A. Phillips Music Company

By \_\_\_\_\_ Salesman

Left—Record of sale and agreement between store and salesman. This is the form on which the financial part of the sale is recorded and from which the salesmen's commissions are determined.

in immediately off the truck, but is not hooked up. This is left for the salesman to do in the evening when the man of the house will be home, and gives an added excuse for paying the home a visit that night.

#### WHAT THE AVERAGE SALESMAN CAN DO

FROM the way the plan has worked out in a number of towns, it has been found that the average salesman can get permission to put about three sets per day into prospects' homes. With a crew of seven men, and leaving each set for a three-day demonstration, the dealer must thus be prepared to have 50 or 60 sets ready for demonstration. No large initial cash order is necessary, however, the usual procedure here being to order the necessary sets from the distributor, on the usual thirty-day billing basis. And here again experience has shown that most of the sets are sold, very few finding their way back to the distributor.

Each salesman is paid a small fee—fifty or seventy-five cents, for every set he puts into a home, so that he can have something to show for the day's work, and a similar sum is paid for every daily "follow up" call.

These cannot amount to much, however, as every set is always "pulled" after three days if the sale is not closed. These payments, however, are deducted from the salesman's commissions on sales, although they are advanced to him definitely each week by the dealer.

Averages of a number of successful campaigns have indicated that each salesman visits thirty homes before he secures his average quota of three demonstrations per day, or 10 per cent of the homes visited will consent to a demonstration. Out of the three that do get in, however, the averages show that one sale results.

AS THE men devote Saturdays to closing sales, and do no soliciting on that day, the weekly averages for a single salesman will run something like this—homes called on, 150; sets demonstrated, 15; sales closed, 5. A good man will double these figures, but these are the average. With seven men working, and each selling an average of five sets a week, the initial quota of 50 or 60 sets is soon depleted. And this has been found to be the case in the great majority of towns where such campaigns have been tried.

With the average sale around \$130 and with the average salesman making five sales a week at 10 per cent, the salesman has an opportunity to make about \$65 a week in commissions while the campaign is on. The approximate number of sales for the dealer per week is 30, with a crew of six or seven men.

A definite system of "follow up" is used once the set is installed on demonstration, some of the forms of which are reproduced with this article. Forms to record salesman's activities are also illustrated.

The morning the set is installed, the customer merely signs an ordinary receipt for it, which, it is carefully explained, is not a sales contract and entails no obligation. Either the salesman himself or the crew manager then goes back the same evening and makes the demonstration. If the sale is not closed, the salesman or crew manager calls again the next night, and, finally, the third night. If the sale is not closed the third night, the set is removed. Meanwhile, one or two postcards have been mailed to the prospect (the first one going out the same day on which the set is first installed), hoping the prospect likes the set and that he will find it possible to keep it permanently.

Time payments, of course, enter into the great majority of sales made through this type of campaign. In this respect, arrangements should be made with a local bank to carry the customer's paper, if the dealer is not equipped to finance his own paper and has no arrangement with a contract - purchasing company.

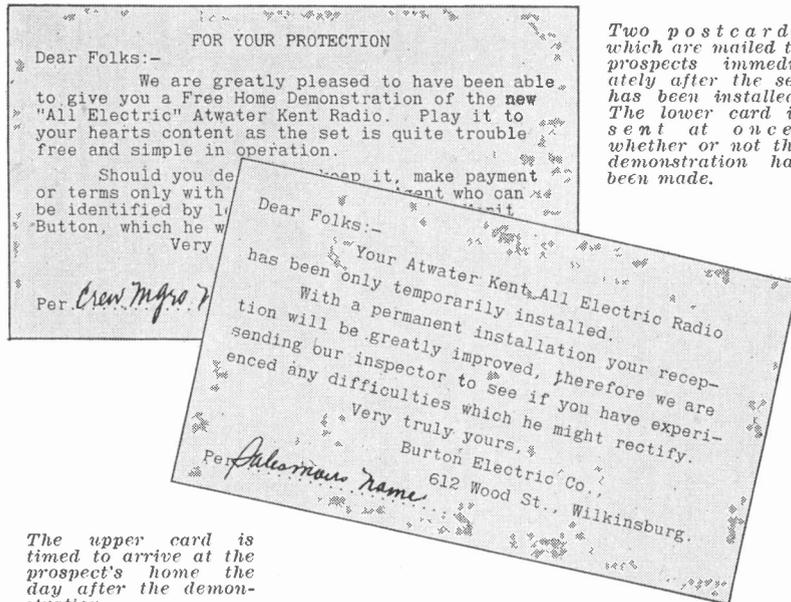
No trouble is experienced with local banks, usually, if the dealer has a franchise from a reliable manufacturer and the customer's credit in the town is good.

Observations of the Atwater Kent Company with this type of selling prove that dealers can make money with it. An off-season campaign, for instance, was carried on last summer in Camden, N. J., by Hurley's, Inc., during which 1,000 sets were sold during the hottest months—July, August and September. The campaign proved so successful that the Hurley company has never since dispensed with house-to-house salesmen on radio.

For the sales force, men were recruited from every walk of life; men who had previous selling experience and men who had not. Selling jobs, however, while on a straight commission basis without drawing account, were not awarded promiscuously. Tests were given, references checked and the survivors hired and trained. Instruction classes were conducted for a few minutes each morning. Inspirational talks were given by members of the Hurley staff. The spirit of the thing was contagious. Midsummer lassitude was dissipated as the spirit of quotas and special awards for special sustained effort built up an atmosphere of their own.

Going to the opposite extreme, a small dealer in the little town of Humboldt, Nebraska, added a net profit of \$806.78 to his regular business during a 24-day campaign in which only one salesman was used, and on a regular salary basis without commission.

These two widely divergent experiences—one from a large store in a New Jersey city, the other from a dealer in a little Nebraska town—both successful campaigns from the dealer's standpoint—are clear evidence of the efficiency and profit-making potentialities of sales campaigns carried on outside the store.



Two postcards which are mailed to prospects immediately after the set has been installed. The lower card is sent at once, whether or not the demonstration has been made.

The upper card is timed to arrive at the prospect's home the day after the demonstration.

# GUIDING

*Sales manual issued by Grand Rapids dealer increases volume by 25 per cent, reduces misunderstandings with customers and improves efficiency of salesmen.*

## the SALESMEN

EVERY employee of The Radio Shop, of Grand Rapids, Michigan, is provided with a five-page, mimeographed manual which outlines the company's policies and sales methods. According to D. R. Eason, the proprietor, this sales manual has been responsible for, approximately, a 25 per cent increase in business over the former period when salesmen's instructions were verbal.

"Furthermore," declares Mr. Eason, "the manual has reduced misunderstandings between the company and its customers by 80 per cent. Also, it has materially increased the efficiency of the salesmen—particularly in the case of newcomers and part-time representatives."

The manual gives a detailed explanation of company policies. For example, The Radio Shop charges from \$6 to \$11 for the aerial installation, whether a set is purchased or not. It permits trial demonstrations. It gives a 90-day guarantee. Five paragraphs are devoted to time-payment policies. Then under the heading of "Talking Points," Eason has written a series of sales instructions—personal advice to salesmen—which he believes is chiefly responsible for the success of the manual in increasing the company's sales volume. Here are some selections from the series:

Make no statements that you cannot absolutely substantiate and bear out to the letter. Be particularly careful about your claims as to the distance-getting ability of any radio set; also, make no claims about the ability of the set to cut out interference and static. Remember that there is no radio set built yet, that can eliminate static or any other interference, if such static or interference is within the effective radius of the set.

Good reception with a good set, is dependent on atmospheric conditions at the time of demonstration, local conditions surrounding the set, nearness and power of the sending station and skill in operation.

*Tell the truth about radio, even if you lose the sale.*

Remember that if, after you have made a demonstration, you fail to sell your merchandise, a sale has been made, nevertheless. Your prospect has sold you the proposition of not buying your merchandise.

We do not want to tell you how you should sell radios, and we welcome any legitimate methods you may have for selling them. Give the prospect an idea of the wonderful educational and entertainment advantages of radio.

Show him how it will keep the youngsters at home—where they should be.

Show him he can get wonderful entertainment at a cost of a

few cents and compare the cost with that of any opera or picture show.

Assure him that the entertainment will always be *clean* and *wholesome*, a thing that is not always true at the theater, and that it will be right in his own home.

Tune in a station for him and then let him tune in one or two himself.

Be sure to keep a record of the stations you get for him on the cards furnished you, and leave this record with him when you leave.

Explain the method by which stations are gotten by meters and kilocycles and illustrate the method on the set.

Almost every prospect will bring out the local paper and want to know why he cannot get certain stations that are listed as being on the air that particular evening. Explain to him that these programs are prepared some time in advance and are quite often changed before published. Other stations are of low power or far distant or have other stations interfering and cannot be brought in any radio set at the time.

Don't make the mistake of trying to see how many stations you can bring in—rather a lower number of stations with high quality programs.

Don't let your prospect get the

idea that a radio is a plaything. Sell him on the idea of education and entertainment by high-class artists and educators.

After your prospect is able to bring in stations with comparative ease, proceed to give him the cost of the radio equipped as he sees it, together with terms of sale and financing plan if necessary.

Impress upon him that you do not want him to buy the set on what you have claimed for it, but rather on what it does for him in his home.

If he believes in doing business with an established, reliable, concern which has been in business for four years, guarantees all merchandise it sells, maintains a competent service force, takes a real interest in its customers, giving them dependable merchandise as

cheaply as such merchandise can be bought, you have overcome 90 per cent of the sales resistance.

Before closing any sale be sure the customer is furnished with a complete itemized list of just what he is going to get so that there will be no misunderstanding for our office to straighten out.

Answer every question regarding radio courteously and truthfully, no matter how foolish it may seem to you. Remember the prospect is seeking information or he would not ask the question, and he is entitled to an intelligent answer. Don't guess the answer. If you do not know, ask our technical department. They will give you authentic data.

Your sale is not completed when you have the customer's *name* on the dotted line and have satisfied him. Keep in touch with him from time to time and give him the benefit of your knowledge of radio.

Tell him about the plan of paying \$5 cash for the name of each prospect whom we sell, and leave one of the orange-colored cards with him.

We will stand half of this charge ourselves.

### A GOOD SALESMAN—

*has a steady eye, a steady tongue, and steady habits. Understands men and can make himself understood by men. Turns up with a smile and smiles on a turn-down. Strives to out-think the buyer rather than out-talk him.*

*Keeps his work, his temper, and his friends. Takes a firm interest in his firm's interest. Wins respect by being respectable and respectful. Can be courteous in the face of discourtesy.*

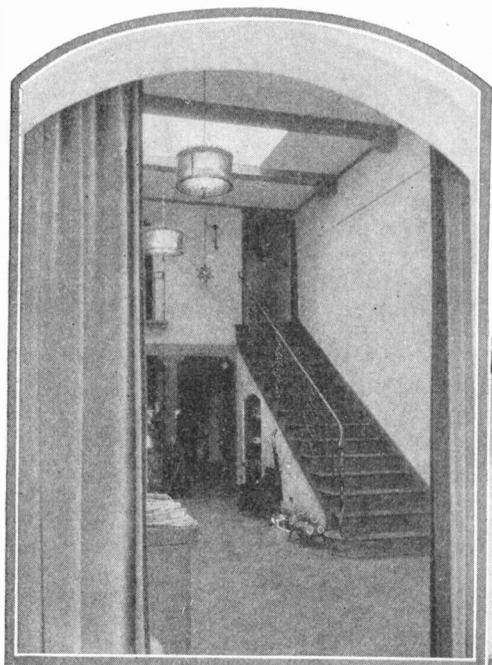
*Never discusses tactics of competitors, politics, or religion. Is a gentleman first, last, and all the time. Has self-confidence, but does not show it. And best of all, he tells all the truth all the time.*

—From the manual issued to its salesmen by  
The Radio Shop, Grand Rapids, Michigan.

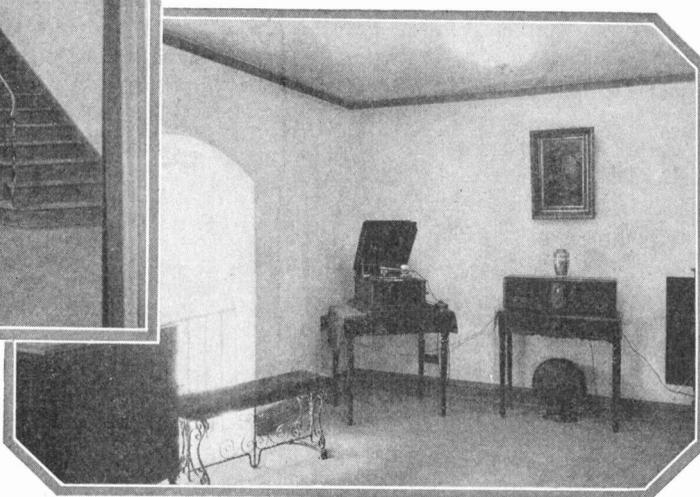
# "We RENT Radios"

*C. A. Rowley, of Pasadena, California, disposes of his trade-ins and gets red-hot sales leads by renting used radio sets*

By C. Grunsky



*Above is a view through the window of the Rowley Electric Company, Pasadena, California. At right is one of the radio demonstration rooms on the mezzanine floor.*



Company this seems almost imperative — and when a very large sale is involved, it frequently seems expedient. In such cases, a fair price is allowed for the old set, considering all the elements involved in its future disposal. Occasionally the allowance is made conditional upon the actual disposal of the set, the sum allowed to be credited on future time-payments whenever the trade-in set is actually disposed of. With this system of handling

**I**N spite of a policy which discourages the acceptance of trade-ins, many retail radio firms usually find themselves with numerous used sets which they must dispose of in order to realize the full profit on sales into which trade-ins have entered.

The Rowley Electric Company of Pasadena, California, seldom admits the fact that it accepts used sets and, in response to most requests of customers to be allowed something on the set they have been using, Mr. Rowley returns a refusal. The customer is told that his old equipment is worth more to him as its present owner than to the store.

"It may be actually worth, in service, \$100 or more," Mr. Rowley points out, "but when we have to recondition it and to put in new tubes (and batteries, if it is that kind of a set) and still can get only something under that value in the best of markets, you will realize that we cannot allow you very much on your purchase."

The result of talk along these lines usually is that the customer decides to keep the old set for auxiliary service in another part of the house or to give it away to a relative or friend. Occasionally the arrangement is made that the customer himself will dispose of the set by means of a want ad in the paper, Mr. Rowley helping to frame the ad.

There are some cases, however, in which it seems expedient to take the used set as a down payment. When the original set was purchased from the Rowley Electric

customers, however, not more than five per cent of the sales made involve trade-ins; the remaining ninety-five are outright cash or credit transactions.

As for the five per cent of old sets which the firm finds itself obligated to dispose of, they are usually most satisfactorily handled by a system of rentals. The method used is to put the set in good condition, to fit it out with new tubes—and batteries if required—and then to advertise it in the papers. The Rowley Electric Company carries a weekly advertisement in the Pasadena morning paper and in this always appears the slogan "We Rent Radios."

It is surprising how many people there are who are glad to have the use of a set for a short period. Pasadena, of course, is a favored community with a winter climate which attracts winter tourists, but visitors are not the only ones who like the temporary use of a set. Apartment house and hotel dwellers, always a more or less migratory folk, people who want to get the benefit of special programs; those temporarily alone who like the company; people with an invalid in the house who wants entertaining—these and others are interested in the possibility of renting a radio instrument.

**T**HE charge is never less than \$10 a month, and sometimes is more than this, depending upon the character of the set. No down payment is required and Mr. Rowley confesses to taking all sorts of credit chances

*Merchants  
Who Are  
Making Radio  
Pay—No. 25*

without ever having suffered on this account. There is very little danger of loss short of actual robbery, as the first payment is adjusted to cover the use of all depreciating elements—and the set, being second-hand, does not lessen in value through a little further use. It is just as salable when it is returned as when taken in. As a matter of fact, people prefer to buy sets sold cheaply because they are rental sets rather than those which are advertised as having been turned in by the owner because he wanted something better. The implication in this latter

case is always that there was something wrong with the set or the owner would not have wanted something else. The rented set, on the other hand, must have been satisfactory, or it would not have been rented.

Of course, every encouragement is given to turn these rented sets into actual sales and frequently the lessee makes the purchase. In this case, the rent is allowed on the purchase price, the tubes and battery replacement being allowed for extra and due interest charged on deferred payments.

Naturally, the sets are kept in good condition during the period of rental. The only expense to the company is in this service and in the wear and tear on tubes and batteries. How satisfactory the monetary side of this can be is shown by the case of a \$425 set which was taken in as a conditional trade-in, \$100 to be allowed if the set was disposed of. Opportunity soon came to rent it and the credit was allowed. Seventy dollars was received in rent and the set was then sold for \$150, making a total of \$220 received for the set. Of course, the expense of battery and tube replacement had to come out of this, so that the profit was not as spectacular as might appear on the surface, but certainly nothing was lost.

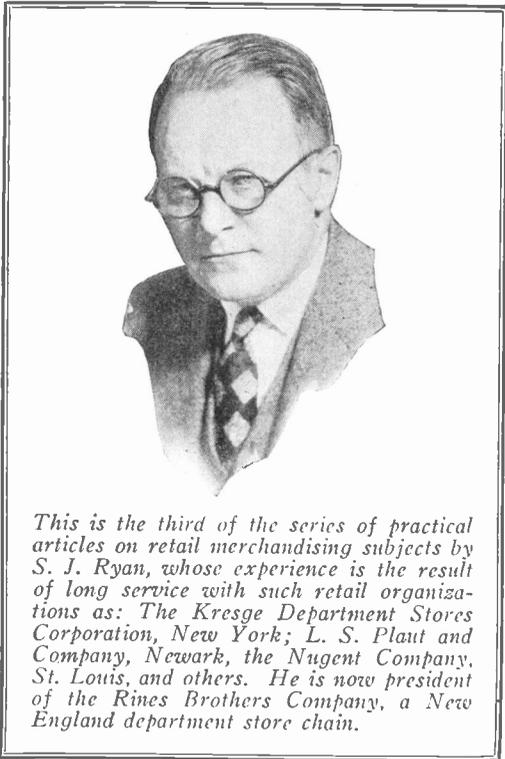


Some of the more expensive sets of the old-fashioned type are very difficult to dispose of except on some such system. But people will rent sets which give good service, even if they are not of the latest style and once having found them to operate satisfactorily, they may buy them, profiting by the real bargains available.

The window of the Rowley Electric Company is especially adapted to feature displays. It has a curtain and archway in the rear, permitting of the display of merchandise as on the theater stage. The floor is on a level with the floor of the store itself and the archway opens into the store, so that, if desired, the entire space may be joined in one. Generally, however, the curtain is closed, presenting a rich background for merchandise, or else is partially drawn, with a platform and screen background to give special prominence to some one feature.

Radio was taken on by Mr. Rowley originally as a sideline to the sale of electrical appliances, but it is now the most important feature of his business.

"Trade-ins are not to be sought for," according to Mr. Rowley, "but they are nothing to be afraid of. Make a fair allowance for those which it seems advisable to accept—and then rent them."



# S. J. RYAN

President of Rines Brothers Company, Portland, Maine,  
and Merchandising Counsellor to "Radio Retailing"

## Talks About

*How to start and operate a simple "unit control" system of recording stock received, sales, and stock on hand is explained in this article by an experienced store executive*

**U**NIT CONTROL is doing for merchandise what the automobile and the airplane are doing for transportation—speeding things up. Your stocks don't have to grow whiskers before you find out the public isn't interested, that they are probably buying something else from someone else. This system tells you these facts more quickly than older methods of merchandising did formerly. But that's all it can do—the rest is up to you.

In discussing Inventories in the January issue, I made some pretty large claims for Unit Control. I said it would positively reduce your stocks, increase your sales, reduce losses through depreciation and increase your profits. That is certainly taking in a lot of territory—it seems to be about the whole story. The system is only a mechanical contrivance, however, and the merchant has to put in plenty of good skull work if he is going to get the greatest good from it.

Unfortunately for the more general acceptance of Unit Control amongst merchants, many individuals with a more or less real knowledge of its operation have created the impression that it is some sort of a complicated, mysterious thing. It is nothing of the sort. Mechanically it is just a sort of perpetual inventory, showing you each week your *units* of merchandise by quantities on hand and quantities sold.

If you install it, keep it *simple*. Don't let anyone sell you the idea of an involved, complicated system that will

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Editor's Note—*In the January issue, Mr. Ryan discussed "Inventories" and mentioned the "unit control" method of keeping track of merchandise. So many inquiries were received from readers asking for more detailed information concerning "unit control" that Mr. Ryan found it necessary to devote an entire article to the subject, outlining a simple system and telling how to use it.*

take so much of your time to compile that you'll not have any time left to *interpret* it. *Speed* is the essence of efficient unit control operation. Getting the essential information quickly is the big thing. What you do with the information after you get it depends, of course, on how smart a merchant you are.

### WILL GIVE YOU YEARLY SALES COMPARISON

**T**WO distinct advantages of this method are that it gives you quickly definite information as to the relation of your stocks and sales by units for the current period and, after it has been in operation a year, the same information for the similar period of the preceding year. This latter is mighty valuable information. Styles change but buying habits do not vary so much and this information is of great value to you in laying out your buying plans.

What I mean by this is simply that merchandise of all kinds is today quite generally sold in *price lines*, from the penny piece of candy to the automobile. Next year you may not be selling the same make of radio nor the same style, but the same demand will exist for a radio at the same price. Of course, if you feel it smart to satisfy that demand by selling lower priced units, thus reducing the amount of your individual sale, that's your lookout.

All this conversation has had to do with the *interpretation* of the information, but I suspect that what you want to know is—*how to get it*.

### HOW TO INSTALL UNIT CONTROL

**I** SUPPOSE there are dozens and dozens of unit control systems. I have seen some that would take an expert accountant to install and probably a half dozen more to operate. You don't need anything like that at all. Of course, even the simplest system is going to cost you some money to operate—about one-half of one per cent of your retail sales probably—but it certainly is worth it.

First take a physical inventory of your stock on hand,

# STOCK CONTROL

in order to get going correctly. Then you need two sets of records: a receiving record which you can also use as a selling record, and the inventory form. Let us call the receiving record "Form A," and the other, "Form B."

Form A will be a sort of copy of the invoice you get from the manufacturer or wholesaler. A merchant could rule these forms up himself or have them mimeographed or printed. They should show the merchandise received by units, the cost, retail price, the date received, who from, etc., as per illustration. Each unit of merchandise will be indicated by a stroke like half of the letter X. As it is sold it will be crossed through, completing the X, and the date of sale noted. There you have the whole story of your purchase. Don't bother to make any such records on small items, it's too costly.

That's the story of the individual unit. Now for the composite picture of your stock, Form B.

As illustrated, classify your merchandise down the left hand column of the form in the space provided and then break them up into price lines along the top of the sheet. Each little square on the sheet should show two figures: in black the stock on hand and in red the sales for the week. This means taking a physical inventory of your more important units of stock 52 times a year, whereas probably you only do so once or twice a year now. If this is too large a burden, then get these reports out once a month. We get them out every week.

Naturally, Unit Control cannot make you a better merchant automatically. The success of any merchant is in ratio to his ability to interpret public demand. Personal contact with his trade is the best way to accomplish this. Next to that is some mechanical aid which will furnish you with this vital information a little bit quicker than the other fellow gets it. So far, Unit Control is the best thing we have been able to evolve.

I have attempted to make this explanation as clear and concise as I could. Should you have any individual problem in connection with the installation of such a system, write to me direct or in care of this publication.

For week ending *February 9* 19*29*

Unit Control—Stocks and Sales by Price Lines

Items	Under \$5	\$5-\$10	\$10-\$25	\$25-\$50	\$50-\$100	\$100-\$150	\$150-\$200	\$200-\$350	\$350-500	Over \$500
<i>Tubes 226</i>	<i>48</i>									
" <i>227</i>	<i>16</i>									
" <i>228</i>	<i>12</i>									
" <i>210</i>	<i>6</i>									
" <i>250</i>	<i>2</i>									
" <i>201A</i>	<i>48</i>									
<i>Battery Rec</i>	<i>36</i>									
<i>A.C. Rec</i>										
<i>B. Batt</i>	<i>24</i>									
<i>Mag. Spkn</i>	<i>6</i>									
<i>Dyn. Spkn</i>										
<i>Cabinets</i>										
<i>R. Phonolon</i>										
<i>Portable</i>										

FORM "A" (Below)

A simple "unit control" receiving and selling record. Every individual article received is indicated by the first half of an X, in the columns at the right. When it is sold, the X is completed and the date of sale noted in the same space. This form of record should be used only for large items, although important small accessories, such as tubes, may be included. Explaining one of the transactions indicated on the form, for instance, five model 200 A. C. receivers have been received, three have been sold and two are on hand, as shown by the three completed X marks, and the two incomplete marks.

FORM "B" (Above)

A form to record stock received, sales, and stock on hand, by weeks. Stock received should be indicated in black, and sales in red. The difference is stock on hand. In this form, stock received is indicated in the boldface letters, sales in the lighter italics. Thus, in the top column, 48 type 226 tubes were received and 36 sold, leaving a stock on hand of 12.

Received from *Smith Mfg. Co.* Date *2/12*

Name of Mfr. *Smith Mfg. Co.*

Address *Chicago, Ill.*

Terms *X-10-30* Invoice No. \_\_\_\_\_

Amount of invoice \_\_\_\_\_ From Order No. \_\_\_\_\_

Your Name and Address \_\_\_\_\_

Mr. Model No.	Quantity	Unit Cost	Selling Price	Mr. Serial No.	Type	Description		
<i>200</i>	<i>5</i>	<i>89.50</i>	<i>139.50</i>	<i>E 22017</i>	<i>@</i>	<i>A.C. Rec</i>	<i>X</i>	<i>1</i>
<i>201</i>	<i>7</i>	<i>75.00</i>	<i>410.00</i>	<i>M 2166</i>	<i>@</i>	<i>A.C. Rec</i>	<i>X</i>	<i>1</i>

# What will the Tube Decision

*The case of independent tube manufacturers vs. RCA is of unusual importance—What will the decision be and how will it affect the industry?—Decision is awaited this month—A review of the tube manufacturing situation from 1905 to date.*

THE suit of independent tube manufacturers against the Radio Corporation of America which was tried last month in the United States District Court at Wilmington, Delaware, now awaits the judge's decision. It has again focussed the attention of the radio industry upon the tube manufacturing situation.

The case grows out of an application by certain tube manufacturers for an injunction restraining the Radio Corporation of America from carrying out the provisions of the now famous Clause 9 of its radio receiving set license agreements. This clause required licensees to purchase from the Radio Corporation all tubes used as initial equipment in sets.

The case has been complicated by its many elements of controversy. The facts in the case go back several years. As a result, the industry has become confused as to the true status of the tube situation. Yet naturally this litigation concerns practically the entire tube manufacturing industry which has now grown to include some eighty-odd manufacturers who last year did a retail business of \$100,000,000 in tubes alone. These tubes were sold by some 35,000 distributors and dealers. It is a matter of vital importance to the radio trade.

The facts in the case, however, are not hard to understand, as the following chronological review discloses:

- (1) 1905—The perfection of the three-element vacuum tube by De Forest made possible radio telephone broadcasting and reception, and the eventual development of the radio industry.
- (2) —Development, improvement and perfection of new types of tubes continued by Langmuir and Coolidge of the General Electric Laboratories, and by independent inventors, engineers and manufacturers too numerous to mention.
- (3) 1920—Broadcasting began, the radio vacuum tube came into widespread use and the radio industry and trade took form.
- (4) 1922—The original De Forest "audion" vacuum tube patents expired, throwing the tube manufacturing industry wide open.
- (5) —Numerous tube manufacturing companies were formed and enjoyed sensational growth, paralleling the rapid expansion of the radio industry.
- (6) 1927—The Radio Act was passed, creating the Federal Radio Commission,—and prohibiting the granting of radio station licenses to any corporation or subsidiary adjudged guilty of violating the monopoly or restraint of trade laws.
- (7) —The Radio Corporation of America licensed a number of radio receiving set manufacturers under the Alexanderson tuned radio frequency patent and other receiving set patents. "Clause 9" in the license agreement required licensees to buy all tubes to be used as initial equipment from the Radio Corporation.
- (8) —Headed by Eugene A. Tracey, president of the Northern Electrical Manufacturing Company, and Arthur D. Lord, then receiver for the De Forest Company, a group of independent tube manufacturers retained W. E. Darby, Jr., as counsel and brought suit against the Radio Corporation claiming that Clause 9 was restricting their business and tended to give the Radio Corporation a monopoly of the tube business in violation of the Clayton Act.
- (9) —The Radio Corporation voluntarily suspended Clause 9 pending the outcome of the litigation, but maintained as its defense that tubes are integral parts of the circuit and therefore should be under the control of the holder of the circuit patents.
- (10) 1928—A temporary injunction restraining the Radio Corporation from enforcing Clause 9 was granted by the United States District Court at Wilmington, Delaware.
- (11) —The Radio Corporation entered an appeal and the decision was affirmed by the United States Circuit Court of Appeals at Philadelphia.
- (12) —The case was again appealed on a writ of certiorari to the Supreme Court, but the writ was denied.
- (13) —The Radio Corporation petitioned for a rehearing but that also was denied by the Supreme Court.
- (14) —The temporary injunction, although granted, was not issued, the plaintiffs preferring to hold it in suspense, inasmuch as the Radio Corporation had already voluntarily ceased to enforce Clause 9.
- (15) —Darby, counsel for independents, asked Federal Radio Commission for a decision as to the right of the Radio Corporation to broadcast, in view of the action of the District Court and under the provision of the 1927 Radio Act. Louis Caldwell, counsel for the Commission, issued an opinion that "any corporation or subsidiary that is finally adjudged guilty in a Federal Court of violating the laws against monopoly or restraint of trade by attempting to monopolize broadcasting through the control or sale of radio products should be denied all broadcasting licenses."
- (16) —The independent manufacturers applied for a permanent injunction against Clause 9 at the District Court at Wilmington, Del. In the application this injunction was disassociated from the action for damages, leaving each individual plaintiff free to bring its own damage suit.
- (17) —The Radio Corporation of America instituted litigation against certain independent tube manufacturers claiming infringement of its tube manufacturing patents.
- (18) 1929—The application of the independent tube manufacturers for a permanent injunction against Clause 9 came to trial in the United States District Court at Wilmington. Trial was completed on February 16, and March 15 was set as the date for final arguments, after which a decision will be rendered.
- (19) —Meanwhile, certain tube manufacturers reported negotiations under way with the Radio Corporation concerning the taking out of licenses to manufacture under RCA tube patents. The RCA admitted that licenses are under development.

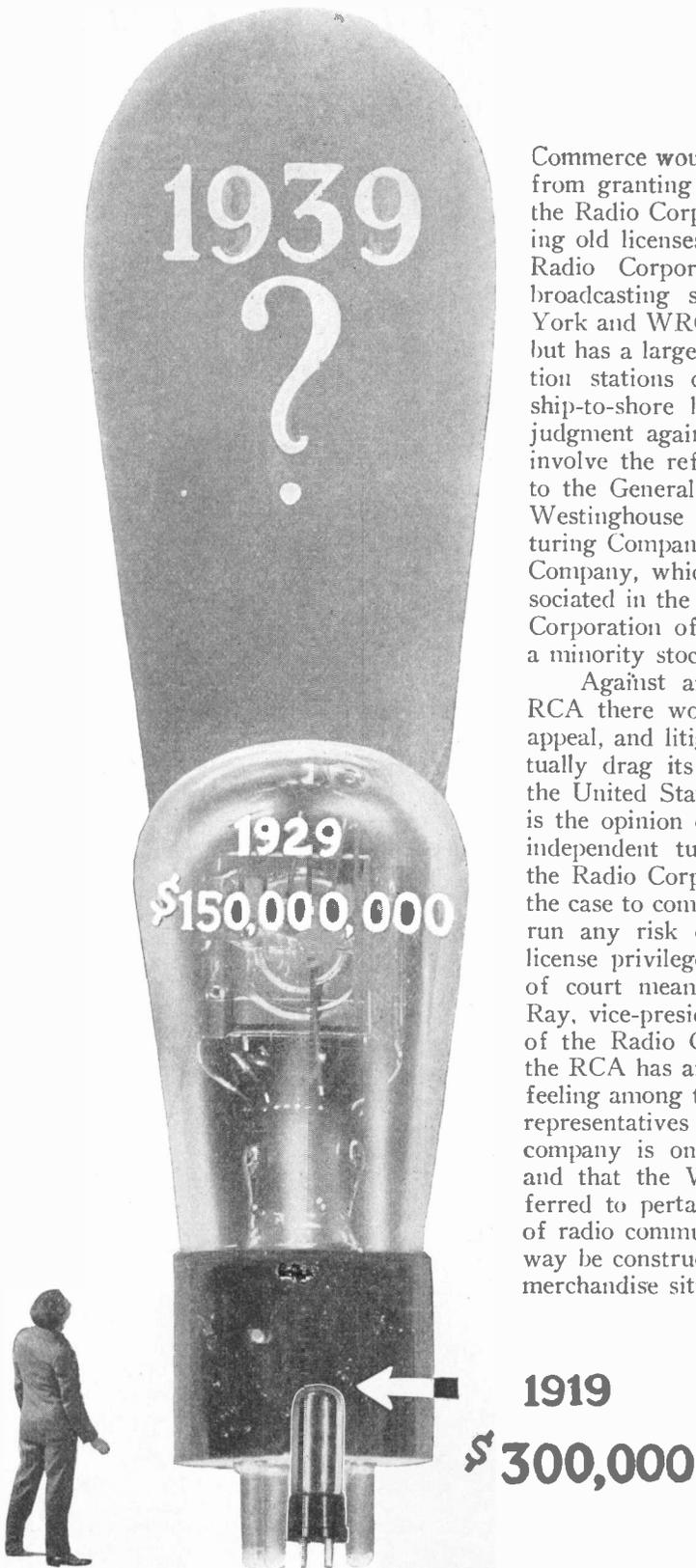
# Mean to the Trade?

In reviewing these facts of the case, one of the questions in every mind is—What would be the effect of a “final” decision against the Radio Corporation of America?

Section 13 of the 1927 White Radio Act, in language not altogether clear, provides as follows:

“The licensing authority is hereby directed to refuse a station license and/or the permit hereinafter required for the construction of a station to any person, firm, company, or corporation, or any subsidiary thereof, which has been finally adjudged guilty by a Federal Court of unlawfully monopolizing or attempting unlawfully to monopolize, after this act takes effect, radio communication, directly or indirectly, through the control of the manufacture or sale of radio apparatus, through exclusive traffic arrangements, or by any other means or to have been using unfair methods of competition. The granting of a license shall not estop the United States or any person aggrieved from proceeding against such person, firm, company or corporation for violating the law against unfair methods of competition or for a violation of the law against unlawful restraints and monopolies and/or combinations, contracts, or agreements in restraint of trade, or from instituting proceedings for the dissolution of such firm, company, or corporation.”

Some interpret this to mean that in the event any corporation be found guilty of violating the laws of the United States prohibiting “either monopoly or restraint of trade,” no further radio-station licenses can be granted to it or to any subsidiary. According to those who hold that viewpoint violations of both the Sherman and Clayton Acts are covered and should the Radio Corporation or any other company be “finally adjudged guilty” the Federal Radio Commission or Secretary of



The importance in dollars and cents of the decision in the case of independent tube manufacturers against the RCA is indicated in this graphic illustration. From gross sales of only \$300,000 in 1919, tube sales grew to the remarkable total of \$150,000,000 in the intervening decade. Considering this astonishing growth, who can foretell to what heights tube sales will climb in the next ten years?

Commerce would thereby be prohibited from granting new station licenses to the Radio Corporation or from renewing old licenses as they expire. (The Radio Corporation owns only two broadcasting stations, WJZ at New York and WRC at Washington, D. C., but has a large number of communication stations doing international and ship-to-shore business.) But such a judgment against the RCA would not involve the refusal of further licenses to the General Electric Company, the Westinghouse Electric and Manufacturing Company, and the United Fruit Company, which companies, while associated in the ownership of the Radio Corporation of America, are each but a minority stockholder.

Against any decision adverse to RCA there would undoubtedly be an appeal, and litigation that would eventually drag its way to a decision by the United States Supreme Court. It is the opinion of at least some of the independent tube manufacturers that the Radio Corporation will not permit the case to come to a final decision and run any risk of involving its radio-license privileges but would settle out of court meanwhile. But Joseph L. Ray, vice-president and sales manager of the Radio Corporation denies that the RCA has any such intention. The feeling among the Radio Corporation's representatives seems to be that the company is on strong legal grounds, and that the White clause above referred to pertains only to the control of radio communication and can in no way be construed to relate to a purely merchandise situation. Meanwhile the

independent tube manufacturers who are the plaintiffs in the case are apparently willing to settle their suit on the basis of their being granted licenses to manufacture tubes under the Radio Corporation patents subject to the payment of  
(Please turn to page 83)

# Now is the Time to Think About

*Summer's coming—radio sales descend—a line of "hot weather*

**R**ADIO sales are slowly being put upon a twelve-month basis. Summer broadcasting is improving right along and the sale of radio sets and supplies increases a little more every summer. But still the need remains for the dealer to stock seasonal merchandise for hot weather sales.

It is an old business axiom that, when public interest in one line begins to wane, the thing to do is to put in other lines which are finding public favor at the moment.

Experienced tradesmen have long since learned the necessity for a "balanced stock." Balanced not only as between the various items in one line, but as between a number of different lines.

The radio merchant, naturally, turns his attention to some line that has its sales peak in the summer months when radio sales are at their lowest ebb. And radio merchants have learned, also, that it doesn't pay to push radio completely out of the picture during the summer, even though their "summer line" may take up the largest part of the sales volume. Many dealers have learned to their sorrow that forgetting about radio in the summertime has led to a long hard fight to get their radio customers back in the wintertime.

Therefore, no matter how slow radio may be, no matter how great sales in other line may become, keep plugging at radio throughout the whole twelve months. Never let your town forget, even on the hottest day of the hottest week, that your store is radio headquarters. Then, when September rolls around, they won't have forgotten that you are still in the radio business.

Keep radio in the window, on the display floor and in your advertising constantly. But, at the same time,

balance your expenditures and selling efforts between radio and the sideline that you are pushing.

The music trade found out long years ago that the public simply wouldn't pay serious attention to the purchase of phonographs in the hot weather. The portable phonograph was the logical development. It is a simple, inexpensive summer line and, with the virtual extinction of portable radio sets, has been taken up with fine results by many radio stores.

Electrical refrigerators and radio is another popular combination. Refrigerators are specialties which have their greatest appeal in the summer. To sell them requires much the same organization and approach as radio. Many stores keep their radio sales forces busy in the warm weather through the house-to-house sale of refrigerators.

**E**LECTRIC fans and other small appliances have also been found profitable by a number of stores as summer radio "balancers." Many dealers make it a point to solicit all their radio customers at the beginning of Spring for the sale of electric fans. This, naturally, is timed to coincide with the first touch of warm weather, and if the day is hot, fans are taken direct to the home and left "on demonstration" much in the same manner as radio itself.

For retailers in towns bordering on the water, out-board motors and small boats are becoming increasingly popular, as their seasonal aspect ties in perfectly with radio sales. They, too, are not "over the counter" merchandise. They must be taken to the public and sold. They are highly specialized articles and are subject to "specialty selling" methods.



# SIDELINES

*sellers' will help fill in the depression*

Then, too, there is opening up the whole new development of movies for the home. A large number of radio retailers are already well into this new market through the sale of small hand cameras. It is a logical move to branch out into the sale of the larger cameras and tripods and projectors for home use by the amateur movie maker, whose numbers are increasing daily. It is an ideal summer line, as summer is the best weather to take pictures, either stills or movies.

And a great number of these dealers have discovered another source of profit through the developing and printing of films for radio customers to whom they have sold cameras. This work is, of course, "farmed out" on a commission basis to photographers equipped to do it.

No matter how great or how small summer radio volume may be, the dealer should not overlook the profit-making possibilities of other summer lines.



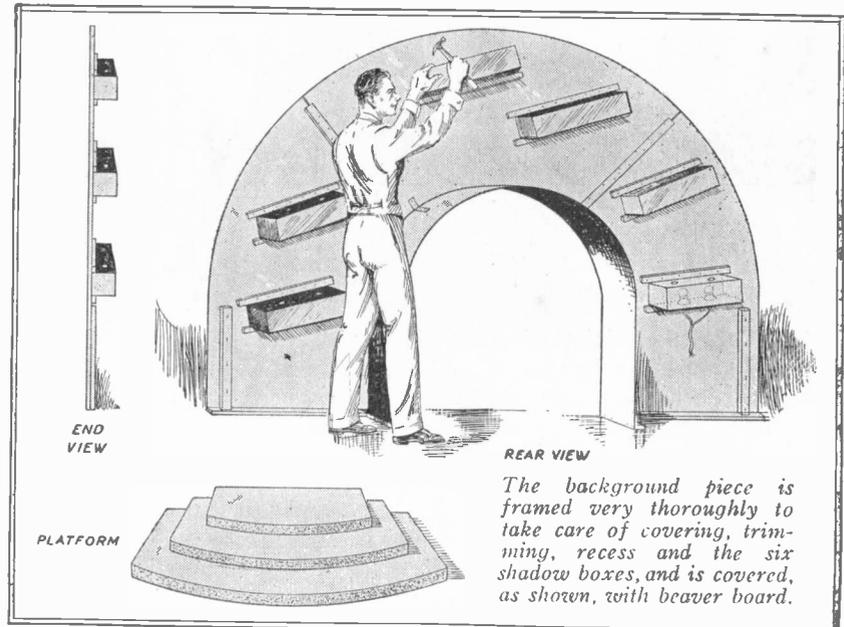
*Portable Phonographs  
Electric Refrigerators  
Electric Fans  
Movie Cameras  
Outboard Motors*

*are some of the sidelines  
that radio dealers are  
successfully selling*



# How to Build ACTION WINDOWS No. 2

Here's a  
window display  
that combines

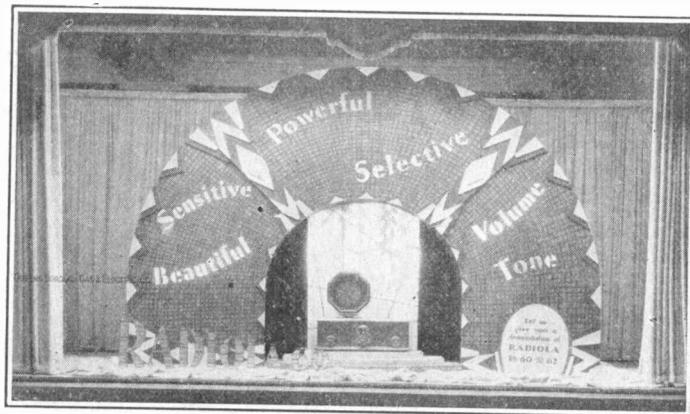


# LIGHT and ACTION

THIS is the second in the series of monthly articles in which I. L. Cochrane, prominent display authority, provides the necessary information and procedure for installing effective window displays. These articles are of practical value to the radio merchant because they describe displays which make use of that attention-getting element—action.

But this window is not merely active—it is vivacious. Each one of the six leading, one-word claims for a good radio set flashes on and off, one word at a time. The arrangement of the words, as may be seen, is haphazard, or modernistic, if you prefer that term. Also, the sequence of flashing on and off is irregular; the lighted words skip and hop around without any definite sequence or seeming order. And further to heighten the charming effect, each word is cut out and painted on a differently colored translucency; one red, another yellow, another green and so on through six bright colors.

An examination of the plan of this display reveals a very close merchandising connection between attraction value and sales punch. Every element, such as harmony of form and color, lighting effects, stage-line layout, shape of background, location and setting of cabinet, and especially, the dramatic presentation of the words, all unconsciously, but forcefully, direct attention to the superiority of the set. Nothing is strained;



This window display was installed in the four stores of the Queensboro Gas and Electric Company, Far Rockaway, New York

instead, the mind is naturally told to think of the radio set in terms of desire.

A profusion of silver-gray drapes, back, top, and sides, form a soft, shadow-box effect, enhanced by puffed grey velour on the floor. The background piece is framed very thoroughly to take care of covering, trimming, recess and six shadow-boxes and is covered, where shown, with beaver-board cut

to fit. Edges and cracks are then covered with the two-layer decorative pieces, silver on black.

The letters for the words are cut out in stencil shapes, with strips of white silk previously painted, each in a different color; and back of them are placed six shadow-boxes, containing sockets, lamps and wires leading to a flasher. The field surrounding the translucent letters is composed of black lines on a reddish-brown background.

THE center piece is in the form of a modernistic window seat, with three steps on a semi-circular platform, the steps being painted in variations of rose color. The curved sides are formed of black-painted beaver-board. The window is of pleated white silk, behind which are placed strips of narrow moulding and cut-out leaves. With a strong light in the rear, both moulding and leaves are silhouetted, as shown in the photograph.

The name of the set, in the foreground, is cut out of beaverboard and surfaced with silver bars on black.

# ART— *an Asset to the Sales Room*



**T**HE Prest & Dean Radio Co., of Long Beach, Cal., in designing its new quarters at Fourth and American Streets sought for an artistic beauty that would impress its customers with the high character of the firm and its merchandise.



**T**HIS Spanish treatment, so appropriate to Southern California, is ample testimony of the achievement. The window backgrounds represent old Spanish walls and the interior of the sales-rooms are in the form of delightful, cool patios.



# The Best SALES IDEAS

## Contest Disposes of Obsolete Sets

KINNEY AND SIPPRELL, music dealers of Everett, Washington, instituted a newspaper contest which effectively disposed of every obsolete set upon their shelves.

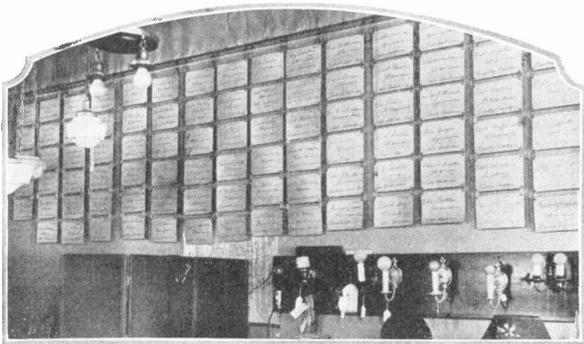
The contest was in the form of a simple puzzle, not too difficult for the average newspaper reader to solve, with prizes offered for the most *artistic*, correct reply. It was thus possible to secure a large number of replies and yet to have some means of discriminating between contestants and judging the award.

Some 27,000 answers were received. Each of these was sent an acknowledgment of his entry, together with a credit slip good for a small amount on any of the types of radio sets to be disposed of, as well as upon certain other musical instruments in the store.

Three out of every 100 receiving such credit slips turned them in. The result was that *every one of the radio sets in question was sold*, as well as some forty pianos and other musical instruments.

The prize was awarded to a contestant who had embroidered the correct reply on the cover of a sofa cushion.

## Displays Names of Set Buyers on Wall



The name and address of every set purchaser is emblazoned on 8x10 in. cards by Henderson and Parker, Warsaw, Ind., and hung high on the wall. There are 126 of these cards and Parker states that scores of sales have been aided by this simple procedure.

## Free Estimates and Tube Testing Service Get Prospects

TWO excellent methods of getting new prospects are used by the City Radio Stores, New York City. The first is the offer of a free estimate upon the mailing of a coupon to the company. This does not obligate the prospect in any way and as most people are anxious to know what they can get for their old set as an allowance toward a new one, the advertisement is effective.

The second method is the advertising of a free tube-testing service. People are invited to come in with their tubes for a free test on the company's specially equipped tube-testing machine. This method gets people into the stores and builds up the prospect list.

**FREE ESTIMATE**

If you have an old model radio and would like to know its present value—mail this coupon. This will in no way obligate you.

Name .....

Address .....

For residents only of New York City and vicinity. MAIL to Your nearest City Radio Store

**FREE!**

**Tube Testing Service**

Poor volume and distorted radio reception may be due to your tubes. Bring in your tubes for a free test on the City Radio specially equipped tube testing machine.

The City Radio Stores, New York, advertise a free testing and estimate service and get prospects into the store.

## Co-Operation with Builders Sells Radio

THE proportion of homes built by general contractors for sale is very large in all sections of the country. Frequently these homes are furnished and sold *ready for use*. Almost always, a sample home in each tract is treated in this way.

The many attractions of Long Beach as a winter resort and permanent residence for those who have come out to make southern California their home, make it a particularly favorable district for this type of construction.

George Monk, manager of the radio department of the Frank Graves Company, of that city, has found it profitable to co-operate with builders. Through actual demonstration, he has proved to them that homes equipped with radio are more readily salable than those without.

In particular, all model homes should have a radio instrument, both because of the ornamental value and because it furnishes a peculiarly modern touch. Mr. Monk has established a definite co-operation with several builders who call upon him to install radio in all residences sold furnished. In more than one instance it has been possible to sell radio for a group of such homes, placed on the market at the same time.

## Sells Radio to Replace Orchestra in Theatre

GENE OVIATT, of McCoy, Incorporated, radio dealer in Waterbury, Connecticut, heard that a local theater was to be opened by a stock company, and that it was having difficulty in obtaining an orchestra at a price that could be considered.

Mr. Oviatt went to the producer with the suggestion that they use a radio receiver with a magnetic pick-up for phonograph record reproductions, and several speakers. He succeeded in convincing them of the feasibility of this installation, and as a result, sold a set, four speakers

# of the MONTH

and a magnetic pick-up, as well as obtaining valuable publicity. A radio set was installed under the stage with a monitor speaker for the operator, together with the phonograph, magnetic pick-up and switching devices that would throw the radio or pick-up output into either the monitor speaker or the theater auditorium speakers or both.

Two of these speakers were placed near the stage in the auditorium, and two others under the gallery so as to provide even distribution of the music all over the theater, eliminating possibility of excessive volume in the front of the house, and possible dead spots in the rear of the balcony.

McCoy supplies a full set of new records each week, ranging from an overture or symphony at the opening of the show to concert and popular numbers for filling in between acts. McCoy gets free space in the theater program for supplying the records and arranging the program.

## Red Tag Speeds Turnover

"MY AVERAGE unit price per sale is 20 per cent lower than it was last year. To maintain total gross volume and net profit, I must sell more sets and turn my stock faster," declares Howard Middleton of Sedalia, Missouri. "I do this by working faster—I get right down to the decision point without lost motion and shorten the number of days sets are out on trial.

"Tying a special red tag to each set when it leaves the store on demonstration has doubled my turnover rate. This tag must be left on the set while it is in the home and identifies it as store-owned.

"In addition to stating the cash and time-payment price, it states the day we will call and close the order or remove the outfit. Four days is the maximum period. If, at the end of that time, the prospect asks for an extension we use a little strategy. We say that we are sorry but that it is

very hard to keep enough sets in stock to supply the demand from actual buyers—here we show a letter from our jobber to the effect that he is having difficulty getting sets to fill our orders. Then we explain that we have another prospect who will undoubtedly buy and that we must have this set to demonstrate it to him.

"If this does not produce the desired results, but if the prospect appears to be genuinely interested, we



**QUOTATION**

Cash Price. \$ 148

---

**PAYMENT PLANS**

\$ 30 down and \$12.50

per month for 10 months.

down and

per month for \_\_\_\_\_ months.

Term Price \$ 158

---

We will call for this machine.

Thursday. These are our best prices and terms. Further concessions cannot be granted.

**HOWARD A. MIDDLETON,**  
"The Radio Man".

## Would You Take \$5 for an IDEA?

RADIO RETAILING will pay \$5 every month for the best sales idea and three dollars for every sales idea accepted for publication in this department.

All you have to do is to write us a letter telling us about that successful display, that sales-getting campaign, or any other experiences which helped to increase your business. If possible, send us a photo or diagram.

Address:

SALES IDEA EDITOR,  
Radio Retailing, 36th Street and Tenth Ave.,  
New York City.

promise to return with a similar model at the earliest opportunity. But we always 'pull' the set on the day stated on the red tag.

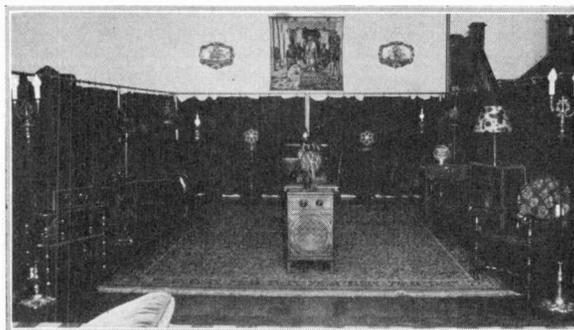
"In addition to making six sets do the work of twelve we have increased our ratio of closings to leads 40 per cent."

## Gas Pipe and Sateen Creates Exclusive Department

FOR a time, the radio business of the Rowland Furniture Company, Fort Wayne, Indiana, was anybody's business, so far as sales and display were concerned. As a result, that phase of the company's business was somewhat under par.

But this was quickly remedied. An exclusive radio department was created at a cost of less than one hundred dollars by the use of black sateen curtains and ordinary gas pipe; the pipe being gilded after it was installed.

The radio department was then treated as a completely separate department and a competent manager placed in charge. Radio is now one of the most profitable phases of the company's business.



The Rowland Furniture Company, of Fort Wayne, Indiana, separated and enclosed its radio department, giving it an exclusive appearance, by the use of ordinary gas pipe and black sateen. This cost less than \$100

# Radio Retailing

A McGraw-Hill Publication

MARCH, 1929

Vol. 9, No. 3

# Are Trade

## The Battle of the Discounts

THE question of trade discounts is coming sharply to the fore again. Manufacturers are bringing out new models. Competition is becoming keener. What shall the discount be?—40 and 5?—40 and 10?—50 and 10? They can mount and mount beyond all economic reason, or they can be standardized within reasonable limits.

It is not our purpose to tell the trade what its discounts should be. Frankly we don't know. It is doubtful if anyone really knows what the correct ratio between consumer's price and trade discounts should be. But the experience of older industries has shown that competition between manufacturers for the dealer's business is unsound if such competition is predicated upon the size of the discount. The dealer's cost of doing business is the determining factor.

The size of the discount doesn't build a market—not permanently. Increasing the discount is not the answer to increased sales. The spread between the manufacturer's cost and the consumer price is already far too wide in radio. Sales cannot be forced by widening it still further. But it is a subject of vast importance to the trade and one which should receive the thinking of the best minds in the industry.

Meanwhile, normal profits at normal volume will dictate the size of the discount. What we are selling is radio sets. Let the battle of the discounts die a natural death.

## It Doesn't Pay to be Careless

EVEN in this day of simple A.C. sets, service men are still prone to do half a job when installing sets in the customer's home. Service and installations may have been simplified for the dealer, but his obligation to see that his service men do satisfactory work is still as vital as it ever was.

And the fluctuating line voltage found in many homes makes the check-up of service men of greater importance. The experience of the past year with all sorts of A.C. tubes and A.C. receivers emphasizes the fact that the chief

trouble with electric sets has been due to the burning out of tubes and resistances because of over-voltage.

Much time and trouble could be saved—if the house voltage tests too high and the set itself has no compensating device—by installing a voltage-reducer when the set is first put into the home.

## Meeting "Big Store" Competition

THE SMALLER merchant of today is watching his larger competitor closely. He is watching his advertisements, his window displays. He is studying his store arrangement. He realizes that these are the products of most careful planning, and he is following the successful competitor wherever it is possible.

Meanwhile the smaller merchant is stressing his personality, his biggest stock in trade. People like to deal with *persons* and the big establishment will always remain impersonal. The smaller retailer who adapts the best of the big fellow's methods, and stresses his own advantages as a personality, will always succeed in attracting trade. What he does with that trade depends upon himself.

## A New Angle in the Copyright Situation

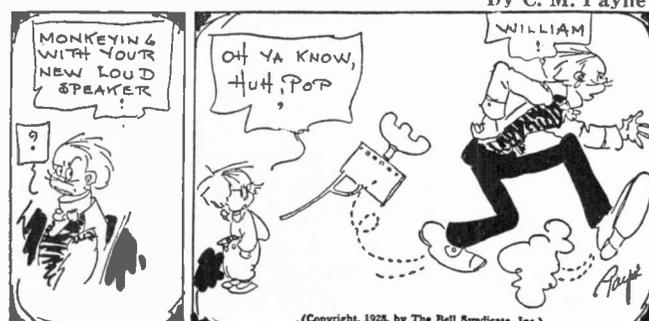
SO MUCH confusion exists in the trade as to the musical copyright situation that a few words of explanation seem to be in order.

A great majority of musical compositions are now copyrighted by members of the American Society of Composers, Authors and Publishers, whose headquarters are in New York City. Broadcasting stations pay an annual license fee to the Society for the privilege of broadcasting these copyrighted songs.

So far, the copyright laws have not been extended to include radio retailers or radio set owners. At this time, they do not need to take out licenses in order to receive copyrighted music via radio. And radio stores do not need licenses in order to make demonstrations.

However, the Society is attempting to prevent the playing of copyrighted music *for profit*, without payment

### S'MATTER POP



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Radio Retailing, A McGraw-Hill Publication

# Discounts Too Low?

of a license fee. If hotels, ice cream stores, restaurants and other public places desire to install radio receivers, the Society maintains they must take out a license. Whether this be necessary is problematical. Litigation has been inaugurated and the outcome will be reported as soon as a decision has been reached.

## *Are Tube Licenses Necessary?*

SHALL independent manufacturers of radio vacuum tubes take out licenses under patents held by the Radio Corporation of America? Here is an acute problem which is confronting the tube manufacturing industry at this time.

Some believe that the establishment of a tube licensing structure would give added stability to the industry and stop further costly litigation. The experience of the incandescent lamp industry is held up as an example of the beneficial results to be obtained by such a licensing policy. The market is controlled by a group of licensees who are assured that widespread competition cannot cut into their market; there is no cut-price competition; prices to the consumer are low; quality of the product is high, and clean standards of merchandising prevail.

On the other hand, many independent tube manufacturers declare that licenses are uncalled for because the tube patents have not yet been adjudicated. It is also believed that tube licenses will throttle the independent expansion of manufacturers by limiting their sales quotas, and that the license fees will seriously cut into their already narrow margin of profit.

At any rate, whether or not the Radio Corporation of America licenses other tube manufacturers, the fact remains that the retail trade need have no fear of the outcome. Whatever procedure eventuates, the trade will always be able to obtain and sell radio tubes. Research and the development of new tubes will continue and the market will increase and expand through replacements as time goes on.

## *Saturation—Does Anybody Ever Catch Up With It?*

WHAT is this thing called "Saturation"? Statisticians talk about it. Manufacturers worry about it. Everyone spends time thinking about it. But no one has actually ever caught up with it, in the radio industry. Far from being a fixed quantity, it is a most elusive variable—like chasing your hat on a gusty fall day; just when you are about to pick it up after pursuing it down the road, another breeze comes along and away it goes again.

Each year sees improvements in receiving sets. New types of reproducers are marketed. Better and more



O. H. CALDWELL  
*Comes  
Back*

*TWO* years ago, O. H. Caldwell, the Editor of "Radio Retailing" was appointed a member of the Federal Radio Commission by President Coolidge. He was granted a year's leave of absence that he might assist in solving the tangled problems of radio broadcasting. At the end of the year, the Commission was deeply involved in its program for reallocation and he felt it his duty to continue in Washington. He therefore severed all connection with the McGraw-Hill Publishing Company and with this paper, and as the radio industry well knows, has labored long and against the most discouraging obstacles to establish a broadcasting structure for this country founded on sound engineering principles and not upon political expediency.

With this job accomplished, Mr. Caldwell has now resigned from the Federal Radio Commission and has returned to "Radio Retailing" to resume his former place as editor. He has rendered a splendid service to the American people and to the radio industry and won national recognition for his courageous leadership. We welcome him back to a post where he can continue to devote his tireless energy and fine intelligence to the promotion of radio progress.

JAMES H. MCGRAW, chairman,  
McGraw-Hill Publishing Company.

attractive furniture makes its appearance. Tubes and other accessories are constantly undergoing improvement in order to give better reception.

Thus engineering developments, changing styles and advancing public demand lead production on and on. Fleetfooted Sales Effort plans and directs the pursuit. And still saturation is not caught. The race, in the past year, has resulted in over six and a half million dollars worth of business. This year it promises an even greater sum. It is a healthy, interesting and fascinating race.

# 1928 Greatest Radio EXPORT Year

## American Radio Exports for 1928

(in dollars)

Prepared exclusively for *Radio Retailing*

By **H. E. Way**

Assistant Chief, Electrical Equipment Division,  
Bureau of Foreign and Domestic Commerce  
U. S. Department of Commerce

Total radio exports amounted to \$12,061,410. Seventy-five per cent of world's sets include American-made parts

**D**URING the twelve-month period ended December 31, 1928, the exports from the United States to foreign countries reached a total of \$12,061,410, the largest total that has ever been reached. This sum was made up of \$768,728 worth of transmitting sets and parts, and the remainder, with a few exceptions, of broadcast receiving equipment. Receiving sets accounted for \$4,549,825, tubes \$1,017,560, receiving-set components \$3,054,310, and receiving-set accessories \$2,670,987. This does not include batteries, wire, and the like. Statistics of the exports of radio dry batteries have been available only since January, 1929. Also, a new subdivision of the accessories class now shows reproducers separately.

Examination of the detailed table showing exports by countries of destination shows Canada to be the largest single market, with Argentina and Australia second and third in order of importance.

The value of exports of receiving sets increased by 50 per cent over 1927. Shipments of tubes remained about the same. Exports of components went up one-third, while a slight increase was shown in the exports of accessories. The effects of patent agitation are reflected in the decreased sales to parts of the British Empire, although some of the decreases are due to overstocking in previous years.

Eliminating transmitting materials from the discussion, the total of \$11,292,682 comprised 40 per cent sets, 9 per cent tubes, 27 per cent components, and 24 per cent accessories. Production in the United States, excluding transmitting sets, totaled \$189,615,182 in 1927, divided as follows: 50 per cent sets, 9 per cent tubes, 19 per cent components, and 22 per cent accessories. From a comparison of these data, it is evident that the home builder is still an element of importance in foreign trade, although a portion of the exports of this class may have reached manufacturers.

Two countries of Europe stand out as importers of parts, the Netherlands and the United Kingdom. The United Kingdom is also an excellent market for accessories, these being the largest of the items during 1928. Italy and Spain were the largest set markets of Europe.

Canada is our largest market, taking 44 per cent of the total. Exports of tubes were lower than the aver-

Country	Radio Transmitting Sets and Parts	Radio Receiving Sets	Radio Tubes	Radio Receiving Set Components	Radio Receiving Set Accessories
Austria	\$817		\$2,237	\$1,674	\$867
Azores and Madeira Islands	51		175		4,847
Belgium	2,015		23,918	24,286	4,847
Bulgaria	464		357	106	233
Czechoslovakia	\$807		8,177	2,838	3,904
Denmark	8,466		10,859	22,242	31,317
Estonia	485		1,727	60	119
Finland	6,695		833	8,742	4,827
France	4,990	287	8,551	17,388	31,674
Germany	32,238	7,147	1,576	14,506	49,871
Gibraltar	45				22
Greece	1,177			819	239
Hungary	543		1,257	143	2,106
Iceland	78		33		74
Irish Free State		709		1,038	26
Italy	8,087	171,555	38,179	58,483	60,981
Latvia			172	473	
Lithuania				37	
Malta, Gozo, and Cyprus	51		229		385
Netherlands	1,618	7,083	1,532	148,412	50,554
Norway	961		786	627	1,944
Poland and Danzig	5,896	460	739		184
Portugal		5,302	1,938	2,456	1,938
Rumania		2,145	592	593	483
Soviet Russia in Europe	1,318	345	520	799	106
Spain	1,098	100,047	21,705	32,393	16,082
Sweden	381	3,548	1,980	5,157	8,182
Switzerland		10,671	10,211	9,499	11,878
United Kingdom	26,403	21,150	22,256	165,523	224,671
Yugoslavia and Albania		190			42
Canada	255,434	2,449,666	173,843	1,280,602	1,105,097
British Honduras	12	482	222	61	171
Costa Rica	4,337	4,370	1,836	1,504	3,067
Guatemala	75	4,007	1,268	725	3,316
Honduras	34	2,465	925	1,407	1,484
Nicaragua	281	2,146	1,171	1,188	2,097
Panama	3,195	2,328	5,218	6,216	6,471
Salvador	15	6,781	759	944	1,477
Greenland					
Mexico	8,377	147,513	17,787	14,655	35,923
Miquelon and St. Pierre Is.		48			64
Newfoundland and Labrador	360	12,575	1,864	2,911	7,951
Bermudas		6,164	657	2,531	2,060
Barbados		243	171	773	349
Jamaica	159	3,826	443	1,941	2,279
Trinidad and Tobago		1,370	254	1,899	1,555
Other British West Indies	676	7,548	1,260	1,794	1,248
Dominican Republic	13,825	110,325	23,959	36,412	37,870
Netherland West Indies	25,426	12,390	4,455	3,318	3,736
French West Indies	117	1,209	497	1,994	573
Haiti, Republic of		1,217	262	1,136	827
Virgin Islands of U. S.		137		138	
Argentina	99,454	482,371	123,315	583,335	225,218
Bolivia	4,660	2,799	279	1,565	812
Brazil	101,420	99,026	69,142	89,456	73,480
Chile	216	33,197	17,200	11,614	15,377
Colombia	24,100	12,689	16,055	12,021	9,157
Ecuador	1,000	3,171	563	432	1,017
Falkland Islands					
British Guiana		132	19	1,630	228
Surinam				88	10
French Guiana		310			
Paraguay		196		254	319
Peru	38	3,341	1,890	6,325	2,320
Uruguay	1,108	148,385	25,904	37,674	31,238
Venezuela	8,945	1,879	3,286	2,575	1,041
Aden					
Arabia				360	
British India	19	8,654	1,366	3,747	1,654
British Malaya		485	306	733	471
Ceylon	78	223		5,237	60
China	47,329	34,279	33,178	14,725	22,766
Java and Madura	5,845	657	145	1,705	2,239
Other Netherland East Ind.		188	124	724	1,089
French Indo-China					
Hong Kong	2,174	440	128	4,801	3,786
Iraq					
Japan	41,053	29,540	79,418	55,549	61,693
Kwantung		150		777	120
Palestine				125	
Persia					
Philippine Islands	24,859	52,808	18,708	8,657	15,305
Siam	8,975	2,154	1,423	640	227
Soviet Russia in Asia			3,445		100
Syria					
Turkey				99	
Other Asia					
Australia	6,244	349,414	178,414	239,992	405,266
British Oceania	22	396	11	348	458
French Oceania		1,180	198	289	549
New Zealand	700	112,519	46,937	77,799	48,756
Ethiopia					
Belgian Congo					
British East Africa					36
Union of South Africa		24,275	3,459	6,790	19,426
Other British South Africa		872	116	196	147
British West Africa			58		65
Egypt		163		547	45
Algeria and Tunisia		40			10
Madagascar					
Other French Africa					
Italian Africa					
Liberia		115		78	1,581
Morocco		618	49		404
Mozambique	33	651	62	1,616	42
Other Portuguese Africa					
Canary Islands		95	110	211	174
Other Spanish Africa		231	51		
<b>Total</b>	<b>\$768,728</b>	<b>\$4,549,825</b>	<b>\$1,017,560</b>	<b>\$3,054,310</b>	<b>\$2,670,987</b>

**Grand Total.....\$12,061,410**

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# Making DOLLARS out of

# NICKELS

There are 250,000 commercial prospects for automatic coin-operated phonographs. Two dealers tell how they are capitalizing this "allied" business.

By Ray V. Sutcliffe



**A**UTOMATIC music in public places is an old story, as, also, are the facts that, generally speaking, the character of this "canned entertainment" has been of mediocre quality and the devices themselves have required frequent attention.

The application of the electric pick-up, line power amplification and the modern reproducer to automatic phonograph apparatus of a commercial character, together with a mechanical feeding device whereby it is possible to play as many as 48 different selections, has, however, raised this proposition to a much higher plane. It has materially enhanced its merchandising possibilities and has definitely thrown it into the lap of the live-wire radio merchant; in the opinion of the two dealers whose successful experiences with the automatic phonograph are herein presented.

The machine handled by the Christena-Teague Piano Company, of Indianapolis, Ind., for example, sells for \$1,095 up to \$1,250. William Christena, president of this old and conservative music house, sold 47 of these machines—gross \$54,000—during the first four months in which he actively got behind them. He is now averaging one sale every two working days.

S. B. McFadden, Havana, Ill., working in two counties, secured 27 signed orders from November 15 to January 10.

**T**HE selling methods employed by these two dealers are practically identical. It's a field promotional proposition, they declare—a case of putting one of these automatic phonographs on a light delivery truck and contacting prospects until it's either sold or left on approval with some worthwhile customer. As the coin-slot type begins to pay its own way from the first hour it's plugged in, reverts have run less than one to every ten installations.

The experience of both dealers in selling high-priced

merchandise was a valuable aid in this new activity although the buyers were of entirely different character. Proprietors of soft drink parlors, public amusement places, or chairmen of house committees are hard-boiled, commercially-minded, individuals. They are, however, accustomed to making quick decisions. For these reasons, the person-to-person, first-call, "high pressure" technique frequently produces immediate results. McFadden states that 40 per cent of his sales are practically closed on his first call if the prospect be a likely one.

Knowing that once the present-day, coin-operated, machine is given a trial, its beauty of tone, ease of operation and earning power will cause it to "stay put," every effort is made to obtain permission to place one on the

Please turn to page 87

## TRIAL INSTALLATION CONTRACT

Jan. 21, 29  
Havana, ILLINOIS

S. B. McFADDEN being the authorized distributor of the Orchestrope Automatic Phonograph agrees to install a new Orchestrope Automatic Phonograph in store of C. S. Amer located at Havana and to pay all installation charges, records, freight and drayage, etc. for a period of 30 days.

It is distinctly understood that this does not incur any obligations to buy on the part of Mr. Amer located at \_\_\_\_\_ and that in lieu of above that S. B. McFadden is to take all proceeds in said coin box unless the said Amer desires to purchase the machine. In this event it is distinctly understood between S. B. McFadden and C. S. Amer located at Havana that all of the proceeds shall be applied on the purchase of the machine as a partial down payment.

S. B. McFadden  
C. S. Amer

The contract form used by S. B. McFadden, of Havana, Ill., for trial installations of automatic, coin-operated, phonographs. Note that the proceeds of the coin box belong to McFadden unless the machine is purchased by the customer.



# Practical Service Methods

Conducted by H. W. BAUKAT



## Simple Device to Determine Condenser Capacity

Numerous requests from readers asking for simple methods of determining the capacity of fixed condensers lead us to present the following system which is easily constructed and operated by the radio dealer and costs at maximum \$10.

The device employs the familiar capacity bridge principle used in the more elaborate laboratory instruments for this purpose and utilizes the common A.C. 110 volt light line as a resonance indicator as shown in the illustration.

In order to place the bridge in operation it is first necessary to balance it perfectly. This is done by inserting a .001 microfarad fixed condenser at C 1, listening in on the phones and varying resistance R 2 and capacity C 2 until the A.C. hum becomes weak or disappears entirely. The bridge is then in proper balance and resistance R 2 may be left in this position permanently, all further adjustments being made with C 2. Resonance usually occurs when C 2 is practically at maximum.

In order to test a condenser of unknown value, remove the capacity C 2, used to permit preliminary adjustment and substitute the condenser to be tested. Then vary the dial of C 2 until resonance occurs, or until the A.C. hum disappears. At this point the dial setting of the variable condenser indicates the capacity of the condenser on test, the bridge circuit balancing when the variable standard and the condenser on test are of equal values. If the standard or C 2 is of the *straight line capacity* type and is equipped with a 0-100 degree dial, the capacity of the condenser may be read directly from these dial settings. In other

capacity is not above the maximum or below the minimum capacity of the standard. A calibrated condenser of the type which comes equipped with a dial calibrated in microfarads will greatly simplify capacity readings and may be used in the circuit.

A line fuse should be inserted in one of the A.C. leads, as a broken-down condenser at either C 1 or C 2 will short circuit the house current supply. If the condenser on test is open circuited, or has a broken connection between the terminal and the plates, it will be impossible to balance the bridge circuit.

## How to Reduce Transformer Voltages

Occasionally transformers are available whose windings are designed for higher voltages than are required for the operation of certain types of tubes, just as for instance storage batteries which are available must have the voltage cut down to lower values for operation of tube filaments. Usually a 7.5-volt winding originally designed for use with the 7.5-volt filament of a 210, 250 or 281 tube must be cut down to 5 volts for operation of a 112A, 171A or 280 tube.

In order to preserve the electrical balance of the winding it is best to reduce the voltage to the required value by using a resistance in each leg of the winding rather than by using a single resistor. To reduce the 7.5 volts of the winding to 5 volts for a 171A tube which draws .25 amperes at 5 volts, the voltage drop required will be 2.5 volts, the current drain is .25 ampere and the resistance required is therefore 2.5 divided by .25 or 10 ohms which can be obtained by inserting a resistance of 5 ohms in each leg. If the winding is to be used with two 171A tubes which together draw .5 ampere then the resistance will be 2.5 divided by .5 or 5 ohms requiring 2.5 ohms in each leg.

If the filament is to be used for a 280 tube which draws 2 amperes at 5 volts, the resistance required will be 1.25 ohms with .625 ohms in each leg. The resistor of course should be of sufficient capacity to carry the load.

## Why An Output Filter Should Be Used

Most of the discussions dealing with the advisability of employing an output circuit in the plate circuit of a power tube mention the fact that this procedure is necessary to prevent damage to the speaker.

It is just as important, however, aside from any possible damage to the speaker to use such an output circuit or "tone filter." The average speaker has a winding having an average resistance of about 1,500 ohms. If we use a 171A output tube which draws a current of 20 milliamperes when operated at a plate voltage of 180 volts, the drop in voltage which would be

caused by the introduction of the resistance of the speaker windings would amount to .020 ampere multiplied by the resistance of the speaker (1,500 ohms) or 30 volts. This means that it would be necessary to add another 45-volt block to make up for this loss in a "B" battery operated receiver or a loss in efficiency and quality if the additional voltage were not added because of the lowered "B" voltage applied to the plate of the power tube and because of excess grid bias for the lowered plate voltage unless the grid bias was reduced proportionately. In addition the wasting of .6 watts of "B" battery current would be far from economical.

## Spark Suppressors in Movie Dark Rooms

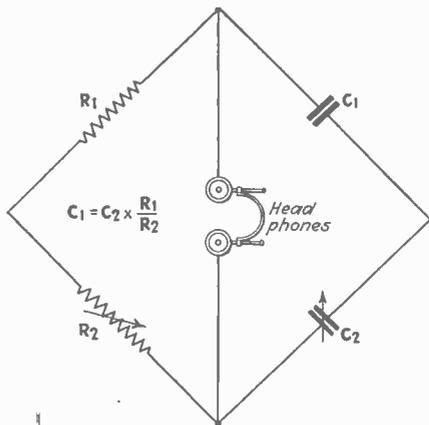
One of the unexpected sales fields for condensers is in spark suppression, according to George E. Palmer, general sales manager of the Dubilier Condenser Corporation. In fact, the field of spark suppression is steadily increasing, and the technique and production methods developed originally for radio condensers are coming into good use in many other industries.

"The usual spark suppression problem is mainly one of preventing interference with radio reception. With the super-sensitive radio sets of today," says Mr. Palmer, "a sparking motor brush or contact device can cause troublesome interference over a wide area. The problem is therefore of suppressing the radio-frequency energy set up by the electric spark, so that it will not give rise to parasitic radio waves either through space or over the electric power circuit.

"However, we have recently been called in on a different kind of spark suppression campaign, and that is in connection with sparking contacts in motion picture dark-rooms. Here the problem is not only the prevention of radio interference, but also protecting sensitive films against fogging by actinic light waves. In this connection we have actually succeeded in suppressing troublesome sparks on the one hand, and, in other cases, actually changing the actinic value of the spark so as to render them harmless to sensitized films, in the case of printing machines.

## Operate Power Tubes at Rated Voltages

In using tubes which consume appreciable power, some precautions must be taken, which are not necessary with smaller tubes. The best example to illustrate this point is the 250, which, when operated at maximum voltage, consumes 10 watts in the filament and 25 watts in the plate circuit. Under such conditions it is not advisable to attempt to use the tube "conservatively" by operating the filament at reduced temperature, because this may result in very unsatisfactory operating conditions for the tube. This is due to the fact that as the filament temperature is reduced, the internal



In the above circuit R1 is a 50,000 ohm grid type resistor. R2 is a 10-100,000 ohm variable resistor. C2 a .001 mfd. S-I-C variable condenser. C1 is the condenser under test.

words if resonance occurs at 50 on the dial, the condenser on test is half the capacity of the standard, or .0005 microfarads. If resonance occurs at 25 on the dial, the capacity of the condenser is one quarter of the maximum capacity of the standard, or .00025 microfarads.

Parallel or series condensers may be tested in this circuit provided the total

resistance of the tube increases, and the voltage applied by the rectifier will often rise to values which may result in damage to the power tube.

Instances in which a flash over has occurred have been traced to operation of the power tube filament at voltages as low as six volts instead of the rated voltage. When the filament temperature was increased to normal, the operation of the tube was entirely satisfactory.

The rule to follow in the operation of the larger power tubes is to operate the filament as close to the rated value as possible, this value being 7.5 volts with the 250 tube.

## Notes on the Design of Voltage Dividers for A.C. Tubes

In determining upon the proper design of a voltage divider for a power pack to be used with a given receiver, it is absolutely important to know the plate current drain of every tube used in the receiver. The correct value of plate current that should be drawn in any particular tube circuit depends on the effective plate voltage applied in the circuit.

The tube characteristic curves or charts give the current drain of a tube at zero grid bias for different values of plate voltage.

The tables of tube characteristics give the values of plate current at several values of grid bias and applied plate voltage, but it is a simple matter to figure the plate current for any given condition of plate voltage and grid bias voltage.

The effective plate voltage in the plate circuit of a tube is equal to the plate voltage (measured between the plate of the tube and the negative filament terminal) plus the product of the grid bias voltage times the Mu or amplification factor of the tube.

If we take a 226 tube, for instance, operated at zero grid bias with an applied plate voltage of 135 volts, the effective plate voltage will be 135 plus  $(0 \times 8.2)$  which equals 135 plus (0) or 135.

The plate voltage-plate current curves show that the plate current drain with an effective plate voltage of 135 volts would be approximately 20 milliamperes.

If the recommended grid bias of -9 volts is used with this applied plate voltage of 135, the effective plate voltage becomes 135 plus  $(-9 \times 8.2)$  equals 135 plus (-73.8) equals 61.2 volts, effective plate voltage.

### SIMPLIFIES CALCULATIONS

At this effective plate voltage the plate current is just six milliamperes, according to the plate voltage-plate current curves for zero grid bias.

When using the effective plate voltage to determine plate current, the use of the plate voltage-plate current characteristics at zero grid bias is equivalent to using special plate voltage-plate current curves plotted with the required grid bias.

Once the approximate effective plate voltage which should be used with any given tube is determined, it becomes a simple matter to keep the relationship of grid bias and applied plate voltage approximately correct.

All that is necessary is to take the recommended values of grid bias and plate voltage for any particular instance, such as the recommended grid bias of -9 volts for an applied voltage of 135 volts to give the necessary effective plate voltage of 61.2 volts required by the 226 tube. Then if we decide to use an applied voltage of

SERVICE REPORT		ORDER TAKEN
Name _____	Address _____	Date _____
City _____	Remarks _____	By _____
Make _____	Our Sale _____	Date _____
A-Battery _____	B-Battery _____	
C-Battery _____	Eliminators _____	
Rec. & Sprk. _____	Tubes _____	
Remarks _____		
CHARGES ON SERVICE AND MATERIAL C. O. D.		
_____		
_____		
This apparatus is now in satisfactory condition and above charges approved		
Work Done By _____	By _____	
Date completed _____		
Charges-C.O.D. _____		
Charges-G _____		

A very good example of a service report form. The dealer's name and address may be printed on the form also.

180 volts, the difference between the applied voltage (180), and the effective voltage (61.2) must equal Mu (amplification factor) times the grid bias. In this particular case, then,  $180 - 61.2$  that is 118.8 must equal the negative grid bias times Mu (8.2) or grid bias equals  $118.8$  divided by 8.2 equals approximately -14.5 volts.

In the same way it is possible to calculate the proper grid bias for any given intermediate value of applied plate voltage for the 226 tube. The same idea can also be applied to other tubes when the required effective plate voltage and amplification factor of the tube are known.

## Screen-Grid Tube Calls for Careful Engineering

Although the shielded grid tube has been mentioned in somewhat abated breath in radio experimental circles, it succumbs to

careful engineering and is quite docile when introduced in a radio set. In fact, a single screen-grid tube replaces at least two of the usual radio-frequency tubes and, in many instances, three such tubes. The fact that the A.C. screen-grid tube is still largely in the experimental stage has caused radio manufacturers for the most part to avoid the standard screen-grid tube, because of the demand for A.C. sets exclusively.

The battery-type screen-grid tube has proved entirely practical, when properly used. This tube is capable of satisfactory life and service, but it must be employed in a correctly designed circuit. Many amateurs and experimenters who have attempted to employ this tube have had sorry experience in the way of short life, due to excess voltage, improper grid bias and other errors. The tube is a boon to those who know how to use it, because of its delicate characteristics.

## Grid Suppressor Efficient Means of Feedback Control

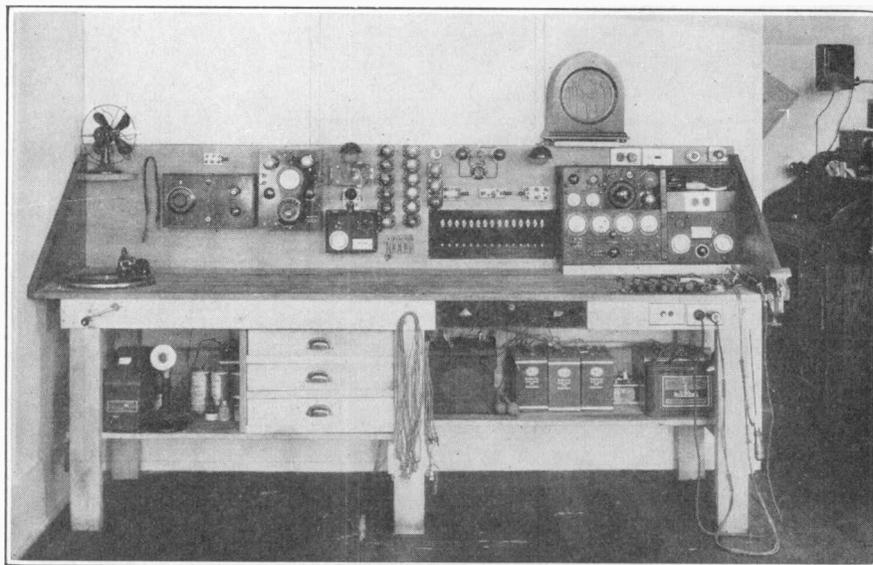
Although the 222 tube is proving very popular among experimenters this season, there are still many circuits in which it is not convenient to take advantage of the low inter-electrode capacity of the 222 tube to eliminate oscillation.

One of the simplest, most inexpensive and yet one of the most efficient means to use to avoid trouble from oscillation in radio frequency circuits in which 201A or 226 tubes are used as radio frequency amplifiers, is to use the grid suppressor method. This consists simply of inserting a fixed resistor having a value of from 200 to 800 ohms in the grid circuit of the radio frequency tubes, between the grid of the tube and tuning unit.

The use of such a resistance causes a decrease in amplification which is more pronounced at the higher frequencies, an advantageous feature, since the feed-back and consequent trouble from oscillation increases with frequency.

This method is easy to install in both new and old type receivers either battery or a.c. operated.

## Well Arranged and Adequately Fitted Test Bench



The illustrated test bench of Lyon Service Company, Syracuse, N. Y., enables the service man to test for opens, shorts, noises, measurements, modulation output, resonance, realigning gang condensers, current consumption, neutralization and many other tests.

# RCA RADIOLA 62



The big seller  
in fine  
cabinet  
receivers

## RCA RADIOLA 62—

*Cabinet model of new RCA Super-Heterodyne with Electro-Dynamic Speaker. A. C. house-current operation. Beautiful cabinet of walnut veneer with maple inlays.*

\$375 (less Radiotrons)



*This sign marks the leading dealer in every community*

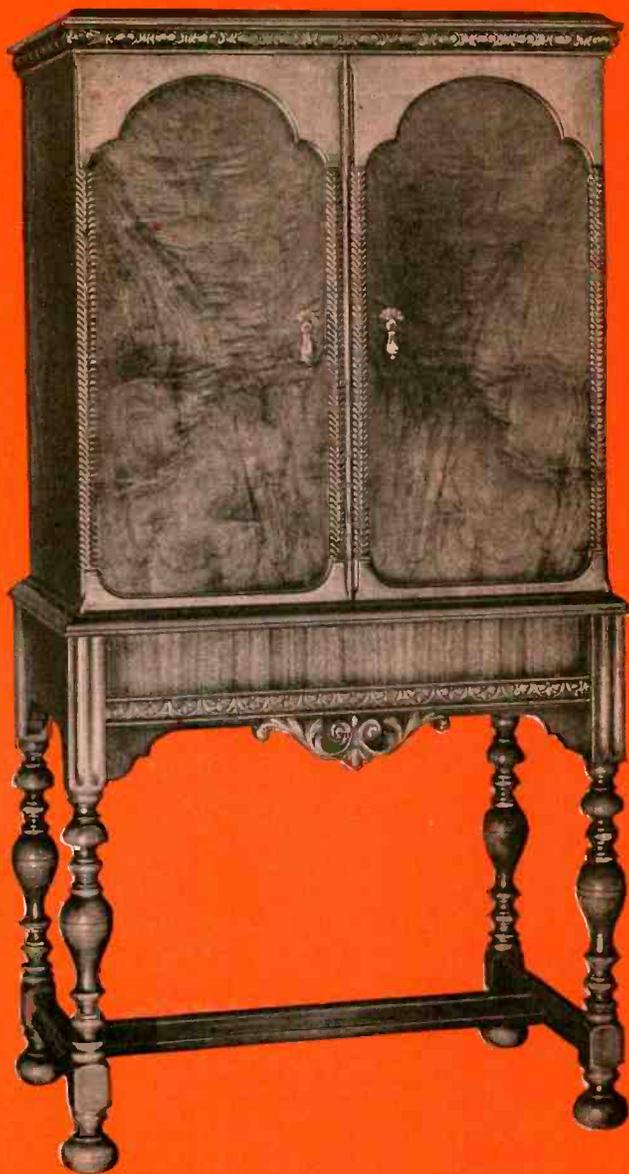
RADIO CORPORATION OF AMERICA • NEW YORK • CHICAGO • ATLANTA • DALLAS • SAN FRANCISCO

# RCA RADIOLA

MADE BY THE MAKERS OF THE RADIOTRON

# RCA RADIOLA 41

With RCA Electro-Dynamic Speaker—  
and equipped for  
either A. C. or D. C.  
operation



## RCA RADIOLA 41—

*Cabinet receiver (tuned-radio-frequency) with  
RCA Electro-Dynamic Speaker. Electric  
operation from house current. Walnut finish.*

A. C. \$215. (less Radiotrons)

D. C. \$230. (less Radiotrons)

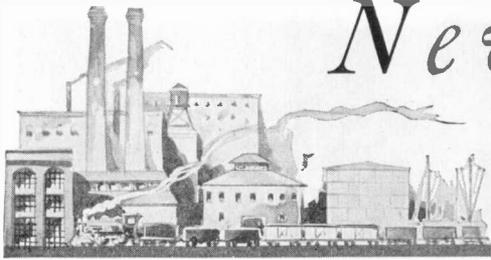


*This sign marks the leading dealer in every community*

RADIO CORPORATION OF AMERICA • NEW YORK • CHICAGO • ATLANTA • DALLAS • SAN FRANCISCO

# RCA RADIOLA

MADE BY THE MAKERS OF THE RADIOTRON



# New Products for

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

## New Columbia Radio-Phonograph Combinations

The Columbia Phonograph Company, 1819 Broadway, New York City, has brought out five new combinations, featuring the Columbia viva-tonal phonograph and the Kolster radio receiver.



MODEL 980 (Above)

The cabinet of this instrument is combination Tudor and Gothic in motif. The receiver uses four stages of radio frequency and one detector. Two 350 type tubes are employed in push-pull. The height is 48 inches and the width 31½ inches. Price, \$900.—*Radio Retailing*, March, 1929.

**MODEL 961**  
This model is encased in a Tudor period cabinet, finished in walnut. The record bins are on either side of the grille. The set has three stages of tuned radio frequency and one detector. A drop panel at the top reveals the phonograph and radio controls. It is 40½ in. high and 32½ in. wide. Price, \$600.—*Radio Retailing*, March, 1929.

**MODEL 902**  
An Italian type cabinet of mahogany veneer with overlays of walnut houses this combination. Two swinging vertical doors expose the grille, electric switch and volume control knobs. At either side of these doors is a drop style record bin, each holding 20 records. Price, \$525.—*Radio Retailing*, March, 1929.



**MODEL 950 (Above)**  
This model is a radio, phonograph and escriptorio all in one. The set is a six tube Kolster and the phonograph a Columbia electric viva-tonal model with the ten inch dynamic cone speaker above the radio panel. The turntable is in the drawer beneath the desk with a record bin on either side. It is 62 in. high and 25½ in. wide. Price, \$450.—*Radio Retailing*, March, 1929.



**MODEL 931 (Right)**  
This model is encased in a Spanish design cabinet of walnut veneer with overlays of rosewood, shaded and toned. The Kolster power cone is located in the center with a record bin on either side. It is 39½ in. high and 33½ in. wide. Price, \$395.—*Radio Retailing*, March, 1929.



Cabinets

Four new cabinets have been announced by the Radio Master Corporation, Bay City, Mich.

Model 117, illustrated, is built for Eveready set 3. It is made of mahogany and gumwood, finished to match the receiver. The list price is \$25. Model 113, a console for Eveready sets 1 and 2, is made of selected butt and striped walnut plywoods. Price, \$75.

Model 150, for Atwater Kent 46, is made of matched butt walnut, has sliding doors and is equipped with proper baffle for the A-K dynamic speaker. Price, \$75.

Model 160, is made for Radiolas 18 or 60, and is equipped with the Radiola 106 dynamic speaker. The cabinet is walnut and gumwood with doors of butt walnut and satinwood overlays. Price, with speaker, \$120.—*Radio Retailing*, March, 1929.

## Cabinet Speakers

The new model 15 cabinet speaker announced by the Rola Company, Oakland, Calif., is equipped with the same magnetic armature unit that is used in model 20, and has a full-floating diaphragm. The cabinet is of hardwood with walnut finish and is 10½ in. high by 12 in. wide by 6 in. deep. The intended retail price is \$22.50.—*Radio Retailing*, March, 1929.

## Eight-Tube Set

An eight-tube A.C. set with two power tubes in push-pull is now being made by the Sparks-Withington Company, Jackson, Mich. It has the Equasone circuit, a Magnavox dynamic speaker, and is encased in a cabinet of stump walnut. The intended retail price, complete with tubes, is \$189.50.—*Radio Retailing*, March, 1929.



## A. C. Heater Tube

The Y227-AC heater type tube, made by the Sonatron Tube Company, 108 W. Lake Street, Chicago, will, according to the manufacturer, heat up in from five to seven seconds. Another feature of this tube is the mica support bridge. The intended retail price is \$4. A new 171AC tube is also announced, to retail at \$3.50.—*Radio Retailing*, March, 1929.

## Sets and Reproducers

A line of reproducers and receivers under the trade name of "Century" has been brought out by the United Research Laboratories, Inc., 864 W. North Avenue, Chicago, Ill. The A.C. receiver, model 67, is a six-tube set and retails at \$85. The chassis only is \$77.50.

The reproducer may be had in two models. The "Purital" in a walnut cabinet, is \$48, and the De Luxe model is \$62.50. Chassis only, \$37.50.—*Radio Retailing*, March, 1929.

## Radio-Phonograph Cabinet

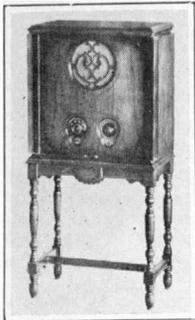
Illustrated is the latest addition to the line of cabinets of the Aston Cabinet Manufacturers, 1223 W. Lake Street, Chicago. It is equipped with a phonograph pick-up, which includes an induction type 110 volt A.C. 50-60 cycle electric phonograph motor, 12 in. turntable, electric pick-up, volume control, adapter, automatic stop, and change-over switch. The set compartment measures 10½ in. by 26½ in. by 13½ in. The intended retail price is \$195. Without phonograph equipment, \$125.

Another new model to accommodate the receiver only, is 48 in. high by 30 in. wide by 18 in. deep. The set compartment measures 13½ in. by 26½ in. by 13½ in. The intended retail price is \$105.—*Radio Retailing*, March, 1929.



# Dealers to SELL

All announcements appearing on these pages are published without advertising considerations of any kind whatsoever.

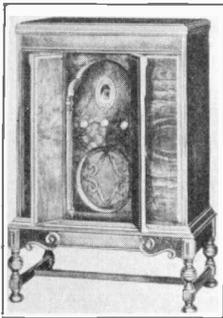


## Cabinet

A radio cabinet especially designed for Atwater Kent sets Nos. 40, 42 or 46, is being made by the Radio Cabinet Manufacturing Corporation, 666 Lake Shore Drive, Chicago, Ill. It is solid walnut on all exposed parts with a 5-ply walnut veneer on the front, top and sides, and an all walnut base. A heavy full-width baffle board is bolted to the cabinet. The intended retail price is \$44.75.—*Radio Retailing*, March, 1929.

## Radio-Phonograph Combination

The radio receiver of the new Majestic radio-phonograph combination made by the Grigsby-Grunow Company, 5801 Dickens Avenue, Chicago, has three stages of tuned radio frequency amplification, using R.F.L. balanced circuit; two stages of audio amplification, with two 250 type power tubes in the last stage. The cabinet is made of butt burl walnut. The intended retail price is \$265, less tubes.—*Radio Retailing*, March, 1929.



## Electric Motor and Electric Pick-Up

The electrical phonograph pick-up made by the L. S. Gordon Company, 1800 Montrose Avenue, Chicago, may be had in four types. Model B-1, with adaptor for UX and UY tubes, \$6.75; model B-2, for attachment to the phonograph tone arm and equipped with volume control and adaptors, \$11.50; model B-4, with tone arm, volume control, and two adaptors, \$12.50; and B-3, same as B-4,

but without volume control, \$8.75.

An induction type electric motor, which, according to the maker, will not hum when used in machines having electrical reproduction and amplification, is also available. It operates on 110 volts A.C. and comes complete with 12 in. turntable, automatic stop, speed control, etc. and lists at \$37.50.—*Radio Retailing*, March, 1929.

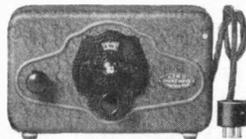
## Cabinet

Two features of the cabinet made especially for Atwater Kent set No. 46 by the Pooley Cabinet Company, Indiana Avenue and 16th Street, Philadelphia, Pa., are the baffle board of solid resonant wood and the shelf which allows the use of either the F-2 or F-2C speaker chassis. It has channeled corner posts, fluted legs, sliding doors and is finished in American walnut. The intended retail price is \$45.—*Radio Retailing*, March, 1929.



## Short Wave Converter

A short wave converter, the "Aero-Call," has been introduced by Aero Products, Inc., 4611 E. Ravenswood Avenue, Chicago. It may be used with both A.C. and D.C. sets and plugs into the detector socket. A special filter control is furnished to overcome motor-boating. The unit is compact, completely shielded and housed in a browntone cabinet, which is 9 in. by 5½ in. by 2½ in. The intended retail price, including three types of plug-in coils, is \$25.—*Radio Retailing*, March, 1929.



## Indoor Antenna

The Indoor Antenna Company, 1674 Main Street, Green Bay, Wis., is making the "Duo-Power," an indoor antenna. It is ornamental in design and will work on any set. The intended retail price is \$12.—*Radio Retailing*, March, 1929.



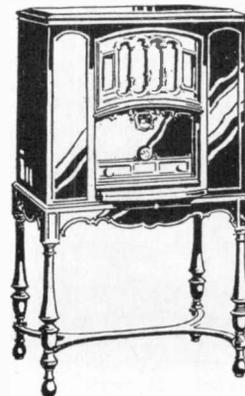
## New Temple Line

The new line being introduced by the Temple Corporation, 5253 W. 65th Street, Chicago, Ill., includes two seven tube A.C. sets and a radio-phonograph combination. Six 227 type tubes, a 250 power tube in the last audio stage and one rectifier are utilized. The console model has a 9 in. dynamic speaker and the highboy is equipped with a 14 in. speaker. The console model without doors lists at \$149, less tubes; the highboy model with doors retails for \$189, less tubes. The price of the combination has not been announced.—*Radio Retailing*, March, 1929.

## A.C. Receiver

The latest addition to the line of the Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., is model 638, a console with a built-in electro-dynamic speaker, which is mounted in a specially designed baffle compartment. The chassis is the same as model 636.

In the A.C. model the two 171-A tubes in the output stage are in multiple and in the D.C. model, four 171-A's are arranged in multiple and are located in the position occupied by the power transformer in the A.C. model. A jack is provided at the rear of the chassis frame into which the electro-magnetic pick-up plug may be left for permanent connection. The intended retail price for 105-125 volt, 60 cycle operation, is \$380, less tubes; for 105-125 volt 25-60 cycle operation, \$385, less tubes; and, for operation on 105-125 volts D.C. \$370.—*Radio Retailing*, March, 1929.



## New Lyric Line

Three new sets are now being made by the All-American Mohawk Corporation, 4201 Belmont Avenue, Chicago, Ill. Each has three stages of R. F. and two A.F. stages, utilizing four 226 type tubes, two 227's, one 280 and one 250.

Model 70, a table set, is incased in a cabinet of five-ply walnut veneer. The intended retail price, with dynamic speaker in a cabinet to match, is \$150.

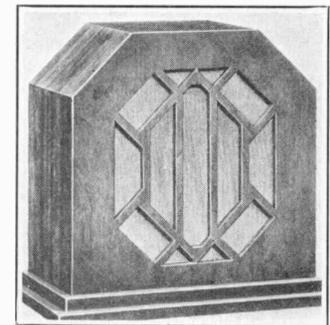
Model 73, a console, with dynamic speaker, in a five-ply walnut veneer cabinet, is \$157.50.

Model 75, a console with dynamic speaker, in a walnut veneer cabinet, 51 in. by 25½ in. by 14½ in., is \$185.—*Radio Retailing*, March, 1929.



## Radio Ground

A radio ground in the form of a cylindrical copper canister, 12 in. long and 4 in. in diameter, is being made by the Radio Research Laboratories, P. O. Box 570, Stockton, Calif. It is filled with a chemical formula which insures a positive and permanent ground, according to the manufacturer. The intended retail price is \$5.—*Radio Retailing*, March, 1929.



## Dynamic Speakers

Two new dynamic speakers have been introduced by the Cperadio Manufacturing Company St. Charles, Ill. The Batavia model, illustrated, is housed in a walnut cabinet, and retails at \$32.50. The Aurora model comes in a metal cabinet, clock style, and is \$28. The chassis, mounted complete in a baffle compartment, size 12½ in. by 12½ in. by 7 in., is \$18.—*Radio Retailing*, March, 1929.

# THIS MONTH in the *Radio Industry*

## 300 Manufacturers to Display New Lines at Trade Show

Four of the principal hotels in Chicago have been engaged for the third annual RMA trade show and fifth annual convention to be held this year in conjunction with the convention of the Music Industries Chamber of Commerce, the week of June 3. Owing to the great demand for exhibition space and the many new lines to be displayed, it has been found necessary to take over the Blackstone and Congress Hotels, in addition to the Stevens Hotel, for the RMA events. The music industry convention will be staged at the Drake Hotel.

Each day during the entire week there will be constant and varied entertainment for the industry guests. The premier event, the annual RMA banquet, will be held in the ballroom of the Stevens.

During the business meetings of the various affiliated associations there will be addresses by prominent industry figures.

Special trains will be run from several states. A private section of the Twentieth Century will be chartered from the Atlantic Coast; a special train run from the Pacific Coast and Northwest; and another from the South and Southwest is in prospect. Reduced rates from all points are now being secured.

## Music Industries Directors Approve Convention Plans

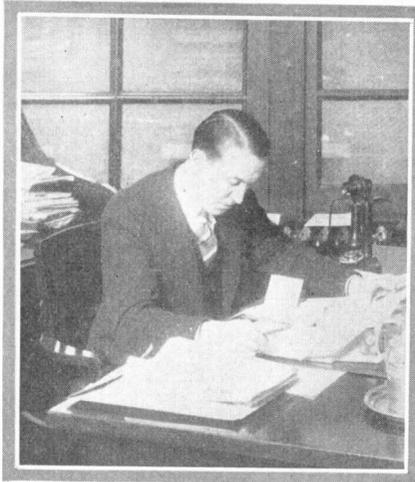
The convention plans recommended by the Executive Committee were approved at a recent meeting of the board of directors of the Music Industries Chamber of Commerce. The only change from the program of the past year or two will be a conference of all branches of the music industry and delegates of all the radio associations on Tuesday morning, at the Hotel Drake. President Irion of the Chamber will preside.

With regard to the tariff hearings, the board instructed the secretary and general manager to appear before the Ways and Means Committee to argue for such changes in tariff rates as the various associations in the Chamber might desire.

## Freshman Leases Third Factory

The new factory which the Chas. Freshman Company, New York City, has just leased in Clifton, N. J., has six acres of floor space on one floor. At the present time two factories, one in the Bronx and the other in Brooklyn, with an assembly plant in Chicago, are being operated, and the Freed-Eisemann Company is operating a factory in East New York. It is planned to consolidate the manufacturing operation of both these companies, which will result in more efficient and economical production.

THE ARCTURUS RADIO COMPANY, Newark, N. J., has changed its name to the Arcturus Radio Tube Company. There will be no change in the policy or personnel of the company.



## Prosperity Personified

"Bill" Mackle, executive secretary of the St. Louis Radio Trades Association, St. Louis, Mo., now has the seclusion of a private office—roll-top desk, coat rack, thermos bottle an' everything, in the enlarged headquarters of the association.

## Thordarson Acquires New Building

The manufacturing space of the Thordarson Electric Manufacturing Company, Chicago, has been increased over 100 per cent with the acquisition of an additional building adjoining its present factory. The combined factory site now occupies one-half a city block.

As a means of establishing closer contact with its manufacturers and jobbers in the Cleveland section, this company has opened a branch office at 520 Citizen's Building in Cleveland.

## Polymet Now in Coil Field

The entrance of the Polymet Manufacturing Corporation, New York, into the coil field has been made with the acquisition of the Coilton Electric Manufacturing Company, Easton, Pa. Under the new direction, it is planned to increase the size of the plant and add from 50 to 100 new double winding machines.

## Association Changes Name

In recognition of the fast growing radio industry and as an expression of the desire further to cement the close co-operation between the local electrical and radio industries, the Kansas City Electric Club has changed its name to the Electric and Radio Association of Kansas City. It is anticipated that with the new and broader name, a stronger organization will result.

THE TOBE DEUTSCHMANN COMPANY, Canton, Mass., has just released the first issue of its new house organ, "Filterette." This four-page bulletin deals with interference problems and how to treat them. A generous number of diagrams and photos illustrating the use of the various Tobe devices in this connection are included.

## New York and Chicago Chain Stores Consolidate

The merger of the Walthal Electric Corporation, New York City, and the Wextark Radio Stores, Inc., Chicago, will create, according to the announcement, what is believed to be the largest distributing and merchandising organization in the radio industry. The Walthal company operates eleven retail stores in metropolitan New York and the Wextark company was recently created to consolidate several retail radio companies. Additional units throughout the country will be opened as locations are obtained.

Associated with Walter Nussbaum, president of the Walthal chain, are Charles Izenstark, chairman, and Simon Wexler, president of the Wexler Radio Stores, Inc.

## Two Engineers Named to Fill Commission Vacancies

Two new members of the Federal Radio Commission were named by President Coolidge on February 11. They are Arthur Batcheller of Massachusetts, Federal Radio Supervisor with headquarters in New York, to succeed O. H. Caldwell; and Professor C. M. Jansky, Jr., of Minnesota, consulting radio engineer and associate professor in charge of radio engineering at the University of Minnesota, to succeed Samuel Pickard.

The reappointments of Ira E. Robinson of West Virginia, Harold LaFont of Utah and Eugene O. Sykes of Mississippi, were confirmed.

## I. H. Hartman Forms Cabinet Co.

The formation of the Radio Cabinet Manufacturing Corporation, Chicago, brings another cabinet manufacturer into the field. I. H. Hartman, who has had long experience in furniture merchandising, is president. The new company will make a line of cabinets for Atwater Kent sets and a plan of co-operation with A-K dealers is now being developed. Associated with Mr. Hartman is Saul Woolf, who is in charge of sales and advertising. Mr. Woolf was formerly president of a Chicago advertising agency.

## Ken-Rad Reorganizes

The Ken-Rad Tube and Lamp Corporation has been formed to take over the Ken-Rad Corporation and the Kentucky Electric Lamp Company, both of Owensboro, Ky. The latter is one of five companies holding licenses to produce, under General Electric patents, large tungsten lamps such as are used for general lighting purposes. Both companies will remain in the hands of the original organizers.

THE RADIO-ART CORPORATION, NEW YORK, has decided to market its line of cabinets nationally. Heretofore, this company's activities have been centered around metropolitan New York.

## Steinite Crusaders on Coast-to-Coast Tour

With their trip about two-thirds completed, the Steinite Crusaders, traveling from coast to coast to present the new line of Steinite sets at 44 jobber conventions, have reported tremendous success.

The Crusaders consist of Fred W. Stein, president of the Steinite Manufacturing Company, O. R. Coblentz, sales promotion manager of the Steinite Laboratories, and Fred Welch, of the engineering department.

The schedule of the balance of the trip is as follows: March 11, Memphis; March 14, Denver; March 18, Salt Lake City; March 20, Spokane; March 22, Seattle; March 25, Portland, Ore.; March 27, San Francisco; March 29, Los Angeles; and March 30, San Diego.

## United Air Cleaner Augments Its Personnel

R. J. Beatty, a prominent member of the steel industry, has purchased the interest of F. R. Nichols in the United Air Cleaner Company, Chicago. The new officers and directors are as follows: R. J. Beatty, chairman of the board; John T. Beatty, president and treasurer; F. F. Paul, vice-president in charge of sales and John Hockery, assistant treasurer.

This concern is introducing to the trade an electric phonograph motor and a phonograph pick-up. Its Sentinel division will soon announce two new radio receivers, it is understood, thus placing the company in a position to furnish complete radio-phonograph equipment with the exception of cabinets.

## Sonatron Reports Net Earnings

The net earnings of the Sonatron Tube Company, Chicago, for the month of December, 1928, after deducting all charges including Federal income tax, amounted to \$204,337.58, which is equivalent to 70c. per share on the 282,400 shares outstanding, as compared to earnings of about 46c. per share in November, 1928. For the nine months ending December 31, 1928, the total net earnings, after deducting all charges including Federal income tax, amounted to \$666,453.23.

## Tube Price Reductions

The Radio Corporation of America, E. T. Cunningham, Inc., DeForest Radio Company, Sonatron Tube Company, Sylvania Products Company and the Gold Seal Electrical Company, have reduced the prices on ten of their tubes. The one exception is the DeForest 401-A tube which remains at \$2.

The new prices are as follows: 226, \$2; 227, \$3; 280, \$3.50; 281, \$7.25; 112-A, \$2.50; 250, \$11; 199, \$2; 171-A, \$2.50; 200-A, \$3.50; and 201-A, \$1.40.

## New Temple Factory

A plant is now being completed in Chicago for the Temple Corporation, which recently merged with the Sleeper Radio & Manufacturing Corporation. The new factory is a one-story building of 70,000 square feet and is located at 5253 West 65th Street.

## Majestic Window Display Contest

A window display contest limited to Majestic dealers has been announced by the K. W. Radio Company, Inc., 350 Hudson Street, N. Y., Majestic distributor. The

rules are as follows: only one window may be entered but more than one picture of that window may be submitted; pictures must be accompanied by a short description of the window; windows may be set any time between Feb. 18 and March 16 and all entries must be in by March 20. The windows will be judged according to their sales value. The prizes are, first, \$100; second, \$75, and third, \$25.

## Allan Manufacturing Enlarges

Equipment sufficient to warrant the production of 12,000 tubes per day is being installed in the new tube factory of the Allan Manufacturing Company, at East Newark, N. J. This factory, in conjunction with the present plant at Harrison, N. J., will have facilities to warrant a daily output of about 15,000 tubes.

THE COLONIAL RADIO CORPORATION, Long Island City, N. Y., has been granted a license under the patents of the Radio Corporation of America, General Electric Company, Westinghouse and American Telephone and Telegraph Companies.

## Radio Shows and Conventions

May 20-25: N.E.M.A. Annual Meeting, The Homestead, Hot Springs, Va.

June 2-8: N.E.L.A. National Convention, Atlantic City, N. J.

June 3-8: R.M.A. Trade Show and Convention, Hotel Stevens, and Annual Convention of the Music Industries Chamber of Commerce, Hotel Drake, Chicago.

September 16-21: Fifth Annual Southwest National Radio Exposition, New Coliseum, St. Louis, Mo.

September 23-28: Sixth Annual Radio Worlds' Fair, Madison Square Garden, New York City.

October 21-27: Seventh Annual Chicago Radio Show, Coliseum, Chicago, Ill.

## Busy Signing Checks



In January, when the Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., first adopted the practice of paying salaries by check, George V. Lennon, treasurer, hardly had time for lunch. But, now, everything is different—an electric check signer has been installed.

## Majestic Promoting Home Demonstration Idea

A concentrated effort to encourage the dealer to get his sets into the home and to aid him in closing the sale after the demonstration, is being made by the Grigsby-Grunow Company, Chicago.

After the dealer figures his cost of doing business and knows how many sets he must sell to clear a profit, he hires the necessary number of salesmen, each working on an individual quota. A home demonstration board, which gives him a complete picture of his outside selling activities, is brought into service at this point. This board has been especially prepared for the campaign and will be sent upon request. On it is each salesman's name with his eight prospect cards hung opposite. As soon as a prospect is sold or has become inactive, the card is removed and a new one put in its place. The idea is to keep eight sets out on demonstration at all times.

To further the plan, this company is promoting "home acceptance" for its representatives by urging radio listeners to accept a free home demonstration so that they will be as welcome in the home as those selling brushes, etc. The sales promotion department is co-operating with every Majestic distributor and field representative in serving the dealer in this campaign.

## O. W. Ray Acquires Neon Tube Co.

With the purchase of the A. C. Neon Corporation, New York City, Oscar Willard Ray, who has been connected with the music and radio industries for fifteen years, has entered the radio tube business. He has been elected president of the concern and is now setting up its management policies. James Watters, who has been in charge of sales, continues as vice-president, and Walter Bullock, engineer, is secretary, while the treasurer is Herbert Asher.

## New De Forest House Organ

A monthly house organ called "The Grid" is now being published by the De Forest Radio Company, Jersey City, N. J. Explanations of sales policies, advertising and selling suggestions, will be covered from time to time. Personal items, editorials, and a column open to those who wish to express themselves on a pertinent subject, will be regular features.

## Open Sales Office

Bert Smith and A. J. Daniels, both of whom were recently associated with Aero Products, Inc., Chicago, have formed the Gotham Engineering and Sales Company at 50 Church Street, New York, acting as manufacturers' agents for the Potter Company, Precise Products, Inc., and Transcontinental Coil, Inc.

THE GREENVILLE CABINET COMPANY, Greenville, Ohio, recently purchased the stock and building of the Universal Cabinet Company of Greenville. The company will make cabinets for radio receivers. The incorporators are C. F. York, Adelbert Martz, George W. Mannix, Jr., J. G. Rogers and L. J. George.

THE GENERAL AMPLIFIER COMPANY, 27 Commercial Avenue, Cambridge, Mass., has been organized by A. R. Wilson, formerly with the engineering department of the General Radio Company. Power amplifiers suitable for public address systems will be made.

## Reviews of Recent Books

### Yearbook and Diary

The fifth annual edition of the yearbook and diary published by the Trader Publishing Company, Ltd., St. Bride's House, Fleet Street, London, E.C. 4, is an interesting and useful volume of general information of particular interest to the radio industry of England. The book is divided into various sections, chief among which are those devoted to trade information, technical data, "gramophones," and includes several complete lists of English manufacturers, manufacturers' agents, associations, and wholesalers. There is also a 1929 diary. The book sells for \$1.80.

### Methods of Retail Management

The McGraw-Hill Book Company, 370 Seventh Avenue, New York, N. Y., has made another addition to its list of books on the subject of modern retailing. "Methods of Retail Management," by William E. Koch, is a thorough study of retail management calculated greatly to increase the merchant's sales and profit-making capacity.

Its eighteen chapters cover such topics as: Sales Quotas, Stock Control, Expense Budgets, Merchandise Turnover, Inventories, Bookkeeping Systems and Buying. The price of the book is \$3.

### Practical Radio

The third edition of "Practical Radio" by James A. Moyer and John F. Wostrel, has been published by the McGraw-Hill Book Company, Inc., 370 Seventh Avenue, New York, N. Y. This is a 5x7½ in. book containing 378 pages. It brings up to date all the information contained in the two previous editions and takes up the whole subject of radio broadcasting in a comprehensive manner, explaining all the apparatus and the various functions of the associated parts. It is an excellent reference book for the service man. The intended retail price is \$2.50.

### A.C. Tubes—How to Use Them

A laboratory treatise on A.C. tubes of the present day entitled, "A.C. Tubes—How to Use Them," has been prepared by John F. Rider, and is being sold by the Radio Treatise Company, 270 Madison Avenue, New York, N. Y. This is in the form of a flexible paper cover loose leaf binder, the sheets being mimeographed on standard 8½x11 in. pages. It is very completely written, plentifully interspersed with circuit diagrams, and is an excellent reference book for the service man. The intended retail price is \$1.

### Storage Batteries Simplified

"Storage Batteries Simplified," by Victor W. Page, is published by the Norman W. Henley Publishing Company, 2 West 45th Street, New York, N. Y. This new and large 5 x 7½ in. edition contains 258 pages and is a complete non-technical treatise on the development of the modern storage battery, outlining the basis operation of the leading type. Methods of construction, charging, maintenance and repair are taken up. The intended retail price is \$2.

THE SULMOCK MANUFACTURING CORPORATION, Oakland, Calif., recently added 8,000 sq.ft. of space to its plant. Bushnell and Rayner, its sales agents, have closed their Oakland branch and opened new sales and display rooms in the Chronicle Building, San Francisco.



### Air-Minded

When Harley Miethé, (right), of the Miethé Motor Company, Georgetown, Ill., needs a Fada set pronto, he flies to Indianapolis, about a hundred miles, returning with the set in less than two hours and a half.

## RCA Profit for 1928 Is \$18,983,394

A preliminary statement of the operations for 1928 of the Radio Corporation of America, New York, has been issued. It is believed that the final figures will be approximately the same, according to the release.

Gross Income from Sales, Communications, Real Estate Operations and Other Income	\$100,530,720
Deduct: General Operating and Administrative Expenses, Depreciation, Cost of Sales, Patent Amortization, Estimated Federal Income Tax and Accrued Reserve for Year End Adjustments	\$81,547,326

Surplus profits for the year ended December 31, 1928..... \$18,983,394

### C. M. Tichenor Now with Freshman

Colonel C. M. Tichenor has been elected vice-president in charge of production of the Chas. Freshman Company, New York. He is well known in both the automobile and electrical fields, having been connected with Gray & Davis, the Pierce-Arrow Motor Company, and the Kellogg Switchboard and Supply Company.

Leo Reed, who has been manager of a number of retail radio stores in Pittsburgh for the past several years, has been made director of sales promotion.

THE DAVIS-HUNT COMPANY, Philadelphia, has been formed to take over the sale of Stromberg-Carlson products in that city. The partnership consists of Rufus Davis, who has been a salesman for the Stromberg-Carlson Manufacturing Company in the Philadelphia territory for twelve years, and Clifford Hunt, who comes from St. Louis, where he has had considerable experience as a retail radio salesman.

THE ST. LOUIS RADIO TRADES ASSOCIATION, St. Louis, Mo., is actively engaged in working for the enactment of a proposed city ordinance and state law prohibiting the destroying, removing, concealing, altering, etc., of the manufacturer's original number or serial number or other distinguishing mark on radio receivers or other radio devices, and electrical appliances.

## Personnel Changes

E. D. LASHBROOK has been made advertising manager and E. O. Hobbs appointed sales promotion manager of the Capehart Automatic Phonograph Corporation. Mr. Lashbrook has been advertising manager of the Holcomb & Hoke Manufacturing Company of Indianapolis for the past eight years.

ALFRED HAND, who has been associated with Thomas A. Edison, Inc., for eight years is now advertising manager of the radio-phonograph division.

HAL P. SHEARER, formerly general manager of the Splittorf Radio Corporation, has assumed duties as vice-president and general manager of the Sleeper Radio & Manufacturing Company. A. N. Clifton formerly with the Alden Manufacturing Company has been made sales manager.

G. A. THEOBALD, who has in the past been connected with the Western Electric Company and Bell & Howell is now with Bremer-Tully as factory manager.

FRANCIS X. BURNS has severed his connection with the Valley Electric Company of St. Louis to become assistant sales manager of the Associated Cabinet Factories in the same city.

A. L. ASHBY has resigned as assistant general attorney of Westinghouse to become general attorney of the National Broadcasting Company.

MARTIN COHN, formerly chief engineer and production manager of the Mayolian Corporation, New York, is now president and chief engineer of the Botland Manufacturing Company, New York.

EDWARD T. MAHARIN, who has been special representative for CeCo for the past year, has been made sales and field manager.

MERWYN HEALD, who has held a position in the production and research laboratory of the Thordarson Company in Chicago, has been made chief engineer.

GUY C. KOWFELDT has been made district sales manager for De Forest in Minneapolis and E. F. Coglin has been given the same authority in Boston.

NORMAN H. STUMPH has been promoted from a position in the factory of the United Reproducers, to a sales position, and George Dodson has been transferred from the New England territory to Metropolitan Chicago. Mr. Dodson's place is being filled by Charles J. Jones.

R. B. ROSE has been appointed general manager of Landay Bros., Inc., in New York.

W. J. VAN LIEW has been made general manager of Steinite's three factories in Atchison, Kan. He started his business career with Fred W. Stein, inventor of the original Steinite set, seven years ago.

WILLIAM H. OGLE, formerly in charge of production and stores, has been made plant superintendent of the Federal Radio Corporation.

FRANK A. RAFFERTY, former director of the Radio Research Laboratories of Villanova College, has joined Zenith's staff of research engineers.

ROBERT G. KITTLE, who has been associated with the Benjamin Electric Company for many years, is now with the Paramount Manufacturing Company, Newark, N. J.

EARL S. TEMPLE, formerly with the French Battery Company has joined Fada's sales force, covering the metropolitan New York district.

HAROLD BERMAN is now with Caswell-Runyan on the sales staff, traveling the east coast.

## Three Million Sets in 1929 Slogan of FRTA Meeting

Michael Ert was elected to the presidency of the Federated Radio Trade Association at its third annual convention held at the Statler Hotel, Buffalo, N. Y., February 18 and 19. Mr. Ert is past-president of the Association Section of Federated, president of the Wisconsin Radio Trade Association and a distributor of radio products in Milwaukee. He succeeds Harold J. Wrape of St. Louis, who has headed this association since its inception in 1926. Mr. Wrape will occupy the newly created chair of honorary chairman of the board.

### Other Elections

The results of the elections for a president of each of the four sections were as follows:

Radio Associations Section—J. Newcomb Blackman, president, Blackman Distributing Company, New York City; Radio Wholesalers Association—Peter Sampson (re-elected), Sampson Electric Company, Chicago; Radio Manufacturers Representatives Association—John Redell, Chicago; and, Radio Retailers Association—H. M. Steussy, Milwaukee.

These gentlemen, with the following group directors, will comprise the governing board of directors for the ensuing year: Radio Associations Section—Herbert C. Wall, Ft. Wayne, Matt Kaemerer, St. Louis, Michael Ert, Milwaukee, Joe Lazar, Chicago, H. H. Cory, Minneapolis; Radio Manufacturers Representatives Association—N. E. Hill, St. Louis, E. E. Healy, Buffalo, G. Spencer Pritchard, Chicago, H. J. Arens, Indianapolis, James M. Bateman, Cleveland; Radio Retailers Association—Julian Sampson, St. Louis, John M. Kibbler, Buffalo, Charles T. Naddy, Columbus, B. M. Furnas, Dayton, Elmer C. Metzger, Buffalo; Radio Wholesalers Association—James Aitken, Toledo, W. H. Roth, Milwaukee, Harry Alter, Chicago, Fred Wiebe, St. Louis, Ernest Ingold, San Francisco.

Harry Alter, Chicago, and H. H. Cory, Minneapolis, were re-elected to the offices of treasurer and secretary, respectively.

### Notables Address the Convention

The gathering at Buffalo was noteworthy from a standpoint of attendance and genuine interest displayed. Over 500 registrants listened to addresses by Merlin H. Aylesworth, president of the NBC; Bond P. Geddes, executive vice-president of the RMA; William Hedges, president of the NBA; Judge Van Allen, counsel for RMA; and the chief executives of Federated.

A bright picture of the growth of international amity through the development of trans-oceanic broadcasting was painted by Mr. Aylesworth.

"Three million set sales for '29' should be the slogan for the radio industry this year," declared Ray V. Sutcliffe, western editor of *Radio Retailing*. He stated that this bogie would represent but a 20 per cent increase over actual sales for 1928. "And we have a potential buying market of 23,000,000 homes to shoot at."

Group meetings occupied much of the two-day session. These discussions, while covering such vital subjects as trade-ins, financing plans, removal of serial numbers from sets, legislation, the broadcasting situation, credits and cost of distribution and of retailing, were all for the ultimate purpose of accomplishing—profitably—"Three million sets in 1929," the commonly accepted slogan of the convention.

Indicative of the close co-operation which is developing between the RMA and the



**MICHAEL ERT**  
Newly Elected President of Federated

FRTA is the invitation from the RMA directors inviting the board of the Federated to attend its meeting at Hot Springs, Va., on March 7 and 8.

A resolution was also adopted at this meeting endorsing the legislative policies of the NBA, which shortly will be presented at Washington. The Federation also favored the passage of state and national laws "prohibiting the concealing, changing or effacement of manufacturers' serial numbers or identification marks upon machines or articles of merchandise (radio sets)."

## Radio Commission Extended to Dec. 31

A compromise measure, extending the life of the Federal Radio Commission until December 31, 1929, instead of March 16, 1930, has been passed by the Senate. The House, having already passed the original radio bill, accepted the compromise date. Thus broadcasting control remains with the Commission until the end of this year. If no further legislation is enacted before that time, the administration of radio affairs may revert to the Department of Commerce.

## Talking Machine & Radio Men Plan Dance April 1

The annual dinner-dance of Talking Machine & Radio Men, Inc., will be held at the Hotel Commodore, New York City, on April 1. The entertainment committee has secured fifteen dance orchestras to supply the music during the evening's vaudeville offerings. The personnel of the various committees, all under the direction of Byron R. Forster, includes: Chester Abelowitz, Frederick P. Altschul, Henry Benjamin, M. Frank Burns, Harry Fox, Albert Galuchie, William Geng, P. Gillig, David F. Goldman, Otto Goldsmith, Charles Goulding, O. P. Graffen, Benjamin Gross, E. W. Guttenberger, Albert Kendrick, Maurice Landay, Philip Masters, Joseph H. Mayers, S. Platek, Robert M. Richter, T. G. Rockwell, Mortimer Salzman, Irving Sarnoff, William Schneider, Sidney Schutter, George J. Seedman, George Seifert, Benjamin Selvin, Samuel Semel, Jules Smith, Lloyd Spencer, Edward Strauss, A. H. Suchoff, William H. Topping, Arthur A. Trostler, Leonard C. Welling.

THE SONATRON TUBE COMPANY, owing to its increased western business, has acquired a new factory location at Central Park and Filmore Avenue, Chicago. The maximum output for this plant will be 40,000 tubes a day.

## McGraw-Hill to Serve Aviation Industry

*Aviation*, the oldest aeronautical magazine published in this country, has been purchased by the McGraw-Hill Publishing Company, Inc., and will hereafter be issued as a McGraw-Hill magazine. *Aviation* will be issued weekly, under the supervision of Earl D. Osborn who has been publisher of the magazine for several years.

The aeroplane industry is assuming such broad significance in transportation and air mail, and is becoming useful in so many ways to other industries served by McGraw-Hill papers that it was deemed essential that McGraw-Hill assume responsibility for serving the aviation industry, in order that the aeroplane's influence upon American business and industry might be efficiently reflected through the medium of a McGraw-Hill publication.

In radio, for instance, the aeroplane finds a close ally. Many radio devices are used as signals to guide planes to landing fields, radio beacons are used between the field and the plane, radio transmitters and receivers are the only forms of communication between planes and the earth, and radio manufacturers and jobbers are often using planes for quick delivery of merchandise.

### New Power Tubes

A new power amplifier tube for use in the last audio stage for supplying large undistorted output to the speaker, is announced by the Radio Corporation of America, 233 Broadway, New York City. Radiotron UX-245, as the tube is designated, is capable of delivering a power output equal to that of the UX-210, but at a plate voltage not exceeding 250 volts. It is not interchangeable with the UX-171A or any other power amplifier and can be used only with apparatus especially designed for it. A coated ribbon filament is used. The characteristics are: Plate voltage, 180 to 250 volts; negative grid bias, 33 to 50 volts; plate current, 26 to 32 milliamperes; plate resistance, 1950 to 1900 ohms; mutual conductance, 1800 to 1850 micromhos; amplification factor, 3.5; undistorted power output, 750 to 1600 milliwatts; filament, 2.5 volts, 1.5 amperes; max. overall length, 5 $\frac{1}{2}$  in.; diameter 2 $\frac{3}{8}$  in.; and standard large UX base. Intended retail price \$4.25.

E. T. Cunningham, Inc., 370 Seventh Avenue, New York, also announces the CX-345 which is similar in characteristics and price to the above.

### Form Argon Tube Corporation

The factory of the newly organized Argon Tube Corporation, 102 Livingston Street, Newark, N. J., is now in full production. John E. Johnson is president; A. Irving Witz of the Gray Sales Company, New York, is vice-president and sales manager, and Charles G. Kleinwaks has resigned his position as treasurer of the K & H Electric Corporation, to become secretary and treasurer.

THE EBERT FURNITURE COMPANY, Red Lion, Pa., which has been in the furniture manufacturing business since 1854, is now making a line of radio cabinets. Martin J. Polikoff and A. Irving Witz have been appointed national sales agents for the Ebert line.

THE JENSEN RADIO MFG. COMPANY has transferred its experimental laboratory and staff from Oakland, Calif., to the main office at Chicago.

# News of Jobbers and Distributors

## Proudfit Co. Takes Dealers To Majestic Factory

One hundred and twenty-five Majestic radio dealers from all sections of Nebraska and Kansas recently paid a visit to the factory of the Grigsby-Grunow Company in Chicago. The trip was made through the co-operation of the R. S. Proudfit Company, Lincoln, Neb., Majestic jobber, and the factory. A seven-car special train took the retailers to Chicago.

The group went through the factory and then had luncheon. In the afternoon, buses were provided and the dealers were shown the sights of Chicago. The same evening they were entertained at a banquet at the Davis Hotel.

## L. E. Noble Guest at Phila. Meeting

The Federal dealer meeting called by R. E. Tongue & Bros., Inc., Philadelphia, had as its guest of honor, Lester E. Noble, president of the Federal Radio Corporation. Mr. Noble outlined his company's policy with regard to protected trade area for its dealers. The new "K" series receivers were shown to the hundred retailers present. R. E. Tongue, Sr., welcomed the delegates. Among the speakers were R. E. Tongue, Jr., W. R. McAllister, Federal sales manager, and Paul Godley, widely known radio amateur. A dinner and two hours of entertainment closed the evening.

## Zenith Distributors Meet at Plant

A two-day conference of wholesalers, concerning a special national newspaper campaign concentrating on automatic tuning, was recently held at the plant of the Zenith Radio Corporation, Chicago. It was announced that the new line will be ready for the market in May. Plans for extensive expansion of the present manufacturing facilities are now being made.

THE BENWOOD-LINZE COMPANY, St. Louis, Mo., has appointed Bernard S. Tucker as general sales manager and made Emil A. Reutner promotional sales manager. Mr. Tucker, who joined the organization a few months ago in the sales department, was formerly connected with the Sherman-Clay Company and the California Victor Distributing Company. Mr. Reutner was formerly with the Burgess Battery Company as territorial manager.

THE NORTH WARD RADIO COMPANY, Newark, N. J., Majestic distributor, recently held a window display contest, using its "Herb and Bernie Broadcasting" cards to announce it. A gratifying number of windows were entered and the first prize of \$50 was awarded to the Hurd Radio and Electric Shop, Elizabeth, N. J.

THE HARTEN-KNODEL DISTRIBUTING COMPANY, Cincinnati, Ohio, is now Zenith distributor in that territory. A display room along Egyptian lines is being featured by this company.

HUDSON-ROSS, INC., Chicago, Crosley-Amrad distributor, recently held its annual dealer meeting with over five hundred in attendance. Following the afternoon business meeting, was a banquet and frolic, at which Robert Himmel, president, was pre-

sented with a Packard sedan. Charles S. Himmel, vice-president, acted as master of ceremonies and the factory was represented by H. Curtiss Abbott, William H. Lyons and Jack Dalton.

## 20th Century Corp. Enlarges Staff

Several additions have been made to the personnel of the Twentieth Century Radio Corporation, Brooklyn, N. Y. J. F. McGrath has been made sales manager. He has been with the company for five years, filling successively the positions of assistant to the credit manager, credit manager, and now sales manager. John Campi, formerly with the Wholesale Radio Equipment Company, New York, will take his place.

The following men have been added to the sales force: R. J. Walsh, Theodore Wright, III, H. A. Jacobs, A. G. Autenrieth and Claude F. Williams.

## Penn Phonograph Opens New Branch

In order to serve dealers in the central Pennsylvania district, the Penn Phonograph Company, Philadelphia, Majestic distributor, has opened a branch at 123 South Second Street, Harrisburg, Pa. The event was celebrated with a meeting, banquet and show. T. W. Barnhill, president, D. Wilson Mayberry, general sales manager, Earl G. Dare, business manager, and Troy B. Wildermuth, Harrisburg branch manager, were among the speakers.

THE APOLLO RADIO CO., INC., Steinite distributor, held its first annual banquet at the Robert Treat Hotel on February 18, attended by 500 dealers. David Slobodien, president, welcomed the guests and Julian Jacobs acted as toastmaster. Among the speakers were Commissioner Brennan, head of Public Safety in Newark, and O. R. Coblentz from the Steinite factory.

## Majestic Radio Corp. Holds Dealer Convention

Over 200 Majestic dealers in the Kansas City, Mo., territory attended the afternoon session of the convention held by the Majestic Radio Corporation, and about 465 were present at the evening meeting, which included a dinner and entertainment.

Following the style show, Irving Alter, president of the Majestic Radio Corporation, delivered an address on "Production," and A. E. Warr, the newly appointed sales promotion manager, talked on the company's advertising plans for the coming year. Addresses were also given by representatives from the factory.

## Sylvania Holds Two Jobber Meetings

Two sales conferences of the distributors of the Sylvania Products Company, Emporium, Pa., were recently held. The meeting of the eastern division took place at the Hotel Roosevelt, New York, and that of the central and western distributors at the Hotel Stevens, Chicago. Plans for increased advertising and promotional work and more extensive broadcasting activities were announced.

THE BROOKLYN RADIO SERVICE CORPORATION, Brooklyn, N. Y., held its first annual dinner and dance on February 24, sponsored by the Brooklyn Radio Employees Association. Among those attending were Benjamin Ginsberg, president, Louis Rubenstein, and Harry G. Mattern, chairman of the entertainment committee.

J. NEWCOMB BLACKMAN of the Blackman Distributing Company, New York, was tendered a testimonial dinner at the Hotel Pennsylvania, on the occasion of his appointment as exclusive distributor of Thomas A. Edison phonograph and radio products.

## Art Haugh Proves He Means What He Says



"An idea or an operation," is the ultimatum issued each jobber attending the weekly sales "clinics" of the Peerless division of United Reproducers, Inc., Rochester, N. Y. In Dave Trilling's case, it seemed necessary to operate. Reading from left to right are: Arthur Willis, the Willis Co., Canton, Ohio; John Minton, Peerless; Frank Hutchins, Peerless; Max Fishman, Keystone Radio Co., Pittsburgh; Cal Zamojski, Jos. M. Zamojski Co., Baltimore; John S. Maxson, J. S. Maxson Co., Homer, N. Y.; Selden May, president of Peerless; Herman Schultz, H. C. Schultz, Inc., Detroit; Ed Brown, Peerless; "Dr." Art Haugh, vice-president of Peerless; A. J. Kies, Crescent Elec. Supply Co., Dubuque, Ia.; Hollis Vaughan, Wahn Radio Co., Boston; Charles Jones, Peerless; Milton Bickford, Peerless; Fred Schuber, Rochester Auto Parts & Radio Corp., Rochester; The mysterious Mr. X; C. Gomprecht, Trilling & Montague, Philadelphia, taking Mr. Trilling's pulse; A. Z. Heller, York Supply Co., Dayton; Tony Lopez, Peerless; Herb Pollock, Peerless; and, Dave Trilling of Trilling & Montague, Philadelphia, on the operating table.

These specifications are a part of "Radio Retailing's" editorial service. Representation is entirely free of charge. Additions and corrections are always welcomed in order that our records may be at all times complete.

# Specifications of PORTABLE and AUTOMATIC Phonographs

## Portable Phonographs

Name and Address of Manufacturer	Model Number	List Price	Material of Case Cover	Colors Available	Record Capacity	Type of Motor	No. 10 In. Records Plays at 1-Winding	Electric or Mechanical Pick-up	Overall Dimensions inches	Weight in pounds
<b>Allen-Hough Mfg. Co.</b> 14th and Clark Sts. Racine, Wis. Trade Name—ALLEN	22	\$17.50	Fabrikoid	{ Red, black, blue, brown }	10	1-spring	2	Mechanical	14½x11½x8	15
	25	20.00	Fabrikoid	{ Red, blue, black }	15	1-spring	2	Mechanical	16x7½x11½	16½
	8	25.00	Fabrikoid	{ Red, blue }	18	2-spring	3	Mechanical	17½x8½x14	20½
	Rotrola	35.00	Fabrikoid or walnut		0	Electric		Electric	14x12x6	12, 14
<b>Astral Radio Corp.</b> 1812 Chestnut St., Phila., Pa.	1	35.00	Wood	{ Red, blue, black, Brown }	15	1-spring	2	Mechanical	11x11x7	15
	2	12.50	Wood		None	1-spring	2	Mechanical	8x8x6	7
<b>Berg A. T. &amp; S. Co., Inc.</b> Long Island City, N. Y. Trade Name—ARTONE	829	15.00	Fabrikoid	{ Black, blue brown, grey, red }		Spring	2 to 3	Mechanical	15x12½x8½	13
	529	20.00	Fabrikoid			Spring	2 to 3	Mechanical	15½x13½x8½	15
	229	25.00	Fabrikoid			Spring	3 to 4	Mechanical	17½x13½x9	20
	Grand	35.00	Fabrikoid			Spring	3 to 4	Mechanical	17½x13½x9½	25
<b>Brunswick-Balke-Collender Co.</b> 629 S. Wabash Ave., Chicago, Ill. Trade Name—PANATROPE	106	25.00	Fabrikoid	{ Black, blue, Brown }	10	1-spring	2	Mechanical	8x15½x12½	
	108	35.00	Fabrikoid		10	2-spring	3	Mechanical	8x16½x15	
<b>Caswell Mfg. Co.</b> St. Paul Ave. at 10th St. Milwaukee, Wis.	12	12.50	{ 3 ply veneer }	{ Black, brown, blue, red, green }	7	Spring	1½	Mechanical	4½x11½x14	11
	Melody	15.00			18	Spring	1½	Mechanical	7x11½x14	13
	Gypsy	20.00			18	Spring	2	Mechanical	7½x12½x15½	16
	Monarch	25.00			18	Spring	1	Mechanical	9½x13½x17½	22
	Aristocrat	35.00			18	Spring	1	Mechanical	10x13½x17½	25
<b>Columbia Phonograph Co.</b> 1819 Broadway, N. Y. C. Trade Name—COLUMBIA *Synchronous motor	120	25.00	Fabrikoid	{ Dark brown, black, rhino grain }	6	1-spring	3	Mechanical	9x12½x16½	17½
	163	50.00	Fabrikoid	{ Gray, alligator, Pigskin }	8	1-spring	3	Mechanical	8½x13½x17½	32
	175	60.00	Fabrikoid		8	*Electric		Mechanical	8½x13½x17½	32
<b>Edison Inc., Thos. A., Orange, N.J.</b>				Information not available at this time.						
<b>Lifton Mfg. Co.</b> 40 West 20th St., N. Y. C.				Information not available—New models soon to come out.						
<b>Plaza Music Co.</b> 10 West 20th St., N. Y. C. Trade Name—PAL	Gen	13.50	Fabrikoid	{ Red, blue, brown, black, green }	12	Spring	3	Mechanical	7½x11½x13½	10½
	Jr.	15.00	Fabrikoid		12	Spring	3	Mechanical	7x11½x14½	12
	Standard	25.00	Fabrikoid		12	Spring	4	Mechanical	7½x11½x15½	15½
	Supreme	30.00	Fabrikoid		12	2-spring	4	Mechanical	7½x12½x16½	17½
	Regent	27.50	Fabrikoid		12	2-spring	4	Mechanical	12½x16½x8	17½
<b>Sonora Phonograph Co.</b> 50 West 57th St., N. Y. C. Trade Name—SONORA	A-10	30.00	Morrocotine	{ Brown, blue }	6	Spring	2	Mechanical	13x17½x5½	21
<b>Starr Piano Co.</b> Richmond, Ind. Trade Name—STARR	55	25.00	Leatherode	{ Black, gray, wine, blue* }	15	Spring	2	Mechanical	8½x11½x15½	18
	56	25.00	Leatherode		15	Spring	2	Mechanical	8½x11½x15½	18
<b>Victor Talking Machine Co.</b> Camden, N. J. Trade Name—VICTOR	2-25	25.00	Fabric	{ Black }		Spring		Mechanical	7x16½x14½	23
	2-55	35.00	Fabrikoid	{ Blue, brown }	10	Spring			7½x16x14½	24

## Automatic Phonographs

Name and Address of Manufacturer	Model Number	List Price	Operating Voltage and Frequency	Number of Records It Plays	Both Sides of Record Played Automatically	Built-in Coin Collector	Type and Number of Tubes Used	Overall Dimensions inches	Shipping Weight, Pounds
<b>Capehart Automatic Phono. Co.</b> Huntington, Ind. Trade Name—ORCHESTROPE	28F	1,250.00	110v. 60 cy.	28	Yes	{ Built-in at \$20 extra }	{ 1—281, 2—226, 2—210 or 250 }	45x24x49	400
	Auditorium	1,495.00	110 v. 60 cy.	28	Yes			45x24x49	400
	Park	1,250.00	110 v. 60 cy.	28	Yes			45x24x49	400
<b>Gabel's Entertainer Co.</b> 1200 W. Lake St., Chicago, Ill. Note—Anyone of 24 records can be selected at will.	A	700.00	{ 110v. A.C. or D.C. motor as desired }	24	No	Yes	{ Mechanical reproduction }	64x38x21	
	B	800.00		24	No	Yes		62x38x21	
	C	800.00		24	No	Yes		62x38x21	
<b>Holcombe &amp; Hoke</b> 1545 Van Buren St. Indianapolis, Ind. Trade Name—ELECTRAMUSE	Grand Super-Tone		{ 110v. 60-25-40 also D.C. cy. }	10	No	Yes	{ 1—226, 2—210 1—281 }	26x38x65	400
				10	No	Yes		26x38x65	400
<b>Seeburg Piano Co., J. P.</b> 1508 Dayton St., Chicago, Ill. Trade Name—AUDIOPHONE	Non-amp.	\$885.00	{ 110v. 30-40-50-60 cy. }	8	No	Yes	{ 2—210, 1—226, 1—281 }	26½x41½x56½	550
	Amplified	1,250.00		8	No	Yes		26½x41½x56½	550
Note—Operator can also select and play any one of these 8 records and also repeat one as many times as is desired.									
<b>Victor Talking Machine Co.</b> Camden, N. J. Trade Name—ORTHOPHONIC ELECTROLA	11-25	550.00	} Further information not available at this time.						
	11-50	950.00							
<b>Western Electric Piano Co.</b> 850 Blackhawk St., Chicago, Ill. Trade Name—SELECTRAPHONE	A	1,250.00	110 v. 60 cy.	8	Yes	Yes		26½x41½x59½	500

# Portable

*"Portable Music" offers a simple and economical means of boosting hot weather volume—how several dealers are making money with portables*



**W**ITH the approach of the summer months, the radio trade casts about for allied lines with which to increase hot weather volume.

Portable phonographs is one of the lines which many radio merchants have successfully merchandised during the summer, because of the distinct appeal of these instruments in providing "portable music" for many hot weather activities.

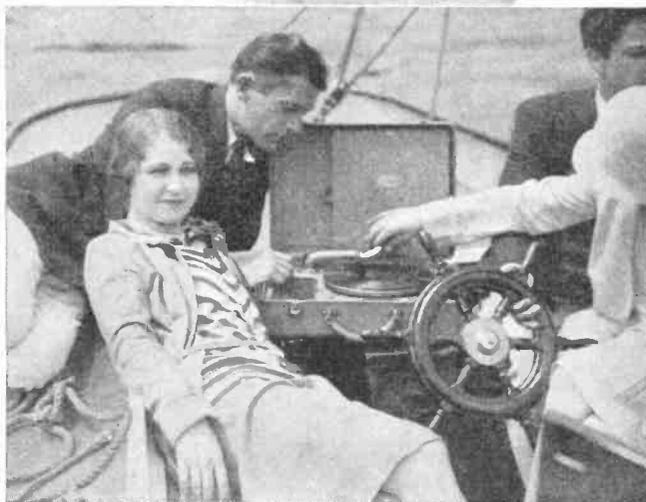
One of the most active merchandisers of portable phonographs in Toledo, Ohio, is the United Music Store. Last year it sold 483 of these instruments. It features them in "mass" window displays and in its newspaper copy, not, primarily, because of the direct profit they produce but because each sale, average price \$16, means double that sum, during the following 12 months, in records.

Five hundred new customers a year, from this source, means not less than 2,500 store calls. And 2,500 "exposures" to an attractive array of radio receivers means, it was stated, not less than 60 orders for radio receivers otherwise unobtainable.

United finds that special offers for a limited time, which include half-a-dozen records without extra charge, materially stimulate portable sales. The records used are taken from its slow-moving stock. This practice helps keep record stock clean and up-to-date.

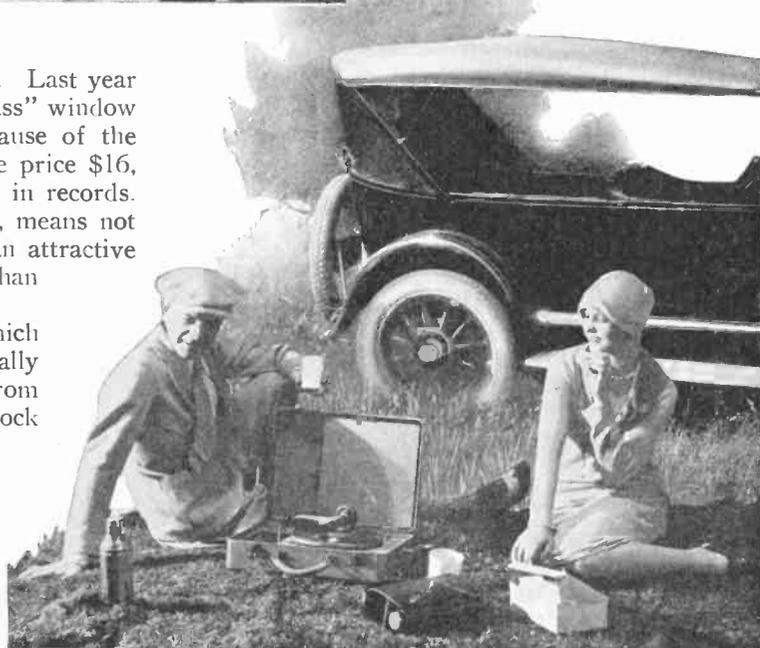
## KEEPS PORTABLES ALWAYS ON DISPLAY

A. J. Beers, Inc., 81 Chambers Street, New York, does a profitable business in portable phonographs without any other effort than the display of one or two models in the windows. This dealer's business is divided about equally



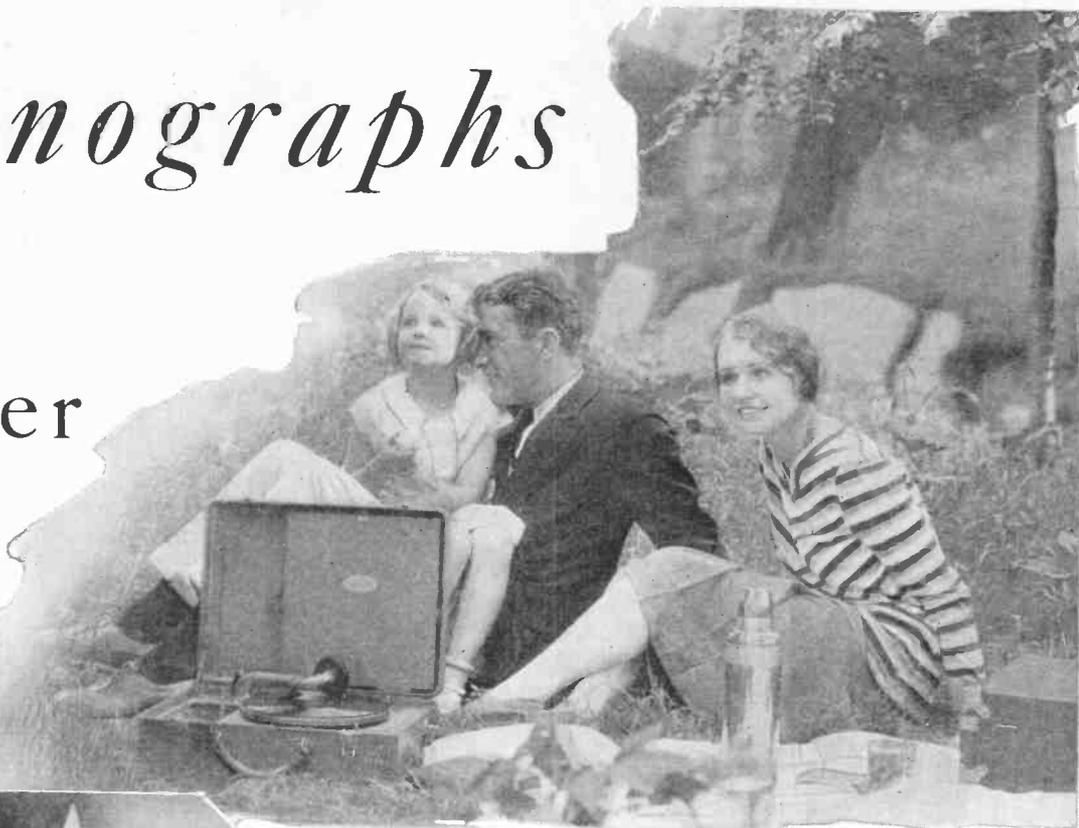
between radio and phonographs and about 15 per cent of the latter consists of portable phonograph sales.

Beers keeps the portables on display in the window all year round, and, since he is located on a fairly busy street, the continuous display makes an impression on a large number of people. Thus, when the summer season arrives, with its opportunities for the use of portable phonographs, these prospects remember the display of portables in the Beers store and go there to buy. In the course of his long



# Phonographs

## for Summer Sales



### Portables Sell the Year 'Round—

**SPRING** . . Go after the "young moderrs"—particularly students of local boys' and girls' schools who are away from home.

**SUMMER** . . Camps — Qu'ings — Automobiles — Front Porches—Public Amusement Places.

**FALL** . . School teachers—for classroom and private use—Scholars and parents—Billiard parlors.

**WINTER** . . For clubs and institutions — and in addition to a radio installation for use with an electric pick-up.



experience, Beers found that a majority of his customers were Italians, so he inaugurated a special department to develop this business, and full-page advertisements in the Italian newspapers are run regularly. These are supplemented by circulars addressed to this special class of trade in which the various advantages of portables for small-home use are pointed out, together with their usefulness as a means of keeping in touch with the music of the homeland.





# What's on the RADIO?

Broadcasting Features That Will Help You Sell



Radio broadcast descriptions of sports events always draw crowds to Cortine's, San Antonio, Texas.

## "Broadcast Programs of Popular Interest Sell Radio"

*Newark, N. J., dealer uses newspaper ads and window displays to tie in with important radio programs.*

RADIO programs have come to have a definite importance in the public mind and the growth of the chain features and the broadcasting of special current events have emphasized the quality of entertainment and information which may be picked out of the air. Radio has lost its novelty as a mechanical device and the programs which are being broadcast are now being considered for their own value as entertainment or education.

Dealers who realize all this and who take advantage of every opportunity to call the attention of the public to these programs have found them to be a valuable selling aid.

For instance, N. A. Davis, manager of the Newark branch of Landay Brothers, music merchants, says:

"It has been our experience that good broadcasting programs of general interest have a definite value in selling radio. When the first big fight was broadcast, we found that customers were very anxious to have sets delivered and installed in their homes in time to be able to tune in on the fight. Hundreds of them made the purchase of the set conditional on this fact. The same thing was true, although not to the same extent, of the world's series baseball games and some of the more important football contests.

"Furthermore, radio, as is well known, played a very important part in the presidential election. The widespread interest in the campaign speeches so stimulated radio sales that it had the effect of moving our sales peak from December to October. This is a definite indication of what good radio programs of popular appeal will do to improve the sale of sets."

As a result of the experience outlined by Mr. Davis, Landay Brothers call attention, in their newspaper advertising and window displays, to coming programs of popular interest. When an important fight, staged in the open air last summer, was broadcast, Landay Brothers headlined it in its newspaper ads.

"Easy chair seats at home for the Tunney-Heeney fight and a free pass to all important events on the air for years to come," was the head on one of these advertisements. Another read: "Ringside seats for the whole family and your guests in your own home."

Tying in with this advertising, a miniature prize-fighting ring was installed in the window, with a neatly lettered sign calling attention to the date of the occasion, and to the fact that it would be broadcast over the radio.

Mr. Davis makes it a point to be familiar

with coming sporting events which may be broadcast. He even keeps abreast of the progress of the arrangements being made for the broadcasting.

"After all" he said "the great majority of the people to whom we sell are chiefly interested in sports and especially the fights. If they can't go to a fight the next best thing is the radio broadcast description of the encounter. As I mentioned before many of our customers literally fight for the privilege of getting a radio in time to hear the broadcast account of a good fight."

### Albert Spalding to Feature Vitaphone Jubilee Hour

Albert Spalding, world famous violinist, will be the star of the next broadcast that the Vitaphone Jubilee Hour will present over stations of the Columbia Broadcasting System, on Monday night, March 11, at 9:30 o'clock, Eastern Standard Time.

### Congressmen and Cabinet Members to Debate

A weekly radio forum for the discussion of outstanding political questions of the hour by speakers of national prominence has been arranged by the Washington Star with the co-operation and sponsorship of the Columbia Broadcasting System and will be heard by millions of the American public through a large nation-wide network of broadcasting stations every Saturday night at 10 p.m., E.S.T. Senator William E. Borah, of Idaho, Chairman of the Foreign Relations Committee of the Senate inaugurated the radio discussions on March second.

A short musical program by the United States Army Band will open and conclude each broadcast in this series. The hour, which is to be devoted to the National Forum every Saturday evening, will be about evenly divided between the band and the speakers.

On March 9, speaker Nicholas Long-

nearly 10,000  
Baltimore school pupils--

this morning enjoyed the first experimental program of musical appreciation given by Dr. Walter Damrosch and the New York Symphony Orchestra. The RCA Radiola 28 and RCA Loudspeaker 104 used for this program were loaned by the Radio Department of The Gas & Electric Co., second floor, Lexington Building. The Radio Department of The Gas & Electric Co. features a complete selection of RCA Radiolas and Loudspeakers. You are cordially invited to enjoy a demonstration of the RCA Radiola 28 and the RCA Loudspeaker 104 at your convenience.

The Baltimore Gas & Electric Co., capitalized the Damrosch series in its advertising

worth of the House and Senator George H. Moses of New Hampshire, speaker pro-tem of the Senate, spoke on the approaching special session of Congress.

On Saturday evening, March 16, Senator Charles I. McNary, Republican, of Oregon, and Senator Ellison D. Smith, Democrat, of South Carolina, will debate on agricultural relief. The agricultural situation will be the outstanding issue before the special session and it is understood, by agreement, that legislation looking to agricultural relief will originate in the Senate during the special session.

Representative John N. Garner of Texas, Democratic floor leader, and Representative Willis C. Hawley, Chairman of the Ways and Means Committee, will conduct a National Forum debate on the perplexing tariff problem and the proposed tariff legislation.

Further than this, the schedule has not been arranged since the object is to keep the program open from week to week for the discussion of those problems of national importance which actually arise.

### Famous Stars on Sonatron Broadcasts

A new "million dollar" series of radio broadcasts over the Columbia Broadcasting System has been started by the Sonatron Tube Company of Chicago, Ill. Some of the best amusement talent in the country is being drafted to serve on these programs. Irene Bordoni opened the series; other stars who have already signed up are: Ben Bernie, Phil Baker, Helen Morgan, Helen Kane and many others.

The programs are scheduled for Sunday evenings at 8 o'clock, E.S.T.

### "Old Counsellor" Programs Now Nationwide

The financial advice of Halsey, Stuart Company's "Old Counsellor," broadcast for nearly a year over the east and midwest networks of the National Broadcasting Company, has been extended to the entire nation.

The "Old Counsellor" broadcasts from coast to coast over the NBC system each Thursday night at 10:00 o'clock, Eastern Standard Time. At irregular intervals he will be replaced by business and financial leaders of the nation, such as have appeared as guest speakers in Halsey, Stuart broadcasts of the past.

## Features of the Air

On Wednesday, March 13, at 8 p.m., Central Time, the *Indiana Male Quartet* will broadcast from the WBBM Air Theatre, Chicago, Ill. There will be a *Half Hour with Chicago Orchestras* on Friday, March 15, and Saturday, March 16, at 8:30 p.m. \* \* \* \*

Future programs on the RMA broadcasting schedule include the National Carbon Company, with its *Eveready Hour*, on March 12; CeCo Manufacturing Company during the week of March 18; the Grigsby-Grumow Company during the week of March 24, and the Philadelphia Storage Battery Company on April 5. \* \* \* \*

*Williams Syncomatics*, musical emissaries of the Williams Oil-O-Matic Heating Corporation, made their bow to radio listeners on February 26 and will broadcast every Tuesday night at 10 p.m., E.S.T., over WJZ and associated stations. Josef Koestner will direct a twenty-five piece novelty concert orchestra during this series. \* \* \* \*

A new series of broadcasts to be known as *The Temple of the Air* will start early in April over twenty-two key stations of the Columbia Broadcasting System. It is sponsored by the Temple Corporation, of Chicago. \* \* \* \*

A rendition of nonsense songs from "Alice in Wonderland" will be the offering of the *United Choral Singers* in their program over the Columbia Broadcasting System, on Monday, March 11, at 10:30 p.m., Eastern Standard Time. \* \* \* \*

*Sunday at Seth Parker's* is the name of a new program which goes on every Sunday night at 10:45 p.m., over the National Broadcasting System of stations headed by WEA. This program presents a meeting, of a semi-religious nature, of more or less quaint characters from "down east." A mixed quartet, aided by a melodeon, supplies the musical element. \* \* \* \*

The well-known *Locust Sisters*, five of them all told, will be the feature of the next program that the Majestic Theatre of the Air will broadcast over a nation-wide hookup of stations of the Columbia Broadcasting System, on Sunday night, March 10, at 9 o'clock Eastern Standard Time. \* \* \* \*

Poe's famous poem "The Raven" will be burlesqued as a feature of the hour pro-

## Adventures of Mr. Van Heusen in New Program

A program with a special appeal to men has been inaugurated over the Columbia Broadcasting System on Wednesdays, at 9 p.m., E.S.T., sponsored by the Van Heusen Company.

The central character of this series of broadcasts is Mr. Van Heusen, a popular society man, whose adventures will appeal to every cosmopolitan man. Women, however, will not be neglected, as the Van Heusen series will include music and entertainment that will delight them as well.

gram that the *Coco Couriers* will present on Monday night, March 11, at 8:30 p.m., E.S.T., over the stations of the Columbia Broadcasting System. \* \* \* \*

WMCA is broadcasting a series of weekly programs featuring the *Vogue Nonpareils*, an organization of entertainers sponsored by the Allan Manufacturing Company of Harrison, N. J. The *Nonpareils* include an orchestra and a group of variety entertainers. They go on the air on Friday evenings, at 10 o'clock, \* \* \* \*

*Mobo Entertainment* will begin a new series of broadcasts on Tuesday night, March 12 at 7:30 p.m., E.S.T., when it presents a half hour of musical mirth and melody over stations of the Columbia Broadcasting System.

*Mo and Bo*, two colored comedians, will introduce the hour, and will then occupy themselves with the automobile of two tourists who will thus be enabled to go to a neighboring restaurant and listen to thirty minutes of up-to-date dance music. \* \* \* \*

*Hank Karch*, "banjo-kicker" at WLW, will be heard at that station every Friday at 1:30 p.m., E.S.T., in original musical sketches. \* \* \* \*

On the evening of April 4, the *New Jersey State Chamber of Commerce* will hold a "statewide" dinner to inaugurate the magnificent new building of the New Jersey Bell Telephone Company. The dinner will be held concurrently at Newark, Camden, Paterson, Atlantic City, Trenton and Jersey City. The speeches at each of the dinners will be broadcast over a telephone-radio hook-up which will send them out as though they all came from the same gathering. WPG, Atlantic City, and WCAM, Camden, will put the program on the air. \* \* \* \*

*Lucie Stern, Charlotte Simons, Clarence Reinert and Max Aronoff*, four star pupils of the Curtis Institute of Music, will present a musical program of solo numbers on Tuesday night, March 12, at 10:00 o'clock, Eastern Standard Time, over the Columbia Broadcasting System. \* \* \* \*

*Erno Rapee* is now wielding the baton for the augmented Mobiloil Orchestra in its concerts through WJZ and affiliated station on Wednesday nights, at 8 p.m., E.S.T. \* \* \* \*

WSB, Atlanta, each Thursday, at 5:30 p.m., is broadcasting a series of talks on gardening. Prominent Georgia women, identified with flower and gardening projects, participate in the programs, which are sponsored by a new Dixie publication, *Our Southern Gardens and Homes*. \* \* \* \*

Melodies by the famous German composer, Johannes Brahms, will be featured by KOA, Denver, on Tuesday, March 12, from 3:35 to 4:30 p.m., Mountain Time. The *Music Album Family* will broadcast on Friday, March 15, from 10 to 10:30 p.m.

## League of Nations to Conduct Short-Wave Trials

The League of Nations will conduct a series of short-wave broadcast trials in March, during which programs will be broadcast from Station PCLL, Kootwijk, Holland, to the United States, South America, Japan and Australia. Listeners are asked to send reports on the quality of reception to the Information Section, League of Nations Secretariat, Geneva, Switzerland. The schedule of broadcasts is as follows:

To Be Broadcast to	March, 1929 Day	Duration of Transmission Minutes	Time	Wave- Length Meters
American Continent (In English, French and Spanish).....	Tues. 12, 19, 26	60	5 p. m. EST	38.8
Japan (In Japanese).....	Wed. 13, 20, 27	30	Approx. 1.40-2.10 GMT*	18.4
Australasia (In English).....	Thurs. 14, 21, 28	30	Approx. 1.40-2.10 GMT*	18.4

\* Greenwich Mean Time.

# Timetable of Principal Evening Chain Programs

Use this chart in tuning in for demonstrations—A timetable of morning and afternoon programs will be published next month

	Chain	6.00	6.30	7.00	7.30	8.00	8.30	9.00	9.30	10.00	10.30
SUNDAY	NBC (WEAF)	Stetson Parade	Dictagraph Program	Old Co. Songalog	Capitol Family	Capitol (Continued)	Capitol (Continued)	9.15-Atwater Kent Hour	A. K. (Continued)	Studebaker Champions	10.45-Sunday at Parker's
	NBC (WJZ)		Whittall Anglo-Persians	Nomads	At the Baldwin	8.15-Collier's Hour	Collier's Hour (Continued)	9.15-Utica Jubilee Singers	9.45-El Tango Romantico	El Tango (Continued)	National Light Opera
	Columbia				F. W. Wile	Sonatron Program	La Palina Hour	Majestic Hour	Majestic (Continued)	De Forest Hour	Around the Samovar
	NBC (PACIFIC)	6.15-Atwater Kent Hour	Atwater Kent (Continued)	7.15 Studebaker Champions	7.45-Enna Jettick Melodies						
MONDAY	NBC (WEAF)	Waldorf-Astoria Music	Waldorf Music (Continued)	Rudy Vallee Orchestra	James G. MacDonald	Voice of Firestone	A & P Gypsies	A & P (Continued)	General Motors	General Motors (Continued)	Empire Builders
	NBC (WJZ)			South Sea Islanders	Roxy's Gang	Roxy (Continued)		Edison Recorders	Chesebrough Real Folks	Blue Danube Nights	Milady's Musicians
	Columbia					Kansas School	CeCo Couriers	Phys. Culture Magazine	Vitaphone Hour	Robert Burns Pageant	United Singers
	NBC (PACIFIC)	Edison Program	General Motors	G. M. (Continued)	Empire Builders	Seiger's Symphonists	Symphonists (Continued)	Voice of Firestone	Plantation Echoes	Slumber Hour	
TUESDAY	NBC (WEAF)	Waldorf-Astoria Music	Waldorf Music (Continued)	Voters' Service	Soconyland Sketches	Genia Fonariava	Prophylactic Hour	Eveready Hour	Eveready Hour (Continued)	Cliquot Club Eskimos	The Contraltos 11.00-R-K-O Hour
	NBC (WJZ)	Old Man Sunshine	Savannah Liners Orchestra	Small and Robertson	Fundamentals of the Law	Stromberg-Carlson	Michelin Men	3-in-1 Theatre	Dutch Master's Minstrels	Williams Syncomatics	Freshman-Fred-Eisemann
	Columbia				Mobo Entertainers	F. W. Wile and U. S. Band	Wile and U. S. Band (Continued)	Old Gold-Whiteman	Old Gold-Whiteman (Continued)	Voice of Columbia and Curtis Institute	11-Wrigley's Royal Canadians
	NBC (PACIFIC)	Eveready Hour	Eveready (Continued)	Cliquot Club Eskimos	Freshman Orchestra	Jonesy and Mabel	Amazo's Guitanos				Trocaderans
WEDNESDAY	NBC (WEAF)	Waldorf-Astoria Music			La Touraine Tableau	Sunkist Serenaders	Kremlin Echoes	Ipana Troubadors	Palmolive Hour	Palmolive Hour (Continued)	Gold Strand Orchestra
	NBC (WJZ)	Park Central Orchestra	Park Central (Continued)	Jeddo Highlanders	7.45-The Political Situation	Mobiloil Orchestra	Sylvania Foresters	Smith Brothers	Cabin Door	The Continentals	11.00 Slumber Music
	Columbia					Hank Simmon's Showboat		Van Heusen Program	La Palina Smoker	Kolster Hour	Daguerreotypes
	NBC (PACIFIC)		Palmolive Hour	Palmolive Hour (Continued)	Gold Strand	Road to Romance	Hill Billies				Trocaderans
THURSDAY	NBC (WEAF)	Waldorf-Astoria Music			Coward Shoe Hour	Forhan's Song Shop	Hoover Sentinels	Seiberling Singers	Rapid Transit	Halsey-Stuart Hour	NBC Concert
	NBC (WJZ)	Old Man Sunshine		Talks by Famous Speakers		Lehn and Fink Serenade	Champion Sparkers	Neapolitan Nights	Maxwell House Hour	Mallory Hatters	Sixteen Singers
	Columbia					Sweethearts	Then and Now	Aunt Jemima	Sonora Hour	Columbians	Musical Episode
	NBC (PACIFIC)	Seiberling Singers			Standard Symphony	Symphony (Continued)	Memory Lane	Mem. Lane (Continued)		10-12 Trocaderans	Trocaderans (Continued)
FRIDAY	NBC (WEAF)	Waldorf-Astoria Music	Raybestos Twins	Happy Wonder Bakers	Hotel Manger Orchestra	Cities Service Orchestra	Cities Service (Continued)	Evening in Paris	Schrader-town Band	Palais D'Or Orchestra	Half Hour at the Senate
	NBC (WJZ)	Wilson's Novelty Orchestra	Chopin Eight	The Landt Trio	Dixie's Circus	8.10-Old Man Donaldson	Armstrong Quakers	Wrigley Review	Phileo Hour	Hudson-Essex Hour	Phil Spitalny's Music
	Columbia		6.45 Enna Jettick Melodies			Close-Ups	Veedol Vodvil	True Story Magazine	True Story (Continued)	Kodak Hour	Night Club Romances
	NBC (PACIFIC)	Wrigley Review	Phileo Hour	Hudson-Essex		RCA Hour	RCA Hour (Continued)			10-12 Trocaderans	Trocaderans (Continued)
SATURDAY	NBC (WEAF)	Waldorf-Astoria Music	White House Music	Phil Spitalny's Music	Romance Isle	Lew White Organist	Mildred Hunt	General Electric Symphony		Lucky Strike Orchestra	Lucky Strike (Continued)
	NBC (WJZ)	Collins Faultless Five	Gold Spot Orchestra	Hotel St. Regis Orchestra	7.45-Dr. Julius Klein	Purol Band	Interwoven Pair	Pan-Americans	The Seven-Elevens	Melodrama	11.00 Slumber Music
	Columbia									National Forum	
	NBC (PACIFIC)	G. E. Symphony	G. E. (Continued)	Lucky Strike Orchestra	Lucky Strike (Continued)	The Carnival		Golden Legend	Legend (Continued)	The Big Show	Big Show (Continued)

In first column at left, NBC-WEAF indicates the National Broadcasting Company chain with WEAF as key station. NBC-WJZ indicates the chain of which WJZ is the key station.

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Note—Time figures are for Eastern Standard Time, except for Pacific Coast programs. Time figures then indicate Pacific Coast Standard Time.

# Latest Phonograph Records

Issued by the leading manufacturers

## Latest BRUNSWICK Records

Brunswick-Balke-Collender Company,  
629 So. Wabash Avenue,  
Chicago, Ill.

Record No.	Title and Recorder
283	Shanghai Rooster Mike, the Turk— <i>Dusty Rhodes and His Guitar</i>
285	Never Alone Waltz Texas Quick Step— <i>The Red Headed Fiddlers</i>
287	Ninety-Fifth The Christians' Hope— <i>Denson's Sacred Harp Singers</i>
289	The Bluebird Waltz Irene Waltz— <i>The Collier Trio</i>
290	Hard Cider Song Rosalee— <i>Crockett Family Mountaineers</i>
291	Medley of Old Time Dance Tunes— Part I Medley of Old Time Dance Tunes— Part II— <i>Crockett Family Mountaineers</i>
292	I'm The Child to Fight Buddy, Won't You Roll Down the Line— <i>Uncle Dave Macon</i>
293	Go and Leave Me If You Wish To Birmingham Jail— <i>Lester McFarland and Robert A. Gardner</i>
4100	A Night at Coffee Dan's—Part I A Night at Coffee Dan's—Part II— <i>Frank Shaw</i>
4131	Who Wouldn't Be Jealous of You? Rose of Mandalay— <i>Ray Miller and His Orchestra</i>
4143	Come on Baby! Some of These Days— <i>Allister Wylie and His Coronado Hotel Orchestra</i>
4157	Love Dreams Another Kiss— <i>Jack Denny and His Orchestra</i>
4159	We'll Have a New Home Comin' Home— <i>The Rollickers</i>
4165	Andantino Fifth Nocturne— <i>Godfrey Ludlow</i>
4166	Little Town in the Ould Country Down Lassie O' Mine— <i>Frank Munn</i>
4167	I'll Take You Home Again Kathleen Somewhere a Voice Is Calling— <i>Frank Munn</i>
4168	I'll Get By Glad Rag Doll— <i>Ben Bernie and His Hotel Roosevelt Orchestra</i>
4169	No Other Love The Glory of Spring— <i>Wirges and His Orchestra</i>
4171	When the World is at Rest I'll Never Ask for More— <i>Nick Lucas</i>
4172	La Rosita Querida— <i>Lawrence Salerno</i>
4173	You're the Cream in My Coffee She's Funny That Way— <i>Harry Richman</i>
4174	In the Big Rock Candy Mountains Who Said I Was a Bum?— <i>Wendell Hall</i>
4175	Won't You Tell Me, Hon? Give Your Little Baby Lots of Lovin'— <i>Abe Lyman and His California Orchestra</i>
4178	Why Did You Make Believe? Somebody Loves Me— <i>Freddie Rose</i>
4179	Caressing You Don't Remind Me— <i>Meyer Davis' Swanee Syncopators</i>
4185	I'm Sorry Sally Where the Shy Little Violets Grow— <i>Earl Burnnett's Biltmore Trio</i>
4186	All By Yourself in the Moonlight "Monna Vanna"— <i>Colonial Club Orchestra</i>
4187	How Long, How Long Blues My Kinda Love— <i>Walter Barnes and His Royal Creolians</i>
4188	The Monte Carlo Song I'm Wild About Horns on Automobiles That Go "Ta-ta-ta-ta"— <i>The Yacht Club Boys</i>

4189	If I Had You Avalon Town— <i>Colonial Club Orchestra</i>
4190	I'm Telling You I Found You Out When I Found You In— <i>Tom Gerunovich and His Roof Garden Orchestra</i>
4191	Ring Dem Heavenly Bells Hide Away— <i>Frank and James McCravy</i>
4192	I Faw Down An' Go Boom Sweethearts on Parade— <i>Dick Robertson</i>
4193	Happy Humming Bird Susanna— <i>Colonial Club Orchestra</i>
4194	No One In The World But You Mississippi, Here I Am— <i>Ray Miller and His Orchestra</i>
4195	No Hiding Place Down There Dip Me in the Golden Sea— <i>Frank and James McCravy</i>
4196	I Faw Down An' Go Boom— <i>Six Jumping Jacks</i> Guess Who!— <i>The Clevelanders</i>
4197	Makin' Whoopee Don't Be Like That— <i>Harry Richman</i>
4198	The Spell of the Blues You'll Never Know— <i>Jesse Stafford and His Orchestra. Vocal chorus by Leon Lucas</i>
4199	Fashionette Sweetheart of All My Dreams— <i>Joe Rines and His Orchestra</i>
4200	Futuristic Rhythm Out Where The Blue Begins.— <i>Hotsy Totsy Gang</i>
4201	My Man I Love You— <i>The Blackstone Trio</i>
4205	What a Girl! What a Night! Honey— <i>The Clevelanders</i>
4206	Poor Punchinello Loneliness— <i>Waltzes—Regent Club Orchestra</i>
4208	Stout Hearted Men Softly, as in a Morning Sunrise— <i>William O'Neal</i>
4209	A Precious Little Thing Called Love— <i>Danny Shavin</i> My Mother's Eyes— <i>Frank Munn</i>
4210	One Kiss Lover, Come Back to Me!— <i>Louis Katzman and His Salon Orchestra</i>
4211	Singapore Sal Rosemary— <i>Jack Parker</i>
4213	My Man I'd Rather Be Blue with You— <i>Louis Katzman and the Brunswick Orchestra</i>
4216	One Kiss— <i>Hal Kemp and His Orchestra</i> Lover, Come Back to Me!— <i>Louis Katzman and the Brunswick Orchestra</i>
4218	Redskin Dardanella— <i>Louis Katzman and the Brunswick Orchestra</i>
4223	In A Great Big Way Let's Sit And Talk About You— <i>Ray Miller and His Orchestra</i>
4225	Obertass Mazurka—Op. 19. Military Caprice—No. 14— <i>Alexander Sebald</i>
4226	Devil's Trill—Parts I and II— <i>Alexander Sebald</i>
4227	Devil's Trill—Parts III and IV— <i>Alexander Sebald</i>
4230	That's the Good Old Sunny South If I Had You— <i>June Pursell</i>
4231	You Were Meant For Me Broadway Melody— <i>Earl Burnnett and His Los Angeles Biltmore Hotel Orchestra</i>
4232	Wedding of the Painted Doll Love Boat— <i>Earl Burnnett and His Los Angeles Biltmore Hotel Orchestra</i>
15195	Cradle Song Oh Promise Me— <i>Marie Morrissey</i>
15196	Nightingale Song By the Waters of Minnetonka— <i>Florence Easton</i>
50154	Freischutz—Agath's Prayer Otello—Ave Maria— <i>Rethberg</i>
57004	Broken Life On the Embankments of Manchuria— <i>Peter Bijo's Balalaika Orchestra</i>

## Latest COLUMBIA Records

Columbia Phonograph Company  
1819 Broadway, New York City

Record No.	Title and Recorder
Set No. 104 (\$10.50)	Tschaikowsky: Symphony No. 5, in E Minor, Op. 64 in Thirteen Parts, on Seven Twelve-inch Records—with Album.
	Tschaikowsky: Valse, from Serenade for Strings, Op. 48. <i>By Willem Mengelberg and Concertgebouw Orchestra of Amsterdam.</i>
Set No. 105 (\$4.50)	Mozart: Symphony No. 39, in E Flat; Op. 543 in Six Parts, on Three Twelve-inch Records—with Album. <i>By Felix Weingartner and Royal Philharmonic Orchestra.</i>
178-M	Honey— <i>Babee</i> Love's Like a Rosebud— <i>Martha Attwood</i>
179-M	Seven Variations on a theme by Mozart—Parts 1 and 2 (Beethoven)— <i>Felix Salmond</i>
180-M	Seven Variations on a theme by Mozart—Parts 3 and 4 (Beethoven)— <i>Felix Salmond</i>
181-M	Valse Bluettes Orientale— <i>Efrem Zimbalist</i>
182-M	Sonnambula: Prendi l'anel ti dono I Pescatori di Perle: Della mia vita— <i>Dino Borgioli</i>
1709-D	Glad Rag Doll When the Curtain Comes Down— <i>Ted Lewis and His Band</i>
1710-D	That's How I Feel About You I Want a "Yes" Girl— <i>Ed Loury</i>
1711-D	The Song I Love My Tonia— <i>James Melton</i>
1712-D	The Mule Song Sippin' Cider— <i>Vernon Dalhart</i>
1713-D	Let's Sit and Talk About You As Long as We Are in Love— <i>Fred Rich and His Orchestra</i>
1714-D	Daily Paskman's Radio Minstrels— Parts 1 and 2.
1715-D	Sleep, Baby, Sleep Alice in Wonderland— <i>Vaughn De Leath</i>
1716-D	Where the Shy Little Violets Grow You Are My Own— <i>Lee Morse and Her Blue Grass Boys</i>
1717-D	Mississippi A Precious Little Thing Called Love— <i>Ipana Troubadours</i>
1718-D	Olaf (You Ought-a Hear Olaf Laff) In a Little Town Called Home— Sweet Home— <i>Chester Club Eskimos</i>
1719-D	Carolina Moon. Waltz If I Had You— <i>Ben Selvin and His Orchestra</i>
1720-D	Dream Train I Get the Blues When It Rains— <i>Ford and Glenn</i>
1721-D	Please Let Me Dream in Your Arms Baby!— <i>Guy Lombardo and His Royal Canadians</i>
1722-D	Love's First Kiss Heart O' Mine— <i>Milton Watson</i>
1723-D	How About Me? Cradle of Love— <i>Paul Whiteman and His Orchestra</i>
1724-D	Caressing You Weary River— <i>Jan Garber and His Orchestra</i>
1725-D	Ai Suzette Mamzelle Zizi— <i>Edna Thomas</i>
1730-D	Sweethearts on Parade I'm Sorry Sally— <i>Pipe Organ Solos Milton Charles</i>
1731-D	Lover, Come Back to Me! Marlann— <i>Paul Whiteman and His Orchestra</i>
1732-D	Carolina Moon Mississippi— <i>Creole Crooner</i>
1733-D	Glad Rag Doll I'll Get By— <i>Ruth Etting</i>
1734-D	I Faw Down an' Go Boom! Atlanta Gal— <i>Charles Fulcher and His Orchestra</i>
1735-D	Have You Ever Felt that Way? If You Like Me Like I Like You— <i>Clarence Williams' Jazz Kings</i>

- 1736-D My Lucky Star  
Button Up Your Overcoat—*Paul Whiteman and His Orchestra*
- 1737-D If I Had You  
That's the Good Old Sunny South—*Irving Kaufman*
- 1738-D Broadway Melody—*Ben Selvin and His Orchestra*  
You Were Ment for Me—*Broadway Nitelites*
- 1739-D Redskin—*Ben Selvin and His Orchestra*  
Yo Te Amo Means I Love You—*The Columbians*
- 1740-D Wedding Bells (Are Breaking Up That Old Gang of Mine)—*Fred Rich and His Orchestra*  
Guess Who?—*Jan Garber and His Orchestra*
- 14393-D Just It  
How Long Baby?—*William McCoy*
- 38010-F Tango of the Death  
Marenka Polka—*L. Cavadias' Greek Sextette*
- 38011-F Proposal of Love  
The Midnight Waltz—*Nullio Romani and Italian Orchestra*
- 50120-D Carry Me Back to Old Virginny  
Old Folks at Home—*Sophie Braslau*
- 50121-D Faust: Air des Bijoux  
La Danza (Rossini)—*Maria Kurenko*
- 50122-D Radetzky (March J. Strauss; Op. 228)  
Feuergest (J. Strauss; Op. 269)—*Johann Strauss and Symphony Orchestra*
- 50123-D Pique Dame: Overture—Parts 1 and 2 (Von Suppé)—*Bournemouth Municipal Orchestra Conducted by Sir Dan Godfrey*
- 50124-D By the Blue Hawaiian Waters  
Jungle Drums (Ketelbey)—*Band of H. M. Grenadier Guards*
- 50125-D Toccata (Boëllmann)  
Toccata (Gigout), Organ Solos—*Edouard Commette recorded in St. Jean Cathedral, Lyons, France*
- 50126-D Hear Me, Ye Winds and Waves  
Ombra Mai Fu, from "Xerxes" (Handel)—*Fraser Gange*
- 50127-D Variations on a Theme by Corelli  
Caprice Viennois—*Naoum Blinder*
- 50128-D Aida: Grand March—Parts 1 and 2 (Verdi)—*Milan Symphony Orchestra with Chorus*
- 67469-D Lohengrin: Prelude—Part 1  
Lohengrin: Prelude—Part 2—*By Arthur Bodanzky and Symphony Orchestra*

## Latest EDISON Records

Thomas A. Edison, Inc.,  
Orange, N. J.

- | Record No. | Title and Recorder   |
|------------|--|
| 52435      | My Jesus, As Thou Wilt<br>What Will You Do with Jesus?— <i>Metropolitan Quartet</i>  |
| 52457      | Polly-Wolly-Doodle<br>Eleven Cent Cotton— <i>Vernon Dalhart and Company</i>  |
| 52467      | His Eye Is on the Sparrow<br>Ivory Palaces— <i>Arthur Billings Hunt</i>  |
| 52485      | Live and Love<br>Sleepy Valley— <i>Frank Munn</i>  |
| 52486      | Please Let Me Dream in Your Arms<br>Glad Rag Doll— <i>Golden Gate Orchestra</i>  |
| 52489      | Goodbye, Dear Old Step Stone<br>All I've Got's Gone— <i>Ernest V. Stoneman and His Dixie Mountaineers</i>                  |
| 52490      | My Dreaming of You<br>Poor Man's Blues— <i>Frankie Marvin</i>  |
| 52492      | I'll Get By<br>How About Me?— <i>Muriel Pollack</i>  |
| 52493      | Sally of My Dreams<br>Little Baby Curls— <i>Walter Scanlan</i>   |
| 52494      | Comin' Home<br>Sweet Little Lady of Mine— <i>The Rollickers</i>  |
| 52495      | Give Your Little Baby Lots of Lovin'<br>That's Her Now!— <i>The 7 Blue Babies</i>  |
| 52497      | The Spinning Song<br>Spring Song— <i>Edison Concert Orchestra</i>  |
| 52498      | My Inspiration Is You<br>Caressing You— <i>Mike Speciale and His Orchestra</i>   |
| 52499      | Floggan Reel<br>The Trip to the Cottage— <i>John J. Kimmel</i>   |
| 52501      | Bo-Peep—(Intermezzo)<br>A Dream— <i>Murray Kellner's Dinner Music Ensemble</i>   |
| 52502      | Hymn to the Sun<br>Song of India— <i>Arcade Birkenholz</i>   |
| 52503      | All by Yourself in the Moonlight<br>What Good Is a Sandwich if It Hasn't Any Bread?— <i>Jack Parker and Will Donaldson</i> |

- 52504 Daddy  
Little Boy Blue—*Edith Thayer*
- 52505 Mia Bella Rosa (My Beautiful Rose)  
Let's Do It (Let's Fall in Love)—*B. A. Rolfe and His Orchestra*
- 52506 Sweethearts on Parade  
I'll Never Ask for More—*Golden Gate Orchestra*
- 52508 I'm Wild About Horns on Automobiles that Go "Ta-Ta-Ta-Ta"  
I Love to Bumpity Bump on a Bumpy Road with You—*Jack Dalton and the 7 Blue Babies*
- 52509 Hey Rube  
When He's All Dolled Up He's the Best Dressed Man in Town—*Bob Pierce and the Cornhuskers*
- 52510 The Toymakers Dream  
Underneath the Russian Moon—*B. A. Rolfe and His Orchestra*
- 52511 Killarney, My Home O'er the Sea  
Walter Scanlan's Irish Medley—*Walter Scanlan*
- 52517 Me and the Man in the Moon  
Happy Days and Lonely Nights—*Faughn De Leath*
- 52519 Is There Anything Wrong in That?  
Good Little Bad Little You—*Ermine Calloway*

## Latest VICTOR Records

Victor Talking Machine Co.,  
Camden, N. J.

- | Record No. | Title and Recorder  |
|------------|---|
| 1364       | Caprice in E Flat Major<br>Vocalise— <i>Mischa Elman</i>  |
| 1365       | The Blind Ploughman<br>Oh! Could I But Express in Song— <i>Feodor Chaliapin</i>   |
| 3051       | Rigoletto—Veglia o donna<br>Rigoletto — Piangi, fanciulla— <i>Amelita Galli-Curci — Giuseppe De Luca</i>                            |
| 6903       | Wiener Blut<br>Frühlingstimmen (Strauss)— <i>Boston Symphony Orchestra</i>  |
| 6905       | Mignon—Addio, Mignon!<br>Mignon—Ah! Non Crede Vi Tu— <i>Beniamino Gigli</i>   |
| 6906       | Leonore Overture, No. 3—Part 1<br>Leonore Overture, No. 3—Part 2 (Beethoven, Op. 72)— <i>San Francisco Symphony Orchestra</i>       |
| 6907       | Leonore Overture, No. 3—Part 3<br>Leonore Overture, No. 3—Part 4 (Beethoven, Op. 72)— <i>San Francisco Symphony Orchestra</i>       |
| 9297       | Lasca<br>Pinto Ben— <i>William S. Hart</i>  |
| 21421      | The Old Chisholm Trail<br>Red River Valley—"Mac" (Harry McClintock) and His Haywire Orchestra                                       |
| 21775      | One Kiss—The Troubadours<br>Softly, as in a Morning Sunrise— <i>Nat Shilkret and the Victor Orchestra</i>                           |
| 21776      | Lover, Come Back to Me!<br>Marianne— <i>Victor Arden—Phil Ohman and Their Orchestra</i>   |
| 21838      | Where Is the Song of Songs for Me?— <i>Johnny Hamp's Kentucky Serenaders</i><br>Betty— <i>Nat Shilkret and the Victor Orchestra</i> |
| 21841      | Onward, Christian Soldiers<br>Battle Hymn of the Republic— <i>Victor Mixed Chorus</i>   |
| 21842      | Balm in Gilead<br>Leaning on the Lord— <i>Utica Institute Jubilee Singers</i>   |
| 21843      | American Spirit<br>Army and Marine— <i>United States Army Band</i>  |
| 21844      | You're the Cream in My Coffee<br>Me and the Man in the Moon— <i>Jesse Crawford</i>  |
| 21845      | Jumping Jack<br>Jack in the Box— <i>Zez Confrey and His Orchestra</i>   |
| 21846      | When the World Is at Rest<br>In a Little Town Called Home<br>Sweet Home— <i>George Olsen and His Music</i>                          |
| 21847      | When Summer Is Gone— <i>Nat Shilkret and the Victor Orchestra</i><br>Carolina Moon— <i>The Troubadours</i>                          |
| 21848      | When the World Is at Rest— <i>Chick Endor</i><br>Ev'rybody Loves You— <i>Aileen Stanley—Johnny Marvin</i>                           |
| 21849      | Little Irish Rose<br>Rosemary— <i>Morton Downey</i>   |
| 21850      | I'll Get by as Long as I Have You<br>How About Me?— <i>Jesse Crawford</i>   |
| 21851      | All by Yourself in the Moonlight<br>Sweetheart of All My Dreams— <i>Johnny Marvin</i>   |

- 21852 My Mother's Eyes  
When the Curtain Comes Down—*George Jessel*
- 21853 She's Funny That Way—*Jean Goldkette and His Orchestra*  
Dream Train—*Nat Shilkret and the Victor Orchestra*
- 21854 You're the Cream in My Coffee—*Gladys Rice-Franklyn Baur*  
I'm Bringing a Red, Red Rose—*Franklyn Baur*
- 21855 Glad Rag Doll—*Nat Shilkret and the Victor Orchestra*  
I'll Never Ask for More—*George Olsen and His Music*
- 21856 Weary River  
The Song I Love—*Gene Austin*
- 21857 Sally of My Dreams—*Ben Pollack and His Park Central Orchestra*  
My Mother's Eyes—*Waring's Pennsylvanians*
- 21859 You Wouldn't Fool Me, Would You?  
I Want to Be Bad—*Nat Shilkret and the Victor Orchestra*
- 21860 I'll Always be in Love with You  
My Inspiration Is You—*Morton Downey*
- 21861 Button Up Your Overcoat  
My Lucky Star—*Warin's Pennsylvanians*
- 21862 I Faw Down An' Go Boom!  
Eddie Cantor's "Automobile Horn" Song—*Eddie Cantor*
- 21863 Button Up Your Overcoat  
I Want to Be Bad—*Helen Kane*
- 21866 If I Had You—*Willard Robinson*  
The Sun is at My Window—*Johnny Marvin—Ed Smalle*
- 21867 If I Had You—  
All By Yourself in the Moonlight—*Irving Aaronson and His Commanders*
- 21868 Weary River  
Deep Night—*Rudy Vallee and His Connecticut Yankees*
- 21869 Sweet Suzanne  
Honey—*Ruby Vallee and His Connecticut Yankees*
- 35958 Largo (from "Xerxes"—Handel)  
Funeral March (Chopin, Op. 35)—*Mark Andrews*

## What Will the Tube Decision Mean to the Trade?

(Continued from page 53)

a nominal royalty but without restriction upon production.

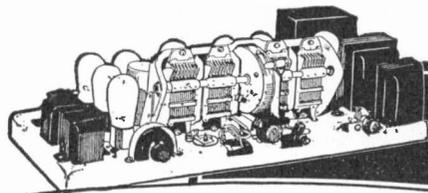
Inasmuch as certain of the tube patents owned by the Radio Corporation have never been adjudicated (although many have already been passed upon by the courts) the basis of such a license from the RCA is declared to be indefinite. Certain independent manufacturers, therefore, look doubtfully on such licenses, feeling that there may be no necessity for an independent manufacturer of tubes to take out a license because of patent control.

A third and somewhat surprising point of view is presented by another independent, who has declared to a representative of this publication that even though no license may be required for reasons of patent control, such a license might be deemed highly desirable because of the commercial advantages offered. For it is entirely possible, according to this observer, for a large company possessing valuable resources of good will, and facilities for research, distribution, publicity and other services, to build up a license system based entirely on commercial considerations and desired by the licensee for reasons of practical expediency. Such a license would be voluntarily self-imposed by the licensee. Many other independents, however, do not consider such a possibility at all seriously.

Here then are the three points of view regarding the license situation in the radio tube field. Two of the alternatives depend upon the decision now in the breast of the court. The third is merely a matter of commercial development.

The situation possesses elements of great interest. It will be watched with deep concern by the entire industry.

# your money's worth ... in musical performance



The Finest Receivers Are Thordarson Equipped

**T**ONE Fidelity . . . the master salesman of radio . . . is the constant companion of the Thordarson equipped receiver. A snap of the switch . . . a turn of the dial . . . and his message begins. He collects no commissions . . . has no expense account, yet works unceasingly, delivering his message of quality reproduction to everyone within earshot. Without his effortless activity the set manufacturer's days are numbered, for the public will accept no substitute for Tone Fidelity.

It is significant that the manufacturers of the world's finest radio receivers almost universally have selected Thordarson power supply and audio transformers to carry this message of tonal purity into millions of homes.

Whether you are engaged in building, selling or buying radio receivers, remember this: Thordarson power supply and audio equipment spells quality reproduction.

## THORDARSON ELECTRIC MANUFACTURING CO.

TRANSFORMER SPECIALISTS SINCE 1895

Huron, Kingsbury  
and Larrabee Sts., Chicago



~~PHILCO~~  
neutrodyne-plus

EQUIPPED  
WITH

**THORDARSON**  
RADIO  
TRANSFORMERS

S U P R E M E I N M U S I C A L P E R F O R M A N C E



## Keeping in touch with RADIO MANUFACTURING



### Should the Set Manufacturer Make His Own Parts?

By Chester Hjurtur Thordarson  
President, Thordarson Electric Manufacturing Company, Chicago, Ill.

**W**HAT is the place of the maker of quality standard parts in the present-day economics of radio set manufacturing? Should set manufacturers build their own parts—such as transformer, condensers and resistances—or should these be purchased from manufacturers specializing in them?

Viewing this matter in the light of recent developments it is apparent that the very simplicity of the modern set, from the user's standpoint, has increased the complexity of its engineering and manufacturing requirements. Exactitude is a vital factor in the production of today's receivers.

The one-dial set is, therefore, a complex, delicately balanced, precision instrument; an assembly of a series of precision parts furnished, as a rule, by a group of secondary manufacturers who are specialists in their own fields. The majority of the finest instruments that the industry produces represent, in other words, the combined efforts of a number of specialized organizations, each highly developed in the technicalities of engineering and of production. In this respect the situation is not unlike that of the automobile industry.

Will it be advisable to continue this arrangement? I see five major reasons for the affirmative: It—

1. Saves money.
2. Establishes a definite cost basis.
3. Permits greater manufacturing latitude.
4. Offers better engineering facilities.
5. Makes possible the use of the established prestige of nationally advertised parts.

It is logical to believe that the quantity production of a parts specialist supplying a large group of receiver manufacturers will make for a much lower price per unit than the set manufacturer himself could hope to attain. This is accomplished by reducing the set manufacturer's factory space, raw material inventory, labor overhead and production spoilage. Such a policy also relieves the set concern of the burden of carrying parts materials over from one season to another, or of being unable to obtain the required essentials during the height of the season. The parts specialist is closer to these sources of supply than is the set manufacturer, as many of the latter learned during 1928.

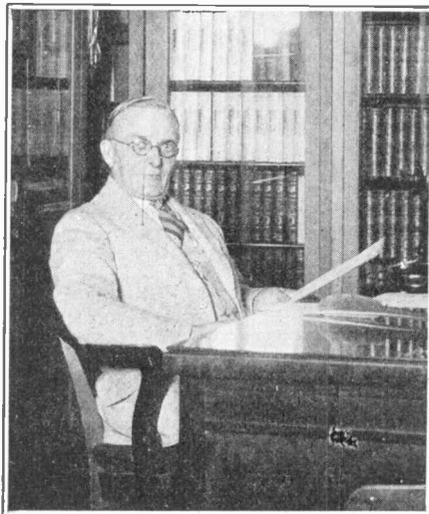
Again, the processing of such delicate and highly technical parts as audio transformers in the hands of a set producer would result in a larger percentage of goods spoiled than with the transformer specialist. The experience, special production methods and labor elements would account for this.

Second, the purchase of built-up parts

**EDITOR'S NOTE:** *The columns of this department are open to those who may wish to amplify or dispute Mr. Thordarson's contentions.*

automatically establishes a definite cost basis. This is much more difficult to determine with home manufacturing due to the many variable and intangible features involved.

The inertia of production is a vital factor which is frequently overlooked when considering point three. It takes time to start the wheels of production or to change their speed. A set concern making its own transformers may start with production facilities considered ample for the coming year. Almost over night, its sales department may be flooded with orders; unfillable because of the time required to obtain additional special machinery, raw materials and trained labor. Both an increase or decrease of demand is more quickly adjusted



**About Mr. Thordarson**

The author of this article, Chester Hjurtur Thordarson, was born in Iceland. He came to this country when in his teens and by dint of hard work and self-education has raised himself to a position of eminence in the radio and electrical industries. Mr. Thordarson is an indefatigable reader. He owns one of the most complete collections of scientific treatises in the world. His library, at the Thordarson plant, is valued at \$500,000.

if parts of the type under discussion are being obtained from a reputable specialist.

Now let us look at the situation from the engineering standpoint. It is casting no reflection upon any technician with a set manufacturer to claim that an engineer working year after year on a specialized parts problem should know more about its characteristics than his brother graduate who is working in a broader field. Therefore the set manufacturer who buys from a parts organization whose reputation is established is reasonably assured of better

design and performance than can be obtained through home production. Likewise no delay is required for general research and experimental development.

The average set engineer should endorse this contention, for, during the stress of the yearly—or bi-yearly—designing period he has little enough time for sleep and refreshment as it is. Furthermore the parts specialist is generally admitted into the sanctum sanctorum of the engineering laboratories of his customers, and although he holds inviolate the secret developments entrusted to his care, he is, nevertheless in a position to make many valuable suggestions.

Lastly, the sales department also profits. Just as the automobile salesman points with pride to the merits of standard equipment—ignition, bearings, carburetor, etc., all made by specialist manufacturers, so can the set salesman cash in on the value of nationally advertised parts of recognized quality which grace his product.

If the preceding be sound logic, it leads to the conclusion that the set user also will benefit from specialization production methods. The more satisfactory the ultimate performance is, the more will the radio industry as a whole gain in repute, and just that much more will it progress and prosper.

### Accurate Control of Output Voltages Insured by New A.C. Voltage Regulator

A vital and fundamental problem in the design of A.C. electric receivers, the automatic control of line voltage surges and variations which work havoc with tubes, has finally been solved, according to an announcement made by Dawson J. Burns of the Ward Leonard Electric Co., Mount Vernon, N. Y.

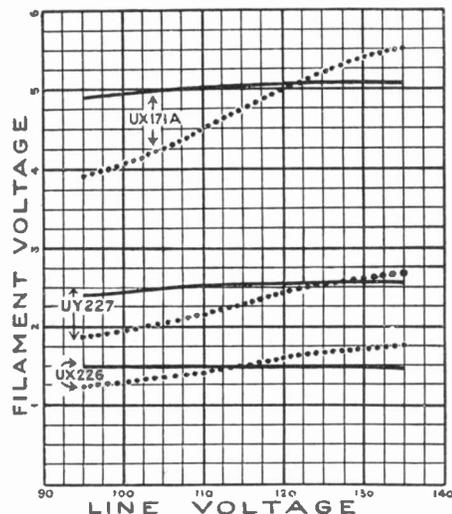
The device developed by Ward Leonard engineers after nearly three years of laboratory work is an instantaneously acting magnetic device, without moving parts, which supplants the present power transformer. In commercial form it is not appreciably larger than the usual power supply transformer. It performs the double function of transformer and automatic A.C. voltage regulator.

The new regulator unit has a number of unique features which taken together make it invaluable in the design of more efficient electric radio receivers. Under extended tests the unit has proved remarkably efficient in accurately controlling output voltages despite wide variations and surges in line voltage. The perfect operating range of the device for general radio use is from 95 to 135 volts. Should line voltage rise above the latter figure, control becomes negative; that is, output voltages actually are slightly less than normal. Thus, absolute protection is given to all components without loss in tonal quality. The 226 type tube has a normal filament requirement of 1.5 volts, and the 227 detector type calls for 2.5. Under the worst conditions of line voltage variation, the Ward Leonard regulator was found to pass only 0.083 volts extra to the 226, and 0.138 volts to the 227. Neither of these excess volt-

ages is sufficient to damage the filament of the modern types of A.C. tube.

#### COMPENSATES FOR HIGH AND LOW VOLTAGES

The value of adequate and automatic A.C. voltage regulation as an integral part of the modern electric set can hardly be overestimated. Not only have countless tubes been burned out or paralyzed by exposure to excess voltage, but the quality of electric receivers generally has been



This series of curves was taken with a very popular A.C. set. The dotted line shows the filament regulation with the ordinary transformer, the heavy lines with the new A.C. voltage regulator installed.

injured by incorrect relation of B and C voltages. In fact, either high or low voltage at the electric outlet impairs true reproduction. One is about as undesirable as the other. The usual type of voltage reducing device using condenser or resistor takes care of high line voltage, but is a hindrance rather than a help when voltage drops below normal value. The new Ward Leonard unit, marks a distinct step forward in voltage regulation in that it is equally effective whether the voltage is above or below normal value. When voltage is low it acts as a booster, delivering 100 per cent normal output to the tubes. When line voltage is excessive it acts as a reducer, maintaining normal output to the A.C. tubes.

#### ADOPTED BY LEADING MANUFACTURERS

Manufacturers of power transformers, sets, and kits have already indicated great interest in this new form of voltage regulator which solves the basic problem in electric set design. Eleven leading concerns in the east and middle west have signed agreements with the Ward Leonard Electric Co. giving them rights to the use of the new device.

It is understood that many set manufacturers plan to incorporate the new voltage regulator in their 1929 models which will be marketed next fall.

### Patent Infringement Suit

The BB Laboratories and the Best Manufacturing Company, Irvington, N. J., have instituted joint action against the Stuyvesant Electric Company, 53 Walker St., New York, for infringement of patent No. 1,667,531 of the unit manufactured by the plaintiff, known as the BBL Loud Speaker Motor. Similar action is being prepared against others manufacturing or selling units infringing on this patent.

### Insurance Rates Claimed Excessive in Radio Field

Complaint of radio dealers that their fire insurance rates had been greatly increased caused the inquiry being made by the radio industrial associations. Fire underwriters advised them that insurance rates on radio products were increased because they are more subject to damage from fire and water than electrical products. This also raises the question of whether radio apparatus is an electrical product or not—another burning question within the radio and electrical industries.

Insurance rates fairly adjusted on radio products as compared with electrical and other similar products are being sought by the Federated Radio Trades Association and the Radio Manufacturers Association.

### Radio Commission Issues Television Permits

Seventeen stations were issued licenses for experimental television by the Federal Radio Commission. The stations are to be operated between 2,000 to 2,200 and 2,750 to 2,950 kc. The commission announced that these licenses were authorized for six months and subject to revocation if any interference was caused to services operated by other North American stations. It also was announced that the commission will no longer authorize visual broadcasting in the regular broadcast band when existing licenses expire, except for experimental use between 1 and 6 a.m.

Visual broadcasting licenses covering still or moving picture transmission were issued to the following stations:

W2XBW and W2XBV of the Radio Corporation of America, in New York and New Jersey, and a construction permit for a third station.

The Jenkins Laboratory, Inc., W3XK, to be located in Washington, and a construction permit for another station in Jersey City.

Westinghouse Electric and Manufacturing Company, four licenses for stations to be located in East Pittsburgh, Pa., and Springfield, Mass.

General Electric Company at Schenectady, N. Y., and Oakland, Cal., two licenses.

WAAM, Inc., at Newark. Lexington Air Station at Lexington, Mass.

Pilot Electric Manufacturing Company, at Brooklyn.

Chicago Federation of Labor at Chicago. William Justice Lee at Winter Park, Fla. Aero Products, Inc., at Chicago.

The commission authorized the issuance of the following relay experimental licenses and construction permits:

Westinghouse Electric and Manufacturing Company, at East Pittsburgh, six licenses.

Great Lakes Broadcasting Company, at Chicago.

Nona Motor Oil Company, at Council Bluffs, Iowa.

Atlantic Broadcasting Corporation, at New York City.

L. Bamberger & Co., at Kearny, N. J. Crosley Radio Corporation, at Cincinnati.

### Conveyor Speeds Production

A new conveyor system in the test department of the Federal Radio Corporation that has speeded up this operation of production more than 100 per cent, is one of

the units of the Buffalo manufacturing plant, which, through its improvement, has led to increased output of Ortho-sonic receivers.

Five tests and inspection operations are made on each complete chassis in addition to test and inspection of each part and unit in sub-assembly. The time required for each test or inspection operation is different, making it necessary to provide some means for getting a continuous flow of chassis through these operations.

The conveyor has only one inlet and four outlets. It is built in fanshape, with the inlet connected to the end of the assembly line, branching out to four outlets about fifteen feet long.

Each chassis, after it has reached the end of the assembly line, is placed on the roller conveyor for its journey along the line of testers and inspectors, to assure perfect operation before it is placed in its cabinet. The antenna, ground, voltage cable and speaker output terminals of each chassis are all connected with a carriage which automatically stops at each bench as it is sent along its route of inspection. As the chassis is halted it is automatically connected with antenna, ground, voltage and speaker. The chassis also can be rotated on the carrier to an up-side-down position while thus connected, allowing for necessary adjustments on coils, socket prongs, etc., under the shielding.

### RCA in South America

The RCA has recently formed two subsidiary companies in South America. One is the RCA of Argentine, Inc., the other, the RCA of Brazil, Inc.

The first meeting of the board of directors of both companies was held on November 8. The board for the Brazilian company is composed of General J. G. Harbord, chairman; David Sarnoff, Joseph L. Ray, Van Ness Philip and Paul A. Dana.

The board of the Argentine company is composed of General J. G. Harbord, chairman; David Sarnoff, Joseph L. Ray, Van Ness Philip and George W. Hayes.

Offices of the two companies have been established at 233 Broadway, New York City, and branch offices will be maintained in Rio de Janeiro, for the R.C.A. of Brazil, Inc., and Buenos Aires for the RCA of Argentine, Inc.

### New Broadcasting Station in Japan

A new radio broadcasting station at Kumanoto, Japan, call letters JOGK, commenced operating a short time ago according to a report from the Department of Commerce. The new station, of ten kilowatt power, broadcasts on a wave length of 380 meters.

It is expected that inauguration of the new station will increase the Japanese demand for radio sets. Up to the present but few sets had been sold, owing, it is said, to the poor reception from stations over the mountains in central and eastern Japan.

### Booklet On Television

Under the title of "Television," a comprehensive statement of the present status of the television technique and industry, as well as the formation and purpose of the Jenkins Television Corporation, is available to all those interested in this latest phase of the radio art. A copy of this booklet will be sent to anyone addressing the Jenkins Television Corporation, Jersey City, N. J.

# 1928 Greatest Radio Export Year

(Continued from page 62)

age, being only 4 per cent, the other classes following the average.

In Latin America, Mexico, Cuba, Argentina, Brazil and Uruguay are the markets of importance. Sales of components in Argentina, Colombia and Panama exceeded the imports of sets, and in a number of other instances were larger than the average.

The principal markets of the remainder of the world are Japan, Philippine Islands, Australia, and New Zealand. The fourteen countries mentioned as important markets took \$10,933,377 worth, or 90 per cent of the total.

It is estimated that 55 per cent of the receiving sets in operation in the world are of American manufacture. It is probably conservative to say that 75 per cent of the sets of the world are, at least in part, made of the products of American manufacturers. Although the foreign trade in radio is nearly equally divided between the United States, Germany, and Great Britain, 9,640,348 sets are in operation in continental United States as

compared with the latest estimate of 20,337,546 in the world, distributed as follows: North America (including the United States) 47 per cent, Europe 42 per cent, South America 4 per cent, Asia 3 per cent, and Oceania and Africa 2 per cent each.

THE world's total foreign trade in radio has approximated \$30,000,000 annually for several years. The principal participators have been the United Kingdom, Germany, and the United States, which share about equally, while France, the Netherlands and other exported small percentages.

Several circumstances have mitigated against a larger sale of sets. The patent situation has hindered sales in parts of the British Empire. The wide wave band used in Europe made our sets less desired by those who wished to receive all the stations. It is expected that the coming year will see these long-wave stations operating in a band within the reach of American factory built sets.

## Making DOLLARS Out of NICKELS

(Continued from page 63)

floor—"just to see what happens." Gross income, in nickels, frequently has been as high as \$8 per day over a period of three months. The terms are \$200 down and \$60 a month, with \$80 added for financing, and so far no difficulty has been experienced in collecting these payments. The dealer retains the key to the coin box until the machine is paid for.

Hotels, clubs and institutions of a semi-public nature are the logical prospects for the push-button type of phonograph instrument. Eighty per cent of sales to date, however, have included the five or ten-cent coin operated attachment for which there is an added first cost of approximately \$85.

As a town of 10,000 persons probably has less than a dozen real prospects, territory is granted by counties or groups of counties. The seller must be prepared not only to cover his bailiwick by personal contacts but should have available a speed wagon to support his introductory efforts.

Newspaper advertising is not recommended. Direct-mail circulars to selected lists, supplemented by the

liberal use of the telephone, provide the necessary lead-producing machinery.

"Three things strike me as particularly interesting in connection with the merchandising of automatic phonographs, electrically operated, for commercial and institutional use," enthusiastically declares Bill Christena. "First, the adaptability of the radio-trained dealer as the logical outlet for a device whose main operating elements are identical with those of a radio receiver. Second, the fact that it's practically a virgin field—for the modern machine. Third, the comparative ease with which a \$2,000 to \$3,000 gross volume, per week, may be obtained and at a sales and servicing cost of not over 10 per cent. This includes promotional expense, truckage, salaries and commissions—but not fixed overhead. The first live dealer in his field will get this business, one of the best 'allied' lines I know of."

With its beauty of tone, ease of operation, earning power and large margin it makes a profitable line to handle.

### The National Market for Modern Automatic Phonographs

(Commercial Type)

4,278	Country Clubs	1,840	Y.M.C.A.'s and Y.W.C.A.'s
1,166	Dancing Academies	70,000	Soft Drink Parlors
634	Athletic Clubs	82,000	Eating Places
1,786	Boarding Schools	23,000	Billiard Halls
932	Catholic Academies	1,440	Bowling Alleys
1,380	Elks Lodges	4,000	Beauty Shops
4,500	Miscellaneous Clubs	6,000	General Stores
4,100	Fraternity Houses	500	Terminal Stations
12,000	Druggists	15,000	Amusement Parks
15,000	Hotels		
197	Steamship Companies		
		249,753	Total Prospects

*and*  
**PERFECT  
 PERFORMANCE  
 FOLLOWS**

T. C. A. power transformers, like T. C. A. audio transformers, output transformers for dynamic speakers, and chokes, are built to standards critical enough to meet the most exacting in the industry. For among T. C. A. users are manufacturers of the world's finest radio sets who must have the best.

Nothing less than T. C. A. workmanship and materials can satisfy these discriminating buyers.

Refinements are many: automatically wound coils, vacuum impregnated; tinned leads; smooth laminations free from burrs; and perfect insulation. These and other important improvements in construction not only insure continued good performance but save the manufacturer money on his assembly.

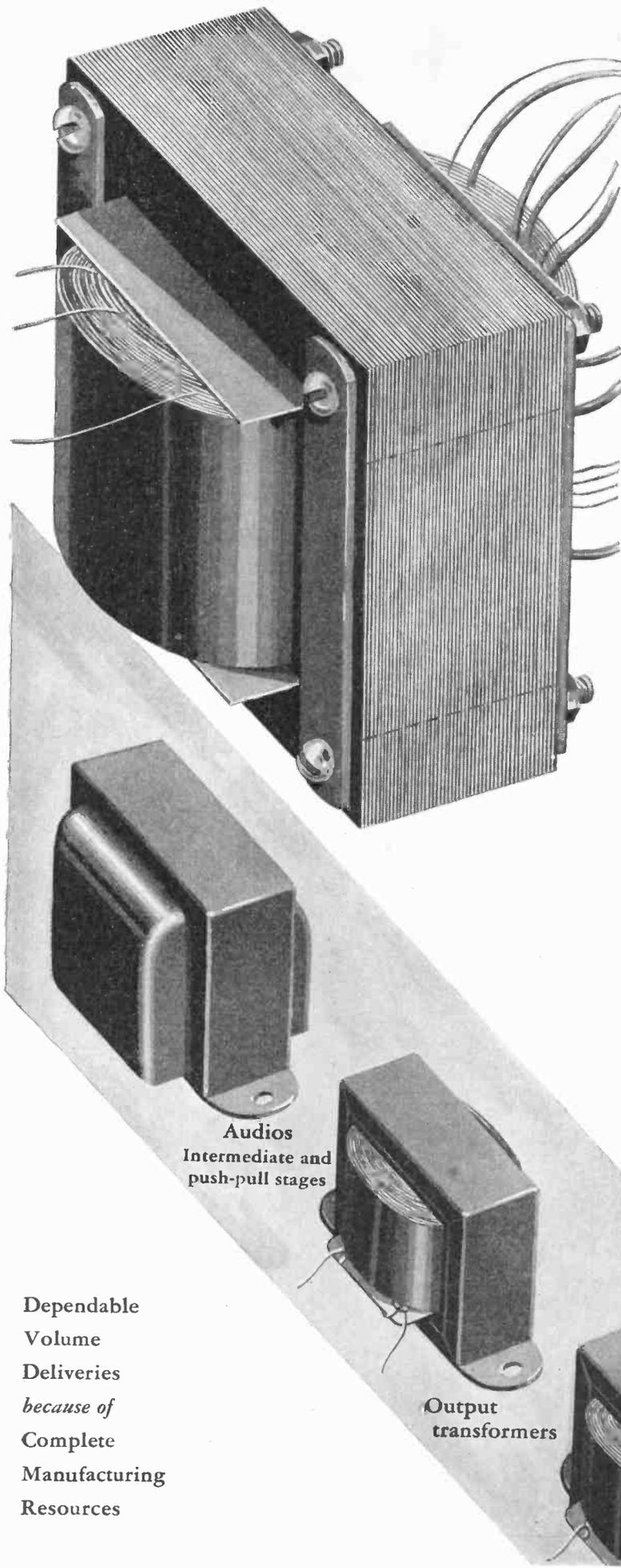
Made up to suit individual specifications in separate units, complete assemblies, or semi-mounted.

These quality products cost no more than you have been paying, and you gain the perfect performance which invariably follows their use.

**The Transformer Corporation  
 of America**

1428-1432 Orleans Street  
 CHICAGO, ILL.

*Sales Offices in Principal Cities*



**Audios**  
 Intermediate and  
 push-pull stages

**Output  
 transformers**

**Chokes**

Dependable  
 Volume  
 Deliveries  
*because of*  
 Complete  
 Manufacturing  
 Resources





# NOTICE

## To Dealers Selling

# Peerless

LICENSED UNDER LEKTOPHONÉ PAT'S, OTHER PAT'S PENDING

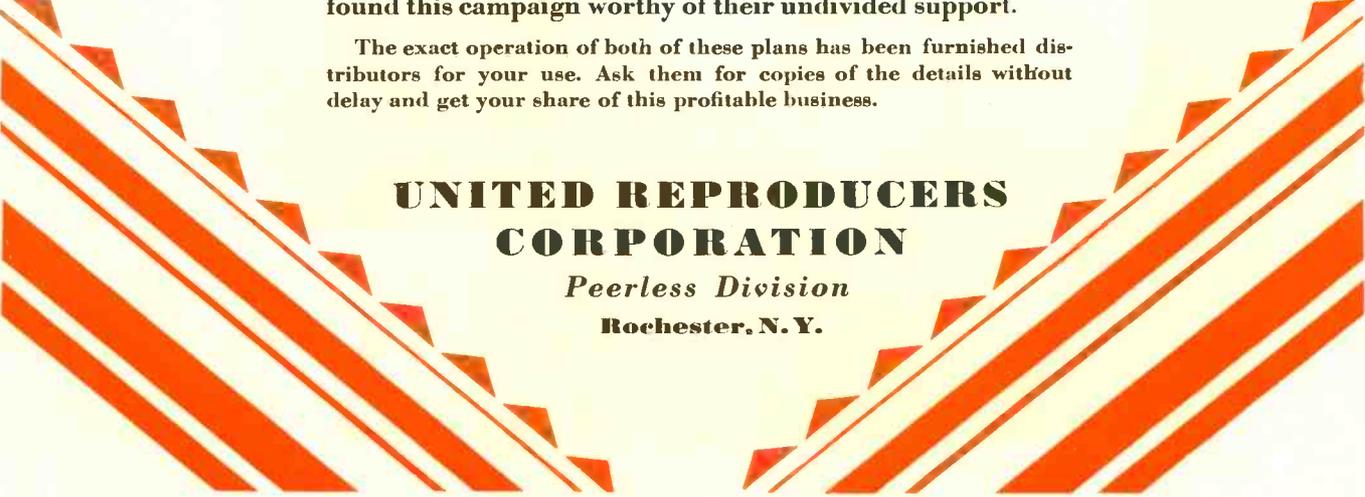
### MAGNETIC AND DYNAMIC REPRODUCERS

**T**HE Trade-In-Plan, inaugurated by the United Reproducers Corporation, Peerless Division, and effectively put into operation during February by thousands of Peerless dealers in every section of the country, will be continued for the month of MARCH. So successful has been this plan, which offers dealers an opportunity to make a liberal allowance for old speakers regardless of make or condition toward a new Peerless, every Peerless dealer should give it special attention.

#### *House-to-House Campaign*

And to make the Trade-In-Plan still more productive the Peerless House-to-House Campaign now makes its bow! In a number of experiments for the purpose of testing the procedure, several prominent retailers, some of whom never before sanctioned house-to-house methods of selling, have found this campaign worthy of their undivided support.

The exact operation of both of these plans has been furnished distributors for your use. Ask them for copies of the details without delay and get your share of this profitable business.



**UNITED REPRODUCERS  
CORPORATION**

*Peerless Division*  
Rochester, N. Y.

# REPEAT ORDERS *prove* that Ken-Rad Tubes *Satisfy*

**O**LD and new customers are buying more Ken-Rad tubes every month. This is the biggest Spring season in Ken-Rad history—and Ken-Rad is one of the three oldest tube manufacturers.

The meaning of Ken-Rad standard quality is fully appreciated by the thousands of radio owners who are using Ken-Rad tubes. And

dealers find it easier to sell Ken-Rads—and at the same time make the better profit that Ken-Rad offers.

Standard quality—complete customer satisfaction—a better margin of profit—these are some of the reasons why you should sell Ken-Rad tubes. A jobber in every section sells Ken-Rads—ask for the Ken-Rad proposition.



**THE KEN-RAD CORPORATION**  
*Incorporated*  
**OWENSBORO, KENTUCKY**  
*(A division of the Ken-Rad Tube & Lamp Corporation)*

## KEN-RAD RADIO TUBES



To create instruments that would reproduce NATURALLY, was the height of our ambition when we first entered the music field, after years of electrical and acoustical experience . . . and later, when we perfected AUDACHROME, our Chromatic Reproducer . . . and still later, when we were preparing to announce this revolutionary new

Pick-up. To interpret voice and music NATURALLY, requires ability to respond to the slightest chromatic shadings and color-tones. AUDAK attributes its acknowledged success in a difficult field to its ability to carry through this principle. Every AUDAK instrument performs NATURALLY . . . we make no other kind.

**The AUDAK COMPANY, 565 Fifth Avenue, New York**

*"Creators of High Grade Electrical and Acoustical Apparatus Since 1915"*

# HERE'S A REAL TONIC TO BRACE UP YOUR SUMMER SALES



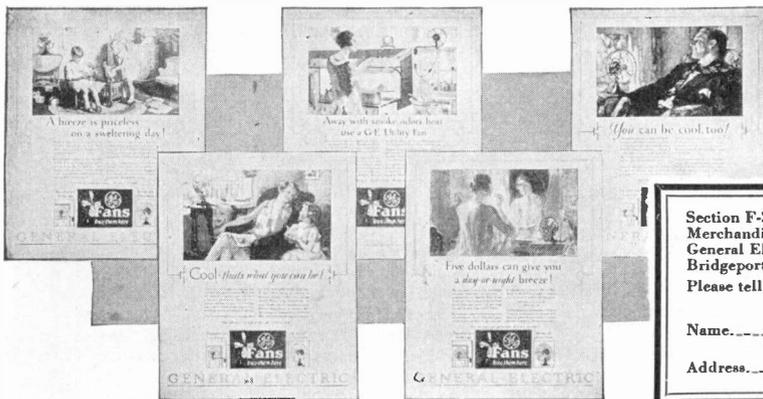
When radio sales melt before the rising temperature of summer, fan sales take their biggest leap ahead.

General Electric Fan sales take the most gigantic steps because General Electric Fans are backed by so tremendous a campaign.

More than 15,000,000 advertisements will appear in *The Saturday Evening Post*, *Collier's* and *Liberty* during the warm months. They not only sell fans, but they prominently display the G-E Fan SIGN which you can have in front of your shop to bring sales right to you.

Forceful local sales campaigns, too, unusual booklets and helps, special price tags and other aids are yours for the asking.

Send the coupon for the whole story. Do it now and reap the benefits in bigger and more profitable summer sales. Radio and G-E Fans are a good combination for all-year-round profit



Section F-293  
 Merchandise Department,  
 General Electric Company,  
 Bridgeport, Conn.  
 Please tell me how to brace up my summer sales.

Name.....  
 Address.....

# GENERAL ELECTRIC

5 GREAT FACTORIES ASSURE VOLUME PRODUCTION

# We Challenge

anyone to Equal the

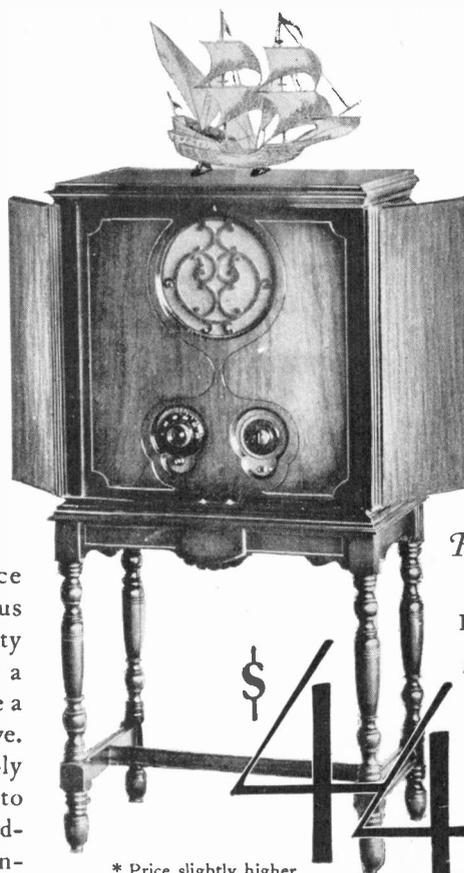
QUALITY, CONSTRUCTION, PRICE

of R. C. M. Model 160

ALL WALNUT CABINET

for ATWATER KENT Radios

RADIO CABINET MANUFACTURING CORPORATION breaks all precedent by announcing "All Walnut Construction." First with many new value features . . . first to feel the pulse of public demand for all walnut construction . . . R. C. M. challenges you to find equal value in popular priced Radio Furniture.



DESIGN  
PATENT  
PENDING

Retail  
List  
PRICE

\$ ~~44~~ 75\*

\* Price slightly higher  
West of the Rockies

Model No. 160 R. C. M. Cabinet  
takes Model No. 40, 42 or 46  
Atwater Kent Radios

ALL WALNUT Construction assures your customer a lasting and substantial radio cabinet . . . and the beauty characteristic of fine Walnut. All exposed parts are genuine Walnut. On the front, top and sides we use 5-ply genuine selected Walnut veneers. The base is All Walnut.

Two-way hinges permit the doors to open flush and trim against the sides. The doors are of matched Burl Walnut veneers with imported Peruvian maple overlays. Fluted edges contribute to a fully finished appearance when the doors are open.

The front panel is

made with 5-ply one piece Walnut Veneers. Harmonious grouping of controls, simplicity in the design of the grille and a plain, continuous design create a rich front panel pleasing to the eye.

The heavy, full-width 5-ply baffleboard is securely bolted to the cabinet. The all brass hardware is krominized and non-tarnishable and styled in keeping with the general design of the cabinet. At home in any surroundings, R. C. M. Cabinet No. 160 will appeal to that vast market of buyers who appreciate quality and yet do not wish to pay the usual high price to obtain it.



Order through your ATWATER KENT Distributor

FAMED as a successful retail merchandiser, Mr. I. H. Hartman makes available to Atwater Kent dealers through R. C. M. his own great talent for merchandising and his extensive knowledge of furniture merchandising. Better service in Merchandise . . . Better Service in Merchandising . . . on these fundamental advantages R. C. M. offers its co-operation to all Atwater Kent dealers.

RADIO CABINET MANUFACTURING CORPORATION

I. H. HARTMAN, President . . . General Offices: FURNITURE MART, CHICAGO

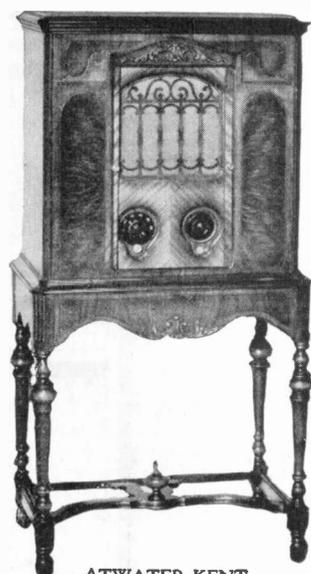
# ATWATER KENT RADIO

Bigger sales than a year ago  
*with*  
**ELECTRO-DYNAMIC**

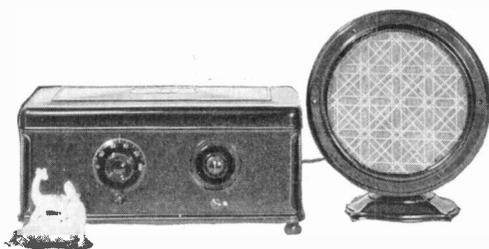
EVERYBODY knows that when Atwater Kent announces a new model it is a perfected instrument at a price most people can afford.

This means that profits are constantly increasing for the retailer who handles the radio the public demands.

Right now they are demanding Atwater Kent Electro-Dynamic.



ATWATER KENT  
ELECTRO-DYNAMIC  
RADIO  
IN CABINET  
*by Red Lion*



MODEL 46. New Electro-Dynamic receiver for use with Model F-2 Electro-Dynamic speaker or other speakers of the same electrical characteristics. Full-vision Dial. Panelled corners, ball feet. Requires 7 A. C. tubes (2 power tubes) and 1 rectifying tube. Without tubes, \$83.

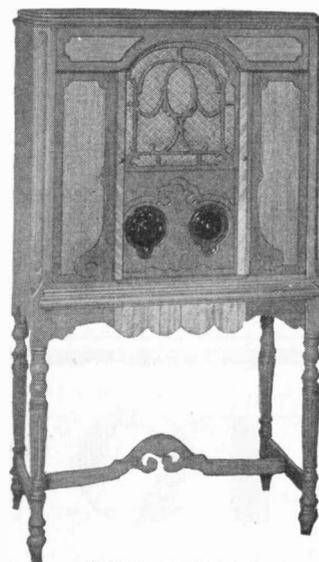
*On the air—every Sunday night — Atwater Kent Radio Hour—listen in!*  
Prices slightly higher west of the Rockies.



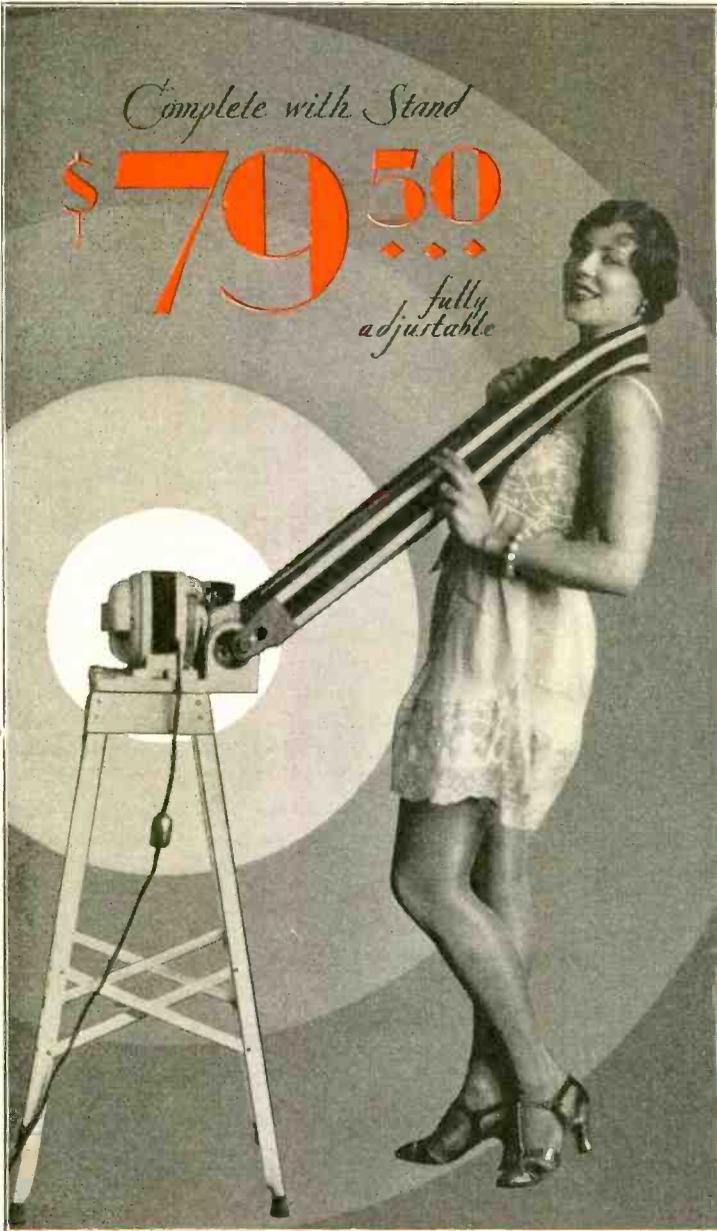
MODEL 53. New, compact, all-in-one set with Atwater Kent Electro-Dynamic speaker. Not much higher than your knee! Makes a beautiful little table for lamp or books — and becomes a musical instrument at the snap of the switch. Full-vision Dial. Requires 7 A. C. tubes and 1 rectifying tube. Without tubes, \$117.

MODEL F-2 Electro-Dynamic speaker. True to the whole range of music. For use with Model 46 Receiver or other receivers supplying a D. C. field current. \$34.

ATWATER KENT  
MFG. COMPANY  
*A. Atwater Kent, President*  
4733 Wissahickon Ave.  
Philadelphia, Pa.



ATWATER KENT  
ELECTRO-DYNAMIC  
RADIO  
IN CABINET  
*by Pooley*



Complete with Stand

**\$79.50**

fully adjustable

Now is the opportunity for radio dealers to boost their Spring and Summer sales with a fast moving item that is a year-round seller. Exercising and reducing machines are here to stay. Public demand is increasing by leaps and bounds, and there's a place in any radio department for this new electrical appliance that's been taking the country by storm.

Dealers holding a Tower franchise are backed by national advertising and a cooperative sales service that means quick turnover and increased profits.

If you have not seen the new machine or heard the entire story about this wonderful sales item write or wire immediately for full details.

TOWER MFG. CORP., 122 BROOKLINE AVE., BOSTON, MASS.

**TOWER**

**EXERCISER REDUCER**

**F**OR information regarding the new Tower Exerciser and Reducer, write Tower Mfg. Corp., Boston or any distributor below.

**WHOLESALE DISTRIBUTORS**

- Alabama**  
Birmingham, Moore-Handley Hdwe. Co.
- California**  
Los Angeles, Radio Sup. Co., Leo J. Meyberg Co., Western Surgical Sup. Co., San Francisco, Robert Weinstock Co., Fobes Sup. Co., Leo J. Meyberg Co., Marcus-Lesoiné.
- Colorado**  
Denver, Hendrie & Bolthoff Mfg. Co.
- Connecticut**  
New Haven, The Hassel & Hoppen Co. Bridgeport and Waterbury, Sprague Electric Co.
- Delaware**  
Wilmington, H. C. Roberts E. S. Co.
- Dist. of Columbia**  
Washington, H. C. Roberts E. S. Co.
- Florida**  
Jacksonville, G. E. Sup. Co., Miami, G. E. Sup. Co., Tampa, G. E. Sup. Co.
- Idaho**  
Pocatello, Intermountain Elec. Co.
- Illinois**  
Chicago, New England Mills Co., Illinois El. Co., Gibbs & Co., Peoria, Ill. El. Co., Streator, Williams Hdwe. Co., Rock Island, R. I. Hdwe. Co.
- Indiana**  
Indianapolis, The Varney El. Co., Van Camp Hdwe. & Iron Co., Evansville, The Varney El. Co.
- Iowa**  
Burlington, Crescent Elect. Co., Des Moines, Julius Andrae & Sons Co., Davenport, Crescent El. Co., Dubuque, Crescent El. Co., Mason City, Julius Andrae & Sons Co., Sioux City, McGraw El. Co.
- Kentucky**  
Louisville, Tafel El. Co.
- Louisiana**  
New Orleans, Interstate El. Co., New Orleans Electric Supply Co., Shreveport, Interstate El. Co.
- Maine**  
Portland, G. E. Sup. Co.
- Maryland**  
Baltimore, H. C. Roberts E. S. Co.
- Massachusetts**  
Boston, Frankel - Smith Co., G. E. Sup. Co., Wetmore-Savage E. S. Co., Wetmore-Savage A. E. Co., New Bedford, Union Electric Supply Co., Springfield, B. H. Spinney Co., Wetmore-Savage E. S. Co., G. E. Sup. Co., Worcester, Wetmore-Savage E. S. Co.
- Michigan**  
Detroit, Com. El. Supply Co., Lake States G. E. Supply, Grand Rapids, C. J. Litscher El. Co., Com. El. Co., Kalamazoo, C. J. Litscher El. Co., Jackson, G. J. Litscher El. Co., Flint, Com. El. Co.
- Minnesota**  
St. Paul, Gt. Northern E. A. Co., Minneapolis,
- Gt. Northern E. A. Co., Duluth, Gt. Northern E. A. Co., Marshall-Wells Co.
- Missouri**  
St. Louis, Com. El. Co., The Straus Co., Kansas City, Columbian El. Co.
- Nebraska**  
Omaha, McGraw El. Co., Lincoln, R. S. Prouditt Co.
- New Jersey**  
Trenton, H. C. Roberts E. S. Co.
- New York**  
Albany, H. C. Roberts E. S. Co., Syracuse, H. C. Roberts E. S. Co., Binghamton, H. C. Roberts E. S. Co., Buffalo, Joseph Strauss Co., Utica, H. C. Roberts E. S. Co., Troy, Hinsdill El. Co., N. Y. City, Chisholm Co., Times Appliance Co., Alpha El. Co.
- North Dakota**  
Fargo, Gt. Northern E. A. Co.
- Ohio**  
Cleveland, Clarke Motor Equip. Co., Erner El. Co., Akron, Hdwe. & Sup. Co., Toledo, Toledo Auto Equip. Co.
- Oklahoma**  
Tulsa, Elec. Appliance Co., Oklahoma City, Electric Appliance Co.
- Oregon**  
Portland, Fobes Sup. Co., Marshall-Wells Co.
- Pennsylvania**  
Philadelphia, H. C. Roberts E. S. Co., Pittsburgh, Iron City El. Co., Edlis Barbers' Sup. Co., Reading, H. C. Roberts E. S. Co.
- Rhode Island**  
Providence, Wetmore-Savage E. S. Co., Union El. Sup. Co.
- Tennessee**  
Memphis, Braid El. Co., Com. El. Co., Nashville, Braid El. Company.
- Texas**  
Fort Worth, The Shield Co., Dallas, El. Appliance Co., El Paso, The Mine & Smelter Co., Houston, El. Appliance Co., Inc., San Antonio, El. Appliance Co.
- Utah**  
Salt Lake City, Intermountain El. Co.
- Virginia**  
Norfolk, Woodhouse Elect. Co., Richmond, Tower-Binford El. Co.
- Washington**  
Seattle, Fobes Sup. Co., Wedel Co., Spokane, Fobes Sup. Co., Marshall-Wells Co.
- Wisconsin**  
Milwaukee, Julius Andrae & Sons Co.
- Hawaii**  
Honolulu, Mutual Telephone Co.
- Cuba**  
Havana, Menendez & Co., 19 Ricalá St.



# Now

you can have an unlimited business

## WITH UNLIMITED PROFIT

*throughout the entire year . . .*

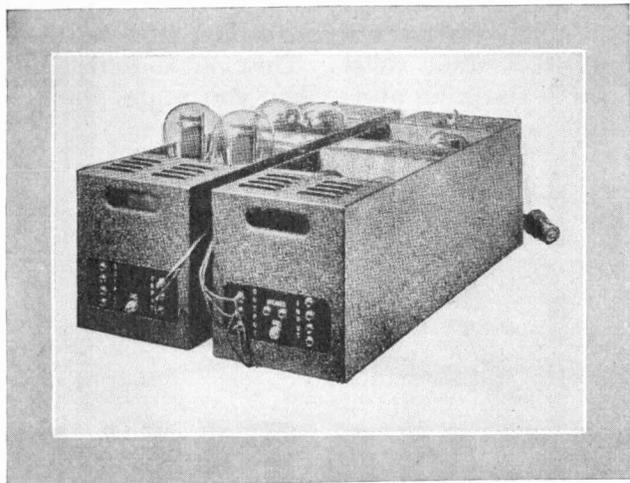
**WOULDN'T** you like to be in a business where the unit sales are big? Where service is small? Where the profit stays put? Where you are not at the mercy of broadcast station interference, line interference and so on?

Get into Power Amplification!

There are a dozen business men right in your neighborhood—men you already know—who are

# POWERIZER

## Power and Super Power AMPLIFIERS



*The new models of Powerizer Amplifiers have the UX245 Tube. Other models for every power amplification purpose.*

Licensed by  
Radio Corporation of America  
and Associated Companies

*right now* wondering about power reproduction . . . looking for information about it.

These men are running dance halls, theatres, restaurants, summer resorts, amusement parks, fairs, schools, camps—all sorts of public places where fifty to several thousand people gather.

You can easily show them how a modern system of A. C. Power Amplification—(reproduction music or speech in full orchestral volume with perfect realism)—will draw big crowds and make money for them.

And think what a profit you can make on complete installations ranging from \$350 to \$1,000 and more! You profit on the equipment . . . you profit on the installation . . . you get advertising value of it . . . and, finally, you keep your organization busy making money for you throughout the year!

This isn't any experiment either—it's business you can easily get if you'll let us help. We make the heart of the system—Powerizer Amplifiers employing the newest Tubes (UX245-UX250). We'll gladly send you all the technical guidance your service men will need to make a thoroughly satisfactory installation. We'll give you all the benefit of our experience in selling and installing Powerizer systems at a profit. Get these complete details now—write, today for our booklet RR3-1026.

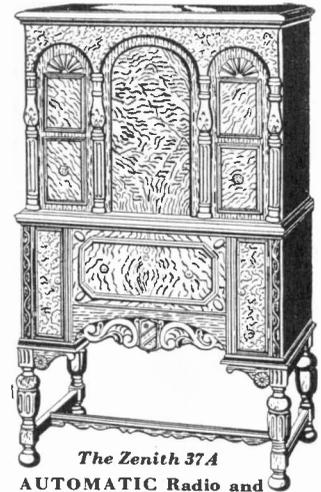
**RADIO RECEPTOR COMPANY, Inc.**  
106 Seventh Ave. • New York, N. Y.  
307 N. Michigan Blvd., Chicago, Ill.

**Sell Power Amplification Installations to:**

Dance Halls	Theatres	Civic Centers
Restaurants	Summer Resorts	Amusement Parks and Fair Grounds
Lunchrooms	Churches	Railway, Bus and other announcing systems.
Hotels and Apartment Houses	Schools and Camps	
Steamships	Movies	
	Hospitals	

**PATENTED..!**  
**.UNCOPYABLE**

**ONLY ZENITH HAS IT**  
**AUTOMATIC TUNING!**



*The Zenith 37A*  
AUTOMATIC Radio and  
Phonograph Combination.  
Zenith Receivers are  
priced from  
**\$100 to \$2500**

**I**T HAD to come. *Automatic* Radio was as firmly destined to become the accepted radio of the future, as was all-electric radio a few years ago. And what could be more inevitable than that the pioneer developer of the electric receiver should again step forward . . . with this great and newer advancement.

Automatic Tuning is here TODAY . . . thanks to Zenith leadership. No more hunting or groping for stations in the old-fash-

ioned way. You simply press a button and the wanted station comes in instantly . . . surer, sharper than the most expert tuner could accomplish by hand. No limit to the number of stations obtainable . . . ALL, local or distant, are at the beck and call of your FINGER TIP!

Zenith dealers, *only*, will have 1930 Automatic Radio. *NOW*. That is something worth thinking over, when you make plans for a profitable radio business this year.

**ZENITH**  
TRADE MARK REG  
**AUTOMATIC**

3620 IRON STREET

CHICAGO, ILLINOIS

"Automatic Radio" Owned and Controlled by The Zenith Radio Corp., Chicago, U. S. A., under the following patents—Vasselli 1581145, Re-issue 17002, Heath 1638734, Canada 264391, Ct. Britain 257138, France 607436, Belgium 331166. Also under Marvin and other U. S. and foreign patents pending.

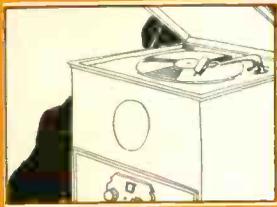
Licensed only for Radio amateur, experimental and broadcast reception. Western United States prices slightly higher

WORLD'S LARGEST MANUFACTURERS OF HIGH GRADE RADIO

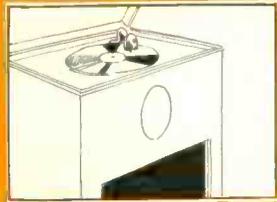
# The Buckingham

“THE BEST THERE IS”

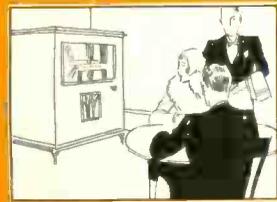
# PICK-UP



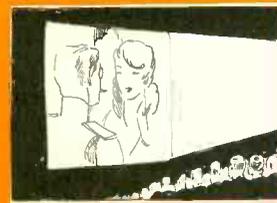
Radio Manufacturers



Cabinet Manufacturers



Automatic Phonograph Manufacturers



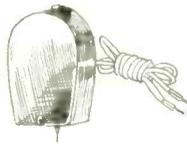
Multiple Turn-Table Machines for Theatre Use



Jobbers and Dealers

THE pick-up is the most important *and least expensive* part of any reproducing instrument. Manufacturers who have used the BUCKINGHAM know that it is absolutely the finest, most efficient and durable pick-up ever offered. Precision made throughout, of highest quality materials and workmanship, yet it costs little more than many inferior makes.

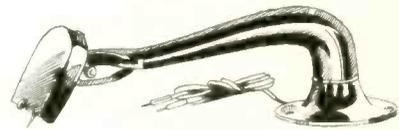
## for the manufacturer



MODEL A

Two models (above and to the right) for manufacturers of radio and phonograph combinations, combination cabinets, automatic electric phonographs, multiple turn-table devices, auditorium speakers, and any other devices for electrical reproduction from records.

Built like a fine chronometer. High voltage output, low impedance, and uniform response over a frequency spectrum far in excess of that audible to the human ear. *Permanent magnet of finest cobalt steel.* Each armature dynamically balanced. Each assembly aged and retested to insure accurate adjustment before shipment is made.



MODEL C

## for the jobber and dealer



MODEL B 227

Jobbers and dealers are finding the BUCKINGHAM Pick-Up an excellent money maker. Two models (with and without arm), both including volume control, for accessory sale.



MODEL C 227

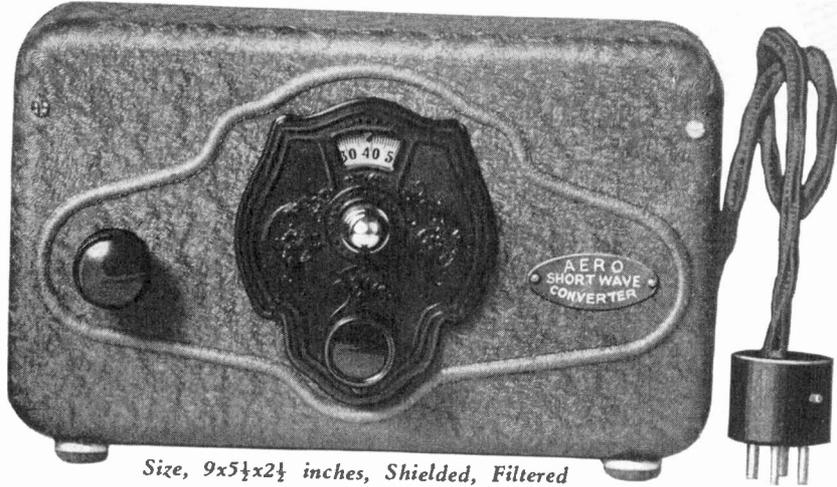
[ Write or Wire for  
Our Proposition ]

# Buckingham

RADIO CORPORATION

Dept. PU1, 440 W. Superior St., Chicago, Ill.

PLUG IT INTO YOUR RADIO SET  
**AERO-CALL**  
 SHORT WAVE CONVERTER



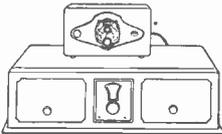
Size, 9x5½x2½ inches, Shielded, Filtered

DEALERS—New  
**AERO-CALL**  
 for 1929

Complete Factory-Built Short-Wave  
 Converter Box  
**PLUGS INSTANTLY  
 INTO ANY RADIO!**  
 A. C. and D. C. Models

Made by  
**AERO PRODUCTS, Inc.**  
 Pioneer Short-Wave  
 and Coil Specialists

A BIG All-Seasons SELLER to ALL SET OWNERS



**T**HE new 1929 Aero-Call Converter Box brings to music stores and radio dealers a real opportunity to increase sales and profits for 1929.

Here is an entirely new adaptation of the wonders of radio. Heretofore, short waves have been appreciated only by "hams." Now they are available instantly to every radio set owner by the use of the Aero-Call short-Wave Converter Box. A compact, shielded, filtered, factory-built short-wave adapter, equipped with special short-wave coils. Designed for both A.C. and D.C. sets. Operates perfectly without motor-boating, by an auxiliary filter system control, an exclusive feature (patent applied for) that entirely eliminates the failure of most converters heretofore offered to the public. It can be plugged into any regular radio set. List of short-wave stations here and abroad, with time of broadcasts, enclosed with each set.

*Get Foreign Countries on Short Wave*

This amazing radio instrument now makes it possible to reach 'round the world—England, Germany, Holland, France, Australia, Panama, Java and many foreign stations are some that are tuned in regularly on short wave. Permits enjoyment of international programs and many others from coast-to-coast that regular receivers cannot get. What a thrill it is to plug this into a tube socket on any set and instantly be in another world!

No change or wiring required. All complete, ready to operate, tubes and coils hidden, no apparatus in sight, except the neat, golden-brown, compact metal cabinet in crackle finish, that harmonizes splendidly with the finest radio cabinet. Cushioned feet prevent marring cabinet.

Size, only 9 x 5½ x 2½ inches.

The only converter we know of that really works on all sets. Two models—A.C. and D.C.

Dealers, write for literature and discounts, and name of your nearest jobber. Jobbers, stock up now.

**AERO PRODUCTS, Inc.**

4611 E. Ravenswood Ave., CHICAGO, ILLINOIS  
 DEPT. 2139-A

*Every Set Owner a Prospect!*

The public's interest in this remarkable new radio improvement has been nation-wide. Jobbers and Dealers will find an instant demand for it from radio users everywhere, both A.C. and D.C. Order your demonstrator now.

MODEL A,  
 for A. C. Sets—

MODEL D,  
 for D. C. Sets—

LIST PRICE } \$25.00

*Dealers' Demonstrator Order*

AERO PRODUCTS, Inc. 4611 E. Ravenswood Ave.,  
 Dept. 2139-A, Chicago

Send me one of your new 1929 Aero-Call Short Wave Converter Boxes ready to plug into any radio set now sold by me. I'll put them on sale. Enclosed is remittance of \$25.00 less 40% dealer's discount, less 2% for cash.

Dealer's Name .....

Street and Number .....

City ..... State .....

State whether A.C. or D.C. Model is desired.

Name and Address of Jobber .....

.....



EMERSON'S  
**Elektron**  
 GUARANTEED  
**Vacuum Tube**

{ A PRODUCT OF EMERSON, one of the  
 best known names in the music industry —  
 and sound reproduction. }

—to the radio set owner it means:

An entirely new conception of clarity of tone and faithfulness in sound reproduction.

Truer reception and a reawakening of interest in radio enjoyment.

Assured satisfaction made doubly sure by the iron-clad EMERSON GUARANTEE.

—to the radio tube dealer it means:

Complete breaking down of sales resistance and a constant turnover of a live line.

A source of steady profit and a sufficient margin to make the EMERSON ELEKTRON a most attractive selling proposition.

—to the jobber it means:

The best tube franchise in radio today.

**JOBBER'S FRANCHISES BEING ALLOTTED**

{ Write at once for full information. No make of radio tubes ever offered to the American market so completely protects set owner, dealer and jobber—or will give such genuine satisfaction to all. An EMERSON franchise has a value which will return handsome profits to live jobbers. }

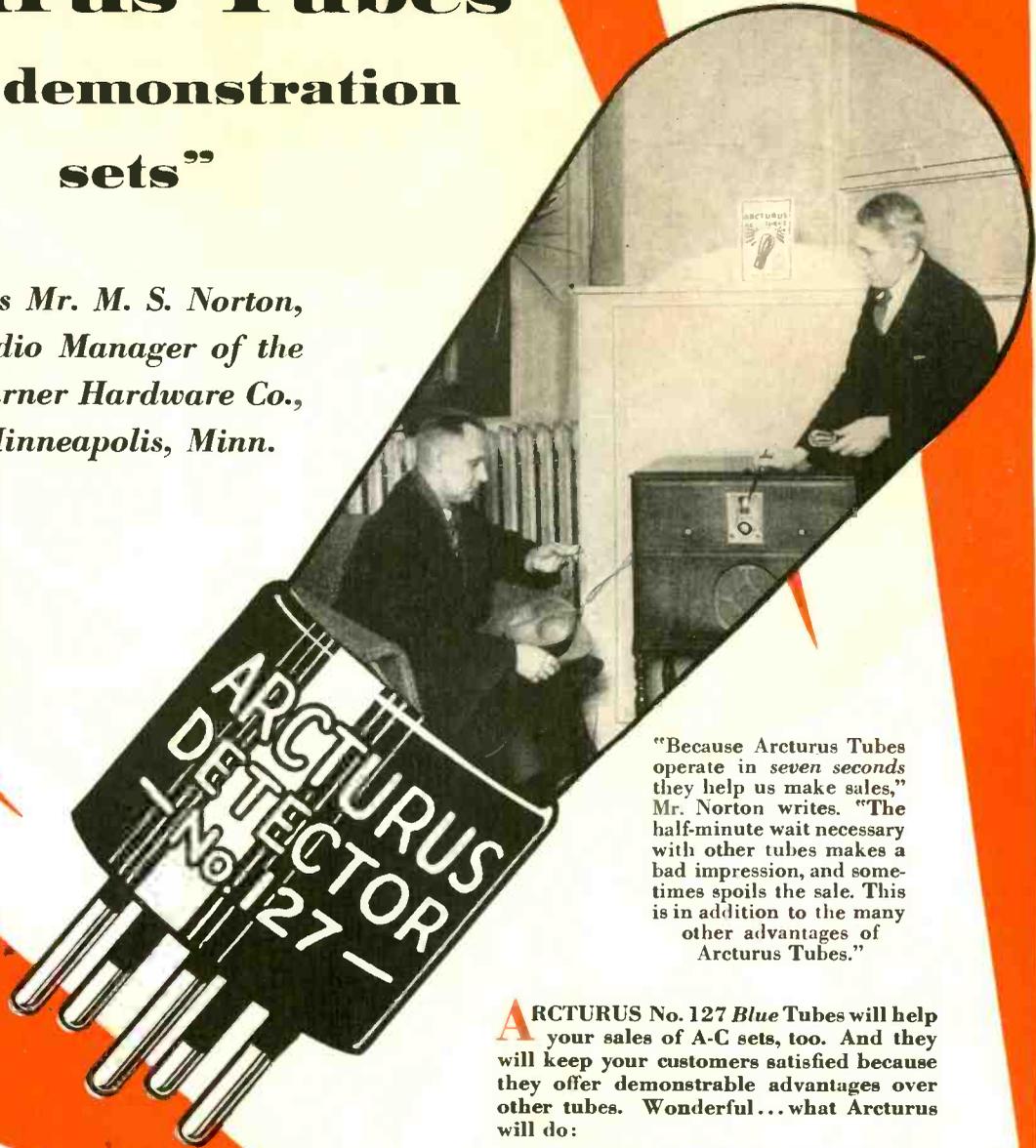
**EMERSON RADIO and PHONOGRAPH CORP.**

*Makers of Emerson Quality Products since 1915*

307-309 Sixth Avenue, New York City

"We use only  
**Arcturus Tubes**  
 in our demonstration  
 sets"

—says Mr. M. S. Norton,  
 Radio Manager of the  
 Warner Hardware Co.,  
 Minneapolis, Minn.



"Because Arcturus Tubes operate in *seven seconds* they help us make sales," Mr. Norton writes. "The half-minute wait necessary with other tubes makes a bad impression, and sometimes spoils the sale. This is in addition to the many other advantages of Arcturus Tubes."

**A** RCTURUS No. 127 Blue Tubes will help your sales of A-C sets, too. And they will keep your customers satisfied because they offer demonstrable advantages over other tubes. Wonderful... what Arcturus will do:

*Brings in programs in 7 seconds.*

*Increases volume.*

*Banishes hum.*

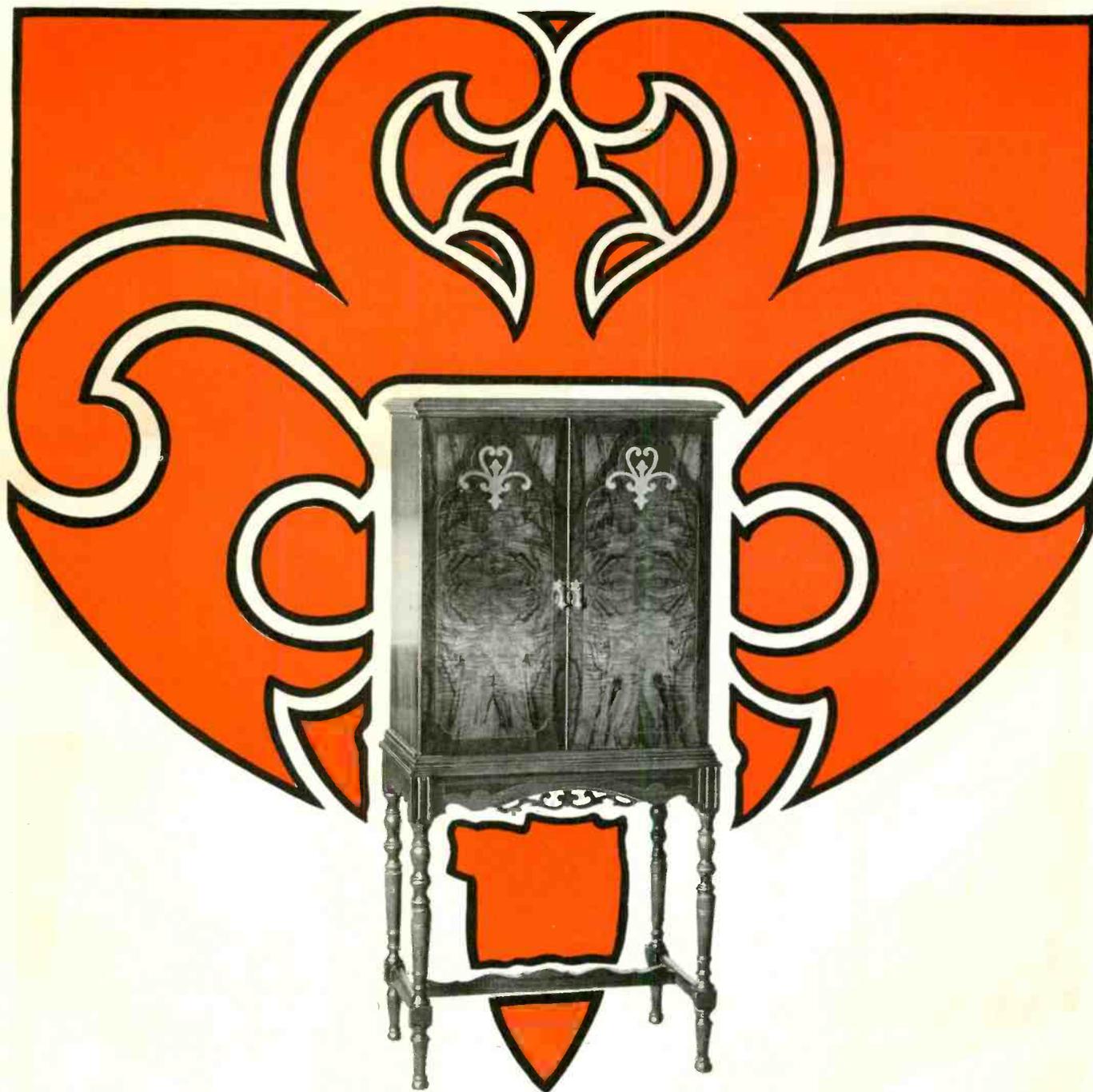
*Prevents harm from line surge.*

*Averages more than 2000 hours' life.*

If you want to sell the fastest moving A-C Tube on the market today, get all the facts about Arcturus.

**ARCTURUS**  
**BLUE** <sup>A-C</sup> **LONG-LIFE** **TUBES**

ARCTURUS RADIO TUBE CO. ~ 220 ELIZABETH AVENUE — NEWARK, NEW JERSEY



### A SPLENDID SETTING FOR RADIOLA 18 OR 60

**B**EAUTY of tone—high quality of radio engineering as found in Radiola 18 or 60 deserve a cabinet in keeping.

This splendid Radio Master Cabinet is made particularly for this need.

Equipped standard with the Radiola 106 speaker. The interior panel is drilled in such a way that either Radiola 18 or 60 may be installed.

Walnut plywood—matched butt wal-

nut doors—cross figured walnut interior panel—these mellow beautiful woods combine with splendid design and Radio Master fine workmanship to give you a cabinet you will like to sell.

Available through Radio Corporation Jobbers only.

Other Radio Master Cabinets are available for every make of set. All of them are beautiful.



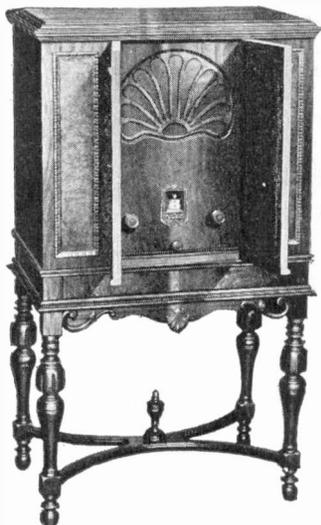
Cabinet open.



RADIO MASTER CORPORATION, Bay City, Mich.

**Radio Master Cabinets**  
**THE SETTING BEAUTIFUL FOR ANY RADIO**

# The big 4 of Radio



## FADA 32

Uses 8 tubes, including two 171-A tubes and rectifier—Using heater element tubes—Smooth volume control—Illuminated single dial—Single tuning knob—Reproduction not affected by line voltage fluctuations. With famous Fada Dynamic Speaker. Self-contained in a beautiful burl walnut console—Operates from A. C. light socket (90-130 volts, 50 to 60 cycles). Yes, it's a neutrodyne!

FADA dealers are not restricted to one class of prospect. For the Fada line gives them quality radio for every type of home and every grade of income.

The Fada 16 at \$110 with push-pull amplification, phonograph attachment, using heater element tubes and dynamic speaker, places fine radio performance within reach of all. And the Fada 32, with the same features and a dynamic speaker built in its beautiful console, is the greatest radio value on the market at \$225.

The Fada 70 represents the highest development of radio and its glorious voice is heard in thousands of the finest homes in the land. Small wonder that Fada dealers value their franchises so highly. For everyone is a prospect for Fada radio. Write us for details regarding our franchise in your territory.

# FADA Radio

## FADA 70

With the famous built-in Fada super-dynamic speaker—a real one (enormous volume or mere whisper)—Illuminated single dial—Uses 9 vacuum tubes, 6 heater element tubes and one rectifier (2 of the powerful 210 type tubes)—push-pull amplification—Loop or antenna operation (loop hidden in top of cabinet when not in use)—Phonograph attachment—Smooth volume control—Completely self-contained in beautiful Sheraton console—Operates from A. C. light socket (90-130 volts, 50 to 60 cycles)—Yes, it's a Neutrodyne!



## FADA 16

Fada 16 table model, in velvetex finish cabinet, for use with Fada dynamic or magnetic speaker, has same features as the 32.

*This same model designed for use with direct current is known as Fada 18.*



## FADA 14

A powerful cone with dynamic motor drive. Built in power supply units for 25 to 60 cycles—90 to 130 volts. No adjustments. Absolutely faithful reproduction within the entire speech and music range (20 to 6000 cycles)—merest whisper or enormous volume without distortion.



# By this Box ~



By this box you know  
"The Healthy Tubes"

# Raytheon

LONG LIFE RADIO TUBES

RAYTHEON MFG. COMPANY, Cambridge, Mass.

# Raytheon

LONG LIFE RADIO TUBES

## one and all have the 4-Pillar Construction, Cross-Anchored Top and Bottom

This unique, super-rigid construction holds the elements permanently in their correct relative positions.

It prolongs the life of the tube, eliminates microphonic noises, and improves reception.





Brandes Wireless  
1908

Brandes Radio  
1929

*From coast to coast*  
Distributors Hail  
*the* new Brandes Radio\*

It met—and *exceeded*—their every expectation! It proved itself the biggest news in radio for 1929!

This Brandes receiver climaxes 21 years of research and experience. It will build sales in a price field where sales potentialities are greatest.

Very shortly, now, distributors will be in a position to make deliveries on this outstanding, new Brandes receiver.

\*all electric operation  
1 table model  
2 console models (with dynamic  
reproducer)  
Cabinets of surpassing beauty

The New  
**Brandes Radio**

# BOSCH RADIO



Bosch Radio Model A, well designed, richly carved with selected woods, complete with Model 28 Bosch Radio Receiver, Bosch Magnetic Speaker—price \$170.00 less tubes. Model 28C a similar model with electro-dynamic speaker is \$195.00 less tubes.



Bosch Radio Model 29D, new in treatment novel in effect of patterned veneers, rich in quality and appeals to discriminating buyers, complete with Model 29 Bosch Radio Receiver, super-dynamic speaker, special high power speaker supply is \$225.00 less tubes.

Bosch Radio Model 28—110 volt A.C. Seven A.C. tubes and power rectifying tube. Single tuning, lighted dial. Solid mahogany cabinet. Price \$110.00 less tubes.



Bosch Radio Model B, beautiful in every line with patterned woods, sliding doors, deep carvings, complete with Model 29 Bosch Radio Receiver, super-dynamic speaker, special high power speaker supply is \$250.00 less tubes.

**A**NOTHER new model—Model 29D—has been added to the highly successful Bosch Radio line. Added strength and new profits are assured to Bosch Dealers who, after a money-making year, start upon a new season with an augmented line and new sales opportunity. The Model D has the same craftsmanship so outstanding in the other models of Bosch Radio—has fine woods, selected veneers and pleasing design. It fits in and rounds out the line.

Participate in the success of Bosch Radio. Profit by a selling policy that has been subjected to the acid test, of an advertising and sales help program that really sells merchandise. Write the Main Office or the nearest branch where your inquiry will be taken seriously and kept confidential.

Prices slightly higher West of Rockies and in Canada  
Bosch Radio is licensed under patents and applications of R. C. A., R. F. L. and Lectophone

**AMERICAN BOSCH MAGNETO CORP.**  
SPRINGFIELD MASSACHUSETTS  
BRANCHES: NEW YORK CHICAGO SAN FRANCISCO

# The BIG NOISE!

The loud clamor that always goes with national advertising circulation figures is supposed to *echo* in your cash register.

### *But Does It?*

The only advertising that does any selling for you is advertising in *your* city, reaching your customers, influencing their buying habits!

And The American Weekly is the national publication that does the job!

### *What is The AMERICAN WEEKLY?*

The American Weekly is the magazine distributed through the seventeen great Hearst Sunday newspapers from seventeen principal American cities.\* It concentrates and dominates in 485 of the nation's 784 towns and cities of 10,000 population and over.

*In each of 153 cities it reaches one out of every two families.*

*In 119 more cities it reaches from 40 to 50%*

*In an additional 108 cities it reaches from 30 to 40%*

*In another 105 cities it reaches from 20 to 30%*

And almost two million additional copies of The American Weekly are bought in thousands of other prosperous communities—constituting an amazing national total of 5,646,898 families who buy and read The American Weekly—the greatest and most responsive circulation of any publication on earth!

## THE AMERICAN *Greatest Circulation in the World* A WEEKLY

Main Office: 9 East 40th Street, New York City

### *Branch Offices:*

- \*Albany
- Atlanta
- Baltimore
- Boston
- Chicago
- Detroit
- Los Angeles
- Milwaukee
- New York
- Omaha
- Pittsburgh
- Rochester
- San Antonio
- San Francisco
- Seattle
- Syracuse
- Washington

- Wrigley Bldg., Chicago
- 5 Winthrop Square, Boston
- 753 Bonnie Brae, Los Angeles
- 222 Monadnock Bldg., San Francisco
- 1138 Hanna Bldg., Cleveland
- 101 Marietta St., Atlanta
- 12-231 General Motors Bldg., Detroit

The American Weekly  
9 East 40th Street  
New York City

Please send me a copy of the American Weekly and a statement of its circulation in my trading territory.

Name.....

Address.....

Town..... State.....

MAIL THIS COUPON

**EXTRA  
HEAVY  
DUTY**

**30%  
LONGER  
LIFE.....  
COSTS  
ONLY  
13%  
MORE**

**CELL-POCKET  
CONSTRUCTION**



**You can tell your customers this: that they'll get longer, better service every time from the new Ray-O-Vac Extra Heavy-Duty "B" Battery (No. 8303) . . . and what's more, you can rely on the battery's backing up your strongest statements. Thirty per cent longer life at only thirteen per cent greater cost is a great selling argument! Your jobber supplies you.**

**FRENCH BATTERY CO.**

*Factory: Madison, Wis.*

*Sales Office:*

30 North Michigan Avenue, Chicago

*Also makers of Ray-O-Vac "A" and "C" Radio Batteries, Ray-O-Vac Rotomatic Searchlights, Ray-O-Vac Flashlight, Ignition and Telephone Batteries*

# SONORA *makes*

## 3 *important* *announcements*



*Model A-44. An exquisitely designed combination instrument embodying the utmost perfection of the electrical reproduction of music—either by record or from the air.*



*Model A-36. In this instrument Sonora presents a radio that represents the highest development in the art of recapturing music from the air.*

1. Sonora's production economies, together with a tremendous consumer demand, have made possible new lower prices on two Sonora Radios. These are Radio Models A-30 and A-32, now listed at \$260 and \$280 respectively—without tubes—instead of \$325 and \$345 as before. All stocks now in the hands of the trade will be protected to cover these price adjustments and credits will be issued to dealers who have stocks of these models on hand.

2. In addition, Sonora announces complete distribution of the famous De Luxe instruments during February. These include Radio Model A-36 and the Sonora Radio-Melodion combinations A-44 and A-46.

3. Instruments operating on 25-40 cycle current will be available this month—good news particularly for dealers located where this type of instrument is in demand.

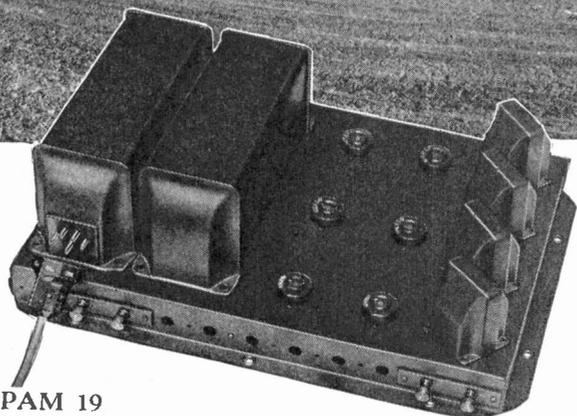
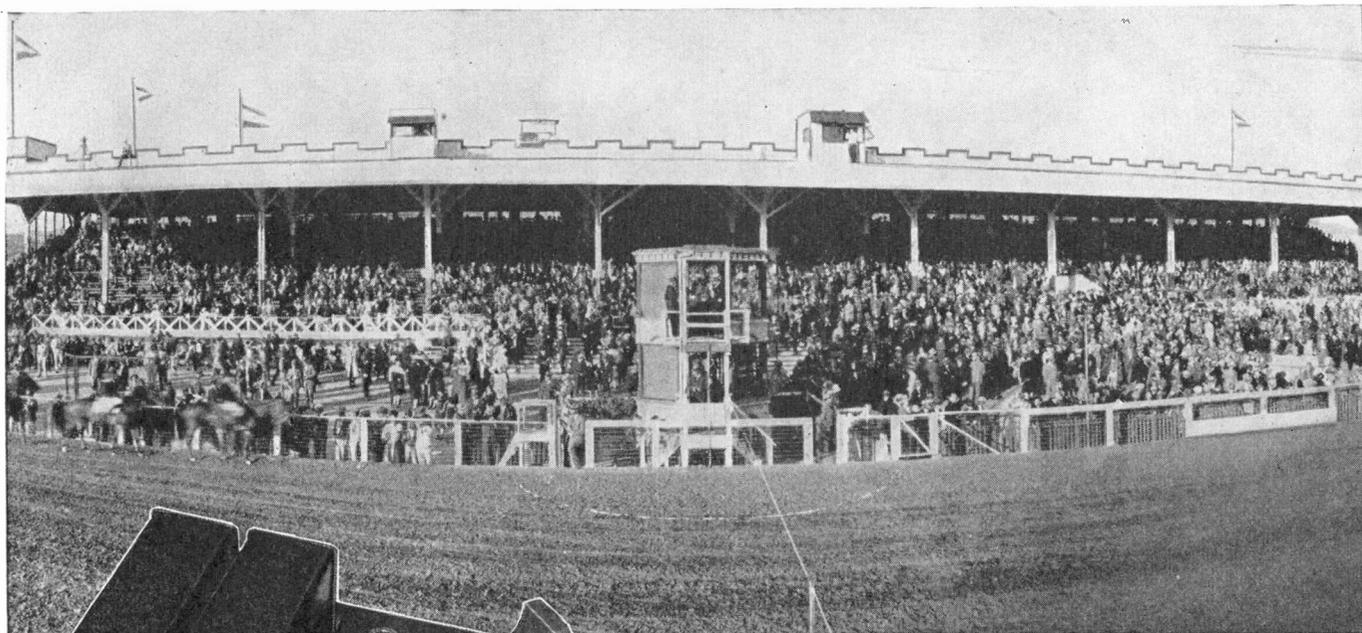
With these important additions and adjustments, Sonora is now prepared to meet the demands of a tremendously growing volume of business. The 1929 Sonora line meets every need with low inventory requirements.

THE SONORA MELODION  
MELODION WITH RADIO  
SONORA PHONOGRAPHS

**Sonora**   
CLEAR AS A BELL  
(Acoustic Products Company)

NEW SONORA RADIOS  
MELODONIC SPEAKER  
SONORA PORTABLES

SONORA PHONOGRAPH CO. INC., SONORA BUILDING, 50 WEST 57th STREET, NEW YORK CITY



PAM 19  
Price, without tubes, \$175.00

## Set the Pace with a "PAM"

Bang! They're off like a flash—and at Tia Juana (pictured above) the spectators, wherever located about the track, know the whole story because they are informed by means of a PAM 19 and MIK 1.

Every race track is a prospect for you and remember this is but one of a thousand applications for "PAM" amplifiers which are keeping dealers busy throughout this country.

*There is no closed season for "PAM" amplifiers  
and the dealer who installs them.*

Send for handsome folder, RR6, describing the above and other Samson PAM Amplifiers, which are also a "Sound Investment."

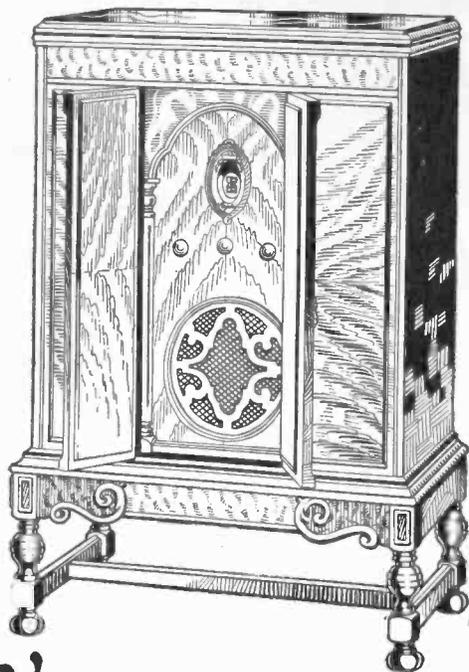
**Samson Electric Co.**  
MEMBER  
**RMA**

Main Office:  
Canton, Mass.

Factories at Canton  
and Watertown, Mass.

Manufacturers Since 1882

# ANNOUNCING



A  
New

## Majestic

COMBINED ELECTRIC RADIO  
and PHONOGRAPH

**\$265<sup>00</sup>**  
LESS TUBES

*Prices Slightly  
Higher West of  
the Rockies*

**J**UST a turn of the dial—and instantly you switch from radio to phonograph—and back again, as your mood dictates. To appreciate the fine quality, the amazing performance, the simplicity of this great instrument—you must see, hear and try it!

Cabinet of beautifully matched butt burl walnut. Radio has three stages of tuned radio frequency amplification, using R. F. L. balanced circuit. Two stages audio amplification, the last stage using two 250-type power tubes. Electric phonograph with Majestic electric pick-up and electric motor-driven turntable. Phonograph switch combined with main tuning control. Volume control on front of set controls both radio and phonograph.

**GRIGSBY-GRUNOW COMPANY**

5801 Dickens Avenue • Chicago, Illinois

# EDISON RADIO

## AND RADIO-PHONOGRAPH COMBINATIONS

Here is the set the world awaited, heard, and *bought!* For it is the set that bears the greatest name in science. *It is the Edison*—and that is all the public needs to know about a radio! Thomas A. Edison, Inc., Orange, New Jersey.

TRADE MARK  
*Thomas A Edison*

The Thomas A. Edison, Inc.,  
Radio Hour

*"The Favorite Music of Famous Persons" played and sung by Edison Recording Artists.—Every Monday evening over the coast-to-coast N.B.C. Network.*



### EDISON DISTRIBUTING CORPORATION

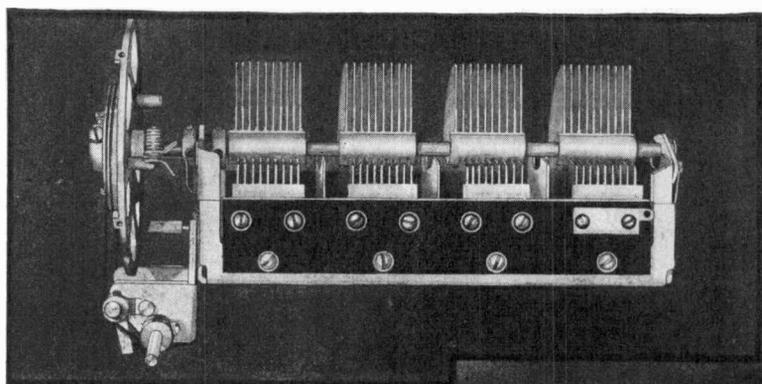
ATLANTA, 155 So. Forsyth St.  
BOSTON, 96 South Street.  
CHICAGO, 3130 So. Michigan Ave.  
DALLAS, 500 Elm Street  
DENVER, 1636 Lawrence St.  
KANSAS CITY, 1215 McGee St.  
MINNEAPOLIS, 608 First Ave., N.  
NEW ORLEANS, 128 Chartres St.  
ORANGE, N. J.  
PITTSBURGH, 909 Penn Ave.  
RICHMOND, 1204 East Main St.  
SAN FRANCISCO, 1267 Mission St.  
SEATTLE, Volker Bldg.



CLEVELAND, B. W. Smith, Inc., 2019 Euclid Ave.  
DETROIT, E. A. Bowman, Inc., 5115 John R. St.  
LOS ANGELES, H. R. Curtiss Co., 727 Venice Blvd.  
NEW YORK, Blackman Distributing Co., 28 W. 23d St.  
OGDEN, Proudfit Sporting Goods Co., 2327 Grant Ave.  
PHILADELPHIA, Girard Phonograph Co., Broad and Wallace Sts.  
ROCHESTER, Alliance Motor Corporation, 727 Main St., East.  
ST. LOUIS, Silvertone Music & Radio Co., 412 N. 12 St.

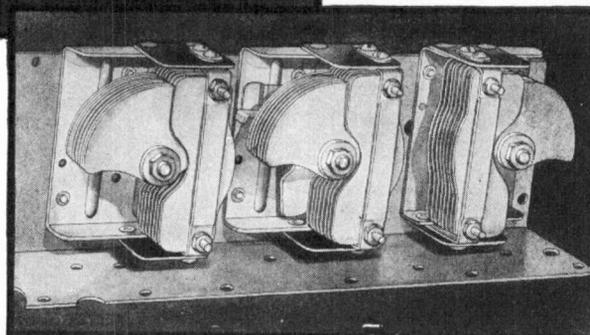


# The trend is toward ALUMINUM



The latest Grigby-Grunow condenser (at left). Grigby-Grunow has always used Alcoa Radio Sheet for its variable condensers.

Alcoa Radio Sheet was first developed for Atwater Kent. The latest Atwater Kent condenser assembly is illustrated below.



**A**FTER more than two years of testing by the technical staff of Aluminum Company of America, and by the designing engineers of the leading manufacturers of receiving sets, nine manufacturers have adopted Alcoa Radio Sheet for their condenser blades.

In 1928 radio manufacturers used almost three times as much Alcoa Radio Sheet as was used in 1927, and more than six times as much as in 1926. In 1929 more than 6,000,000 single condenser units will be made of Alcoa Radio Sheet.

This wide and rapidly growing use of Alcoa Radio Sheet is due to its extreme accuracy of gauge, high electrical conductivity, unique freedom from vibrating, its lightness and its workability.

Paralleling the increased use of Alcoa

Radio Sheet are large increases in the use of aluminum for shielding, aluminum foil for fixed condensers, and aluminum die castings for loud speaker housings, chasses and condenser frames.

We will be glad to send you, on request, a copy of the booklet, "Aluminum for Radio."

Aluminum Company of America  
2462 Oliver Building Pittsburgh, Pa.  
Offices in 18 Principal American Cities

Alcoa Radio Sheet, the exclusive product of Aluminum Company of America, is manufactured to limits of tolerance and uniformity hitherto unattainable. Its maximum total variation within a single sheet

is .0005 inch. Its sheet to sheet tolerance is  $\pm .001$  inch. It is patent leveled, highly planished, and accurately sheared. We will be glad to quote on finished blades of high accuracy made from Alcoa Radio Sheet.

## ALUMINUM

The mark of quality in Radio

# TONE

## Quality... this is the one outstanding feature of the Webster Pick-up

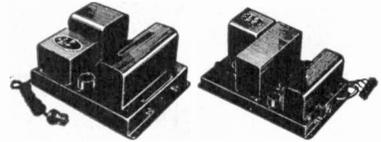
**B**ELIEVING that fine tone quality is the principal desire of music-lovers, Webster has concentrated every effort on developing a pick-up of rarest artistic merit.

How well we have succeeded is evidenced by the sales volume accorded this pick-up over the entire country. Only recently have we been able to fill the flood of orders promptly, through a doubling in production capacity.

The Webster Electric Pick-up embodies many features that insure true fidelity of tone, and ability to capture the deli-

cate intonations of any single or group of instruments. Every part is perfectly matched and balanced. Absolute travel freedom of the needle is assured by a frictionless stylus bearing. The built-in volume control in Model 1-A is a distinct improvement, making the unit extremely compact and simple to install.

Packed in convenient self-selling display cartons that bring constant turnover and profits. Regular wholesale and retail discounts apply. There is an increasing demand for this profitable article—order direct if your jobber is not yet supplied.

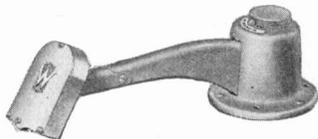
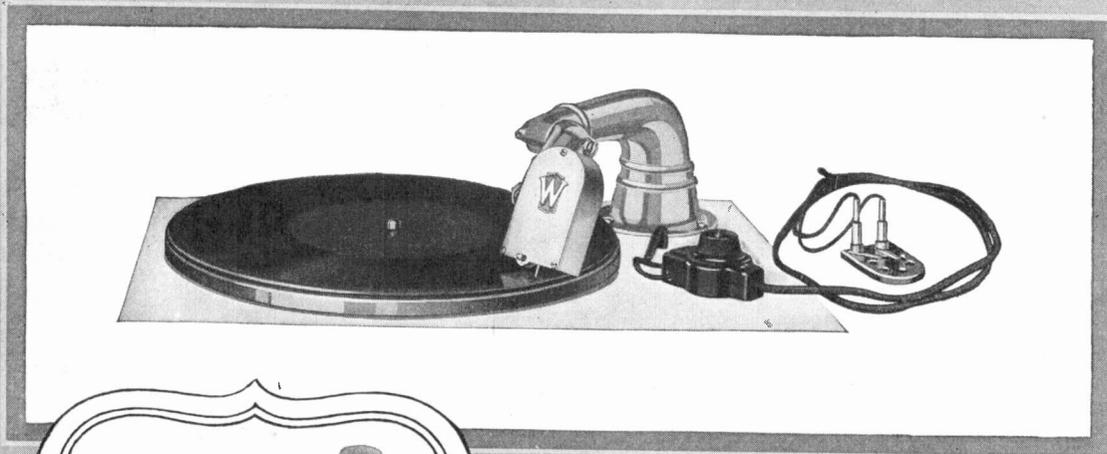


Webster Power Amplifiers used in conjunction with the Webster Electric Pick-up provide new standards of perfection. When used in conjunction with the Webster Electric Pick-up you have an ideal sound-reproducing combination.

Model A-210 List \$105.00  
Model A-310 List \$115.00  
Model A-271 List \$ 67.50

Prices slightly higher west of Rockies.  
Send for full details.

W E B S T E R   E L E C T R I C   C O M P A N Y  
R A C I N E ,   W I S C O N S I N

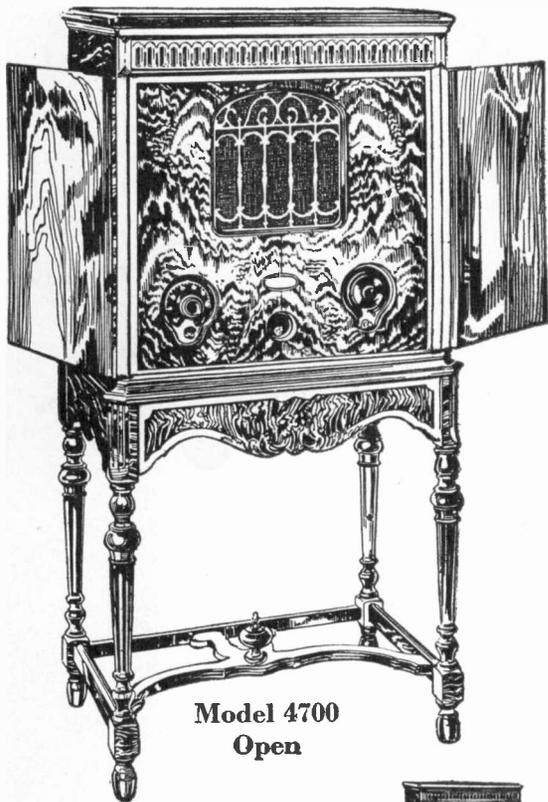


### Two Models

Model 1-A, includes pick-up head, supporting arm with volume control in base—an exclusive Webster feature—and necessary adapters. List \$17.50.  
Model 1-B, includes pick-up head, separate volume control, and necessary adapters. List \$12.50.

**Webster**  
**Electric**  
**Pick-up**

*The Furniture for All ATWATER KENT Radios*



Model 4700  
Open



Model 4700  
Closed

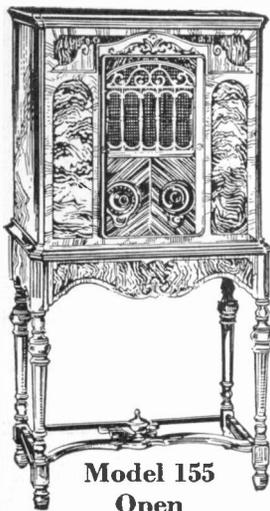
**PRESENTING  
THE NEWEST  
RED LION  
No. 4700**

This new Red Lion Cabinet is designed and built especially to house the new Atwater Kent Radio, Model 47, and the Atwater Kent Electro-Dynamic speaker.

It is, in every way, a fitting setting for this most advanced receiving set and speaker. Constructed with a five-ply, extra heavy baffle-board, it delivers the full value of the marvelous Atwater Kent Electro-Dynamic.

*Price of Cabinet*

**\$50.00**



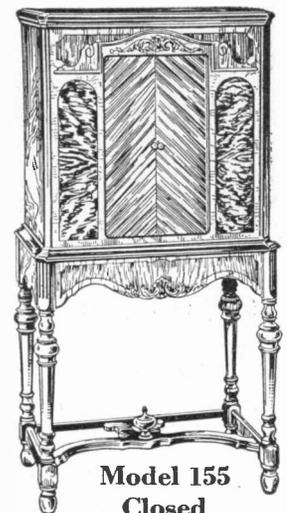
Model 155  
Open

**RED LION ~ ATWATER KENT  
COMPLETE ENSEMBLE  
(Except Tubes)**

*Retailing at* **\$157.50**

The sensational ensemble that has enabled the Atwater Kent-Red Lion dealers to offer a surpassing value in a complete radio of the highest order.

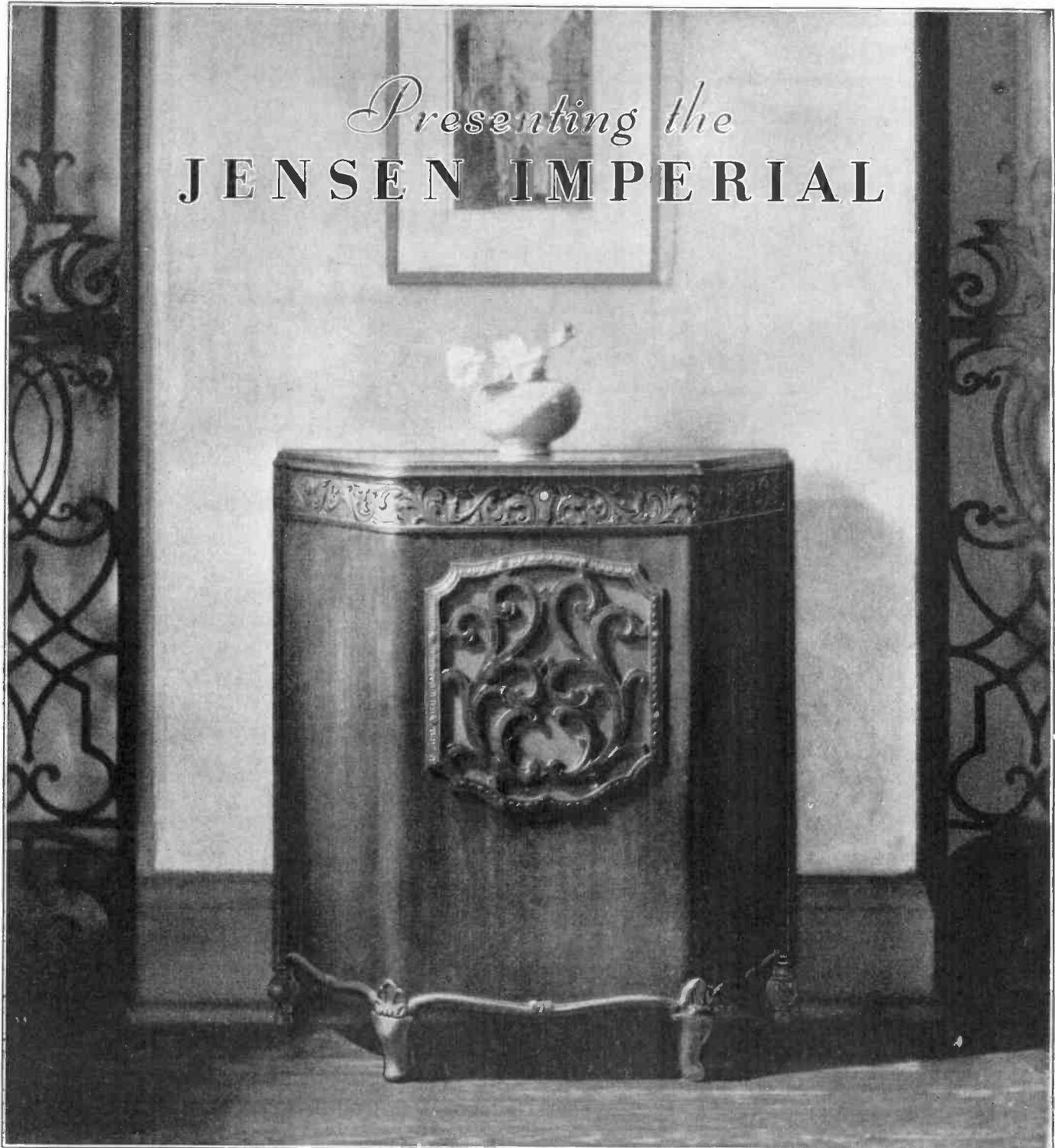
The new Model 155 Cabinet, with Model 46 Radio and Electro-Dynamic Speaker, needing only the tube equipment.



Model 155  
Closed

**RED LION CABINET COMPANY**

**RED LION, PA.**



*The Jensen Imperial, a magnificent reproducer with the new Auditorium Dynamic Unit perfected by Peter L. Jensen. Furniture design by Everett Worthington. \* \* \* Music and radio loving America will demand this newly perfected reproducer capable of concert hall volume from push-pull amplifiers of the 250 type, but retaining full brilliance at softest living room volume. \* \* \* Used with any type of radio receiver the superiority is the same. Models are now available for either 110 volt A.C. or D.C. operation. \* \* \* Address the Jensen Radio Mfg. Co., 338 North Kedzie Avenue, Chicago, Ill., or 212 Ninth Street, Oakland, Cal.*

**JENSEN PATENTS ALLOWED AND PENDING. LICENSED UNDER LEKTOPHONE AND MAGNOVOX PATENTS.**

**INDIVIDUAL INSTRUCTION CARDS**  
for testing  
**Factory-Built Radio Sets**



**An Added Service of the WESTON MODEL 537**

**A. C. and D. C. Radio Set Tester**

**T**HESSE Instruction Cards, by covering the specific testing requirements of individual receivers, make the Model 537 a still more useful test set for the service man.

They save the service man's time by giving a complete outline of procedure for testing the principal makes of factory-built sets and, in addition, give the socket voltages and tube plate current for every stage throughout the set, as well as the comparative grid test on the various tubes.

The Model 537 is designed to meet the service requirements of every type and kind of radio receiver. Its use, however, is reduced to still greater simplicity when testing any particular make of set in conjunction with its individual instruction card.

Write to us and we will be pleased to acquaint you with full particulars. Or, better still, address your inquiry to your radio jobber, supply house or our nearest representative—and ask for a demonstration.

WESTON ELECTRICAL INSTRUMENT CORPORATION  
581 Frelinghuysen Ave., Newark, N. J.



*The Year 'Round Seller!*  
**MASTER VOLTAGE CONTROL**

Eliminates Free Service Calls

Millions of AC sets sold in 1928 and 1929 are not equipped for excessive line voltage fluctuations. Every time you make an AC tube replacement SELL A MASTER VOLTAGE CONTROL. You not only make a good profit, but you eliminate the necessity of making free service calls, on which you make no profit!

**HEAVY DUTY MODEL**  
Capacity 100 Watts.

For use on AC sets with built-in dynamic speakers which draw 80 to 100 watts.

List Price.....\$3.00

**STANDARD MODEL**  
Capacity 60 Watts.

For use on AC sets that use magnetic speakers which draw from 40 to 60 watts.

List Price.....\$2.50

Endorsed by Leading Tube Manufacturers

Order at Once from Your Jobber

**MASTER ENGINEERING CO.**

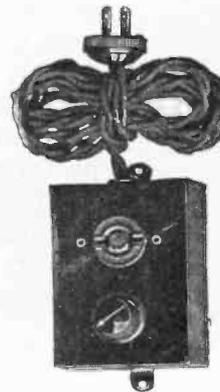
122 So. Michigan Ave., Chicago, U. S. A.



**A VOLTAGE REGULATOR**  
for **THREE DOLLARS!**

The problem of line voltage control is very important but not at all difficult nor expensive to solve.

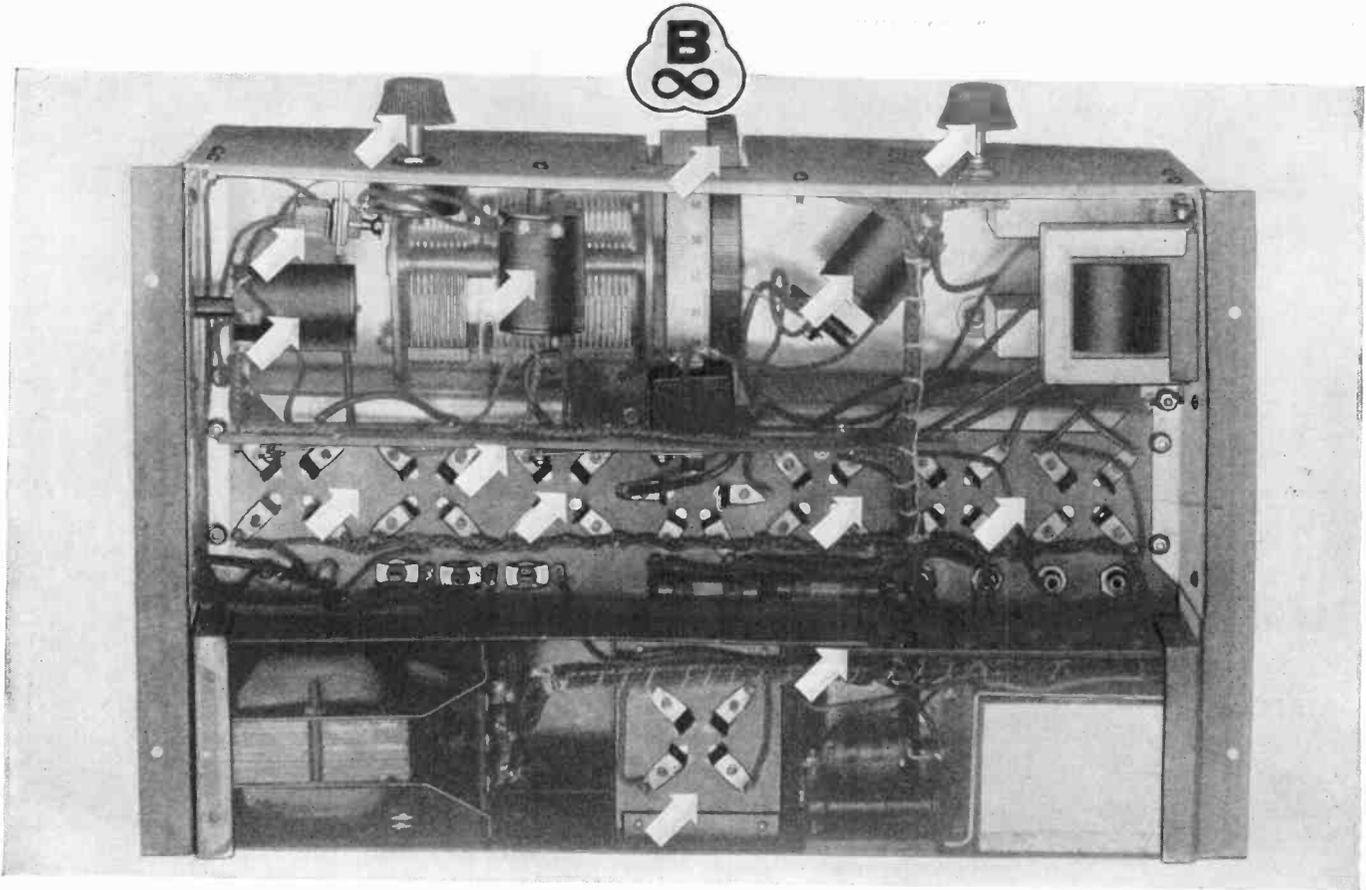
A Centralab Radio Control Box will adjust the line voltage to adapt it to any set. It is easily attached by simply plugging the set into the Control Box and the Control Box into the wall. Then a simple adjustment and your set is permanently protected from the danger of excessive voltage caused by line fluctuations.



Send for interesting Booklet. List Price, \$3.00  
Volume and Voltage Controls—  
Their Use.

**Centralab**  
CENTRAL RADIO LABORATORIES

CENTRAL RADIO LABORATORIES  
30 Keefe Avenue, Milwaukee, Wisconsin



Chassis of Arborphone Receiver, showing some of the Bakelite Insulated parts. Made by Consolidated Radio Corporation, Ann Arbor, Mich.

## Arborphone—like other fine Radio Receivers has Bakelite Insulation throughout

**V**OLUME, clarity, tone selectivity and range are all in a large measure dependent upon the proper insulation of the many sensitive elements of a radio receiver. The slightest loss in insulation value or change in physical dimensions may affect performance.

Makers of fine radio receivers, such as the Arborphone, can only afford to use time proven insulating materials such as Bakelite Molded and Bakelite Lam-



inated. These insulations have proven themselves every step of the way, since the very inception of the radio industry.

Radio dealers are safeguarding their customers' interests, and their own, by making sure that all radio sets and parts which they handle are Bakelite Insulated. Write for our Booklet 39, "Bakelite In Radio", telling story of the part these materials are playing in the development of radio.

### BAKELITE CORPORATION

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

# 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."



# Increase your profits!

THE fact that the store makes a profit, in the last analysis, is the only reason for its existence. But in a great many cases the profit is not as large as it might be—due either to faulty methods of management or to antiquated systems.

How this additional profit can be obtained and the steps which must be taken in order to realize it are given in:

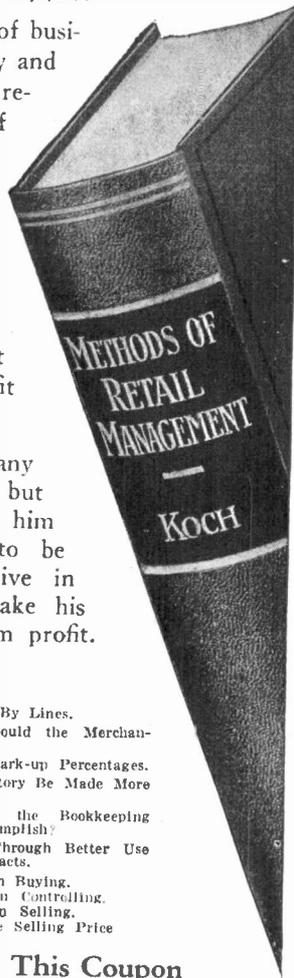
## Methods of Retail Management

By WILLIAM E. KOCH, Business Counselor  
272 pages, 6 x 9, 26 illustrations, \$3.00

The book presents the essentials of business management as applied easily and profitably by the retail merchant regardless of the kind or size of the store he operates.

It brings the retailer valuable ideas and practical plans which could be otherwise acquired only through years of specialized effort. It outlines rules of procedure which will not only result in greater sales but insure profit from these sales.

The book does not attempt to tell any retailer how to run his business, but it does formulate and present to him principles which have proved to be fundamentally sound and effective in practice—principles that will make his selling efforts bring the maximum profit.



### Contents

- |  |   |
|--|---|
| The Age of Management.   | Gaging Profit By Lines.                         |
| The Profit-making Program.                                     | How Fast Should the Merchandise Move?           |
| What the Retailer Can Do With Sales Quotas.                    | A Study of Mark-up Percentages.                 |
| A Practical Basis for Positive Control of Retail Stocks.       | Can the Inventory Be Made More Helpful?         |
| How Consistent Stock Assortments Are Developed and Maintained. | What Should the Bookkeeping System Accomplish?  |
| How a Simple Buying Record Guides to Consistent Assortments.   | More Profit Through Better Use of Figure Facts. |
| Other Simple Forms That Guide to Consistent Assortments.       | High Lights in Buying.                          |
| How a Better Expense Budget Leads to Greater Retail Profit.    | High Lights in Controlling.                     |
|  | High Lights in Selling.                         |
|  | A Study of the Selling Price                    |

Order a copy NOW—Use This Coupon

## McGraw-Hill FREE EXAMINATION COUPON

McGraw-Hill Book Co., Inc., 370 Seventh Avenue, New York.  
You may send me on 10 days' approval, Koch—METHODS OF RETAIL MANAGEMENT, \$3.00 net postpaid. I agree to remit for the book or to return it postpaid within 10 days of receipt. (To secure books on approval write plainly and fill in all lines.)

Name .....

Home Address .....

City and State .....

Name of Company .....

Occupation .....

(Books sent on approval to retail purchasers in U. S. and Canada only.)

R. R. 3-29

## ACME WIRE PRODUCTS

Parvolt Filter and By Pass Condensers  
Coils—Magnet Wire Wound  
Varnished Insulations  
Magnet Wire - - - All Insulations

All products made to Recognized Commercial Standards, including those of:

National Electric Mfrs. Assn.  
Radio Manufacturers' Assn.  
American Society for Testing Materials

For 25 years manufacturers and suppliers to the largest and most discriminating users.

THE ACME WIRE CO.  
NEW HAVEN, CONN.

Branch Offices

New York  
52 Vanderbilt Ave.

Cleveland  
Guardian Bldg.

Chicago  
842 N. Michigan Ave.



# Check Your Condensers

Sprague Hi-volt Midgets meet every requirement in A. C. set construction. Small, compact and dependable, they are safe for continuous A. C. operation up to 550 volts, 60 cycles, and up to 750 volts D. C.

Waterproofed with asphalt covering and special process of triple impregnation. Capacities from .00007 to .1 MFD, in new direct-to-panel eyeletting model.

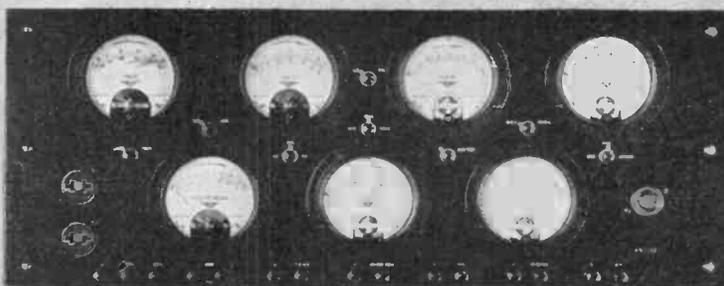
SPRAGUE SPECIALTIES COMPANY  
Quincy, Massachusetts



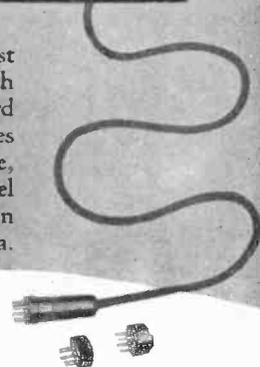
The Jewell 199 Set Analyzer, combined with Jewell Set Analysis Charts and Jewell "Instructions for Servicing Radio Receivers" eliminate guesswork by putting radio service on a thoroughly scientific basis. Radio men everywhere find that this remarkable set analyzer not only reduces time required for set servicing, but also reduces number of repeat calls and eliminates comebacks. Ask your jobber's salesman about the Jewell Method of Servicing.



The Jewell No. 210 is the first tube tester to give direct readings, thereby eliminating mental arithmetic. It provides for variations in line from 100 to 130 volts. Tests all tubes. A 100 milliamperes scale is provided for rectifier tubes. Gives individual reading of each plate of double wave rectifier tubes. Operates from A.C. service line.



The Jewell No. 581 Test Panel makes it easy to test sets rapidly. The large precision instruments with long scales make for accuracy. The convenient cord with 5-prong plug and 4-prong adapter provides for testing of circuits in the radio set with the tube, a socket for which is provided in the panel. Panel can be conveniently mounted on a suitable bench in your shop. Order from jobber or write for data.



## Good Radio Instruments Assure Servicing Profits!

Your radio service instruments not only have a direct effect on the efficiency of your service organization, but in addition they are an important factor in maintaining the confidence and good will of your customers.

Jewell Radio Service Instruments take the guesswork out of radio servicing. Jewell methods of testing, developed through a careful study of radio service problems, scientifically locate trouble with minimum delay, thereby saving time and assuring customer satisfaction.

You should know about the time saving and business building possibilities of Jewell Radio Service Instruments and the Jewell Method of Radio Servicing.

*Ask your jobber's salesman or write us for complete information about Jewell Instruments that enable you to convert service liabilities into profits. Mail the coupon.*

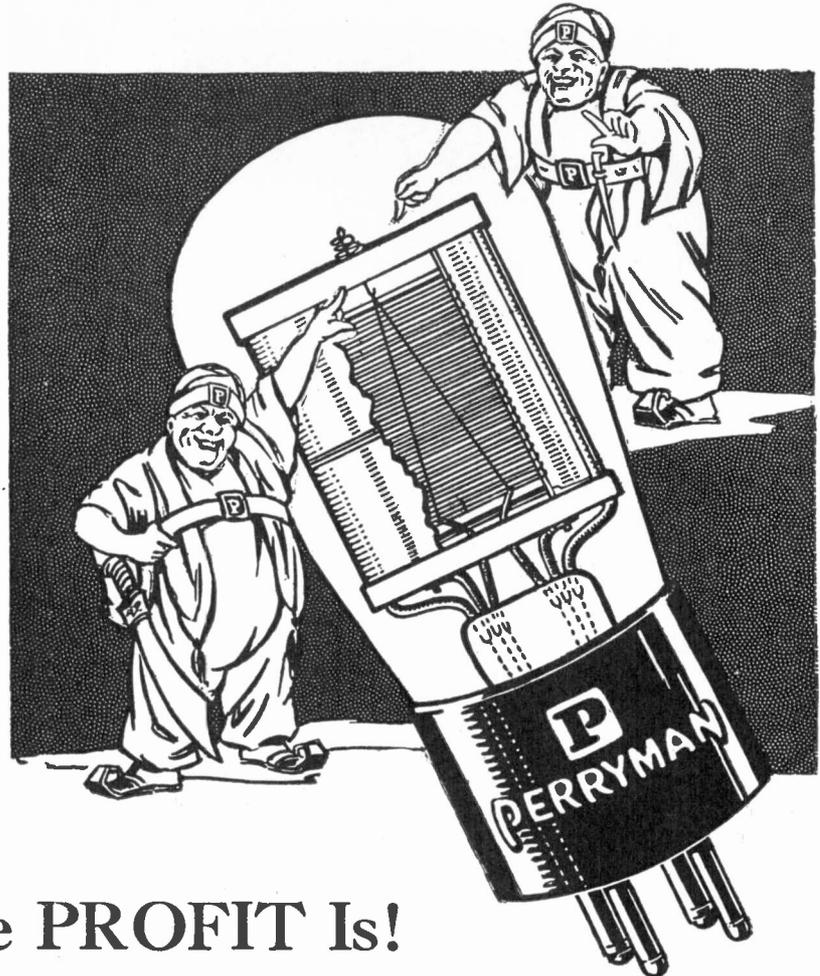
29 YEARS MAKING GOOD INSTRUMENTS  
**JEWELL**  
199 SET ANALYZER

Jewell Electrical Instrument Company  
1650 Walnut St., Chicago, Illinois  
Of course we want to know all about the Jewell Method of Set Analysis. Without obligating us send your book, "Instructions for Servicing Radio Receivers."  
Name \_\_\_\_\_  
Address \_\_\_\_\_



# PERRYMAN RADIO TUBES

"DISTANCE WITHOUT DISTORTION"



## Here's Where the PROFIT Is!

### WHOLESALEERS PLEASE NOTE

We are prepared to cooperate actively with all responsible wholesalers who wish to distribute Perryman Tubes. Our cooperation takes the form of intensive advertising in your own territory, right where it does you the most good. Write for our 1929 proposition.

The patented bridge in Perryman Tubes gives to Perryman Dealers permanent profit. Free from replacement worries.

The Perryman guarantee is based on the Perryman Bridge. Jars and jolts do not affect Perryman tubes. The bridge holds the elements in proper alignment, top and bottom—just as the cross bars support the pickets of a fence. Springs set on the bridge allow for filament expansion and contraction.

Dealers who sell Perryman Tubes get a fair profit on every sale—and keep it.

If you want to increase your net return on tube sales, write us at once for further information.

**PERRYMAN ELECTRIC COMPANY, Inc.**

33 West 60th St., NEW YORK, N. Y.

Laboratories and Plant: NORTH BERGEN, N. J.



## PERRYMAN RADIO TUBES

A Complete Line of Standard Equipment for every Radio Purpose



# Bremer-Tully Radio



For superior radio performance the Bremer-Tully Eight is *without equal*.

Its many *exclusive* features—the rejector, the *patented selector* and new *B-T tone control*—accomplish results heretofore believed impossible.

The B-T Eight has no competition.

## For a More Profitable Business

Bremer-Tully has proved its dependability thru *eight years of unparalleled success*.

Thousands of Bremer-Tully dealers have found thru experience that that dependability spells profit for them.

That is why they are content to continue their franchises year after year. They know that when they sell Bremer-Tully Radio they sell satisfaction—and repeat orders.

Investigate the Bremer-Tully record and you, too, will want the franchise year after year.

The coupon will bring details.

## Bremer-Tully Mfg. Company

656-662 Washington Boulevard, Chicago



Comprising the B-T line are five models priced from \$115 to \$490—a set for every reasonable requirement.

### —COUPON—

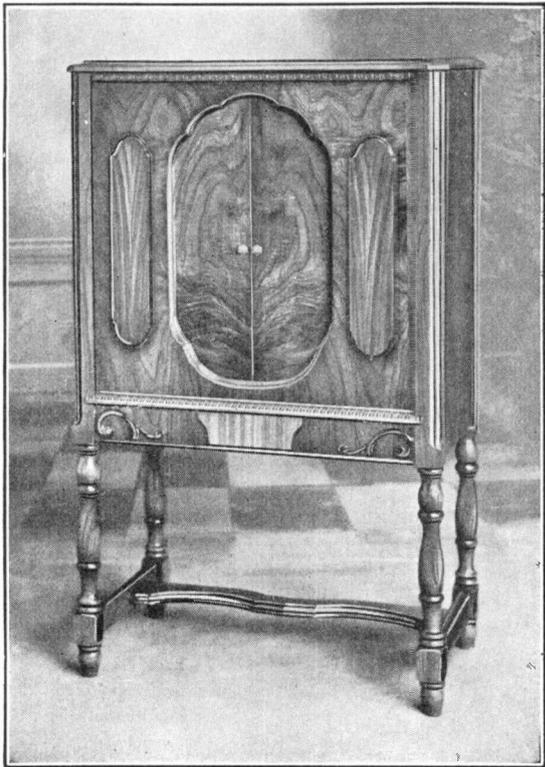
Dealer .....

Street .....

City .....

State .....

R R 3



## Announcing A New CORBETT CONSOLE

for  
Crosley and Atwater Kent Receivers

Corbett walnut sliding door consoles in stock for Crosley, Atwater Kent, Fada, Bosch, Eveready, Freed Eisemann, Pierce Arrow, Buckingham and other receivers.

Special baffles installed for Dynacone and Atwater Kent Dynamic Speakers when ordered for these receivers.

Prices on walnut sliding door models ranging from \$19.50 up.

DEALERS: You will be interested in our new bulletin and price list. Write for it today.

CORBETT CABINET MANUFACTURING COMPANY

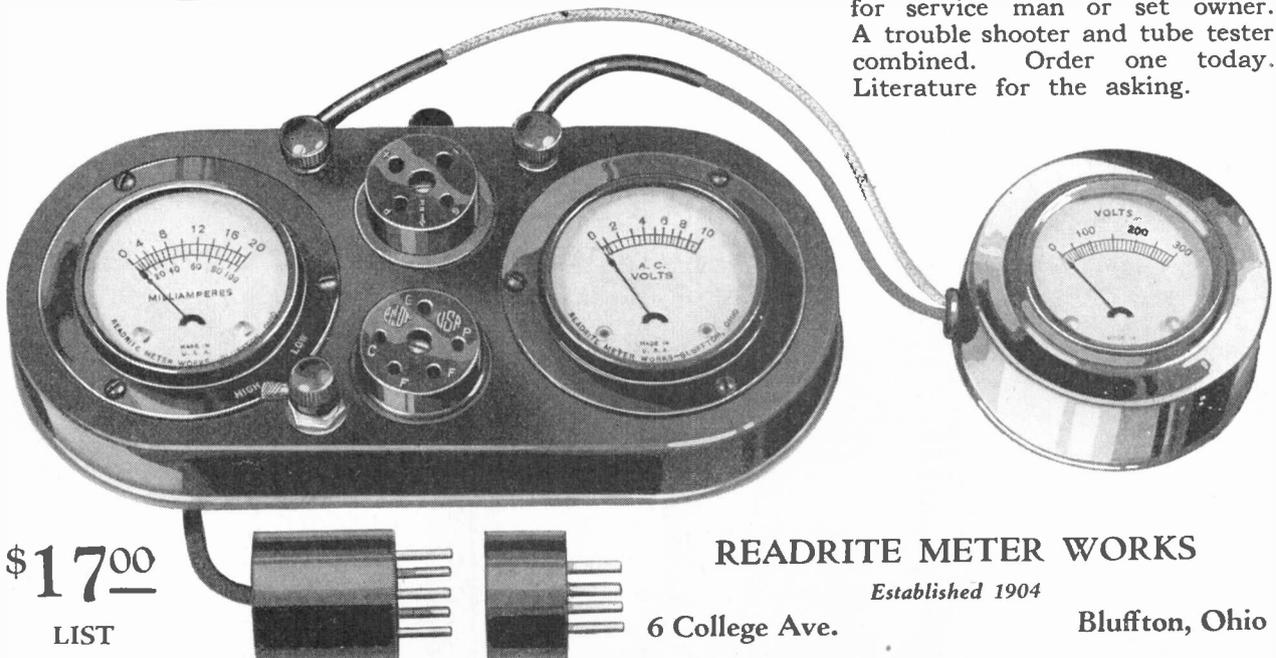
St. Marys, Penna.

# Readrite

## Universal Test Set

Complete Outfit, Shown One-Half Scale

Operates equally well on A. C. or D. C. circuits. Just the thing for service man or set owner. A trouble shooter and tube tester combined. Order one today. Literature for the asking.



\$17<sup>00</sup>

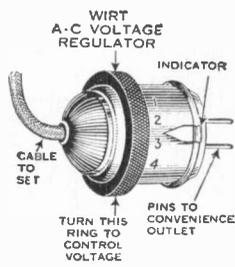
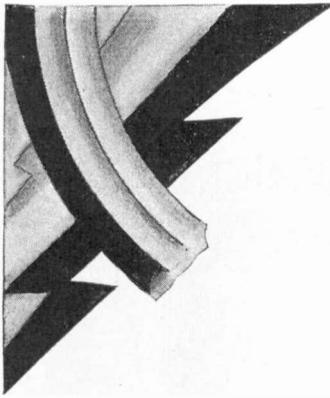
LIST

READRITE METER WORKS

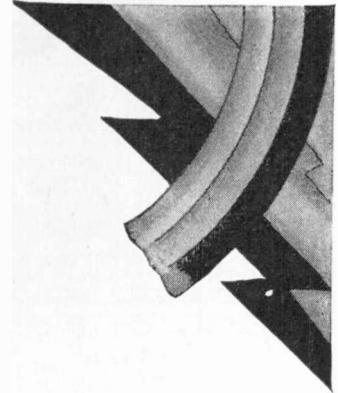
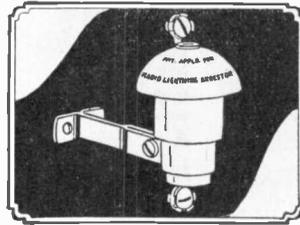
Established 1904

6 College Ave.

Bluffton, Ohio



WIRT  
Lightning Arrester



# You can't sell what you don't have

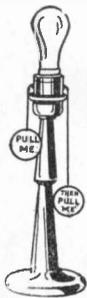
Wirt products move. They are vigorously advertised in Collier's Weekly, perhaps better known to radio fans and to radio audiences than any other general magazine today. They are being pushed by thousands of radio dealers. They move fast!

The Wirt A. C. Voltage Regulator fills a long-felt want and there is nothing else like it on the market. It is the "safety valve" for voltage "surges" and line noises. Every service man should carry a pocketful. He can sell one on nearly every call. \$2.25 list.

Wirt Lightning Arrester is dependable; a real protection for every set as well as every home. Sturdy and good looking. Sells for only \$1.00.

Standard discounts on both lines. Order from your regular jobber —NOW! *You can't sell what you don't have.* For convenience fill in and send in the coupon.

## WIRT COMPANY



The Wirt Company is the sole manufacturer of Dim-a-lite—the well-known addition to household lighting comfort and beauty. Perhaps you can carry Dim-a-lite, it is a profitable item and easy to handle.

Here's a good display idea. Get a modern standard (we can supply at cost); put on it a No. 23 Dim-a-lite with tags, which we'll furnish free, and a 40-watt bulb. Then place the outfit on a counter, connect it up, and let your customers play with it. This sure sells Dim-a-lites! They cost only \$1.00 for No. 23, 25 to 40 watt size; and \$1.25 for No. 23A, 50 to 60 watt size.

Send for free booklet, "Many Lights from One Bulb," if you want to know more about Dim-a-lite and the part it plays in modern home lighting.

Wirt Company, 5221 Greene St., Philadelphia, Pa. RR 3-29  
Please send me by return mail

- ....display cartons of 10 Voltage Regulators, No. 211
- ....display cartons of 10 Wirt Lightning Arresters, No. 200
- ....Free interesting booklet "Many Lights from One Bulb."

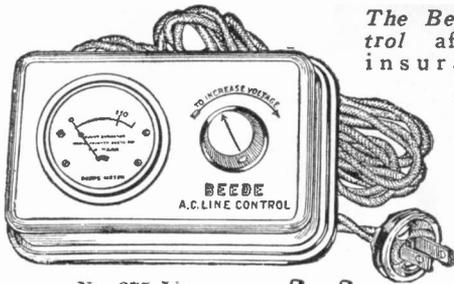
Bill through.....(jobber)

Name .....

Address .....

Town.....State.....

## BEEDE NECESSITIES

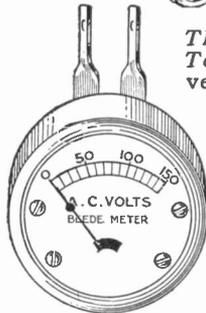


No. 275 Line Control

The Beede Line Control affords genuine insurance against burnt-out tubes and allows perfect operating voltage of all A.C. tubes

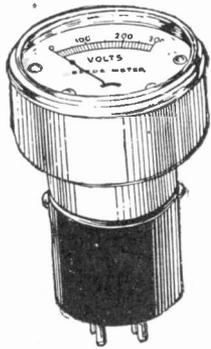
List Price \$8.00  
Dealer Price \$4.80

No. 75 A.C. Line Tester



The Beede Line Tester is a convenient and accurate method of testing A.C. Line Voltages. Simply plug into the receptacle or socket.

List Price \$3.00  
Dealer Price \$1.50



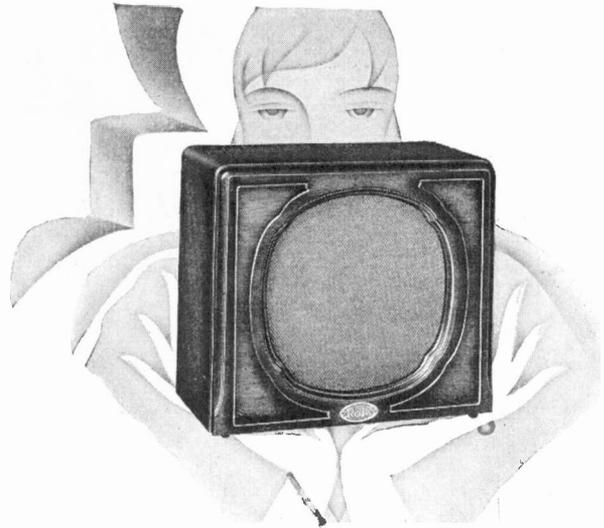
No. 50 Plate Voltage Meter

Every Service Man realizes the importance of being able to check plate voltages right in the socket. The Beede method is the simplest and best.

List Price \$3.00. Dealer Price \$1.50.

Beede Electrical Inst. Co.  
Penacook, N. H.

CHICAGO REPRESENTATIVE  
S. B. Darmstader, 326 West Madison St.  
Chicago, Ill.



Change in design of the speaker opening and attractive routing on the front panel have greatly enhanced the artistic appearance of the Model Fifteen

## IMPROVED DESIGN

Now Quality Performance Combined with Greater Eye-Value

ROLA for only \$22.50

WIDESPREAD popularity with a reputation as one of the fastest sellers on the market has been won by this new speaker in less than three months. The Rola Model Fifteen has led the field in giving radio users finer performance for less money. Now the Model Fifteen with its improved cabinet design offers greater eye-value, greater beauty, with no change in performance and no increase in prices.

*A New Market for Dealers:* Thousands of radio users who are not prospects for the more expensive speakers desire the greater realism, greater power, greater volume of Model Fifteen at the low price of \$22.50. Here is your opportunity to go after this popular-priced market with a quality speaker that you know will give permanent satisfaction. Now, with added beauty, the rapidly selling Model Fifteen will prove an even more profitable item. Ask your jobber for full details on the 1929 loudspeakers or write to the nearest factory for name of Rola jobber.

MANUFACTURERS: The new Model M Magnetic Armature Unit is ideally adapted to built-in consoles and speaker tables. It is the same unit as installed in the Rola Models Fifteen and Twenty. It has the Rola full-floating diaphragm and responds to all tones between 100 and 5000 cycles per second in frequency. Inquiries for details, blueprints and prices from responsible parties are solicited.



Electro-dynamic and Magnetic Speakers for every Radio Installation

Rola Model M List Price \$15

## THE ROLA COMPANY

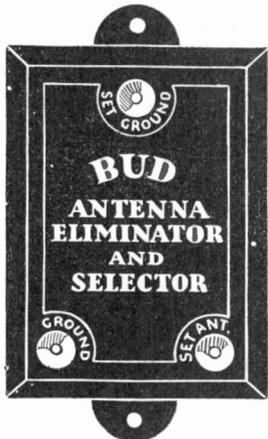
CLEVELAND, OHIO  
2570 East Superior Avenue

OAKLAND, CALIFORNIA  
Forty-fifth and Hollis Streets

## No More Aerial New!

Tried  
Tested  
It Works

Absolute  
Satisfaction  
Guaranteed



New!

PRICED  
AT ONLY

\$3.50

FIRST AND  
LAST COST

### Science's Latest Contribution

The unsightly and troublesome aerial is at last replaced by the more modern and scientific—

## BUD ANTENNA ELIMINATOR AND SELECTOR

No larger than your billfold, and enclosed in bakelite—this simple little device can easily be hidden away (inside the cabinet, if you wish) where it will, without any further attention—

### GIVE YOUR ELECTRIC SET

More Selectivity Less Interference

And none of the grief which has always been associated with the now antiquated aerial.

The thousands who have already bought the BUD ANTENNA ELIMINATOR AND SELECTOR are your assurance that it is truly "THE WORLD'S MOST EFFICIENT AND MODERN ANTENNA."

MANUFACTURED BY

**BUD RADIO, Inc.**

363 Erie Bldg., Cleveland, Ohio

# Wanted

# 138 Energetic Responsible Dealers

*who wish to increase their earnings*

## \$2000<sup>00</sup> to \$5000<sup>00</sup> per Month

In one hundred thirty-eight choice localities of the United States we are looking for a dealer—the *right* dealer—to handle The Capehart Orchestrope, the commercial repeating phonograph which has at last, put the industry upon a basis of real quality and real profit.

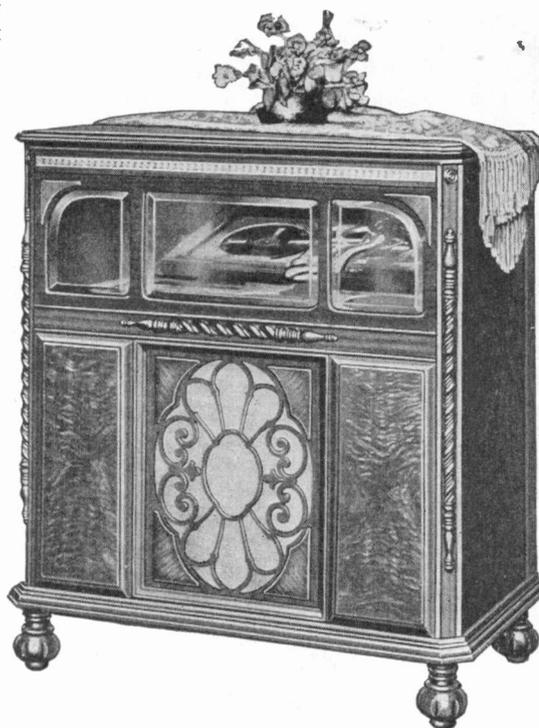
To the right dealer, this proposition offers the possibility of profits amounting to \$2000.00 to \$5000.00 a month. We desire to correspond with established, responsible dealers who can measure up to this possibility. To such, we are prepared to prove by ample evidence that our estimate is not an exaggeration. We will show records of territories where it is *being done today*, and how, with the right kind of intelligent, energetic sales effort, it can be done in any other territory.

### The Product

The Capehart Orchestrope has finally taken the commercial phonograph from the "hurdy-gurdy" classification and made of it an instrument that is a source of profit and prestige to any public establishment. It plays fifty-six selections, twenty-eight records on both sides, without repetition.

It plays continuously and automatically, without attention, for twenty-four hours a day, if desired. It uses three stages of electro-dynamic amplification, giving a tone quality that is startlingly true to life. Its volume is adjustable to any requirements, from a small room to a tremendous auditorium. It is supplied with or without coin-operating attachment.

**New outdoor park model and speaker now ready for amusement parks, pavilions, auditoriums and other places requiring especially large volume.**



### The Market

Any public establishment that can profit, directly or indirectly, by the presence of *good* music, is a prospect for the Capehart Orchestrope. Every hotel, beauty parlor, billiard parlor, cafe, club, community house, confectionary store, dance hall, drug store, hotel, luncheonette, news and cigar store, pleasure boat, restaurant, soda fountain, summer park, tea-room, theatre and tourist camp is a prospect.

Orchestrope dealers are assisted in their sales by a complete advertising and circularizing campaign directed to their prospects by the Capehart Company.

*The Capehart*  
**Orchestrope**

Sold only thru dealers.

*Capehart full page ads to the user are now being run in the following papers:*

- Soda Fountain
- Sweets
- Northwestern Confectioner
- Western Confectioner
- Drug Trade News
- Drug Topics
- N.A.R.D. Journal
- American Druggist
- Retail Druggist
- Northwestern Druggist
- Pacific Drug Review
- American Restaurant
- Restaurant Management
- Roadside Refreshment
- Toples
- Keelers Pac. Coast Hotel Wkly.
- National Hotel Review
- Hotel Management
- Hotel Bulletin
- Pacific Coast Record
- Golfdom

*This advertising will mean big profits to you.*

### Mail this coupon now

If your organization has the equipment to develop the large profits which lie in this product in your territory, kindly fill out the coupon and mail it to us at once. Our representative will outline to you, without obligation, just why and how the right dealer can make and is making \$2000.00 to \$5000.00 a month with the Capehart Orchestrope, and he will explain why this instrument is the first—and the only one—which fully meets the requirements of an *eager* market.

**Capehart Automatic Phonograph Corporation,  
Dept. 4853, Huntington, Indiana.**

Gentlemen: Please send me without obligation descriptive literature on the new Capehart Orchestrope and detailed information with reference to your exclusive dealer franchise now open to only 138 more dealers.

Name .....

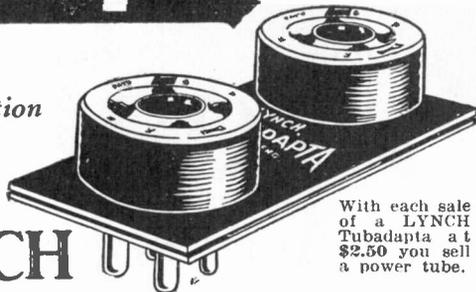
Address .....

City .....

**CAPEHART AUTOMATIC PHONOGRAPH CORP.  
HUNTINGTON INDIANA**

**2 PROFITS WITH 1 SALE**

A Brief  
Demonstration  
—then  
2 SALES



With each sale  
of a LYNCH  
Tubadapta at  
\$2.50 you sell  
a power tube.

## LYNCH TUBADAPTA

Provides a simple means of using *two tubes in parallel*, thus making tubes perform perfectly during their entire life. Plate current for last audio stage is almost doubled, resulting in

### TONE Perfection

The Lynch Tubadapta is endorsed by radio engineers—praised by radio set owners. Jobbers and dealers are reordering in ever-increasing quantities. Four models now ready for delivery.

*Order from your jobber, or direct.*

Arthur H. Lynch, Inc., 1775 Broadway, N. Y.

*Manufacturers of*  
**QUALITY RADIO PRODUCTS**

# CENTURY

## A-C DYNAMIC SPEAKERS A-C ELECTRIC RECEIVERS

FOR EXCLUSIVE DISTRIBUTORS  
and DEALERS ONLY

While new in name and design and employing latest approved methods, the new products are not without a well known background. The builders of the old line of THOROLA sets and speakers have brought out these new products for public acceptance.

EXTREME VOLUME—  
BEAUTIFUL TONE—  
VERY SELECTIVE—  
FAR REACHING—

Our merchandising plan for Distributors is a liberal one. Many are now making application. Outline your actual territory and organization in your application.

UNITED RESEARCH LABORATORIES, INC.  
864 W. North Ave., CHICAGO, ILL.

# ACME

will make an important  
announcement in an early  
issue of *Radio Retailing*.

Radio history is again in  
the making

## WATCH

for this announcement—  
it's worth while waiting  
for.



The ACME ELECTRIC & MFG. CO.

1440 Hamilton Avenue  
CLEVELAND, OHIO

Established 1917

Member R.M.A.

## BUCKEYE Radio Furniture *is beautiful*

**J**OBBERS and Dealers everywhere  
have found Buckeye Radio Furni-  
ture a distinct sales asset. Its beauty of  
design and sound value have made it a  
standard in the trade.

**BUCKEYE  
MANUFACTURING COMPANY**

Springfield, Ohio

National Sales Representatives

STUDNER BROS., Inc.

67 West 44th St., New York City  
28 E. Jackson Blvd., Chicago, Ill.

*Buckeye*  
RADIO FURNITURE

Still  
Growing

12,000  
sq. ft.

Additional Floor Space  
added to

**VOGUE**  
**NONPAREIL**

Tube Plant

Here you have conclusive proof of the rapidly increasing demand for Vogue tubes. In addition to our present plant we have taken over 12,000 square feet of floor space in one of the buildings of the Clark Thread Co., located at East Newark, N. J. Enough new Eisler automatic equipment has been installed to increase our production to approximately 12,000 tubes daily.

**Jobbers Note.** We can conscientiously state without fear of contradiction that not one Vogue jobber was left high and dry for tubes during the shortage that prevailed in the past season. Likewise 1929 promises to be a repetition of this same condition. We absolutely assure those jobbers that tie up sufficiently early on this profit-producing line this year that they will have our unquestionable cooperation in keeping them supplied with merchandise. The same 100% guarantee prevails.

*Write or wire now for further information.*

ALLAN MANUFACTURING CO., Harrison, N. J.  
Los Angeles: 487 Chamber of Commerce Bldg.





### An ASTON Favorite

A rare treat for the discriminating purchaser. With an air of another period, it is nevertheless modern in feeling. Beautifully figured Burl Walnut doors with artistically colored center overlays. Entire cabinet 5-ply walnut lacquer satin finish. An ornament in any setting.

Write for Catalog

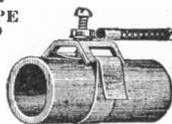
**ASTON CABINET MANUFACTURERS**

Originators and Designers of high grade Radio Cabinets  
1223-1229 W. Lake St., Chicago, Ill.

### MERTZ Nophononic Tube Caps and Ground Clamps



TYPE 199



TYPE 200

Most efficient howl arrester or vibration eliminator made. And is lowest price on market. Made of lead by an extrusion process. Type 199 weighs 2½ ounces; type 200 weighs 5 oz. Because weight is most important consideration, compare these with other caps. All standard sized tubes take type 200—type 199 for all 199 tubes. List price, 25 cents. Ask jobber or will be sent direct F.O.B. Wil.

"Saddle" Full Adjustable Approved Ground Clamp can be applied anywhere, and stays put. Strap of non-corroding bronze—remainder is brass.

Three sizes for 1, 2 and 3-in. pipe. Standard lots of 500—100 and 25.

**MERTZ SPECIALTY COMPANY**  
1306 Stockton St., Wilmington, Del.

Only reliable products can  
be continuously  
advertised



### QUIET AC LINE NOISE WITH A THERMATROL INTERFERENCE FILTER

Plug in the AC line ahead of household appliances that interfere with reception. Can also be used ahead of the set itself. All your set customers need it. Price, \$3.50

### PROTECT AC TUBES THERMATROL VOLTAGE CONTROL

Compact—Efficient—Sticks tight in the outlet  
—Four separate adjustments—Price only \$1.75



THERMATROL MFG. CO., SPRINGFIELD, MASS.



### 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"

0156

**CORWICO**

# Braidite

HOOK-UP WIRE  
"THE BRAID SLIDES BACK"

**CORNISH WIRE CO**  
30 Church Street New York City

# Achievement!



## FILTERVOLT LINE NOISE ELIMINATOR

**RADIO RECEPTION FREE FROM DISTURBANCE**—No longer is it necessary to listen to the crackle and din caused by interfering electrical appliances.

**FOR ALL HOUSE CURRENT RADIOS**—Any radio receiver using house current for power needs FILTERVOLT. Easy to install—no technical hook-up. Automatic; requires no adjustment.

**TESTED AND PROVED A SUCCESS**—Subjected to abnormal tests FILTERVOLT proves itself successful in destroying the noise nuisance. **25 YEARS' RESEARCH BEHIND FILTERVOLT**—Adapting for radio the successful projects of sound transmission engineers in eliminating disturbing line noises.

AT ALL DEALERS **\$15.00** LIST PRICE



### FILTERVOLT JR. IT HELPS!

The FILTERVOLT JUNIOR will eliminate noises caused by electric heating pads, switching on and off of lights, electric toasters, noises caused by vacuum cleaners, small motors and minor disturbances caused by electric appliances. FILTERVOLT JR. is unconditionally recommended as a "light-duty" noise eliminator. **\$3.00**

### 25 Years of Research behind FILTERVOLT

Engineers in the field of electrical sound transmission, which includes the telephone and telegraph, have never ceased their experiments to eliminate their greatest enemy—line noises. Recognized as the most uncontrollable of electrical phenomena, this disturbance commonly known as "line noise," has been conquered sufficiently to make possible the clear telephone transmission we enjoy today. Ever since Radio was made to utilize house current, practically every engineer and laboratory in the country have tried to rid radio of line noise distortion.

### I.C.A. Scores Again with FILTERVOLT

I.C.A. engineers have converted the time proven methods of other fields to the peculiar requirements of Radio. By exhaustive research and experiment they have created FILTERVOLT which completely filters out the line noises to which radio is super-sensitive.

### Now you can sell NOISE-FREE reception

Ever since the first customer plugged his first "light socket" powered radio to house current you have been besieged with requests for something to eliminate those clicks and crackles and hums that are caused by electric appliances operated in or near the home: Vacuum Cleaners, Telephone Bells, Elevators, Electric Flashing Signs, Refrigerators, Sewing Machines, Electric Player Pianos, Washing Machines, etc.

### Cut Down useless Service Calls

To the dealer who guarantees and services the sets he sells, FILTERVOLT is a money saver as well as a money maker. Ask your service man how many trouble calls he covers that turn out to be "line noise." And how much time and material he has wasted making special condenser series to cut down line noise for particularly bad cases. Now he can install FILTERVOLT and make a profit on the sale as well!

### FILTERVOLT insures perfect set demonstrations

Whether you demonstrate in the store or in the prospect's home, FILTERVOLT will insure clear noise-free reception. No more excuses to make for line noises while demonstrating. Prospects think you are trying to cover up the set's deficiencies with those excuses. No need for them now.

### A tried, Tested and Proven Success

FILTERVOLT has been subjected to the severest tests by the most critical and noted radio engineers. Under the most trying conditions—where it was virtually impossible to use a radio receiver because of extreme local electrical disturbances—and FILTERVOLT has purified and filtered out the noises, giving clear, pure reception.

**FILTERVOLT CAN BE SUPPLIED BY YOUR LOCAL DISTRIBUTOR. IF NOT WRITE US.**

Manufactured and Guaranteed by:

## INSULINE CORP. of AMERICA

Makers of:

<p><b>RESISTOVOLT</b> Voltage Controller that protects your A.C. Tubes from excess current. <b>\$1.75</b></p>	<p><b>ANTENNAVOLT</b> Combination Light Socket Antenna and Automatic Voltage Controller. <b>\$2.25</b></p>	<p><b>DYNATROL</b> Automatic Relay that controls Dynamic speaker current from the set switch. <b>\$2.50</b></p>	<p><b>POWERTENNA</b> Socket Antenna with two current outlets for set current and dynamic speaker. <b>\$1.25</b></p>
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78-80 CORTLANDT ST., NEW YORK CITY, N. Y.

# LARGE HOTELS required TO HOUSE the 3<sup>rd</sup> annual RADIO

GENERAL EXHIBITS  
AND  
MANUFACTURERS'  
Demonstration Quarters

*Will Be Held  
at the Following Hotels*

STEVENS  
BLACKSTONE  
AND  
CONGRESS

The exhibitions and demonstration quarters of the various manufacturers in each hotel will be equally prominent and important. It will therefore be necessary for all dealers and jobbers to visit the exhibitions and demonstrations in the three official hotels in order to get a comprehensive view of the entire Trade Show.

Plan now to go. There will be special reduced railroad rates from all points.

**Invitations—**  
To the trade will be issued about May 1st.

MANUFACTURERS'  
ASSOCIATION  
TRADE  
SHOW  
CHICAGO  
JUNE

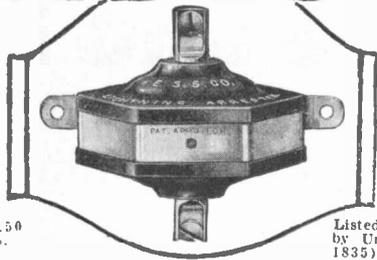
3<sup>RD</sup> TO 7<sup>TH</sup> Inclusive  
in CONJUNCTION  
WITH THE  
5<sup>TH</sup> Annual  
R.M.A.  
CONVENTION



Radio Manufacturers' Association Trade Show, Room 1800 Times Bldg., New York  
Under Direction of U. J. Herrmann and G. Clayton Irwin, Jr.

Space Donated by Radio Retailing—Copy and Layout by Frank Kiernan & Company

# KEYSTONE



Retail price \$1.50  
In Canada \$2.00.

Listed as Standard  
by Underwriters (E-1835).

## Sell one with every set!

Every time you sell a radio set or some antenna material, you can easily sell the purchaser a Keystone Radio Lightning Arrester.

This proven protective device is made of genuine Bakelite and heavy brass and provides maximum protection always. It is reliable, safe and stays sold.

Manufactured by a company having more than thirty years' experience in design and manufacture of lightning arresters.

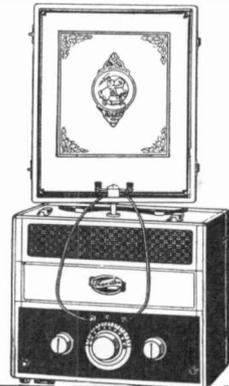
Jobbers and retailers—send for complete details of our attractive proposition.

**ELECTRIC SERVICE SUPPLIES CO.**

Home office and plant at 17th & Cambria Sts., PHILADELPHIA; District Offices at 111 N. Canal St., CHICAGO; 50 Church St., NEW YORK; Bessener Bldg., Pittsburgh; 88 Broad St., Boston; General Motors Bldg., Detroit; 316 N. Washington Ave., Scranton.

# RADIO LIGHTNING ARRESTERS

# ... SPRING MONTHS ARE PROFIT MONTHS for TRAV-LER DEALERS



**57.50**  
STANDARD  
\$75 DE LUXE . . . .  
\$100 ARISTOCRAT . .  
ALL PRICES LESS ACCESSORIES

March, April, May! The best three months in the year to sell Trav-Ler Portable Radio Receivers—the ideal set to take along on motor trips, for use in summer cottages or country home.

The Trav-Ler Receiver has always been, since its introduction, the most popular and largest selling radio set of its type. Back of the new 1929 Trav-Ler Receiver is an intensive and complete merchandising campaign. Metropolitan newspaper and magazine advertising. Attractive window and counter display material and literature. The Trav-Ler franchise means real profit months for aggressive merchants during March, April and May. Write or wire today for complete details and prices.

**TRAV-LER MANUFACTURING CORPORATION**  
3401 N. Halsted St. Chicago, Ill.

## SEARCHLIGHT SECTION

### SALESMEN WANTED

#### Wanted

Salesmen on commission to sell radio cabinets. In your reply please state territory covered and lines carried. Premier Cabinet Corporation, Jamestown, N. Y.

#### Tested Sales Representation Offered Manufacturers of Low Priced Dynamic Speakers and Radio Cabinets

Established Sales Organization can give manufacturers of articles mentioned and other radio products high quality representation in Eastern and Southern Territory—profitably. Inquiries solicited.

RA-85, Radio Retailing  
Tenth Ave. at 36th St., New York City

#### SEARCHLIGHT EMPLOYMENT ADVERTISING

Efficient, economical  
**COMPETENT MEN**  
Engineers—Executives  
—Juniors

Your business needs trained men in every department.

### LOG CHARTS

For Free Distribution with Dealer's Ad on Cover

1st 1,000, \$10.00; 2nd 1,000, \$7.50

These charts have the famous RADEX method of tuning which automatically calibrates the set, showing frequency and wave length to which set is tuned for any dial readings.

**THE RADEX PRESS**  
P. O. Box 143, Cleveland, O.

## GLOBE TUBES

Why pay more when you can buy good tubes at these prices? All tubes guaranteed. Manufactured by one of the largest tube manufacturers in this country.

UX 226 . . . . .	\$ .50	UX 280 . . . . .	\$ .75
UY 227 . . . . .	.60	UX 210 . . . . .	1.50
UX 171A . . . . .	.60	UX 201A . . . . .	.40
UX 112 . . . . .	.55	High Mu. . . . .	.40

10% discount if order in case lots of 50 tubes each.

Acme Super B C Power Supply E-25, 180 Volts . . . . .	\$12.50
Acme Audio Transformers . . . . .	1.10
Willard Super B, 180 Volts, Factory Cartons . . . . .	11.50
Daven Blue Ribbon Leaks, all sizes . . . . .	6c. ea., \$4 per 100
Hillco or Dubilier Fixed Condensers . . . . .	7c. ea., \$5 per 100

20% with order, balance C.O.D.

## RELIABLE RADIO CO.

24 Brattle St., Boston, Mass.

When You're in a Hurry  
Wire or 'Phone  
**SEARCHLIGHT DEPARTMENT.**

10th Ave. at 36th St.,  
New York City

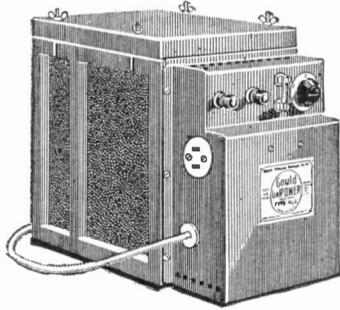
#### WANTED

### Surplus Radio Stocks

Highest Cash Prices Paid.  
Write or Wire.  
**FULTON RADIO CO.**

10 Hudson St., New York City, N. Y.

# Even if you bought in carload prices so attractive and items



The New Gould Kathanode  
**Unipower**  
GOULD PRODUCT  
(With Built-In Relay)  
Automatic Radio "A" Power  
From Light Socket

Model A.C. 6K (6-volt) Kathanode Unipower is the highest quality "A" Power Unit built. Furnishes rich, smooth, unfailling "A" current, without any trace of hum, which is automatically replenished from the light socket. Installed in less than three minutes, makes any set as simple and convenient to operate as an expensive A.C. outfit at only a fraction of the cost. No rewiring necessary in your set.

The Kathanode construction uses the glass mat retainer, which insures extra long life of the battery elements and when sold it will require no servicing. It is very economical and will outlast several storage batteries. This exclusive patented feature (Kathanode) is used and approved by the United States Government for its submarine batteries, which are furnished by Gould.

Equipped with a new noiseless Balkite Charging Unit which has four graduated charging rates, and in addition one booster rate (1 1/2 amperes) for an emergency charge, which enables it to properly take care of all sizes of sets and conditions of operation. Operates on 110-120 V., 50-60 cycle A.C. current. Complete with extra fuse.

List Price \$39.50 Ea.

**Special \$9.75 Ea.**

**Lots of three, \$8.50 "**

**Lots of six, \$7.50 "**

**NOTE**

All units offered in this advertisement are BRAND NEW, packed in original factory sealed carton and fully guaranteed!

TERMS:—20% cash with order, balance C.O.D. f.o.b., New York. (2% Discount for Full Remittance with Order.)



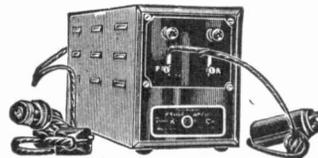
List Price \$1.75 ea.



**Genuine R.C.A.**

These excellent detector tubes draw one amp. Due to the extreme low prices of these tubes, we cannot allow replacements.

However, every tube is brand new and packed in the original factory sealed carton, we having purchased them direct from the Radio Corporation of America.



**Timmons 210 Power Amplifier**



Excellent for use with Dynamic Speakers

An absolute necessity with any radio set for getting full tone quality from Dynamic Speakers, which only can be done with a Power Amplifier. The Adapter Plug is inserted into the last audio socket of any type of Battery or Electric radio set, thus supplying a stage of amplification employing the super power tube. No rewiring necessary in the set and no additional parts are needed.

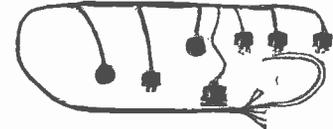
This high quality 210 Power Amplifier can also be used with any Cone Speaker, for distortionless and true natural reception, and will modernize any radio set.

Uses the UX-216B or 281 rectifying tube and the UX-210 super power audio tube. Operates from 110 to 120 volt, 50 to 60 cycle A.C. current.

These units have been approved by Popular Radio and Popular Science Laboratories.

List Price \$45.00 Ea.  
(without tubes)

**Special \$8.75**



**A. C. Adapter Harness with Volume Control**

All Adapters have Mid-Tap resistances and can be used with A.C. Filament Transformers which are and are not center tapped.

The EBY A.C. Harness when used with any standard filament transformer will convert any D.C. set to A.C. operation. Designed for use with UX-226, UY-227 and UX-171, or 112A, power tube.

The best Nationally Advertised Harness sold. Recommended by the following Transformer Manufacturers: Scanlan, Karas, Acme, Jefferson, Silver-Marshall, and many others.

Very simple to connect. No rewiring necessary on sets. Installation can be made in 10 minutes.

Complete simple instructions packed with each Harness.

Two Universal Models

For 5 tube set—List Price \$9.00

**Special \$1.65**

For 6 tube set—List Price \$10.00

**Special \$1.85**



**Dubilier**

High Voltage Filter Condensers



(Newest Types Nos. 902 and 903)

These Dubilier Filter Condensers are tested from 3 to 5 times their rated value. Widely separated soldering lugs are provided to insure long leakage paths. Each Condenser brand new and packed in individual carton.

Type No. 902, Rated D.C. Working Voltage 400 V.

Capacity	List Price	Special
1	\$2.50 ea.	\$.50 ea.
2	3.50	.70
4	5.50	1.10

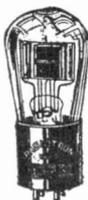
Type No. 903, Rated D.C. Working Voltage 600 V.

Capacity	List Price	Special
1	\$3.00 ea.	\$.60 ea.
2	5.50	1.10
4	9.50	1.90

**AMERICAN SALES COMPANY**

lots, it would be difficult to get as good as those offered here!

UX 200 Radio Tubes



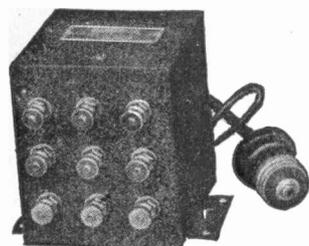
List Price \$1.75 ea.

SPECIAL PRICE

16c. ea.

\$8.00 per Carton

Sold only in Carton lots of 50



**SCANLAN**

A. C. Filament Transformer  
(Model 413)

Supplies up to—six 226 tubes, one 227 tube, two 171-A tubes

This Scanlan A.C. Filament Transformer fills a very definite existing need for an accurate and reliable Transformer. Will not overload or heat up. Used in conjunction with an A.C. Cable Harness such as the Eby, Carter, Naald, Enterprise, Sterling, etc., which makes an ideal combination for converting battery sets to A.C. operation. No rewiring necessary. For 110-120 volts, 50-60 cycles A.C. current.

Green crackle finish case. Size overall 3 1/2 x 4 x 4.

Look at These Features!

1. Absolutely correct voltage.
2. All voltages center tapped.
3. "B" Eliminator Plug-In.
4. Sturdy and Compact.
5. Wire to panel switch.

List Price \$9.00 Ea.

**Special \$2.00**



**Vitalitone**

36 in. CONE SPEAKER KIT  
WITH GENUINE VITALITONE  
POWERFUL MAGNET  
CONE UNIT

This 36-in. Cone will reproduce all the low as well as the high frequencies with absolute fidelity.

Every component part of this kit is of the same high quality that made Vitalitone famous.

Can be easily assembled by anyone in a very short time with only a screw-driver.

All parts complete—nothing else to buy.

List Price \$12.00

**Special \$2.90**

(The Unit Alone Is Worth More)



**POWERIZER**

PXY-1 Model R-20.  
Complete "A, B & C"  
Eliminator and 210 Power  
Amplifier

This is the new, improved Powerizer, exceptionally fine for use in conjunction with Dynamic Speakers, which require the use of a 210 power tube to bring out their best tone quality. Also can be used with any Cone Speaker.

It is a "B & C" Eliminator furnishing "B & C" current to the entire Radio Set, also a Super Power Amplifier furnishing "A, B & C" current to the 210 power amplifying tube. Simple to connect, no rewiring necessary in the set. Comes equipped with an adapter plug which is inserted in the last audio tube socket. Has filament windings which will also supply A.C. current for the A.C. tubes, if desired. Uses the UX-210 super power and the UX-280 full wave rectifying tubes.

Using this Powerizer with any Battery or Electric Set will bring out the finest tone reproduction and volume, comparable with the results obtained from any of the best modern receivers.

Operated direct from light socket; 110-120 V., 50-60 cycle, A. C. current.

List Price \$59.00 Ea.

**Special \$16.50**

(Complete with Harness)

Manufacturers  
and Jobbers

We are prepared to offer cash for surplus stocks of Radio Merchandise. This means of course stock in first class condition and in such volume that insures a good value to our many established buyers. Send details of your offerings for quick action.

—LAST MINUTE SPECIALS—

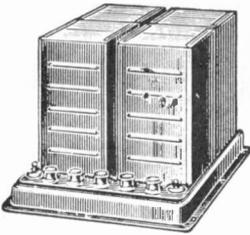
DeForest Output Transformers, 1-1 ratio.....	List \$7.50	Our Price \$1.25 each
E-210 Bradleystats, fine A.C. line voltage control	" 4.00	" " .85 "
New Algonquin Cone Speakers.....	" 15.00	" " 3.95 "
Reliable Automatic Relays. Automatic Power Control Switch for use with trickle charger and "B" eliminator .....	" 2.00	" " .35 "
Scranton Storage Battery Cap Testers, sets of three; descriptive booklet on request.....	" 2.00	" " .37 per set
Timmons Combination 210 Power Amplifiers and "B" Supply Units.....	" 70.00	" " 17.50

19-21 Warren St., New York, N. Y.

**R. C. A. "B" ELIMINATOR**

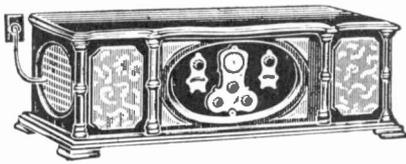
The new RCA "B" Eliminator is a decided improvement over all previous types. It is sturdy, compact and reliable. The cost of operation is unusually low and it will last indefinitely in service. The power output is ample for sets having up to eight tubes with a power tube in the last stage.

A junction type of Rectifier is used, requiring no attention or replacements during its exceptionally long life.



LIST PRICE \$48.00

**Dealer Cost, \$17.50**



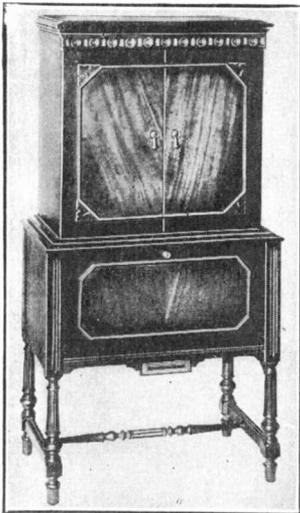
**Argus 210 Dynamic Power Electric Set**

The Argus Electric is a real power receiver—just plug in the nearest base plug or wall socket. Costs less than one cent per hour to operate. Uses standard tubes and a 210 tube in the last audio stage. Two Illuminated Dials. Voltmeter on panel. Tip-jacks for phonograph pick-up. Designed for use with five type UX-199, one type UX-210 and two type UX-281 tubes. For A.C. 110 volt, 60 cycle current. No tubes included.

List Price, \$195.00

**Dealer Cost, \$37.50**

**FRESHMAN Mahogany CONSOLE**



The console is 53 in. high, 27 in. wide and 18 in. deep. The panels are cut out 8 x10 in. now but can be re-cut to accommodate any set with panel up to 10 1/2 in. x 22 in. and 15 in. deep.

Beautifully matched mahogany veneers throughout, hardwood legs and crossbar for strength and delicately decorated with overlays.

The two doors are of the disappearing type that turn back out of the way. The roomy bottom compartment is suitable for accessories or makes a very fine silver or linen chest.

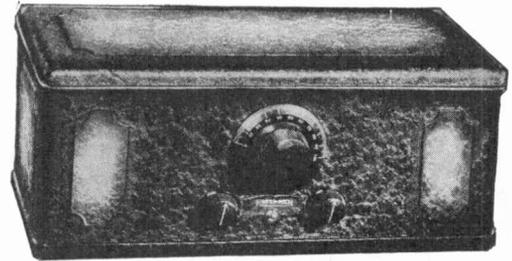
No Set or Speaker Included

**Dealer Cost, \$22.50**

Let Your Better Business  
Is the Best Time to Place an  
*Just glance over the exceptionally*

**Q-15  
POLYDYNE  
All-Electric  
Receivers**

List Price, \$69.00



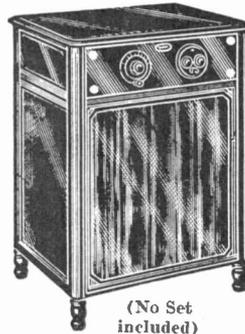
The Q-15 all-electric screen grid set uses 5 tubes, 1—222, 1—227, 1—226, 1—280 and 1—171A. Altho this set has only 5 tubes, owing to the famous screen grid circuit it is as good as any 7 or 8 tube set. Small, compact and neat. This table set has single dial operation, with volume control, selector and switch. Finished in dull brown and gold lacquer with stippled effect. 18 1/4 inches long, 8 inches high, 8 1/2 inches deep.

**Dealer Cost, \$25.00**

**Atwater Kent  
(POOLEY)  
ARMCHAIR  
CONSOLE**

A genuine Pooley Cabinet made for the Atwater Kent set. Built-in Pooley speaker. Battery compartment and tool drawer. Finished on all four sides. Suitable for A. K. No. 20 Compact Set and No. 30.

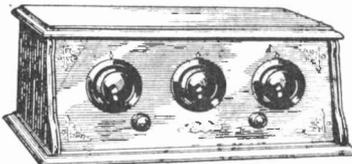
LIST PRICE, \$75.00  
Dimensions: Height, 31 1/4 in.; Length, 22 1/2 in.; Depth, 17 1/2 in.



(No Set included)

**Dealer Cost, \$9.50**

**FREED-EISEMANN  
6 Tube Battery Set**

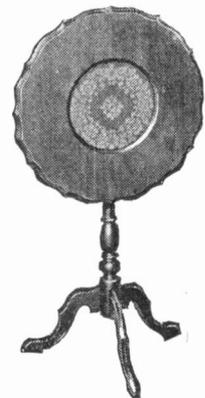


Sensational  
Radio  
Offering!

The set employs the popular tuned R.F. Hook-up and is wired for power tube.

Completely shielded, 3 stages, T.R.F. 1 Detector and 2 Audios—six tubes. Stippled panel, genuine Mahogany Cabinet. List Price, \$80.

**Dealer Cost, \$11.50**



**Crosley Musicone  
Tip-Table Model  
Mahogany Base**

The secret of Crosley's faithful reproduction of all tones lies in the patented actuating unit—an exclusive Crosley Feature found only in the "Musicone."

Perfect reception is assured—there is never any metallic sound or distortion to mar the reproduction.

List Price, \$27.50

**Dealer Cost,  
\$3.75**

20% with order.  
Balance C. O. D.  
All Merchandise  
Brand New.

Only Certified Check  
or Money Order.

**BROOKLYN RADIO**  
Service Corp.

577 Myrtle  
Avenue

Brooklyn,  
New York, N. Y.

Judgment Tell You That NOW  
Order for Needed Radio Stock  
low prices marked on these articles



**N-11 POLYDYNE**  
All-Electric Table Set

This circuit is a seven-tube tuned radio frequency design embodying the exclusive Polydyne System of stabilization. N-11 employs three stages of tuned radio frequency, detector and two stages of improved audio amplification using 1-226, 1-227, 1-250 and 1-281 rectifier tube. UX-250 Radiotron is used in last audio stage, making set suitable for dynamic reception of extreme volume without distortion. Model N-11 has illuminated single dial operation, with volume control and switch. All-electric receiver. Finished in dull brown and gold lacquer with stippled effect. 19 inches long, 10 inches high and 11 1/2 inches deep.

List Price, \$115.00 (Less tubes and speaker)

**Dealer Cost, \$35.00**

**Tower**

Cone Speakers



Castle Cone

A 17 inch free edge cone protected by a metal rim.

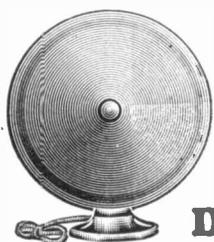


Ship Model

An opportunity to buy real ship model speakers. Height 18 inches.

Dealer Cost Each

**\$4.50**



**THE NEW PACENT CONE**

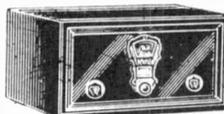
New and improved oversize unit. Flawless reproduction. Takes the tremendous power of a power amplifier or power tubes without rattle or blasting. Has extreme sensitivity, reproducing the highest violin notes down to the zooming of the bass viol without distortion. Greater rigidity and ruggedness in construction.

LIST PRICE, \$28.50

**Dealer Cost, \$6.75**

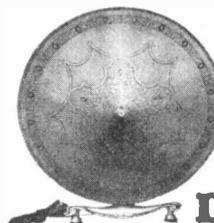
**FEDERAL ORTHO-SONIC RADIO**  
ALL ELECTRIC TABLE MODEL H-10

This set embodies the world famous Ortho-sonic Tone: Single Dial, electrically illuminated; Alternate Selectivity; Vernier Control, assuring maximum results from every station; Federal push-pull amplification; New-type Control, perfect volume gradation; All-Metal Chassis, mechanism completely enclosed; Light Socket operated. Uses three 226, one 227, two 171 and one 280 tubes. Genuine Mahogany Cabinets, rich Walnut finish.



LIST PRICE, \$130.00

**Dealer Cost, \$42.50**



**FREED-EISEMANN**

The New Freed-Eisemann Cone Speaker is 26 in. in diameter, making it one of the largest on the market today. It has a 20-foot cord, allowing removal from set to adjoining room. Faithful reproduction of all notes from the lowest to the highest.

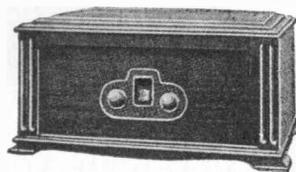
**Dealer Cost, \$7.50**

**A-C DAYTON**  
RADIO

**Model XL-50 Electric Receiver**

These sets are seven tube sets consisting of 3 stages of tuned R. F. and one tuned detector and two stages of tuned audio using 6-227 and one Raytheon.

This 7-tube all electric receiver is characterized by simple tuning. The cabinet and wooden panel are of beautifully grained walnut, and all controls are grouped on a



beautifully embossed bronzed instrument plate. Uses all new A.C. Tubes. Dimensions are 22 in. long, 9 in. high and 9 in. deep.

For 110-120 volt, 50-60 cycles, A.C. current.

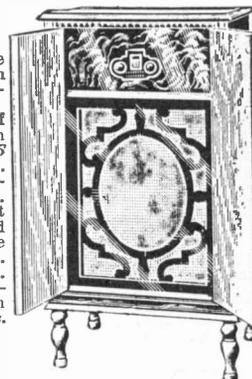
List Price, \$175.00

**Dealer Cost, \$35.00**

**A-C DAYTON ELECTRIC**  
CONSOLE RECEIVER

The XL-50 seven-tube receiver installed in this beautiful cabinet.

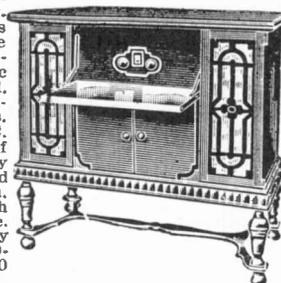
The dimensions of this cabinet which are 22 in. wide x 15 in. deep x 40 in. high. Built in Orthophonic Speaker. Only the finest grained and matched walnut veneers have been used on it. Uses all new A.C. Tubes. Complete — ready to operate on 110 volt 50-60 cycle.



**Dealer Cost, \$43.00**

**A-C DAYTON ELECTRIC**  
Console GRAND Receiver

The compact XL-50 seven-tube A.C. Dayton receiver is installed in the famous AC Dayton Duophonic Console Grand. Has two Air Column Speakers. Uses all A.C. Tubes. Cabinet of walnut especially selected and matched grain, trimmed with bird's eye maple. Complete: ready to operate on 110-120 volt, 50-60 cycles A.C.



**Dealer Cost, \$49.00**

**BROOKLYN RADIO**  
Service Corp.

577 Myrtle Avenue

Brooklyn, New York, N. Y.

20% with order.  
Balance C. O. D.  
All Merchandise  
Brand New.  
Only Certified Check  
or Money Order.

**RADIO BARGAINS**

**Argus Electric**

7 Tube Sets

Model 125. List \$125.

Chassis only, \$23.50  
Takes 6 tubes and rectifier tube. Panel size 8x16.



Argus Chassis

**Borkman Air Column Speakers**

Cone Shaped

With \$7.00 Borkman Velvet Unit, \$3.50; without unit, \$2.25. Very fine tone. Will take power tube volume. Any standard thread unit can be used.

**Jensen & Utah Dynamic Chassis**

Jensen or Utah Dynamic Speakers for console installation. Shipping weight about 20 lbs. A.C. 110 volt; 50-60 cycle. List price \$40.

Our Price \$17.95



Valley "B"

**Valley "B" Eliminators**

135 to 180 Volts. Has "C" Battery Taps of 9 volts for 112-A power tube and 40 Volt Tap for 171-A power tube. Regular \$35; latest model.

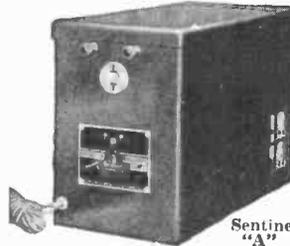
Price with B-H Raytheon tube \$12.50

**Genuine Thomas-Andrews "B" Eliminators**

Latest model, price with BH-125 mil. Raytheon tube \$9.50. Built by Thomas-Andrews Corp. of Waukegan, Ill. Del. 50 mil. at 180 volts—adjustable to 90 - 135 - 180 volts. List \$29.



Thomas Andrews



Sentinel "A"

**Sentinel "A" Eliminators**

Bone Dry, using latest type 2 1/2 amp. Elkon Rectifier and Elkon Condensers; no liquids or vibrating parts — Run any set up to 10 tubes; regular \$39.

Our price \$11.75

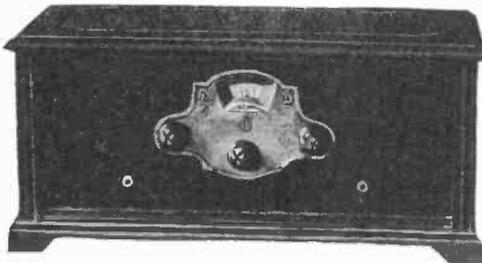
*All goods in original factory cartons. TERMS: 20% with order, balance C.O.D. A 2% discount allowed if full amount is enclosed with order.*

**SMERAGE MUSIC CORP.**

53 W. Jackson Blvd. WHOLESALE ONLY Chicago, Illinois

**1929 RADIO SETS AT SACRIFICE PRICES**

Write or Wire Your Order Now

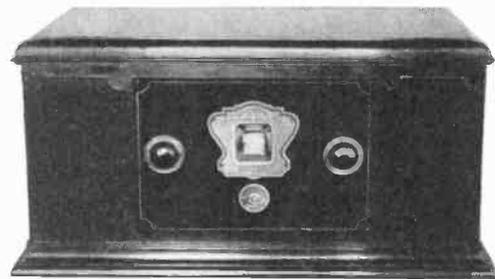


**The GRUEN Six Tube Battery Set**

Late model, uses 3 stages R. F. and 2 stages A. F. Totally shielded, jacks for phonograph pick-up and power amplifier, wired for any type power tube.

Beautiful bronze escutcheon, single dial control. Shipped in plywood cases.

**Dealer Price \$16.50**



**CHELSEA Treasure Chest Seven Tube All-Electric**

Well made steel constructed chassis. Power Pack (licensed by R. C. A.). Uses 1—227, 4—226, 1—171 and 1—280 rectifier tube.

Beautiful bronze escutcheon and illuminated single drum control. Massive Mahogany Cabinet with genuine burl panels. The most beautiful set you have ever seen.

This all-electric receiver is the best "buy" on the market. It's beautiful cabinet will sell the set alone, and — The Price!! Order a sample today.

**Dealer Price \$35.00**

**Ferguson All-Electric 7-Tube Receiver**

Set uses 1—227, 4—226, 1—280 and 1—171 with full 180 volts on plate. Acme power supply unit and C. R. L. volume controls. A limited quantity at this special price. All sets guaranteed.

DEALER  
NET  
PRICE

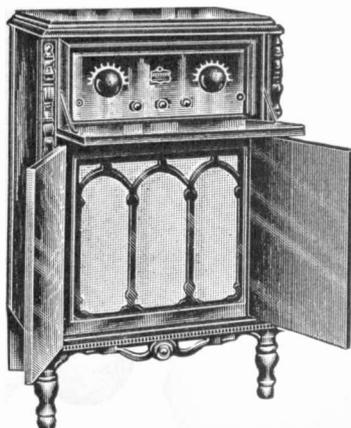
**\$27.50**

All Sets guaranteed new and in original packing. Phone Astoria 5492.

**JACKSON RADIO COMPANY**  
66-68 PATERSON AVE., LONG ISLAND CITY, N. Y.

Terms: 3% discount on full remittance, or 20% with order, balance C.O.D.

**Buy now while the buying is good!**  
Make your selections from these sensational offerings.



**Erla Pearson Console**  
With Built-in ERLA Reproducer

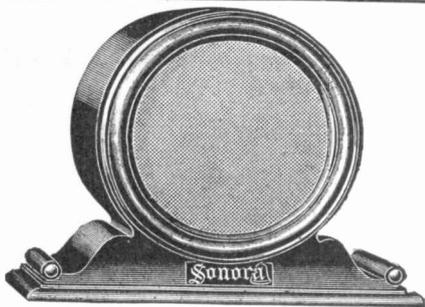
Most modern and popular of Erla designs. Finished in antique American walnut, with quartered and matched panel, inlaid with diamond matched satinwood.

List Price \$135.00

**Our Price \$27.50**

**POWERIZER**  
REG.

General model used with any set.  
List \$75.00. Net \$19.50.  
Model PXYI—R20 for Radiola.  
20 only—Net \$16.50.



**Genuine Sonora  
Magnetic Cone**

New and improved magnetic unit; will stand 600 volts without vibrating. Designed to operate on modern electric power sets. Cabinet is made of selected mahogany grained veneer. Each speaker is packed in original Sonora shipping carton, and fully guaranteed.

List Price \$35.00

**Our Price \$8.50**



**ATWATER KENT  
Super "B"  
Eliminator**

**What A "Buy"**

You will say—and your customers will agree with you!  
Packed in original sealed factory carton and fully Guaranteed.

This is the biggest event of the season—act quickly. Only 2,000 in the lot. With Built-in Relay.  
Raytheon BH Tube furnished for \$2.25  
Sonatron SH-85 Tube furnished for \$2.00

List Price \$50

**Our Price \$13.50**

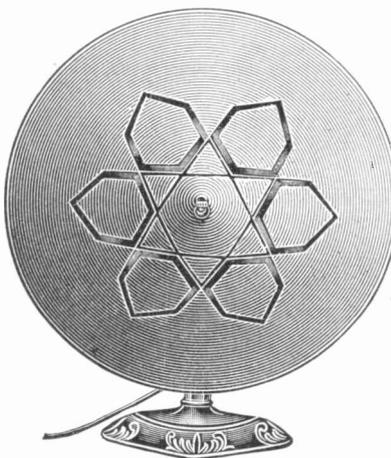
*Nationally Known—Radically Reduced*

**FADA  
RADIO**

SEVEN TUBE  
BATTERY SET

1. Either loop or aerial can be used.
2. Three (3) stages of audio—which means—power amplification.
3. Each tube—and all parts—totally shielded.

**Our Special Price \$35.00**



**GREBE  
CONES**

are synonymous with highest quality in radio. At the ridiculously low prices we advise quick action. Put G in stock and watch the public snap them up when demonstrated. Packed in original factory containers and fully guaranteed perfect goods.

Diameter 20 in.  
List \$35.00

**Our Price  
\$7.95**

**DUBILIER CONDENSERS**



No. 908 By-Pass  
—(will carry  
400 working  
volts) latest  
model, never be-  
fore offered, all  
new in original  
boxes.

	List	Net	Doz.
1 MFD	\$1.00	\$.25 ea.	\$2.64
.25 MFD	1.10	.28 ea.	3.40
.5 MFD	1.25	.30 ea.	3.36
1 MFD	2.00	.35 ea.	3.65

**DUBILIER FILTER  
CONDENSERS**

	List	Net	Lots of 6
No. 901 all new in original boxes.			
B-Block			
2 MFD	\$2.25	\$.70	\$3.30 net
4 MFD	3.50	1.25	6.90 net
6 MFD	5.00	1.90	10.50 net
Polymet 1 MFD Filter Condenser			
	\$3.35 ea.	lots of 12.	\$3.60.

*A Few Items  
Listed in the  
Regular Federated  
Catalog*

Complete line of Sonatron Tubes—Write for discounts.  
B.B.L. Units—(A.C. Dayton)  
List Price, \$7.50 Net \$3.50  
Protecto Voltage Regulators  
List Price, \$1.50 Net 65c.  
Protecto Antenna Plugs  
List Price, \$1.25 Net 55c.  
Protecto Combination,  
List Price, \$2.22 Net 85c.  
Baldwin Units:  
Type H .....\$1.50  
Type C ..... 1.50  
Standard ..... 2.00  
Lyric ..... 2.25  
Westinghouse Meters  
PK-2-0-7 1/2 0-150 volts.  
List Price, \$10.00 Net \$3.15  
B.M.S. Phono Pick Up  
List Price, \$10.00 Net \$3.45  
Atwater Kent (Pooley) Arm-  
chair Console in orig-  
inal factory crate. Our  
Price \$11.85  
Pacnet Speakers,  
List Price, \$22.50 Net \$6.75  
Thordarson Transformers,  
List Price \$5.00 Net \$1.39

**Tungar Trickle  
Charger**

3 Rate Trickle  
.5—.35—.2 Amps.  
A.C. 110 Volts, 60 Cycle  
NO TUBE INCLUDED

**Our Price  
\$1.25 Each**

*Federal Ortho-Sonic  
All Electric Radio  
Table Model H-10*

Single Dial, electrically illu-  
minated; Vernier Control;  
Federal push-pull amplifica-  
tion; New-type Control, per-  
fect volume gradation; All-  
Metal Chassis, mechanism  
completely enclosed; Light  
Socket operated. Uses three  
226, one 227, two 171 and  
one 280 tubes. Genuine  
Mahogany Cabinets, rich  
Walnut finish.

List Price \$130.00

**Our Price  
\$42.50**

If you did not receive a copy of the Federated Bulletin mailed on February 28th, be sure to send us your name and address.

Many bargain items are listed and described which are sure profit makers.

*Terms 20% cash with  
order. Balance C.O.D.*

**Federated Purchaser**

16-22 Hudson Street, New York, N. Y.



**Cabinet Model A.C. 172**  
This is chassis Model A.C. 171 housed in metal cabinet, rendering it highly attractive. The cabinet is of russet bronze crystalline finish. The cover has a highly blended two-tone effect.

## With this Line You Can Meet Every Demand

Every radio buyer now demands tone quality. The Pierce-Airo 8-tube Electric possesses it to a superior degree. Comparison with other receivers proves Pierce-Airo's tonal superiority. The next consideration is appearance. The Pierce-Airo's cabinet is strikingly beautiful and will satisfy the most discriminating. If the buyer desires something more elaborate than a cabinet model, you can easily fit the Pierce-Airo Chassis into any standard console, satisfying the customer and making an extra profit for yourself. With the Pierce-Airo you are really selling three lines: a chassis, a table cabinet and a console, thus meeting every demand of a prospective radio set buyer.

SELF-CONTAINED  
POWER  
SUPPLY



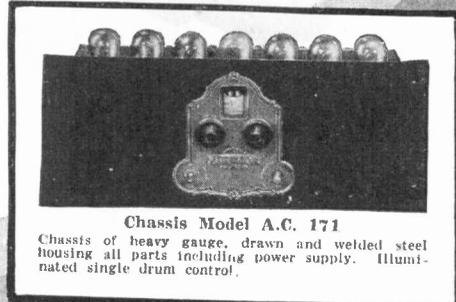
CHASSIS  
AND  
CABINET  
MODELS

### 8 Tube Electric Receivers for A.C. or D.C.

With the Pierce-Airo line you can make your own list price, offer the best radio value in your community, and still realize a good profit. And—your profit sticks, because the Pierce-Airo is so perfectly constructed mechanically and electrically that they never come back. They give lasting satisfaction and every one you sell creates a demand for many others.

*Write for prices and discounts or send for a sample Pierce-Airo Electric Receiver for test in your own store.*

**PIERCE AIRO, INC.**  
113 R FOURTH AVENUE  
NEW YORK CITY



**Chassis Model A.C. 171**  
Chassis of heavy gauge, drawn and welded steel housing all parts including power supply. Illuminated single drum control.

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# GOLD SEAL and what a tube!

**T**HAT'S what the dealer says as he checks his sales. Not just "pretty good", "profits average", or any other half-hearted endorsement. More likely it's "wish my whole stock were half as lively as Gold Seal. *What a tube!*"

**Gold Seal Electrical Co., Inc.**

250 PARK AVENUE

NEW YORK, N. Y.

*Also Manufacturers of Gold Seal Electrical Appliances*



**A Radiotron  
for every purpose**

- RADIOTRON UX-201-A**  
*Detector Amplifier*
- RADIOTRON UV-199**  
*Detector Amplifier*
- RADIOTRON UX-199**  
*Detector Amplifier*
- RADIOTRON WD-11**  
*Detector Amplifier*
- RADIOTRON WX-12**  
*Detector Amplifier*
- RADIOTRON UX-200-A**  
*Detector Only*
- RADIOTRON UX-120**  
*Power Amplifier Last  
Audio Stage Only*
- RADIOTRON UX-222**  
*Screen Grid Radio  
Frequency Amplifier*
- RADIOTRON UX-112-A**  
*Power Amplifier*
- RADIOTRON UX-171-A**  
*Power Amplifier Last  
Audio Stage Only*
- RADIOTRON UX-210**  
*Power Amplifier Oscillator*
- RADIOTRON UX-240**  
*Detector Amplifier for  
Resistance-coupled  
Amplification*
- RADIOTRON UX-250**  
*Power Amplifier*
- RADIOTRON UX-226**  
*A.C. Filament*
- RADIOTRON UY-227**  
*A.C. Heater*
- 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



Look for this mark  
on every Radiotron



**ALFRED H. GREBE**  
President, A. H. GREBE & CO., Inc., 2875



"In replacing worn vacuum tubes we strongly advise all owners of Grebe Receiving sets to use RCA Radiotrons. Our laboratory tests have proved that they give the best results with Grebe instruments."

*Alfred H. Grebe*

Used for laboratory tests and for initial equipment and strongly recommended for replacement by all makers of quality radio sets, RCA Radiotrons will improve the reception of your set. When you need new tubes do not put them in with old ones. Put a new RCA Radiotron in every socket and notice the difference in performance.

**RCA RADIOTRON**

RADIO CORPORATION OF AMERICA - New York - Chicago - Atlanta - Dallas - San Francisco

The national magazine advertisement reproduced at the left is one of the 1929 Radiotron series, each of which carries the signature of a leading radio manufacturer.

**Make the occasional tube customer a regular by showing him that you carry the full line of RCA Radiotrons —and are never out of stock. A radio customer who has had to waste his time shopping from dealer to dealer for tubes is glad to find a store that can always be depended upon to be stocked with the complete line of RCA Radiotrons.**

Superior resources of research and manufacturing guarantee to RCA Radiotrons the finest possible quality in vacuum tubes. They are the standard of the industry—and so accepted by both the trade and the public.



RADIO CORPORATION OF AMERICA - New York - Chicago - Atlanta - Dallas - San Francisco

**RCA RADIOTRON**

**RADIOTRONS ARE THE HEART OF YOUR RADIO SET**