

Vol. 6 No. 3

DECEMBER, 1924

Two Dollars The Year

Published monthly at 1155 Broadway, New York, N. Y., by the Radio Dealer Co. Entered as Second Class Matter, at the Post Office at New York, N. Y., under the act of March 3, 1979

FRESHMAN

Just the Thing for Christmas!



A, FIVE TUBE TUNED RADIO FREQUENCY

Receiver that is building up a WONDERFUL trade for live radio dealers in all sections of the country. It is the

Greatest Value Ever Offered in a Radio Receiving Set

GET YOUR ORDER IN NOW SO THAT YOUR TRADE WILL NOT BE DISAPPOINTED

CHAS. FRESHMAN CO., Inc., 106 Seventh Avenue, New York City



A Spaulding Warehouse Near You!

Manufacturers

who desire to build quality into their products and who insist on speed and economy in their plants should write our nearest office for complete information on Spaulding-Bakelite supplied in sheets, or cut to order.

Spaulding-Bakelite Panels Endorsed by:

Andrews Radio Co. C. D. Tuska Co. Chelsea Radio Co. Coto Coil Co. Rawson Elec'l Instr. Co. The Framingham Co. Elec'l Products Mfg. Co. Forest Electric Co. American Mechanical F. A. D. Andrea Resas, Inc. Magnus Electric Co. R. E. Thompson Dynomotive Radio Carp. Ware Radio Corp. Phenix Radio Corp. Chicago Radio Laboratories Operadio Corporation Howard Radio Co. H. G. Saal Co. Krasco Mfg. Co. Wells Mfg. Co. Ferro Mfg. Co. Joy Kelsey Corp. Clapp Eastham Co. De Witt LaFrance Co. Cutler-Hammer Mfg. Co. Shepard-Potter Co.

When time is a critical factor, and quality dare not be sacrificed, remember that Spaulding-Bakelite, specially processed for radio panels and tubing and of supreme dependability—has warehouses conveniently located on the Atlantic and Pacific Coasts and Midcontinent. In every conceivable way, you can buy safely when you specify "Spaulding-Bakelite".

Beautiful, black everlasting high gloss finish: drill, saw, engrave without chipping; positively will not fade, shrink or split. Widely advertised. Supplied in standard sizes, individually packed in envelope containers—special sizes cut to order.

Spaulding-Bakelite tubes are highest in dielectric properties.

Shipments from nearest branch promptly made in any quantity.

SPAULDING FIBRE COMPANY INC., TONAWANDA, N. Y.

Factory—Tonawanda, N. Y. Sales Offices—Warehouses

15 Elkins St., Boston659 W. Lake St., Chicago310 E. 4th St., Los Angeles

484 Broome St., New York City
141 N. 4th St., Philadelphia
171 Second St., San Francisco, Calit.
509 First National Bank Bldg., Milwaukee





Progressive Charlotte is an Eveready Town

Dry B Batteries

are more economical

and more dependable

than any other

source of plate

current

"EVEREADY HEADQUARTERS—free testing service—come in and get the right battery for every radio

use." Thus the Interstate Radio Corporation, Charlotte, N. C., has advertised and grown. It has recognized the value of attractive window displays. Charlotte has about 50,000 popula-

tion and a number of active radio shops. This one shop turned the

trick of selling 200 Eveready "B" Batteries in a week.

Ask Mr. R. F. Ferguson, vice-

president of the Interstate Radio Corporation. He will tell you that Eveready quality batteries mean satisfied customers, that Eveready trade service means dealer satisfaction, and that Ever-

eady national advertising makes selling easier.

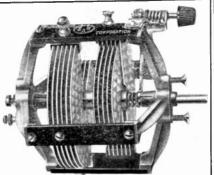
Eveready Radio Batteries are manufactured and guaranteed by

NATIONAL CARBON COMPANY, INC.

Headquarters for Radio Battery Information

New York San Francisco

Canadian National Carbon Co., Limited, Toronto, Ontario



REPUTATION

The pillar of

Any business

Is gained by

15 gamea oj

Offering for sale

Merchandise which

In performance

And quality

Satisfies

The purchaser

So we offer

To your customer

Through you

A new condenser

*"A balanced precision

Instrument

Scientifically designed"

Of hardly any losses

That is different

Because it is not only

A good condenser

But it is split

And can tune

Several stages

With a single dial

And change wavelength

By the turn of a switch

And appeals

To the technical man

For its features

And to the novice

For its appearance

And to you

For its ready sales

And its help

In building up

Your store's

REPUTATION

We will gladly mail discount sheets to jobbers and dealers on request.

Bruno Radio Corporation NEW YORK

SALES OFFICES

Boston, Detroit, Washington, Cleveland, Atlanta, Chicago, Minneapolis, San Francisco

THE RADIO DEALER

The Radio Trade Journal

For The Radio Retailer

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THE RADIO DEALER, The Radio Trade Journal, published monthly on the first, at 1188 Broadway, New York, N. Y., by The Radio Dealer Company, in the interest of dealers in Radio Supplies. Harry M. Konwiser, Publisher; Laurence A. Nixon, Managing Editor; Walter A. Schilling, Editor; J. Maurice Casper, Business Manager; W. B. Wilkinson, Jr., Advertising Manager; A. L. Konwiser, P. S., Albert E. Sonn, R. E., Technical Editors; Bernard Freedman, Associate; V. E. Tibbens, Circulation Manager; M. Jay Klein, Research Manager; M. Commerford, Manager Service Bureau.

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Publication Office: 1133 Broadway, New York, N. Y. Telephone Watkins 8926-8927 Central States: 35 S. Dearborn St., Chicago, Ill. Telephone Dearborn 4053 Pacific Coast: 1116 Chapman Bldg., Los Angeles, Calif. Telephone Los Angeles 12050 512 Pacific Building, San Francisco, Calif. Telephone Sutter 954 Cleveland: V. D. Green, 7101 Detroit Avenue

SOUTH AMERICA: Casilla Coireo 280, Buenos Aires, Argentine. Wm. Schneider, Representative Canadian Office: 669 Main Street, Winnipeg, Manitoba

Advertising Rates and detailed statement of circulation and other information for advertisers furnished on application.

Advertising forms close the 15th of the month prior to date of issue.

Circulation restricted to retailers, manufacturers and jobbers in wireless equipment. Subscription in the United States, two dollars the year, payable invariably in advance. Subscription in foreign countries, three dollars the year, payable invariably in advance.

Also publishers of The Radio Manufacturer and The Radio Dealer YEAR BOOK.



A BROADCAST Receiver that marks a step forward in radio design which will stand as a challenge to the industry for a long time to come. Its surpassing craftsmanship is equalled only by its easy, dependable operation.

Greater sensitivity has been gained through two stages of Balanced tuned radio frequency—the result of many months of intensive research by the Grebe engineering staff. Extreme selectivity has been obtained by the use of Binocular coils.

The settings for the various broadcast stations are equally spaced over the dials. This is accomplished by S-L-F (straight line frequency) condensers.

A new type of volume control gives an unbroken range of six variations of audio amplification.

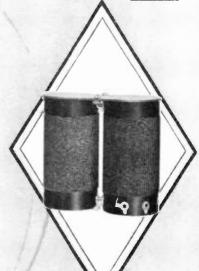
Wise jobbers and dealers everywhere are cashing in on the Synchrophase.
Write us for particulars.

A. H. GREBE & COMPANY, INC.

Van Wyck Blvd., Richmond Hill, N.Y. Western Branch: 443 So. San Pedro St., Los Angeles, Cal.

This Company owns and operates Station WAHG.

All Grebe apparatus is covered by patents granted and pending.



Synchrophase Secrets — No. 1 The "Binocular" Coil

A truly fieldless coil with which the detector and radio stages are tuned. Unaffected by impulses from undesired local stations, its use is a tremendous factor in the success of the Synchrophase.



TRADE MARK

RADIO PRODUCTS

The Guaranteed Line of Highest Quality

BETTER GRADE MERCHANDISE AT LOWER PRICES



40

List

Price

PHILMORE AUTOMATIC GRIP PLUG

The phone tips are removed just as easily as they are inserted. The brass stem is nickel plated. Packed in individual



PHILMORE OUALITY JACK

The best jack that long experience and modern manufac-turing facilities can produce. Reinforced springs of phos-pher bronze. Brackets, Nipples, Washers and Screws of Brass. Blades prepared with non-corrosive flux.

LIST PRICES

Single, Open, 40 cents Single, Closed, 43 cents Double, Closed, 50 cents

PHILMORE DOUBLE PLUG Ribbed Jacket of highly polished composition. Metal parts nickel-plated. In either black or ma-hoganite. Packed in individual hoganite.

35

List

Price



Genuine Bakelite Special Grade Wiring



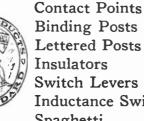


AJAX METAL SHELL SOCKETS

The tube is of heavy brass with a high buff nickel plated finish. Double spring phosphor bronze nickel plated contact arms are used.

PANEL MOUNTED BIND-OVER 130 ITEMS IN THE COMPLETE

AJAX LINE



Binding Posts Lettered Posts Insulators Switch Levers Inductance Switch Spaghetti

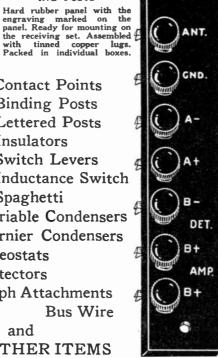
ING POSTS

Dials Variable Condensers Sockets Vernier Condensers Plugs Rheostats

Jacks Detectors Phonograph Attachments

Crystals Bus Wire and

MANY OTHER ITEMS



New Illustrated Catalog and Price List Sent on Request

PHILMORE

105 Chambers Street, New York

Looking Ahead

Another article in the series: "Service vs. Psychology in Retailing" will appear in the January issue. The articles have aroused general interest in the trade and contain much invaluable information for the wideawake retailer.

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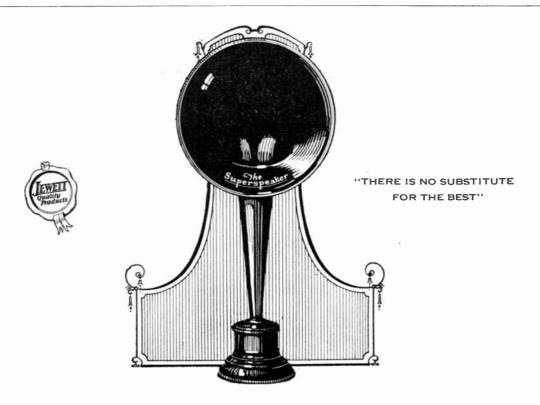
Several dealers report that they have been using some of the Dollar Pullers published in the last two issues of The Radio Dealer to good advantage for the Christmas trade. This opens a new avenue of ideas for the retailer. Dollar Pullers can be used to good advantage at any season of the year. But the sooner the better. The January issue will carry a number of new ideas of the dollar-pulling variety.



The average retailer is interested in knowing "a little bit more" about the knight of the grip who calls every so often and sells him a bill of goods. Many have found the department: "Among the Travelling Men" a good method to learn "a little bit more" about the individual who calls, representing his concern, and keeping himself in the background. General interest has been created as to whose picture will appear the following month. It will prove of interest to peruse that department in the January number.

2. 2. 1.

With the passing of each day the wideawake dealer is being brought more closely to the realization that his display windows are the best medium to attract the attention of the public. The present issue of THE RADIO DEALER carries a number of interesting articles on the subject as well as illustrations of effective and business getting trade displays. The January issue will carry several surprises along these lines and also ideas which can be used to excellent advantage.



ANNOUNCEMENT

Jewett's Open Door Policy is in Full Force

To avert all possible misunderstanding, and to make Jewett Sales Policy a matter of public record everywhere, we hereby announce that all Jewett Superspeaker distributors are—and always have been—free to handle as many other types of loud speaking devices as their business judgment may dictate.

Jewett dealers are similarly encouraged to handle other lines as well.

This open door policy is helpful, we have found, to all concerned. For the Superspeaker sells best when sold in competition. The broader the competition, the more striking is always its superiority.

Such a sales policy is, in our belief, the only path to permanent success.

Should there come a time when any Jewett product cannot meet and beat its competition, we will surely replace it with a product that can.

Distributors who can merchandise, but who find themselves handicapped by products on which manufacturers fear competition and demand exclusive representation, are invited to get in touch with us regarding the Jewett franchise.

JEWETT RADIO & PHONOGRAPH CO.
5662 TWELFTH STREET DETROIT, MICHIGAN

Supers peaker

Supers peaker

Tridemark
Registered

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Cash in on the craze for Radio gifts this Christmas!

I T'S to be a radio Christmas—the country is radio mad. Cash in on the craze!

Sell the Shamrock Kit containing all parts necessary to build this marvelous Shamrock-Harkness Two Tube Reflex. Its low price makes it the set for the masses as well as the classes. Everyone is a prospect.

The astonishing performance of the Shamrock-Harkness also accounts for its tremendous popularity. It combines the best features of the leading circuits.

best features of the leading circuits.

Operates a loud speaker. Two tubes do the work of five. Cuts battery costs 60%. Does not squeal, howl, or radiate. Stations can be logged. Amazing clarity and volume.

The Shamrock Kit contains only genuine licensed Shamrock-Harkness parts-quality parts-the best that are made. To insure your customer's success sell him only Shamrock-Harkness licensed parts.

Because of quantity production, Shamrock can offer this splendid Kit for \$35—which is about ha!f the usual price charged for other kits built to give equal results.

Sell this moderate-priced licensed

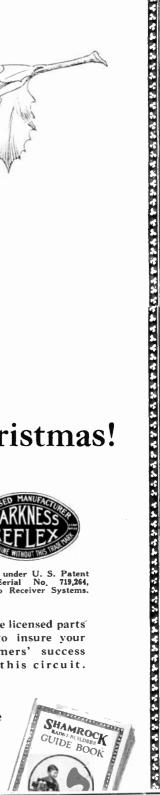
kit. Increase your sales by giving consumer satisfaction. Cash-in on the profits Shamrock can make for

Write for your free dealer copy of "Shamrock Radio Builder's Guide Book." It contains many valuable suggestions about the Shamrock-Harkness Two Tube Reflex and nine other tested circuits. Attach coupon below to your letterhead and mail today.

Licensed under U. S. Patent Office Serial No. 719,264, for Radio Receiver Systems.

Sell the licensed parts' only to insure your customers' success with this circuit.

Kit Complete PRICE



SHAMROCK MANUFACTURING CO. Dept. 118, Market St., Newark, N. J.

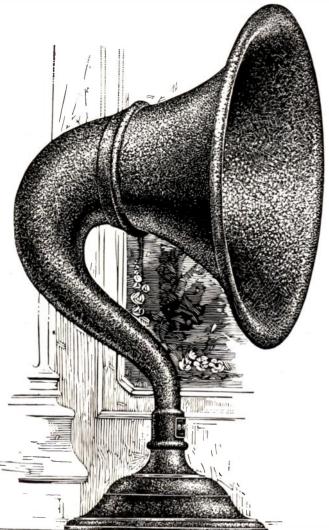


The set for the masses as well as the classes

j	SHAMROCK MANUFACTURING CO., Dept. 118, Market Street, Newark, N. J.
	Please send free copy of valuable booklet "Shamrock Radio Builder's Guide Book" fully describing ten tested circuits including the Shamrock—Harkness Two Tube Re- flex. Also send names of your jobbers in my territory.
ŀ	Name
ŀ	Address
	City State

ATER.

LOUD SPEAKERS



During more than a quarter of a century it has been the unswerving policy of the ATWATER KENT COM-PANY to produce the best at any cost.

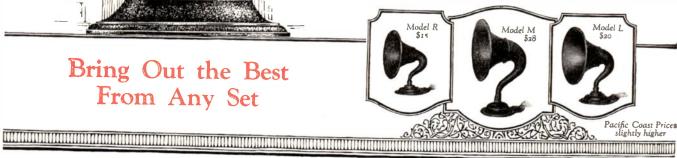
True to tradition, ATWATER KENT Loud Speakers possess a quality that proves itself in remarkable performance.

With this prestige and outstanding value back of them, ATWATER KENT Loud Speakers have won for themselves a nation-wide acceptance.

Add to this the mighty pulling power of a national advertising campaign devoted exclusively to Atwater Kent Loud Speakers — and you, as a radio merchant, have as fine a business proposition as you could find.

Send for descriptive literature and dealer price list ATWATER KENT MANUFACTURING COMPANY 4720 Wissahickon Ave., Philadelphia, Pa.

Bring Out the Best From Any Set



ATWATER KENT

RECEIVING SETS

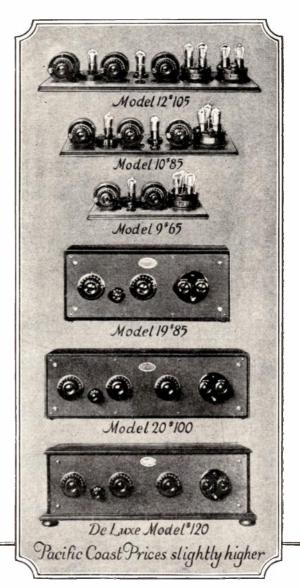
The radio merchant who is building for himself a prosperous and lasting business is the one who is handling right now a sound and well-known line.

If every radio merchant could go through the Atwater Kent Plant, the largest and finest of its kind in the whole world, he would know why there is no better radio made. He would see for himself that here is an organization with the promise of permanent leadership.

The merchant who handles ATWATER KENT Radio has the assurance that year after year he will keep the confidence of his customers—and be able to say to himself, "I know I handle the right line."

Send for descriptive literature and dealer price list

ATWATER KENT MANUFACTURING COMPANY
4720 Wissahickon Ave., Philadelphia, Pa.



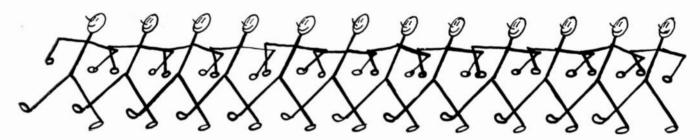
Think What Is Back of It

Table-Talker

The horn of the Table-Talker is matched to the unit. No scratchy sounds/



Just clear, mellow, true tone-all the time.



Sell Table-Talkers by their Tone!



PROMPT SERVICE—COMPLETE STOCK—IMMEDIATE DELIVERY

American Wireless Corp.

54 West 23rd Street, New York City

GRAMERCY 5798

GRAMERCY 0871

Distributors for

Acme Products
American Brand Cond.
Apco Products
Atlas Speakers
Balkite Products

Cutler Hammer Prod.
Dubilier Products
Erla Products
Herald Speakers
Jefferson Transformers

Marco Products
Marwol 5 Tube Sets
Murdock Neutrodyne Sets
Thordarson Transformers
Thorola Speakers

And Many Other STANDARD Lines

Announcing the New

MURDOCK NEUTRODYNE RECEIVER

with built-in Loud-Speaker

LIST PRICE \$100.00



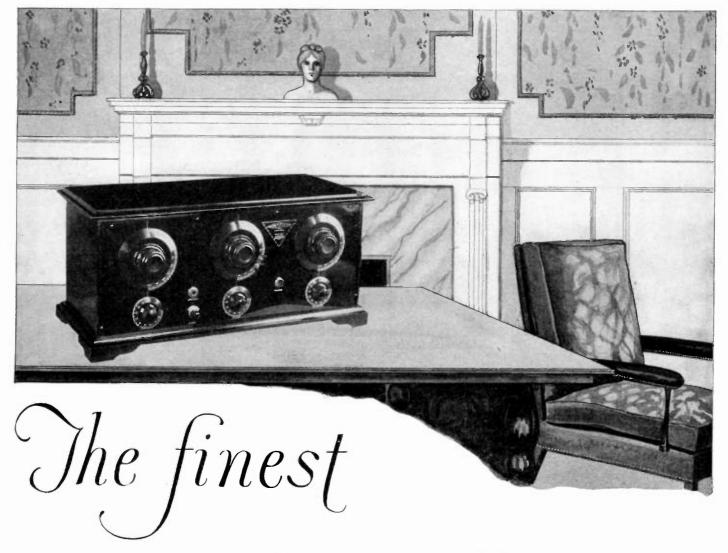


The speaking likeness

No. 4

LIST PRICE \$25.00

"WRITE FOR OUR CATALOGUE"



The Radio Fan is discovering that in the AKRADYNE five tube set he is buying \$175 worth of radio value for only \$75. That, in a nutshell, is the secret of the tremendous enthusiasm which is making AKRADYNE the big winter sales leader. And that is why the makers of this set have an open challenge to the world to show any five tube set that can successfully compete with AKRADYNE.



SUNBEAM RADIO SALES CO., INC., 1834 BROADWAY, NEW YORK



Advertising that helps YOU sell FADA receivers

YOU have seen the striking full-page FADA advertisements in *The Saturday Evening Post* month after month. Look for the issues of December 6th and December 20th. The December 6th issue carries a big two-page smash *in colors* that will create interest and boost holiday sales of FADA Neutrodyne receivers. On December 20th, just when Christmas sales are heaviest, purchasers are again reminded to buy a FADA Neutroceiver or FADA Neutrola. This *Saturday Evening Post* advertising is supplemented by pages in all the leading radio magazines, by pages in *The Literary Digest* and *The American Magazine*.

In addition to one of the largest magazine campaigns ever conducted for radio receivers, FADA is using newspaper space generously in the leading radio centers. Some of this advertising is reproduced above—greatly reduced. It localizes FADA sales and brings customers to the stores selling FADA receivers.

Tie up with this FADA advertising. We will furnish mats or electros of FADA newspaper copy in 12 and $28\frac{1}{2}$ inch space, with plenty of room for your own name. Use it before Christmas. This material is supplied free to dealers who agree to run it in their local papers. Write for further information about FADA Neutrodyne receivers and FADA advertising.

F. A. D. ANDREA, INC.
1581 JEROME AVENUE NEW YORK



Oh boy: Here's the new 5 RICHARDSON 5 A New Invention

The only set that can neutralise equally on all wave-lengths, with no losses.

This 5-tube wonder in a beautiful cabinet costs only

\$65

Compare it with any other set at any price.

Same set in Kit form - no cabinet or accessories

\$49

RICHARDSON RADIO INC.

Factory, 128 University Place - N. Y. City.

RICOPHONES

List



RICOPHONES are noted for exceptionally clear, beautiful tones; free from distortion—every set perfectly matched and carefully inspected by experts.

> Don't judge the quality by the cost—these are truly wonderful headsets at a remarkably low price.

> You and your trade may pay more but you - - can't buy better. - -

We are the Largest Makers of Tri-pole Headsets in the World.

Exceptional Proposition for Dealers and Jobbers.

Your own name or trade mark on quality phones if desired; each set in beautiful box bearing your name.

Write for Proposition

SUPERIOR TO SUPER-HETERODYNE

Complete Outfit

TROPA FORMER

(No. 351) Tuned Long Wave Intermediate Transformer

c.75

Should be used in all Super-Heterodyne Super-Heterodyne Circuits



Over 20,000 Consumer Inquiries Have Been Received Within 90 Days

This business is hereready and waiting for you to cash on it-BIG!

What the Editor of Radio News Says about the wonderful Tropadyne Circuit the real Super Radio Outfit

the real Super Radio Outfit

Here is a remarkable * * * receiver which we warmly recommend to our readers. It has several new and unusual features, * * * only six tubes are used giving as much volume as the average eight tube Heterodyne. The selectivity of this set is unusual. Unequalities of the intermediate transformers have now been done away with by tuning each transformer. After the transformers have been tuned, they can be left this way no further tuning being necessary. This system makes for maximum sharpness and maximum volume. Another outstanding point of superiority of the Tropadyne circuit is that it practically does not radiate, thereby not interfering with other nearby receiving stations. Most Super-Heterodyne circuits, as is well known, are powerful radiators.

—Editor.

RADIO INDUSTRIES CORPORATION

129 Duane St., New York City

Cable Address: Ricotrade, New York

Catalog of Complete Line together with Dealers Discounts on Request





O BATTERIES

"Lively and Lasting"

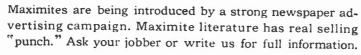




No. 415

AXIMITES are the highest attainment in radio battery manufacture. The standards of design and workmanship are the result of years of experience gained by our Canadian company—the Dominion Battery Company Limited.

In Maximite Radio Batteries, only the purest of scientifically selected ingredients are used; rigid inspections and tests throughout the various manufacturing operations insure their uniform high quality and strong recuperative power. Our method of individually insulating and specially treating each cell before assembling a Maximite Battery means noiseless reception, longer life and higher voltage maintenance.





No. 330-T



No. 13-C

Manufactured and Guaranteed by

WIRELESS DRY CELLS LIMITED

NIAGARA FALLS, NEW YORK



Each Maximite B Battery is equipped with spring and screw connections.



A Popular Priced Receiver That Stays Sold!

HE Marwol is the first high grade five tube radio frequency receiver to reach the popular price range—a receiver specially built, designed, delivered, and guaranteed at a price that practically parallels that of the individual parts required.

Here is a receiver to push! The sales unit is smaller, profit is greater—takes less sales effort and less time than the sale of parts.

The Marwol Receiver is a recent development in the tuned radio frequency circuits, especially designed to eliminate all oscillation over the entire wave length range. A real receiver for DX work.

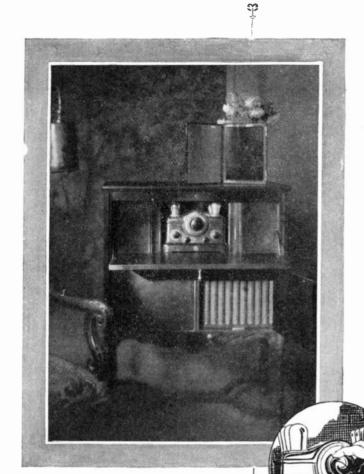
You can sell the Marwol Receiver—it stays sold and makes fast friends. Write for descriptive circular.

Marwol Radio Corporation

85-87 MERCER STREET

NEW YORK





The *only* successful multiple tube *single* control receiver ever designed.

The *only* radio receiver ever designed for home use that can amplify a weak signal one *billion* times.

The *only actual* single dial control receiver requiring *no* adjustment of compensating minor controls to bring in reception.

The *only* receiver that will produce *all* ranges of the musical scale with equal tone quality.

No outdoor antenna required —fifteen feet of copper wire, concealed along picture moulding or baseboard, is ample.

List Prices

Receiver . . . \$195 In Table Cabinet . \$235 In De Lux Cabinet . \$375 If you would sell the most perfect Radio Receiver ever contrived—NOW is the time to seal the selling rights for your territory

that all of the radio work waiting for it. Leading and dealers the country nizing the designing get past successes of Paul C. L. Farrand, have been demand agency appoints.

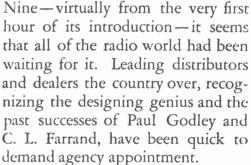
Demonstration of the Farrand-Godley Single Nine—its matchless power,

its brilliant clarity, irrespective of distance, its ease and simplicity of operation—have but further confirmed every pre-conceived opinion of its superiority.

In view of the widespread demand for selling territories, distributors and dealers are urged to make immediate application—communicating at once, with

FARRAND MANUFACTURING CO., Inc. 28 South Sixth Street Newark, N. J.





ROM the enthusiastic reception accorded the Farrand-Godley Single

Dial Control

Nothing else will do, once they hear this Speaker—an ingenious DIAPHRAGM innovation that signalizes the death knell of the Horn type of Speaker

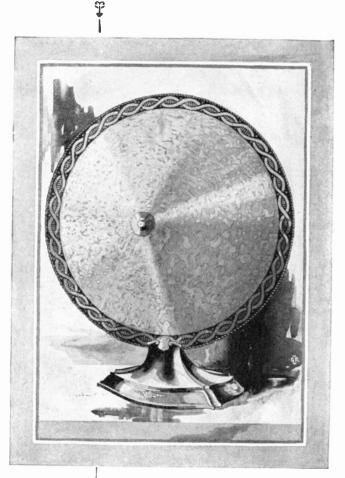
Exit the Horn type Speaker! Enter the Farrand-Godley Speaker—an entirely new *method* of radio reproduction.

The immediate, nationwide response to this marvelous Speaker—which, for the first time in radio reception, brings in *all* the lower tonal effects while retaining to the full the delicate shadings of the upper scale—indicates sales possibilities that embrace, as prospects, *every* owner of a radio receiver. Dealers already claim that it is the easiest selling item they have ever handled. A demonstration assures an immediate sale. The listener hears tonal beauties heretofore clouded in horn reproduction.

Write immediately for details and full information governing the sale of the Farrand-Godley Speaker in your locality. Address

FARRAND MANUFACTURING CO., Inc. 28 South Sixth Street Newark, N. J.





The Farrand-Godley Speaker is the result of many years of exhaustive study and research, the original patents having been granted as far back as 1918—from which time Mr. Farrand has worked unceasingly toward its further improvement. Today sees it perfected.

With the Farrand-Godley Speaker, all the heretofore hidden lower tonal effects are now faithfully, accurately reproduced—the resonant bass stringing of the 'cello, the full lower chords of the organ, the true vibrancy of the human voice—every delicate shading heretofore lost or distorted.

The Speaker, itself, is of diaphragm type, approximately seventeen inches in diameter, mounted on a distinctive bronze base.

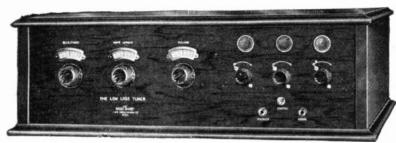
List Price \$32.50

Satisfaction Plus Better Reception A FEATURE IN

APPRECIATION

BRUNSWICK DE LUXE LOW LOSS RECEIVER

WITH VISIDIALS



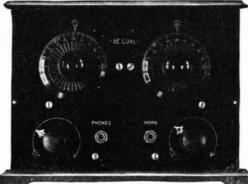
The latest sensation in modern radio efficiency. The Brunswick De Luxe Low Loss Receiver offers the radio fan a combination of unusual merit. Equipped with high grade, low loss instruments and (Visidials, the dials behind the panel), it offers the industry something entirely different with unlimited possibilities. In performance and design it surpasses even its

higher priced rivals, giving the public the benefit of low price and exceptionally efficient workmanship. It is the most triumphant achievement, with respect to construction and reliability, that has yet occurred during the fifteen years of radio development.

BRUNSWICK DE LUXE AMBASSADOR WITH VISIDIALS

The Brunswick De Luxe Ambassador combines genuine satisfaction and low price. It is the outstanding receiver of universal popularity featuring the well known Ambassador all Litzendraht wound coil, equipped with the famous Visidials the use of which eliminates the necessity of vernier attachments. Constructed in two convenient sizes it offers a choice suitable to the individual

PRICE Model-A 7 x 10 \$45.00 Model-B With Visidials 7 x 21 \$60.00



Model-A

BRUNSWICK DE LUXE TUNED RADIO FREQUENCY

The Brunswick De Luxe Tuned Radio Frequency steps into the spot light of radio at the most bustling season of the year. Our efforts in endeavoring to provide the 1925 fan with a set far advanced in design and efficiency have been well rewarded. There are no wild claims, but true statements about its selective capacities and capability of pulling in DX Stations. It is a positive fact that



the Brunswick De Luxe Radio Tuned Frequency surpasses its field in every degree. It combines the two most desirable things necessary perfect reception - fine sharp tuning without need of vernier attachments and clear full tone

volume minus distortion.

Dealers Write for Attractive Discounts

HWAB,

55 Vesey Street

desire of the consumer.

Dept. M32

New York City

GENUINE

RELIABILITY

BREEKERS SEK SEK STANDARD

GUARANTEED



_%__

Anti-capacity SWITCHES



Lower-Loss Vernier

VARIABLE CONDENSERS



Loss PHONE PLUGS









Loss GRID LEAKS





Lower-Loss OTENTIOMETERS NO SOLDERING - LESS DRILLING - SCIENTIFICALLY BUILT

Where is the parts business headed?

The radio fan of today wants results; he is building better and better sets; and he realizes that quality parts are the first essential.

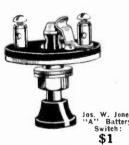
Accordingly, the parts business is becoming more and more a *quality* business.

That means low-loss parts—parts that bring in extreme DX, produce a clearer tone, kill distortion and interference and make set-building easy, even for the beginner in radio.

Jos. W. Jones Radio Parts are quality parts, built to meet those conditions.



Jos. W.
JONES
AntiCapacity



JACKS
5 Types

SWITCHES
5 Types

Jos. W. Jones Jacks and Switches are anti-capacity. Made for radio use only. Five styles of each for every radio need. No long parallel leads, thus eliminating capacity effects. Binding posts for safe, simple connections. Thousands of fans are using these jacks and switches with the little red button.

And—no soldering with any Jos. W. Jones part. Write for our new set and parts catalogs and liberal arrangement to dealers.

For Better Results Build Your Parts Business With JOS. W. JONES

Jacks Vario-couplers Rheostats Inductance Switches Sockets

Switches Variable Condensers Potentiometers Sockets

Phone Plugs Grid Leaks

JOS RADIONES

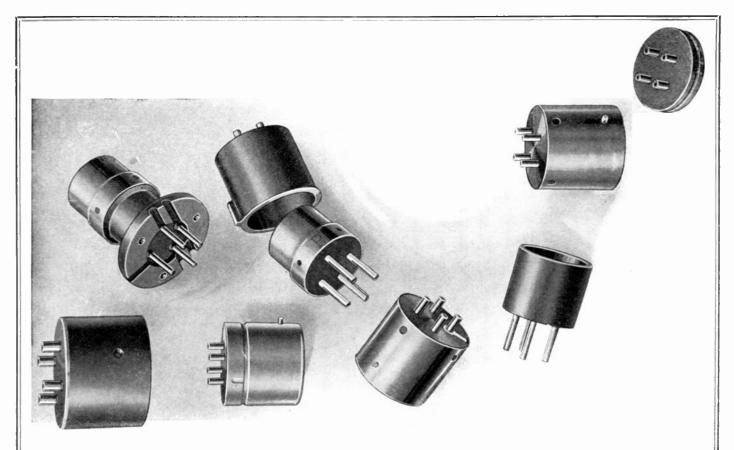
TRADE MARK "IMPROVED"

radio parts

JOS. W. JONES RADIO MFG. CO., Inc., 40-42-44-46 W. 25th St., New York

Headed by JOS. W. JONES-for 28 years a successful engineer and builder of precision instruments.

Philadelphia: 1011 Chestnut Street BRANCH OFFICES: Chicago: 53 W. Jackson Blvd. Boston: 99 Bedford Street



SHAW STANDARD RADIO TUBE BASES

PATENTED 6-12-23

AND OTHERS PENDING

Designed and Manufactured

for

United States and British Governments
General Electric Co.—Westinghouse Elec. & Mfg. Co.
Marconi—De Forest—Moorhead—A. P.
and Independent Manufacturers

SHAW INSULATOR COMPANY

Founded 1892

Henry M. Shaw, President

Frank H. Shaw, Vice-President and Gen'l. Manager

150 COIT ST., IRVINGTON—NEWARK, N. J., U. S. A.

To know how any set will sell for you See how it sells where sales are hardest

The Monotrol Rode Roughshod in a Over Radio Traditions in series

New England is one of the hardest markets in the country in which to sell radio. No other section of the United States has such peculiar "local conditions" with such strange variations in reception. And no other radio set in America has been able to cut through these obstacles so surely, so sharply and with such surprising power as-





SI LIET THE MOST PERFECT RADIO SET "AMERICA



№NVERSE

Instances of weird reception in New England are almost without number. There is the Naugatuck Valley of Connecticut—noted for its "whispering" voices that come faint and ghostlike from even the most powerful of stations.

There is Lawrence, Mass., from which few sets can bring in even the Boston stations with a satisfactory volume and which in consequence, has proved a Waterloo for many sets that worked well elsewhere.

There is Hartford, which for a long time could hardly hear Springfield and Springfield which cannot penetrate the barrage of its own local station.

The Sleeper Monotrol, however, has tremendous reserve power-a power overcoming obstacles that baffle sets of many other types. Riding roughshod over local radio traditions, the Monotrol has fairly taken New England by storm. For instance:

SPRINGFIELD, MASS.—Our New England States distributors tell us that few other sets in Springfield have heretofore been able to tune through WBZ successfully. Then came the Monotrol. A test was conducted with WBZ operating and the Monotrol brought in Mexico City without interference. Then, turning to the Northward, they caught Montreal with perfect separation and but slight difference in wave length.

LAWRENCE, MASS.—Loud speaker reception of Boston, New York and distant

writing in Lawrence.

PORTLAND, ME.—The Monotrol, but recently introduced to Portland, has

already been purchased by 35 of the most prominent citizens who declare it to

be the most successful set operating in that city.

HARTFORD, CONN.—The Monotrol brings in dozens of stations that many sets of otherwise excellent reputations do not hear.

The new Sleeper Monotrol has broken down the local radio traditions in all sections of the country. Let us show you how it can solve your OWN most aggravating problems. Write for name of nearest distributor together with our sales aid plan, book and the manual—"How to sell a Radio."

Joda C Stupen

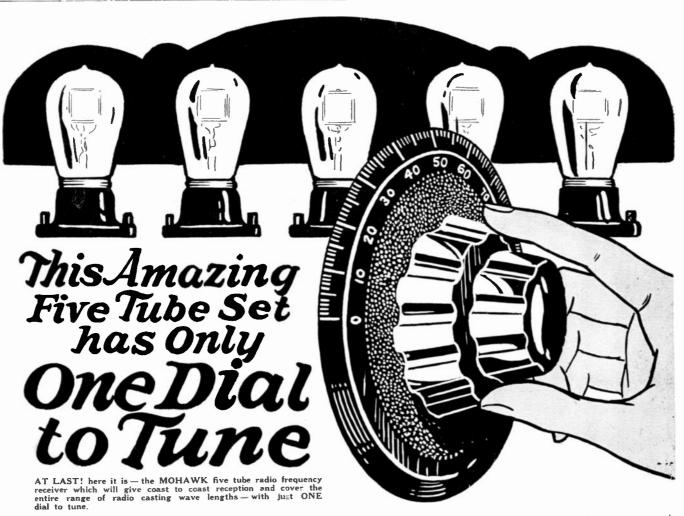
SLEEPER RADIO CORPORATION

Dept. B

430 Washington Ave., Long Island City, N. Y.

CHICAGO 10 South La Salle St.

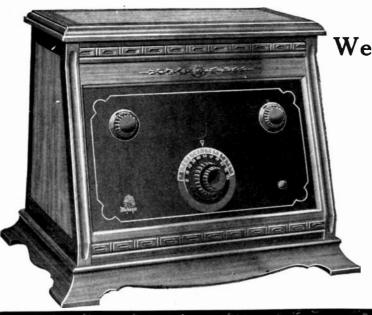
SAN FRANCISCO 111 New Montgomery St.



THIS decidedly different MOHAWK Receiver with its ONE DIAL Control will do anything any other five tube set will do—and do it easier, quicker and better. The super-sharp tuning of the single high ratio Vernier Dial on the Mohawk and its compact construction make it a marvel of selectivity. Just ONE Dial to turn and as you turn it you tune in station after station.

It has a record of 43 stations in one hour—and we can prove it. It cuts out the local stations with ease and brings in the distant ones with unusual volume and without the least particle of distortion. It is a beautiful set—beautifully made and a short half hour's demonstration will convince you that its performance is truly phenomenal.

The Mohawk



Five Tube Receiver

We Want Dealers Everywhere

If you are looking for the selling agency on a Radio set which will meet and beat all competitive outfits on the market—if you are looking for a set that will attract the radio buyers to your store and bring you big, quick, profitable sales—here it is. The new MOHAWK with just ONE Dial to tune.

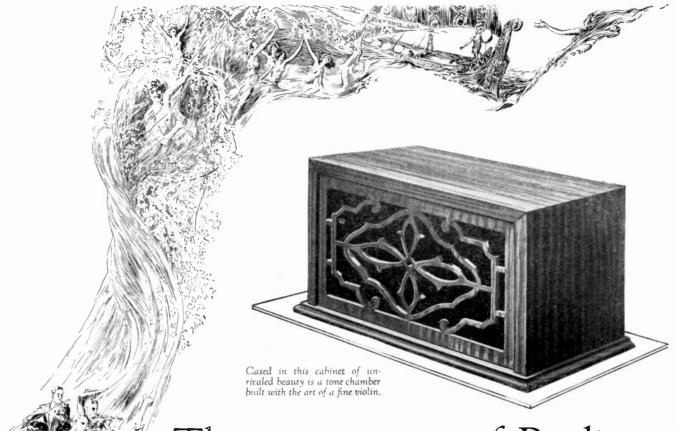
We do not ask you to take our word for all these claims. You can prove it to yourself at our risk, if you wish. Any reputable merchant can order a demonstrating set—test it out for himself, and if the MOHAWK does not prove to be the finest five tube set you ever saw—send it back and get your money. That is fair—isn't it? But do not wait. Write or wire us at once for full particulars and dealers' discounts on the MOHAWK. Do it today—tomorrow may be too late.

MOHAWK ELECTRIC CORPORATION

2238 Diversey Parkway Chicago, Illinois, U. S. A. (Formerly Electrical Dealers Supply House)

Creating Consumer Demand By Establishing Confidence In







Out of the heart of a Sonora

SOUND is one thing—pure tone is another. Today radio enthusiasts want tone, whether it's the human voice, or a violin, or a full orchestra.

Therefore "horns" must give place to scientifically correct sound-chambers. Phonographs went through this development, and radio is going through it now.

Artists and acoustics experts agree that the Sonora laminated wood sound-chamber is the supreme achievement in tone-reproduction.

It won world recognition at the Panama-Pacific Exposition. Now it has been given to radio, in the Sonora Radio Speaker.

Immediate popular success has proved that thousands of radio enthusiasts were waiting for just such an improvement in receiving. With the Sonora Radio Speaker they can get every tone of voice, every delicate phrase of violin or orchestra—absolutely clear, true, and natural.

Dealers find that a brief demonstration sells the Sonora Radio Speaker. And they quickly appreciate its display value, for nothing in all radio equipment is handsomer than Sonora cabinet work.

Results so far indicate that every dealer who wants to please his customers permanently will recommend the Sonora Radio Speaker. But of course the best way to prove a speaker is to hear it yourself. So we suggest you order a Sonora Radio Speaker and give it a personal trial. The price is \$30—less Sonora's liberal discount to dealers.

Sonora Phonograph Co. Inc., New York City. Canadian and Export Distributors, C. A. Richards, Inc., 279 Broadway, New York.



Cross-section of the Sonora tone chamber. Ply after ply of wafer-thin, seasoned wood, moulded cross-grain around a form as perfect as modern acoustics can make it. No unnatural vibration. Every tone is reproduced in all its clear, pure beauty





Super-Zenith VII the ideal radio set for the fine home

They Cost More But They Do More



A Fixed Policy . . . that means real profits for Zenith dealers

To make real money with radio, a merchant must handle sets that sell readily, require a minimum of service, give permanent satisfaction, offer a liberal margin of profit. Observe how *completely* Zenith meets these needs:

1—In point of performance, receiving sets of supreme distinction—witness Zenith's record with MacMillan at the North Pole.

2—Leadership in radio engineering sensationally witnessed in the new and distinctive Zenith circuit, Zenith tuning control, Zenith battery eliminator, Zenith duo-loud speakers.

3—A line wide enough in price range to fit any prospect who really wants radio results.

4—Such artistry of design and craftsmanship that Zenith models look to be worth every dollar you ask.

5—Absolute territorial protection afforded by the Zenith franchise to legitimate merchants of real standing in their respective communities.

6—A margin amply sufficient to permit the dealer to render generous service and at the same time to make a handsome profit. And—one discount only, the same to every dealer.

7—Powerful and continuous advertising in the leading national magazines and radio publications—which, in conjunction with Zenith's unique publicity, makes Zenith the most widely talked of radio on the market.

Within the past sixty days hundreds of the best known and most aggressive radio merchants have been quick to secure a Zenith franchise. A few territories are still open—but—they are going fast. Wire about yours—today.

Zenith Radio Corporation, 332 South Michigan Ave., Chicago

THE complete Zenith line includes seven models, ranging in price from \$95 to \$550.

With either Zenith 3R or Zenith 4R, satisfactory reception over distances of 2,000 to 3,000 miles is readily accomplished, using any ordinary loud speaker. Models 3R and 4R licensed under Armstrong U.S.Pat.No.1,113,149.

The new Super-Zenith is a sixtube set with a new, unique, and really different patented circuit, controlled exclusively by the Zenith Radio Corporation.

It is NOT regenerative.

SUPER-ZENITH VII—Six tubes—2 stages tuned frequency amplification—detector and 3 stages audio frequency amplification. Installed in a beautifully finished cabinet of solid mahogany—44% inches long, 16% inches wide, 10% inches high. Compartments at either end for dry batteries. Price (exclusive of tubes and batteries) \$230

SUPER-ZENITH IX — Console model with additional compartments containing built-in Zenith loud speaker and generous storage battery space. \$350 Price (exclusive of tubes and batteries)...\$

SUPER-ZENITH X—Contains two new features superseding all receivers. lst—Built in, patented, Super-Zenith Duo-Loud Speakers (harmonically synchronized twin speakers and horns), designed to reproduce both high and low pitch tones otherwise

impossible with sing			
Battery Eliminator,		Zenith ac	hievement
Requires no A or I	B batteries		\$ ==0
Price (exclusive of	tubes)		. 355U

Price (without battery eliminator) . . . All Prices F. O. B. Factory.

Zenith	Radio	Corporation
	Don't 1	M 12

332 South Michigan Avenue, Chicago, Ill.

Gentlemen: Please send me full particulars of your dealer proposition.

Name	
Address	



We Are Doing Our Part

We are going the limit to put the MU-RAD story over and to make it easy for our dealers to sell the MU-RAD line. Above are shown some of the media used.

To further help the dealer we have planned a fairly elaborate co-operative advertising campaign.

Write to your nearest distributor and ask for descriptive literature of the MU-RAD line and for information about our co-operative policy.

DISTRIBUTORS

Wireless Mfg. Company, Canton, Ohio
Chicago Radio Apparatus Co., Chicago, Ill.
Howard Piano Co., Syracuse, N. Y.
Pierce Electric Co., Tampa, Florida
Chandler & Farquhar, Boston, Mass.
Fred E. Holmes Co., Detroit, Michigan
Marshall Wells Co., Portland, Oregon
Peaslee Gaulbert Co., Louisville, Kentucky
Radio Studio,

Redfield Electric Co., New York City
Radio Equipment Coat, Dallas, Texas
American Radio Mfg. Company, Kansas City, Mo.
Standard Radio Supply Co., Fort Dodge, Iowa
Benson Radio Company, St. Louis, Mo.
Pattinson Electric Co., Hutchinson, Kansas
Hickson Electric Co., Rochester, N. Y.
Buffalo, N. Y.

LABORATORIES, INC. Asbury Park, New Jersey



MU-RAD MA-20, \$185



MU-RAD MA-15, \$180



MU-RAD MA-18, \$110





DUAL RATIO GROUNDED ROTOR

LOW-LOSS

CONDENSER

PRECISION MOVEMENT
ABSENCE OF GEARS OR COMPLICATED PARTS

Improved Type RHEOSTATS
and POTENTIOMETERS
All Sizes

SUPERIOR CONSTRUCTION

GENUINE BAKELITE TRADE-MARK

UNITED SCIEN LAB.

INC.

United Scientific Laboratories, Inc. 92-94 E. 10th STREET, NEW YORK CITY



The New Somerset





A superior four tube, tuned radio frequency receiver—two dial control—operates on storage battery or dry cells. Automatic filament control insures long life of tubes. The finest "low loss" condensers and the famous SOMERSET Calibrated Transformers are features. "B" battery space is provided in the handsome two-tone mahogany cabinet.

Size 20 7 "" 14 14" x 11 18".

List \$65

The Day Has Come

RUTH in radio, from now on, will be the firm foundation on which the public will build its confidence.

Confused and disappointed by extravagant and misleading claims, by high sounding names and mysterious terms, the radio buyer has eagerly sought for an assurance of full value for his money and a definite idea of what he can expect for a definite expenditure.

He has long awaited an honest combination of simplicity, economy, reliability and beauty—of conscientious workmanship in a worthy setting.

A New Standard of Value

THE Somerset line has been developed to meet this hitherto unfilled want. To provide a full dollar's worth of radio for the consumer's dollar is its fundamental policy and to this end it embodies the best materials, design, and engineering skill available.

Each Somerset Receiver represents the best that can be offered at its price, the utmost in results and permanent satisfaction to the owner.

Send at once for literature describing the complete new Somerset line





NATIONAL AIRPHONE CORP.

Lime of Radio Receivers Era in RADIO

Efficiency Plus Beauty

EDICATED to the ideal of radio as an integral part of the modern home, each Somerset Receiver is a substantial and decorative piece of furniture. All cabinets have an exquisite two-toned panel effect with hand-rubbed finish, and are fully up to the standard of the finest phonographs. Each has compartments to hold and conceal the unsightly "A" and "B" batteries with their necessary wiring.

Guarantee

TXTRAVAGANT claims and misleading descriptions will have no part in the sale of any Somerset Receiver. This we pledge-and back it up by a full and definite guarantee that every set is exactly as represented or the purchase price will be refunded promptly and cheerfully.

Here are the complete standard specifications of the four new Somerset models and the makers of these sets challenge comparison with any others as to correctness of engineering design, beauty of appearance, careful workmanship, high quality and suitability of parts and materials used, clarity of reception and faithfulness and purity of tone.

These are values which can't be matched!

of radio receiversit is well worth your while.

> The Somerset Calibrated Audio Transformer-heralding a new and complete line of radio apparatus, developed in the Somerset Engineering and Research Laboratories and all characterised by the same superior design, highest grade materials and painstaking workmanship as the Somerset line of complete radio receivers.



Combining a built-in loud speaker of the highest type and the four tube tuned radio frequency circuit with single dial synchronized control all the latest and best in radio. Storage battery or dry cell operation, automatic filament control, highest quality "low loss" condensers, and the famous SOMERSET Calibrated Transformers. Ample space is reserved in this cabinet for standard size high ampere hour storage "A" batteries and dry "B" batteries, souther cabinet in antique mahogany. Size 2812" x 13" x 1312".

List \$150

4 Tubes-Single Dial Control with built-in loud speaker

5 Tubes - Three Dial Control



ST. NEW YORK 16~22 HUDSON

Let Our Free Service Bureau Help You Supply Your Needs

Tell us your needs and we'll put you in touch with reputable firms to the end that you will receive information on the latest and best equipment. A post card will do or use the coupon below.

A	63 Condensers, variable	45 Head sets	179 Panel cutting and drill-	235 Sockets, V. I.—metal
1 "A" Batteries	grid 64 Condensers, variable		ing	lain
2 Aerial protectors 3 Aerial insulators	mica variable	ers 127 Hook ups	400 Fb 1 1./33 1 3	72C C-1J
4 Aerials	65 Condensers variable air	179 Horne composition	drilled 181 Panels, engraved 182 Panels, composition 183 Panels, fibre 184 Panels, hard rubber 185 Patent attorneys 186 Phone connectors, mul-	237 Soldering irons, electric
5 Aerials, loop	65 Condensers, variable air 66 Condensers, vernier	129 Horns fibre	181 Panels, engraved	238 Soldering paste
6 Aerials, patent	67 Contact points	130 Horns mache	182 Panels composition	239 Spaghetti tubing
7 Aerials, socket plug	68 Contacts, silver	131 Horns metal	183 Panels, fibre	240 Spark coils
8 Amplifiers	69 Contacts, platinum	132 Horns, wooden	184 Panels, hard rubber	241 Spark gaps
9 Amplifying units	70 Contacts, switch	133 Hydrometer syringes	185 Patent attorneys 186 Phone connectors, mul-	242 Spark gaps, quenching
10 Ammeters		134 Hydrometers	186 Phone connectors, mul-	243 Stampings
***************************************	71 Cord tips 72 Cords, for head sets 73 Covers, battery 74 Crystal alloy 75 Crystal holders 76 Crystals, rough 77 Crystals, mineral 78 Crystals, synthetic		tiple	244 Stators
В	73 Covers, battery	ī	187 Phonograph adapters	244 Stop points
11 "B" batteries	74 Crystal alloy	185 Industances C W		245 Switch arms
12 Batteries (state volt-	75 Crystal holders	136 Instrument brackets	188 Plugs, coil 189 Plugs, telephone	246 Switch levers
age)	76 Crystals, rough	137 Insul tion molded	130 Fointers, dial and knoo	247 Switch points
13 Batteries, dry cell	77 Crystals, mineral	138 Insulation material	191 Poles, aerial	248 Switch stops
14 Batteries, storage	78 Crystals, synthetic	139 Insulators, aerial	192 Potentiometers	249 Switches, aerial
15 Battery chargers		140 Insulators, composition	193 Presses, molding 194 Punching machines	250 Switches, battery 251 Switches, filament
16 Battery chemicals	D	140 Insulators, composition 141 Insulators, fibre	194 Punching machines	251 Switches, filament
17 Battery clips 18 Battery handles 19 Battery holders	79 Desks, radio	142 Insulators, glass		252 Switches, ground
18 Battery handles	80 Detector units	142 Insulators, glass 143 Insulators, hard rubber	R	253 Switches, inductance
19 Battery holders	81 Detectors, crystal	144 Insulators norcelain	195 Reinartz set parts	254 Switches, panel
20 Battery paint	82 Detectors, fixed crystal 83 Dial adjusters 84 Dials, composition 85 Dials, hard rubber 86 Dials, rheostat 87 Dials, vernier	145 Inventions developed	196 Regenerative set parts	255 Switches, single and
21 Battery plates	83 Dial adjusters		197 Receiver caps	double throw
22 Battery substitutes	84 Dials, composition	.ī	198 Resistance leaks	
23 Bezels	85 Dials, hard rubber	146 Jack tags	199 Resistance units	T
24 Binding posts	86 Dials, rheostat 87 Dials, vernier 88 Dials with knobs	147 Jacks	200 Rheostat bases	256 Tape, insulating 257 Tinfoil 258 Towers, aerial 259 Transformers, audio
25 Binding posts, compo-	87 Dials, vernier	arr bucars		257 Tinfoil
sition	88 Dials with knobs	K	202 Rheostats, automatic	258 Towers, aerial
26 Binding posts, initialed	89 Diaphragms, mica	140 V turn-istin a	203 Rheostats, hattery	259 Transformers, audio
27 Binding posts, insulated	90 Dies	K 148 Keys, transmitting 149 Knobs 150 Knock-down panel	204 Rheostats, dial	frequency
28 Binding posts, nickel-	91 Display stands 92 Drills, electric	149 Knobs	205 Rheostats filament	260 Transformers, filament
plated	92 Drills, electric	150 Knock-down panel	206 Rheostats, potentio-	261 Transformers, modula-
29 Books			meter	tion
30 Boxes, battery	94 Dynamotors			262 Transformers, power
31 Boxes, grounding	•		207 Rheostats, power 208 Rheostats, vernier 209 Rods, brass	263 Transformers, push -
32 Bridges, wheatstone	F.	234 Lightning arresters	209 Rods, brass	pull
33 Broadcasting equip-	of Fouth grounds	151 Loosecouplers	210 Rods, fibre	pull 264 Transformers, radio
ment	97 Flectrolyte	152 Loud speakers	211 Rotors	frequency
34 Bushings	98 Emblems	133 Loud Speaker units	S	265 Transformers, variable
35 Buzzers	99 Enamels, battery	154 Lugs, battery	212 Screw drivers	266 Transmitters
•	100 Enamels, metal	100 Lugs, terminal	213 Screws	267 Tubes, vacuum — pea-
16 Caldinate	101 Engraving	M 156 Magnets 157 Magnetizers 158 Mailing lists 159 Measuring instruments	214 Screw machine prod-	nut
36 Cabinets	102 Engraving machines	156 Magnote	ucts	268 Tubes, vacuum — two
37 Cabinets, battery	103 End Stons	157 Magnetis	215 Sate receiving-cabinet	@lemon#
38 Cabinets, loud speaker 39 Carbons, battery	104 Evelets	157 Magnetizers 158 Mailing lists 159 Measuring instruments	216 Sets. receiving-crystal	269 Tubes, vacuum—three element.
40 Cat whickore	105 Experimental work	159 Measuring instruments	217 Sets. receiving-knock-	element.
40 Cat whiskers 41 Code practisers	•	160 Megohmeters 161 Meters, D.C.	down	210 Tuners
	F	161 Meters, D.C.	218 Sate receiving Neutro	v
43 Coils choke	106 Ferrules	162 Mica	dyne	271 Variocouplers, hard
44 Coils counling	107 Fibre sheet, vulcanized	163 Mica sheets	219 Sets, receiving-port-	rubber
45 Coils duo-lateral	108 Filter reactors	164 Milliammeters	able	272 Variocouplers, molded
46 Coils filter	109 Fixtures	165 Molded insulation	220 Sets, receiving-radio	273 Variocouplers wooden 274 Variometers, hard rub-
47 Coils, grid	110 Fuse cut outs	166 Molds	frequency	214 variometers, hard rub-
48 Coils, honeycomb	111 Fuses, tube	161 Meters, D.C. 162 Mica 163 Mica sheets 164 Milliammeters 165 Molded insulation 166 Molds 167 Molybdenum 168 Mountings, coil	221 Sets, receiving-reflex	ber
49 Coils, inductance		168 Mountings, coil		275 Variometers, molded
50 Coils reinartz	G	169 Mountings, condenser	erative	276 Variometers, wooden
51 Coils, stablizer	112 Generators, high fre-	leak	223 Sets, receiving-Rein-	277 Varnish, insulating 278 Voltmeters
51 Coils, stablizer 52 Coils, tuning	quency	170 Mountings, end	artz	410 VUITMETERS
53 Compounds, battery	113 Grid choppers, rotary	171 Mountings, grid leak	224 Sets, receiving - sec-	17.
53 Compounds, battery sealing	114 Grid leak holders	172 Mountings, honeycomb	tional	270 W
54 Compounds impresent.	115 Crid lasks	coil	225 Sets, receiving-short	279 Washers
ing 55 Condenser parts 56 Condenser plates 57 Condensers, air	116 Grid leaks, tube	173 Mountings, inductance	wave	280 Wave meters
55 Condenser parts	117 Grid leaks, variable	switch	226 Sets, receiving—super- regenerative	281 Wave traps
56 Condenser plates	118 Grinders, electric		regenerative	282 Wire, aerial
57 Condensers, air	119 Ground clamps	N	226 Sets, receiving—super- regenerative 227 Sets, transmitting 228 Sheller	283 Wire, braided and
58 Condensers, antenna	120 Ground rods	174 Name plates	228 Sheller	stranded
coupling		175 Neutrodyne set parts	229 Slide &	284 Wire, copper
59 Condensers, by-pass	H	176 Nuts	230 Socket adapters 231 Sockets, V. T.—compo-	200 Wire, insulated
60 Condensers, coupling	121 Handles, switch		231 Sockets, V. I.—compo-	200 VV IPE, LITZ
coupling 59 Condensers, by-pass 60 Condensers, coupling 61 Condensers, filter 62 Condensers, fixed	122 Hardware, cabinet	0		
62 Condensers, fixed	123 Head bands	177 Ohmeters	232 Sockets, V. Thard	200 Wire, platinum
(paper, grid or phone)	124 Head phones	178 Oscillators	rubber	203 Wire, tungsten
Note the number of the	item you want to him-	then check the correspond	ling number in the coupon	n below and mail to us.
Note the number of the item you want to buy—then check the corresponding number in the coupon below and mail to us. ———————————————————————————————————				
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 211 202 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 153 174 275 276 277 278 279 280 281 282 283 284 285 280 290 291 291 292 293 294 285 296 297 298 299 300 301 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 315

Service Bureau The Radio Dealer, 1133 Broadway, New York City

We are interested in buying radio equipment and have circled the numbers on this coupon of the items we are ready to buy now. Please have manufacturers of these lines quote us prices.

Address We are —Retailers	
Address	
Name	

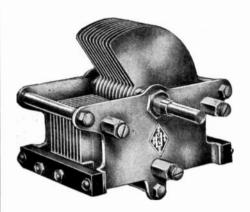




U.R.L. means Quality



The skilled workmanship and finest materials are responsible for the Quality and Uniqueness of U. R. L. products. They're scientific in design and construction, durable and efficient. Absolute satisfaction guaranteed.



SEND for SAMPLE

of the

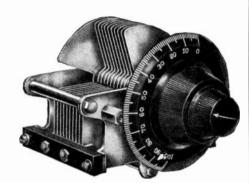
New Montrose

LOW LOSS

Variable Condenser

Made in all capacities. A new and efficient condenser at a new low price.

LIST PRICE 23 PL. .0005



U.R.L. LOW VERNIER CONDENSER

Complete with Bakelite Dial and Knob

Plate	Capacity
11	.00025
13	.00027
15	.0003
17	.00035
21	.0005
43	.001

U.R.L. LOW VARIABLE CONDENSER

Plate	Capacity
11	.00025
13	.00027
15	.0003
17	.00035
21	.0005
43	.001



U.R.L. TRANSFORMERS

Mounted and Unmounted; made in ratios of 3-1, 5-1, and 10-1. Powerful and efficient assuring clearer reception.



U.R.L. JACKS

Single Circuit
Closed Circuit
Double Circuit
Single Filament Control
Double Filament Control

Manufacturers and Jobbers

Write for Proposition

We are Manufacturers

of all types of Condensers, Vernier and Variable. A Condenser for every circuit. Also Potentiometers, Rheostats, Transformers, and Jacks.



U.R.L. RHEOSTATS

Made in 6, 10, 20 and 30 ohms.

POTENTIOMETERS

in 240 and 400 ohms.

UNITED RADIO LABORATORIES

Of the Montrose Mfg. Co.

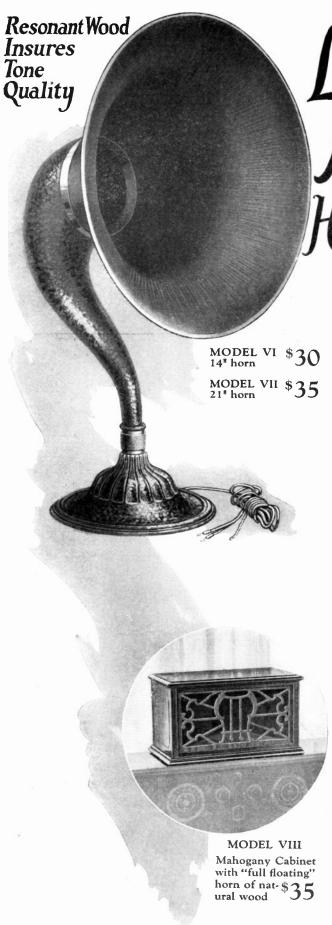
1333 Fulton St..

:: ::

Brooklyn, N. Y.







Music Master can give is

Also it is the easiest way; the most profitable; Music Master becomes a part of the sale, and the customer is satisfied with his purchase.

the surest way to sell a receiving set.

The supersensitive Music Master reproducing unit picks up the most fugitive radio impulses. The tone chamber of heavy cast aluminum eliminates distortion and keeps signals clear and distinct. And, of utmost importance, the amplifying horn is *wood*, unequalled for resonance and tonal quality.

Let Music Master be your master salesman. It supplies the clinching argument that wins.

Music Master Corporation

Makers and Distributors of High-Grade Radio Apparatus
Tenth and Cherry Streets

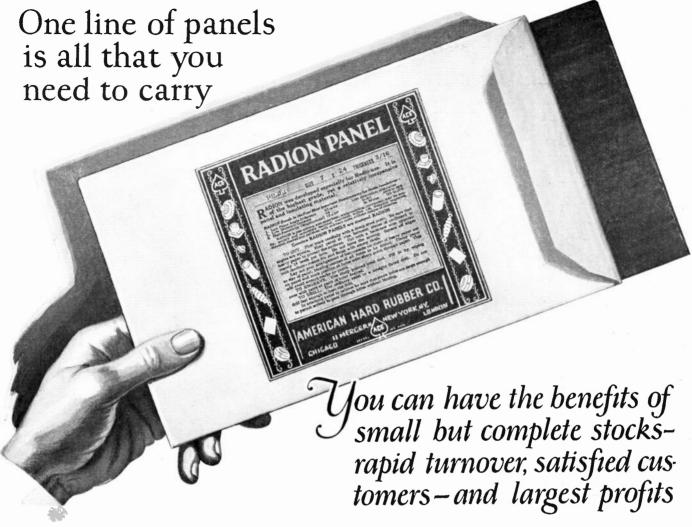
Chicago

Philadelphia

Pittsburgh

Connect any Music Master in place of headphones. No batteries required. No adjustments.





WHEN a dealer in radio can get one of his most important items down to one line, he is following the road to certain profits.

Thousands of dealers find they can follow this first principle of successful retailing by stocking Radion Panels only. It isn't necessary to have two lines. You don't have to use up your capital and space and reduce your turnover, for Radion Panels themselves have everything the dealer and consumer want.

They have the faith of the radio trade. Swiftly the word has passed around that Radion is "the supreme insulation."

Public belief rests on quality. The facts about Radion quality have been put before the public by liberal advertising.

So, purchasers of panels know Radion eliminates much of the poor reception caused by leakage and capacity effects. They know how easy Radion can be drilled, cut, and sawed: that it resists warping because it has only one-tenth the absorption properties of common panel material; that it comes in up-to-date stock sizes; and that if the builder of a set wants the most beautiful panel available today, mahoganite Radion with its double tone, dials to match, and highly polished surface will give it to him.

Radion, while especially developed for panel purposes, has also been adapted to dials and sockets, binding post panels, insulators, kncbs, and the new Radion horn.

Eighteen stock sizes. Sold in attractively printed cavelopes. Write for catalog, stock sizes, and price list.

AMERICAN HARD RUBBER CO.

11 Mercer Street

New York City

Chicago Office: Conway Building

Pacific Coast Agent: Goodyear Rubber Co., San Francisco-Portland

The Supreme Insulation

PANELS

Dials, Sockets, Binding Post Panels, etc.

Please send me your complete R with price list.	adion Catalog
Name of Dealer	
Street Address	
CityState	

National Advertising to 728,088 Readers

Make Sales for EAGLE Dealers

NOW

Appearing in the

Issues of:

January

POPULAR RADIO

RADIO BROADCAST

Q. S. T.

POPULAR SCIENCE MONTHLY

VOGUE

CHARM



Tie Up
With
This
Popular
DEMAND

Write for Proposition!

The GREATER Neutrodyne

EAGLE

Balanced Receiver



New Model B 5 Tubes \$175

A Happier New Year

REASONS—
for Buying the New
Model B Exclusive
EAGLE Instruments

Multiple (filament control) switch; ball-bearing, die-cast condensers; revolving resistor element rheostat-found only in the New Model B.

Balance

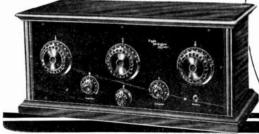
The perfect balance of tube capacities,—the secret of neutrodyne efficiency.



The Eagle Guarantee



RADIO CO.



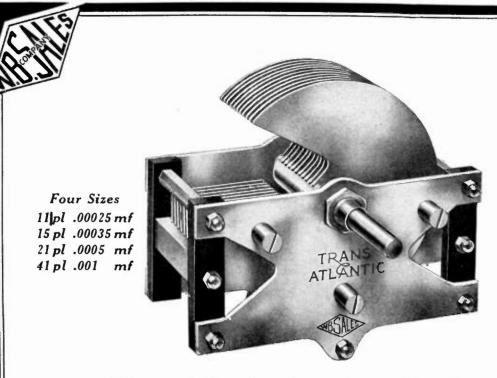
My dear Kry gour wonderful thoughtful ness could have found just the very gift I wanted—the New Eagle Receiver. When plks as ked me this year "has danta Claus good to you! I told them I had demicone who was better to me then even Santa Claus I was a little afraid that radio might prove too complicated for me but the Eagle is as say to operate as my plonographs for made up a log for me and now all I do so decede on the program I want to hear and turn the dieds to the aumbers for that statem. Memore lovelines, long evenings, dull times My Eagle keeps me intertained, of course, didn't Bot select it for me. Now John is going to get a new Model B Engle, Lays its just the set he's hear wanted for.

I appreciate this wonderful gift more than I can tell you.

EAGLE RADIO CO.



16 Boyden Place, Newark, N. J.



Trans-Atlantic Low-Loss Condensers

TRANS-ATLANTIC Low-Loss Condensers are specified and used by leading manufacturers because they are MADE right and they WORK right. That is an endorsement which you cannot afford to overlook.

TRANS-ATLANTIC Low-Loss Condensers are made with brass ends, highly nickel plated. A solid bar grounded rotor is used, assuring positive contact at all times. The plates are of the straight line type, a feature which will appeal to fans and manufacturers alike.

You can't go wrong by sending us your order TODAY for TRANS-ATLANTIC Low-Loss Condensers. You can rest assured that they won't stay on your shelves long!

W. B. SALES CO., Inc.

33 Union Square

New York City

Write Us, Dept. T.B. at Once for Territory and Attractive Prices

Offices in Principal Cities.

Jackson Sales Co., 28 East Jackson Blvd., Chicago, Ill. Baldwin-Pacific & Co., Pacific Bldg., San Francisco, Cal.

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C. R. Fraser Co., Ltd., 8 Colborne St., Toronto, Canada

Walter E. Robi, 325 Howe St., Vancouver, B. C., Canada





NE of the greatest advancements of recent radio achievement. And besides this all-important feature of operation there are many other Thermiodyne advantages.

No other receiver possesses so many unusual selling points. No wonder it is the most taked about outfit today. Thermiodyne involves principles entirely new in radio reception—six tubes, 3 stages of thermionic frequency, detector and two stages audio frequency—all with ONE CONTROL!

Stations always come in at same point with the single control—selections are made according to the wavelengths as published in newspapers. Thermiodyne

calibrations are in wavelengths instead of meaningless degrees. Affords practically instantaneous reception. If it's in the air Thermiodyne will get it regardless of distance.

Tuning in six to ten different stations in a minute's time is no task, even for a child. You'll surely enthuse over the sales possibilities of this newest exploit in the radio field. An unconditional guarantee backs up every sale.

THERMIODYNE RADIO CORPORATION

PLATTSBURGH, N. Y.

Price \$140 without accessories



LARGE FACTORIES Are at Your Service to Build any

RADIO SET or PART

One to Six Tubes

under Your Name or Trade Mark

Receiving Sets

Quality Headphones

Lo Loss Condensers

either to your specifications or we will design for you any RADIO PRODUCT you may be in the market for.

EVERY PRODUCT LEAVING OUR FACTORIES

Mellotone

Transformers

is covered by an unconditional GUAR-

ANTEE as to its efficiency.

Spider Web

Coils

QUALITY considered our prices are

Mica Fixed

and By-Pass

Condensers

unequalled.

Phone Cords

of

Every Type

You can depend on any delivery date

we may set for you.

No Order too Small—None too Large

BERSTAN RADIO PRODUCTS CO.

Sales Division

99 Bedford Street BOSTON, MASS.



ASK-and you shall receive

Strikingly effective Display Cards—that tie up directly with our National Advertising.

Attractive booklets — interesting, non-technical—ready to send to your customers.

They're free—you have only to ask for them.

Treed-Eisemann Radio Corporation
MANHATTAN BRIDGE PLAZA, BROOKLYN, NEW YORK

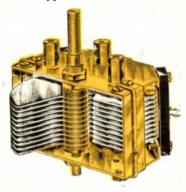
FREED-EISEMANN RADIO RECEIVERS



INTRODUCING

THE ULTIMATE IN LOW LOSS CONDENSERS

With pardonable pride, we point to this, our latest product. Our pride is well founded, for this instrument is as near to mechanical and electrical perfection as any instrument of this type can be.



Type C P Condenser

Capacity. 0005--21 Plates Plain Most substantially constructed condensers on the market today. Solid end plates and broad side ribs, not only for strength but to afford a high degree of shielding, obvaiting the necessity for any external shields. Being unusually compact, these instruments are ideal for portable sets and other hookups where space is at a premium.

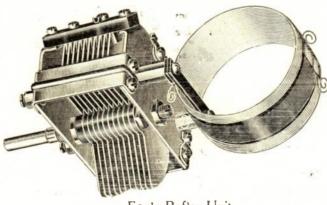
Combining peak efficiency with rich appearance it makes a superlative instrument. Gleaming brass fittings, polished aluminum plates, sleek błack insulation, an ensemble of glistening beauty that fairly shouts "Quality" You don't have to sell Eagle Variable Cordensers. They sell themselves on sight.



PRICES.

Type C V 1 Condensers Cap Plain Vern. Capacity. 0005-24 Plates Vernier EXTRA PLATE TYPE

.00025 -Mf 350 4.25 Exceptionally large bearing surface .00035 -Mf 425 5.25 insures a constant connection to the rotary member, eliminating pigtails .0005 -Mf 450 5.50 with their variation of capacity, .001 Mf 550 6.50 inductance, and resistance. A 60 degree cone bearing renders the shaft self aligning, and in conjunction with the long friction sleeve, prevents all play and looseness. All vernier types equipped with K. K. Dials.



Eagle Reflex Unit



Radio Frequency Coil

Eagle Reflex Kit comprissing of 2 Condensers and 2 reflex coils mounted Price \$12.50 Eagle Ratio Frequency Kit of 3 Condensers and 3 R. F. coils mounted Price \$16.00

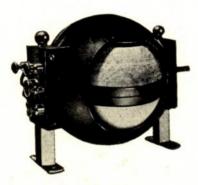
Territory Open For Live Wire Jobbers And Distributors. Write For Our Discounts.



Eagle Condensers Inc. 858 Bedford Ave. Brooklyn, N. Y.



Quick Moving Radio Parts



GA2S Variometer

Mechanically perfect in every detail, best grade Bakelite, burnished brass parts, finest insulation and wiring. A remarkable combination of strength, beauty and ease of oper-150 to 600 meters. Brown, Black or Mahogany - \$8.00



G A 3 COUPLER

A truly selective tuner and a A superior model of this real beauty. Coupling between famous and popular coil, primary and secondary is evenly distributed, givnig maximum efficiency and lowest capacity. Detachable contact- tive results and permament posts and other features satisfaction. Special low simplifies Brown, - Black - or Mahogany Bakelite \$8.00

The Eagle Guarantee

purchase price.



Eagle Filter Coil.

best of materials and workmanship, insuring superlabuilding. loss construction. As illustrated - - \$3.50



EAGLE DIAL

Moulded in one piece of superior quality Bakelite will not warp or sweat. Many refinements not found in other dials. High finish and accuracy. Takes ¼ shaft.

DIOMII			OI	Diack,				
2	Ħ	•	-	-		-		\$. 70
3	Ħ	-	_	-	-	-	-	. 90



WRITE FOR OUR LIBERAL DISCOUNTS

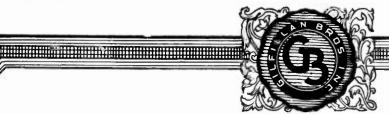


EAGLE SOCKET

Moulded Bakelite with all the latest engineering refinements. Double phosphor bronze contacts. Low capacity loss. Leakage undetectable. Reversible, for back mounting. - Size of base 2½ by 2½. Black or Brown Bakelite

Eagle Condensers Inc.

Makers of Quality Radio Products 858 Bedford Ave. Brooklyn, N. Y.



GILFILLAN NEUTRODYNE



A Christmas Gift of Permanent Satisfaction

QROOF of the superior performance of the Gilfillan Neutrodyne is coming from every section of the country. Users everywhere tell us of their long distance

feats and the wonderful clarity of tone with which stations far and near are reproduced. Convenient to install and simple to operate.



In an artistic, beautifully finished two-tone American Walnut Cabinet of three panels, price without accessories \$175

These sets are manufactured in our three factories, supervised by a corps of Radio Engineers of national reputation. Each set must pass a rigid test so that it reaches you ready for instant service.

Buy a Gilfillan Neutrodyne for your Christmas gift and you will have a set that is in the first rank of Radio Improvement and Achievement.

Ask your dealer for demonstration and send to our nearest office for literature.



Same Neutrodyne construction and features in smaller cabinet made of American walnut finished in two tones; without accessories \$140

Johbers and Dealers write for special sales proposition

GILFILLAN BROS. INC.

KANSAS CITY 2525 W. PennWay

1815 W. 16th St., LOS ANGELES

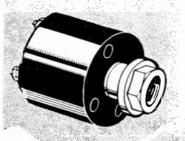
NEW YORK CITY 225 W. 57th Street







TRI-JATK



90¢



M. S. JACKS have the exclusive fantail cupped lugs that make soldering so easy. The cups just hold a standard busbar wire, the fantail makes each connection accessible. Look over these list prices: single open 36c, single closed 38c, double closed 40c, single open filament control 65c, single closed filament control 70c, double closed filament 75c.

The TRI-COIL

Distance and volume on one tube with the TRI-COIL Radio Frequency and Reflex Transformer. The ability to do this is what is selling the TRI-COIL so rapidly. It lists at only \$2.

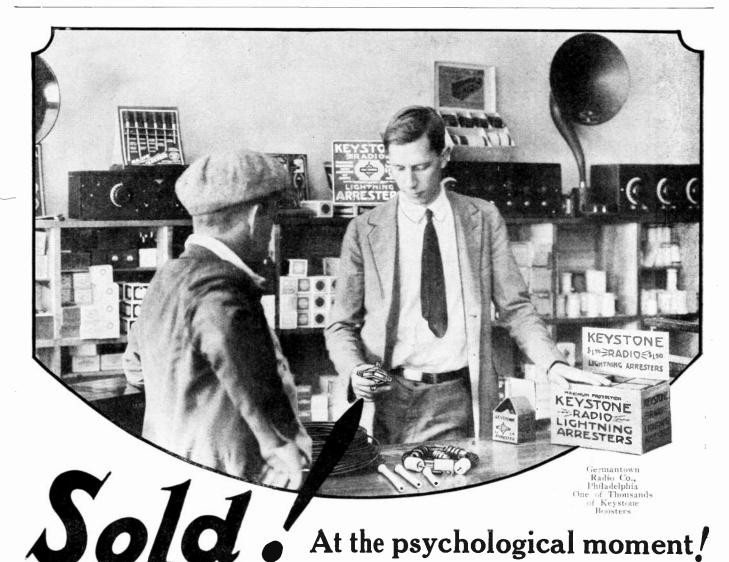
The TRI-JACK

TRI-JACK is three jacks in one! Add to that such real selling points as the fact that TRI-JACK is dustproof, solderless, super-compact, solid bakelite, and of practically zero capacity and you have a real good item. Lists at 90c.

The TRI-PLUG

No screws or levers of any kind. Just insert the phone tips to connect, pull them out to disconnect. A handsome plug that has a real appeal to radio fans. The list is 75c.

BROOKLYN METAL STAMPING Corp. 718 Atlantic Avenue Brooklyn, N.Y.



A KEYSTONE LIGHTNING ARRESTER



Listed as standard by the National Board of Fire Underwriters

When he has picked his antenna material, or chosen a new set that's the time your customer can be sold a Keystone Radio Lightning Arrester. Show it to him—tell him the Underwriters' require it and for him to follow the instructions which accompany each arrester. Tell him it is the cheapest reliable insurance he can buy.

The body of the Keystone Arrester is moulded of genuine Bakelite and all parts are of brass, thus providing an arrester which is most durable and attractive.

The Keystone Arrester is backed by over 32 years' experience in the design of lightning protective apparatus and its electrical characteristics leave little to be desired. It is a strong, sturdy, reliable device and is in line with the better radio products on the market. Yet it retails at the popular price of \$1.50.

You will make no mistake in handling the popular Keystone and you will make many satisfied customers.

Backed by national advertising and the producers of a million and a quarter lightning arresters.

Complete with \$1.50 Instructions

In Canada \$2.00

Ask your jobber for prices or write direct.

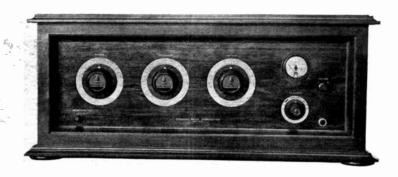
TRIC SERVICE SUPPLIES CO.

PHILADELPHIA 17th and Cambria Sts. PITTSBURGH 829 Oliver Building NEW YORK 50 Church St. SCRANTON 316 N. Washington Aye. CHICAGO Monadnock Bldg. BOSTON 88 Broad St.



Announcing the COLONIAL





Colonial 16

The Colonial 16 is a five-tube, dry battery operated receiver. It employs two stages of tuned *compensated* radio frequency amplification, detector, and two stages of audio amplification. All circuits are shielded and compensated to give uniform response on all waves. No regeneration; no radiation; no howling.

No regeneration; no radiation; no howling.

Cabinet by Brewster, the finest builder of custom built automobile bodies in the world. Beautiful in design; executed in the best of taste. Panel in bronze, done by a new etching process. Maximum of selectivity and sensitivity. Can be logged with greatest accuracy. Absolutely no body capacity. All batteries enclosed in cabinet.

Colonial 17

The Colonial 17 is a four-tube, dry battery operated receiver. It employs one stage of tuned compensated radio frequency amplification, detector, and two stages of audio amplification. The cabinet and panel is a novel combination of beautifully decorated metal and natural grained, lightly polished wood. It is highly sensitive and its selectivity is well above the average. Can be logged with ease and accuracy. All batteries are enclosed in cabinet.



A Revelation in Radio

Experts in radio have described Colonial 16 and 17 as "a revelation in radio." They are the latest contribution to radio science of Dr. Fulton Cutting and Mr. Bowden Washington, and represent the culmination of years of experimenting and testing. We waited until we were absolutely sure that the sets were mechanically and electrically perfect before we placed them before the trade. Now we know they are absolutely right and we guarantee every Colonial receiver that leaves our factory to give perfect satisfaction.

Merchandising Policy

Exclusive franchise and absolute territorial protection are two of the outstanding features of what Colonial gives its jobbers or distributors. We believe the jobber is entitled to this protection from the manufacturer.

Colonial has developed a dealer

co-operative sales service that is unique and that is sure to be of signal importance to the retail merchant. Colonial offers direct to the dealer, through the jobber, this sales plan personally inaugurated by Colonial "dealer salesmen." This has at once been recognized as

the best, most direct and most efficient manner of securing dealer sales that has yet been devised for radio.

We have a booklet completely describing the Colonial Merchandising Plan. Write for your copy today.

COLONIAL RADIO CORPORATION

East Avenue and Tenth Street Long Island City, N. Y.



RAVEN Superheterodyne KIT

REG. U.S. PAT. OFF

A compact monobloc long wave radio frequency unit containing two-coil filter circuit and 3 air core transformers, laboratory wired, synchronized, tested and wax-sealed in one-piece Bakelite shell, with sockets and binding posts.

Oscillator and full size schematic blue print included.



Makes a "Superhet" of the Old Set

The Raven Superheterodyne Kit embraces, in one unit, all the vital parts of the superheterodyne circuit. The rest of the hookup is simple,—in most cases, a builder can use the parts in his old receiver.

There's no middle road about superheterodyne,

—the fan either has one or hopes to have one. If technical complications have stood in his way, show him this kit. Raven craftsmanship and instructions make assembly easy; Raven laboratory thoroughness make perfect performance certain.

Investigate this efficient kit. It's just what the fans have been wishing for.

Be ready to fill their orders.

LIST PRICE \$25

Ask Your Jobber or Write or Wire to Us Today

RAVEN RADIO, INC.

8 Learned Street

Albany, N. Y.



RAMSTONE RADIO RECEIVERS



Price **\$38.50** List

CABINET:

8½ x 9 x 20 in. Covered with Olive Green Leatherette, Spanish design.

PANEL:

7 x 18 in. Beautifully engraved. Dials and controls to match.

CONTROLS: Two tuning dials; two rheostat controls; two jacks; and push-and-pull cut-out switch. Ramstone high-frequency tuning coil and 23-plate low loss condenser.

PARTS:

All of fine quality; rheostats, condenser, coil, jacks, tube sockets and transformers are equal to those furnished in much higher priced sets. No connections on front of set; all connection thru rear of

Each set packed in individual air-cushion, corrugated shipping container. Entire weight including container, 22 lbs.

The "Popular-Price" Line Simplicity—Selectivity Clarity—Volume—Distance

Ramstone Receivers enable you to meet demands for popular-priced sets that will receive local broadcasts perfectly. For selectivity, easy tuning, clarity and volume, these sets cannot be equalled by any of like construction; equally satisfactory performance is obtained only at greater cost.

They offer unusual value; are well made, of carefully selected parts; and provide all the pleasure to be derived from local broadcasting, without great expense. They fill a real need!

Write for "Big-Profit" Discounts

Get posted on this popular, money-making line now, and be ready to offer your Christmas trade something out of the ordinary. Write at once for dealers' discounts—they are worth your while.

RAMSTONE CORPORATION

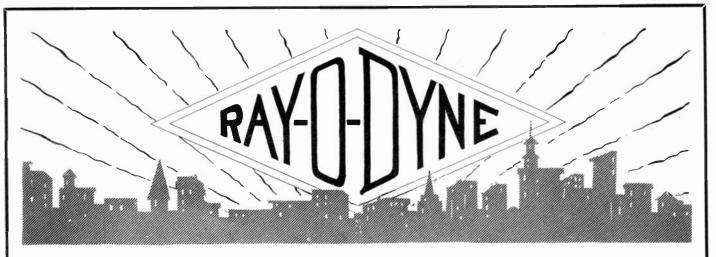
119 West 24th Street, New York





Price \$15,50 List

A reliable one-tube set of wonderful efficiency. Cabinet is $8 \times 8 \times 12$ in., covered with mahogany finished leatherette. Dials, controls and posts to match. All parts of excellent quality, carefully mounted and neatly connected with bus bar wire. Each set packed in individual air-cushion, corrugated shipping container. Entire weight, including container, 81/4 lbs.



AMAZING SIMPLICITY | AMAZING SELECTIVITY

Subject Rayodyne to the most rigid tests you would give a radio receiver of twice its cost. The Rayodyne will delight you beyond expression. The versatility of the Rayodyne is one of the marvels of radio engineering.

The perfection of each Rayodyne is insured by the exhaustive tests given it before it leaves our laboratory.

List Price \$75.00 Liberal discounts

Five tube sets, tuned radio frequency

DISTRIBUTORS WANTED
Several states open.
Write for details.

The circuit Super tuned radio frequency, two stages radio amplification, detector, and two stages of audio amplification. Remarkably selective with powerful volume. Works like a charm in its simplicity of tuning. Non-oscillating and non-radiating.

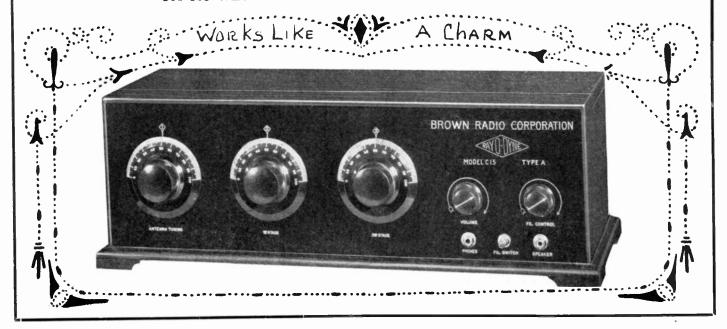
Sub-panel of bakelite conceals and protects the elegant construction. Mahogany cabinet of ornate design. Size $8\frac{1}{4}$ high, $25\frac{1}{2}$ wide and 8 deep.

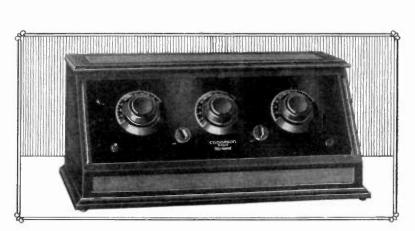
Manufactured by

BROWN RADIO CORPORATION

301-303 WEST 125th STREET

NEW YORK CITY





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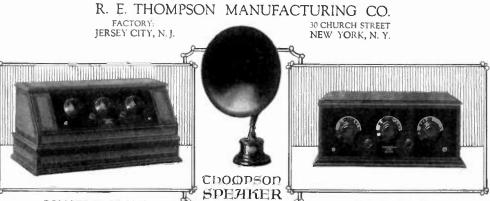
TO THE PART OF THE

A critical investigation of each model will disclose outstanding features of genuine excellence—in artistic appearance, naturalness of tone, simplicity of operation.

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The 5-tube GRANDETTE is \$125. The 5-tube PARLOR GRAND, (shown above) is \$145. The 6-tube CONCERT GRAND is \$180. Prices are without tubes of batteries. The Thompson Speaker, with conical diaphragm and other special features, is now \$28.

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CONCERT GRAND

GRANDETTE

The Radio Dealer

THE RADIO TRADE JOURNAL

Edited and Published at

1133 Broadway, New York, N. Y.

THE PIONEER RADIO TRADE PAPER

VOL. 6 NO. 3

DECEMBER 1, 1924

TWO DOLLARS THE YEAR

Selling Radio: Today and Tomorrow

By WILLIAM H. INGERSOLL Vice-President, De Forest Radio Co. Jersey City, N. J.



WILLIAM H. INGERSOLL

Prominent Sales Authority Who Declares That Merchandising is the Greatest Problem Existing at Present in The Industry HE radio industry can be compared to a four-year-old Goliath, suffering from growing pains. Its wonderful hold upon the public fancy is enmeshed in lack of coordination and organization of merchandising that is hampering it today. Nothing else can be expected in a business that has jumped in annual volume from \$2,000,000 in 1920 to \$300,000,000 in 1924.

Approximately 3,000 manufacturers are creating a tremendous production in radio equipment that is passing into the hands of tens of thousands of electrical, hardware, drug, automobile, sporting goods and other dealers, not to mention the newly-created radio stores and music dealers. All of these elements in turn are endeavoring to meet the market of millions of homes in America for radio equipment, before the business has found itself or has been reduced to stable merchandising standards or has qualified merchants and service men to give it adequate representation.

That is the condition existing in the industry today. Reports from all parts of the country indicate that a boom of new business springing from the 20,000,000 homes now without radio, will far surpass all previous records during the coming holiday season and the early months of 1925. The problem of the radio industry tomorrow is merchandising.

The tremendous flood of new business could engulf the giant among infant industries that already is whirling along on the swift current of newly-developed public wants of a magnitude never before experienced, unless this fresh influx is met with a better ordered distributing machinery.

The "key man" in this situation is the retail merchant. He must be helped to grasp the peculiarities of the merchandising methods and the necessary service it he is to emerge as a permanent factor in radio in his community. He has a right to look to the manufacturer, whose goods he sells, for advice, assistance and cooperation. Radio has the original market to supply in addition to the replacement business on which the phonograph and the automobile now thrive. The danger to radio is in the disordered, unplanned and unrelated conglomeration of manufacturers, distributors and retailers, with an insufficient number of qualified technical men and a lack of policy or method.

What radio needs is a great pull-together movement under leadership that will organize and correlate its activities and bring it safely and surely, by a direct route, to the high position it may otherwise only reach by painful staggering after a dim ideal. To disgust the public by incompetence, poor service or by the entrance of the speculative, transient adventurer who covets easy money, would be as serious a calamity to the public itself as to the industry which finally must be molded to serve it. Manufacturers with distinct policies, dealers with understanding and service are the greatest need of the day.



BE SURE AND PREPARE TO MEET THE DEMAND GOOD JOBBERS EVERYWHERE HANDLE CROSLEYS

Write for Complete Catalog

THE CROSLEY RADIO CORPORATION

POWEL CROSLEY, Jr., President

CINCINNATI, OHIO

Crosley Owns and Operates Broadcasting Station WLW

Follow Up On International Radio Week

Display Long Distance Sets in Show Windows to Get Orders From Holiday Buyers

> By L. N. ALLEN Associate Editor, The Radio Dealer

OLLOWING up on any special event is important for the retailer, but the follow up on International Radio Week offers the greatest opportunity for profit for the retailer of radio apparatus of any event in the year.

In every community in the land it is expected that there will be at least one, and perhaps many listeners, who will hear the British and other foreign stations in their trans-oceanic broad-

casting tests. The sale of identical sets-of the same make and model —as those receiving the overseas broadcasters will be easy for the live wire retailer if he ties his store advertising to the test results.

One retailer in a suburb of New York during the tests of 1923 offered a prize of a high grade loud speaker for the first British broadcasting reception, advertising the offer on the sales slips that accompanied every sale for several weeks before the tests. When the first customer telephoned the retail store on the opening evening of the tests the dealer made arrangements to display the DX set in his show window the following week. In less than four days orders to build and install sim-

ilar sets were received in such numbers as to cause the dealer to double his set building force.

Manufacturers will gladly compile lists of the sets they build and which were among those bringing in the overseas transmission, and advertising of the famous Blank receiver which was so successful in the reception of British broadcasting will be certain to bring orders from the buyer who has never been able to decide exactly what set he wants to purchase.

Many retailers arranged radio parties for their customers during International Radio Week. The names of those attending these parties will offer wonderful leads for sales of complete installations.

A number of times previously through the columns of this magazine the writer has urged the giving of demonstrations at clubs and lodges with the idea of following them up with letters

members their attention to the advantages of having radio receivers in the home. The follow up on Radio Week activities of such a letter will be most profitable for the retailer.

International Radio Week officially opens the holiday buying season. The retail stores that push this idea to the public will be able to do more business than the stores that wait for the public to realize that only three weeks remain in which to do holiday buying.

during Radio Week will prove profitable, while advertising early in December that "we have only a few of this famous set" will bring the early purchaser to your store and very often insure

Holiday advertising

against loss of sales that may pass your store by later in the month because you have not the type of set in which they are most interested. The RADIO DEALER is interested in examples of how retailers followed up Radio Week

and will welcome letters from dealers telling how they were able to make this week a profit maker for themselves. Pictures of business getting window displays should be sent to the writer, for the development of new ideas.



Presidential election year proved an ideal subject for radio window displays, as can be noted in the above illustration presented by Hart & Lane, Inc., Sixth Avenue, New York City. The idea of showing long distance sets in attractive displays can also be done to good advantage for Radio Week "follow-ups" as outlined in Mr. Allen's article.

The Business of Buying

The Old Adage, "Goods Well Bought Are Half Sold" Can Effectively Be Applied to Radio

By GORDON W. TAYLOR

Successful radio business, retail or wholesale, can not reach that stage unless careful buying methods have been adopted early in its career. "Slick selling schemes" may move goods, but that is the hard part of the business if the buying has not been just right. "Goods well bought are half-sold." That is an old adage and every business writer in the last fifty years has written volumes of praise around that belief.

When you buy goods you do just half of your business, the other half being the selling. Right now, in the radio trade, it is important to buy for the Winter and Spring trade. The salesmen are in evidence to help consummate that phase of the transaction. At this very time it would be wise to let the thought sink in that the wares you buy now are the wares you must

sell later and if you buy right now your selling troubles will be lessened later.

No one expects to garner "self-sellers" for himself. If the radio trade gets to that point it will have to develop into a business similar to cigaretteselling, where the legitimate profits to jobber and retailer are surpris-

ingly low. Radio is still a saleable commodity; that is the consumers do not shoot one another to buy any of the excellent sets which are advertised. Radio selling is still being done in a seller's market—speaking especially of the consumer. That being admitted, it behooves the retailer and jobber to scrutinize the trade paper advertising now available and to discuss these products with the salesmen who call.

It is barely possible a good salesman can show how there is a difference of fifty cents on each item if you buy six dozen instead of four dozen. But, suppose you can really only sell four dozen, because of your limited field. Who loses then? Is it better to take a known profit on four dozen sales, than to gamble? Business, we are told, is a gamble. Such is not the case except to bad business men. If you establish a retail store for

the sale of radio equipment in a town of sixtyeight population and do it on a grand, big-city scale you are not gambling in business. Business is only a gamble when it is made a gamble.

If you buy right you can sell right—which is well to bear in mind. Buy when you want, what you want, from the best concerns and you are on the road to profit—assuming you have not everbought for the market you cover. Buy from the reliable houses, not afraid to demonstrate their desire to co-operate for trade betterment.

The reliable concerns are the right ones to deal with, though their selling prices may be a trifle higher than the other fellows. The Non-Reliables are in business today and in trouble tomorrow. Look up the seller, as he looks you up. It is important that the manufacturer and wholesaler shall be paid and it is just important

for the retailer to know that his business connections are in good hands. The business of buying for the real requirements of a retail store tend to develop the art of merchandising, so it means buying the real wares you need for the real customers you are certain to have; if that happens success

The report recently issued by the Department of Commerce covering the various retail divisions of the country clearly indicated that the majority of business troubles experienced by the retail dealers could be attributed to poor buying and lack of budgetary control. The same opinion is ventured by Mr. Taylor in the accompanying article, and drawing from the treasure chest of a successful business career, he advises the radio retailer along the lines best adapted to also make his individual business a profitable proposition.

his individual business a profitable proposition.

The lesson conveyed in the article is worthy of closest consideration by the dealer who at the end of the fiscal year wants to see a healthy condition reflected on the right side of the ledger.

is assured, one might say. That is to say it is certain as much as anything can be certain in business. It does reduce the gambling element.

When you reduce the element of chance you not only help yourself but help the jobber or manufacturer who sell you. They reach the point of knowing just what their clientele can consume, in a given period and this aids them in developing service and tends to reduce prices.

Buy right, from the right people and you are bound to be able to sell to the right people, at a profit. The matter resolves itself to the age-old but timely slogan: "Goods well bought are half-sold." It is truly said that successful retailing means more head work than foot work.

It is truly said that successful radio retailing means more headwork than foot work.

The Field The Jobber Serves

Trade Experience, Declares Writer, Demonstrates Excellent Results Manufacturers Derive from Jobbing Affiliations

By LEONARD O. CARTER

HO has not heard the argument advanced that radio retailing can be done direct to the consumer by the manufacturer? Who has not heard that the manufacturer can sell direct to the retailer—without the jobber or wholesaler? Many radio manufacturers do sell to the retail trade direct, employing factory representatives but in most of these instances these factories sell also to jobbers.

Experience in most lines of endeavor have demonstrated the commercial fact that manufacturers will best serve themselves and their

trade by jobber affiliation. То sell direct to the retailer means that the smaller storekeeper will not be well served and as there are more of the smaller class of retailers (and their total trade is higher than that of the bigger merchants) the producers of radio equipment find it convenient t o sell to jobbers. Jobbers, by concentrating on the requirements of their trade can purchase in such fashion that payments will be-

PARAGON 55

The concealed lighting arrangement of the booth of Adams-Morgan Co., Upper Montclair, N. J., on display at the recent National Radio Exposition, in New York City, added a touch of distinction and interest to the showing of Paragon products.

come regular, pleasing the manufacturer and thereby logically creating the proper co-operative spirit between the distributor and the producer. Manufacturers find it much more convenient to have one decent account in a town like Poughkeepsie or Newburgh, N. Y., than to have a dozen small accounts.

Of necessity jobbers become specialists in selling. When the jobber covers his territory right, he covers it often and he covers it best by offering a comprehensive line. There are of course

wholesalers who will not carry what known in the trade as "a general line." To do a big business, however, which should be the aim of every wholesaler makes for exploiting "a variety line." And to make real profits, to develop real service means doing a big business, because jobbers are perforce required to work on closer margins than retailers.

Variety seems essential to success. The jobbers who feature a variety of standard brands can not work all day and avoid taking orders for merchandise. It costs money to cover ter-

ritory and the jobber who puts himself in the position of not doing any business on any one day is on the road to ruin. Retailers who appreciate conditions have no hesitancy about buying from a jobber. Occasionally one runs across "a wise boy" in the retail who trade "won't buy from any jobber." If you happen to know of a man of this character pin a rose to this fact; he's doomed to get out of the trade;

he's bound to be a failure.

Jobbers, as a rule, can fill orders much more promptly than manufacturers. That is because the proper sort of a jobber buys what he knows his market will require. Being close to the wants he scents their requirements and orders accordingly. In other days many jobbers acted as sort of order-deliverers for manufacturers. They did not seem to worry whether the retailer succeeded or not. Conditions have changed for

(Continued on page 92)

Cost Accounting in the Radio Trade

System of Records Should Be Instant Means of Learning Exact State of Business

By LUDWIG B. PROSNITZ, C.P.A. New York City

Roger W. Babson, noted statistician, in a recent survey of the radio industry, made some very pointed comparisons. It is only necessary to quote a few of his comments. "The value of the radio business is nearly twice as great as that of the carpet and rug business. For every dollar spent for boots and shoes, twenty-five cents is spent for radio. For every dollar spent for musical instruments of all kinds, including phonographs, pianos, organs, etc., seventy-five cents is spent for radio. The value of the radio business amounts to nearly three-fourths of the jewelry business as a whole, including clocks, watches, and novelties." Mr. Babson states that the

radio business mounted from \$5,000,000 annually in 1921 to \$120,000,000 in 1923, and that conservative estimates place the probable 1924 business at \$350,000,000.

Radio has undoubtedly taken its place as one of the great industries of America. Predictions are no longer being made that the "Radio Boom" will die out. Every new industry has a tendency to be over - capitalized

at the start, but sooner or later, it finds its proper level. Many incompetents have naturally been attracted to the business. In fact, the unsuccessful are the first to venture into new fields. As competition becomes keener, the old story of the "survival of the fittest" holds true. Modern business must proceed along scientific lines. Executives in the radio industry must avail themselves of the tools that are being used by successful executives in other industries. Cost accounting is now considered a necessity throughout industrial America. Manufacturers of radio sets and parts can no more afford to be without adequate accounting in-

formation than the manufacturer of automobiles, hats, shoes, dresses, and countless other products.

The successful manufacturer wants to know, at least at the end of every month, how much business he has done. what his labor and material have cost him that went into the product sold, how much of his labor was unproductive, the cost of his factory overhead. the amount and relation of his selling and administrative expenses to the business done, how much he must allow for bad debts and depreciation, and what the net profit has been. If he manufactures one product, he wants to know what it is costing him per unit

present at a two-day conference which the U.S. Chamber of Commerce recently held on Cost Accounting, at which, representatives were gathered from practically every industry of importance in the United States. Chairman McCulloh, in opening the conference made the significant statement that "Manufacturers are rapidly realizing that a good system not only produces records of facts, but is of service in eliminating waste and expediting production. Business can no longer tolerate guesswork or estimating, when it is possible to know the truth.

A word of caution is necessary. Cost accounting systems have failed of

their objective. Many have attempted the impossible. A cost system must take into account the prevailing conditions in the particular plant. The management must be in full sympathy, and the system above all, should conform to the size of the business. The small concern needs to be well regulated, and as orderly as the larger one. But the method of arriving at the desired goal must vary with the size of

FORM A - 5 M - 12 - 1 - 24 XYZ.RADIO CORPORATION STOCK RECORD BLUE PRINT NO. DESCRIPTION USED FOR LOCATION BALANCE ON ORDER IN OUT DATE REQ.NO. QUANTITY QUANTITY UNIT PRICE AMOUNT ORDER NO. QUANTITY FROM WHOM DATE QUARTITY

Specimen of stock record recommended by Mr. Prosnitz in his article as means of listing merchandise on hand.

of production. If he makes more than one product, he wants to be told which are profitable, and which are being sold at a loss, and why. He is also concerned about his assets and liabilities. wants to know his progress from month to month, and demands perpetual inventory control, so that he doesn't have to pray that the inventory is high enough, when the end of the year comes around. He desires a firm control over the flow of merchandise around the plant, and to summarize it all, he wants to be able to lay his finger on all phases of the business at any time.

It was the writer's privilege to be

the enterprise.

With the idea in mind that radio manufacturers will ultimately of necessity be interested in good cost accounting - cost accounting which will give unit costs of production, maintain perpetual inventories, and enable the organization to obtain monthly statements of income profit, and loss, the writer herewith outlines the main features of a cost system which is at the present time in operation in a plant devoted almost exclusively to the manufacture of various types of radio parts and sets. Customers' orders are usually the motive power that start the wheels of industry (Continued on page 66)

Release of Patents Marks Radio Epoch

Sixty Independent Manufacturers Are Affected By Recent Government Ruling

By E. F. McDONALD, JR.,

Pres., Zenith Radio Corp., Chicago

NE of the outstanding, important historical events in the radio patent field occurred October 30th, when the Navy Department decided to issue licenses to approximately sixty independent radio manufacturers under 129 German patents seized by the Alien Property Custodian during the World War. Early in 1923, application for the patents had been filed, but no decisive action was taken by the Washington authorities. Recently the cooperation of Congressman Fred Britten of Chicago, the National Association of Broacasters, and the Radio Manufacturers Association, was enlisted. Through the joint efforts of these, what had grown to be considered a hopeless cause, was quickly matured into a successful issue of widereaching importance.

The majority of the patents and applications involved were originally owned by the Telefunken Co., a German

corporation, among which patents is the controlling patent covering tuned radio frequency-the well-known Wilhelm Schloemilch and Otto Van Bronk patent. Under a series of contracts, the first dated February 21, 1913, substantial rights in these patents and applications were assigned by the Telefunken Co., to the Atlantic Communication Co., a German corporation organized under the laws of the State of New York. Under the provision of the Trading With the Enemy Act, as amended, the Alien Property Custodian seized all right, title and interest in and to these letters patent and applications, which remained in the Telefunken Co., and simultaneously took over the Atlantic Communication Co.

Under the provisions of the Trading With the Enemy Act, as amended, the Alien Property Custodian on February 5, 1919, sold to the Secretary of the Navy, representing the United States, all right, title and interest in and to the said patents, which had been vested in the Atlantic Communication Co., and acquired by him from it. Next day

the Custodian also sold to the Secretary of the Navy all right, title and interest in and to the patents and applications which had remained in the Telefunken Co. after the assignment to the Atlantic Communication Co., and which have been acquired by the Custodian.

These sales were outright, without any limitations whatsoever and covered all the rights acquired by the Government. The sale expressly includes "The sole and exclusive right, license and authority to manufacture or cause to be manufactured within the United States, its territories and dependencies, and within the Republic of Cuba; and the right to sell and install, to use and to grant the right to use."

right to sell and install, to use and to grant the right to use."

There is no question about the legality of sales of this nature. Title to property so acquired vests in the United States. The Attorney General has so decided. It is also

established that the grant of a revocable, non-exclusive license to use patents valuable to the manufacture of radio apparatus, is well within the discretion of the Secretary of the Navy. On August 5, 1920, the Secretary of the Navy granted to The International Radio Telegraph Co., a non-exclusive, irrevocable license, without royalty, to make, use and sell for the purposes, and to the extent which the Department has a right to do, the inventions covered by the patents.

The theory on which the independent manufacturers requested grant of license was that such grant would tend to advance the welfare of the people of the United States, and would promote a healthy competition in the manufacture and sale of radio apparatus; that to withhold such license would tend to injure the public welfare by tending to promote monopoly contrary to the policy declared by the

Sherman Act; that the denial of the license to the applicants would make the International Radio Telegraph Co. the only licensee, which would be inconsistent with Governmental policy as to monopoly, or the principle of equality of opportunity on which this Nation is founded.

As a part consideration for granting the said license, the independent radio manufacturers agreed to grant to the United States of America, represented by the Secretary of the Navy, a non-transferable, non-exclusive license under United States letters patent which they now own or may hereafter own during the term of the agreement, to make or have made for it and use for governmental purposes, apparatus utilizing or embodying the inventions of their patents, but not for sale.

Recently, with the assistance of Congressman Fred Britten of Chicago, an ardent radio enthusiast, as well as an out-an-out opponent of monopilies, and with President Coolidge and the Attorney-General kindly cooperating,

the cause of the approximately sixty independent radio manufacturers was brought to the fore. The manufacturers, Micawber-like, had waited for over a year for "something to develop." It was a lightning-like procedure from first to last, and a very strenuous task for all concerned. Willis H. Taylor, Inc., one of the country's foremost patent attorneys, claims that this grant of license by the Navy Department to the independent radio manufacturers, will completely change the complexion of patent litigation.

One of the chief obstacles to the greatest development of the industry is thus removed. The complexities of the radio patent situation are now much minimized. The difficulties incident to the government sharing the use of these patents with only one American manufacturer, are now permanently obviated, through the new ruling.



E. F. McDONALD, JR.
Pres., Zenith Radio Corp., Chicago

Blue Prints---The Dealer's Silent Salesman

Value as Business Getters Seen In Their Increased Use By Aggressive Retailers

By ARTHUR H. LYNCH, Editor, Radio Broadcast

EALERS in radio supplies are not in the business to debate the question of whether or not they're going to sell apparatus. That is a foregone conclu-Their main interest is in how to keep the stock on their shelves constantly moving. Radio has been with us for a number of years. But it is only since the advent of radio broadcasting that the game has come along by leaps and bounds until now it hardly knows its former self. There is cause to wonder how, even in the good old days of coherers, and spark gaps inserted directly in the antenna circuit, it did not go the way of all other fads and fancies.

Today radio is far from being a mere rich man's hobby. Department stores, hardware stores, phonograph stores and drug stores are catering to the needs of the crystal user and the super-het fan. One of the most direct and influen-

tial aids in the selling of radio accessories and parts has been the pattern and blueprint business. The whole radio business has come to a realization of the psychological value of the blue print. Radio fans are ever ready to part with a quarter, half, or dollar for a blue print and descriptive booklet. It's something they can read about, talk over to their commuter neighbor and visualize as a receiver worthy of gracing the living room.

After a fellow once invests in a set of blue-prints doesn't take long before he's back at the radio supply store ordering the parts for his home-made

receiver. And these fellows are a critical bunch; they want what they want when they want it and woe betide the dealer who cannot reach to his shelf and put his hand on the desired article. The old line about "this is just as good" does not go well at all. The writer was in a fair way to observe the extraordinary selling value of blue-prints during 1921-22. One instance is recalled where one company sold on an average of 1500 blue-prints a day. In many cases a day's sale was many more than this.

Then there was a company which was started solely to furnish the parts for the line of receivers illustrated by these patterns. The demand far exceeded the supply and the little company enjoyed a land office business. On the strength of a one inch ad inserted in one of the then leading monthly radio magazines enough business resulted to keep the organization going for months, working overtime six nights a week. Orders were received from every State in the Union, Hawaii, Alaska, Canada and South America. This is mentioned to illustrate the fact that the people who had purchased the plans wanted parts and wanted them in the easiest, quickest way.

Many manufacturers of coils, condensers, etc., are now issuing circuit plans with their products. But this digresses from the point because a fellow must first buy the coil or condenser before he knows of the plans. The real selling value is in creating a demand in parts by circulating the plans first. The ordinary storekeeper must exercise his intelligence and ingenuity in prominently displaying the blueprints to the best of advantage. Shelves were made for

parts not for blueprints. Indirectly, the manufacturer is getting wonderful advertising, too. Many plans call for special parts which are manufactured by only one concern. Naturally the manufacturer of this part does not mind it one bit.

But from standpoint of the builder, it is bad pany.

business because he does not want to be made to buy trick parts from one com-Herein lies the success of the pattern and blueprint business. Designers must so construct their sets and lay out their blueprints so that any standard parts may readily be used. Furthermore, the problem must not be tackeld from the viewpoint of the producing a set of plans for the primary

RADIO SETS ? KNOCK-DOWN SETS ds Best Radio Sers

A window display embodying the ideas outlined in the accompanying article. The orderly and attractive arrangement speaks well for the establishment and the type of apparatus shown.

able at any radio dealer. The progressive dealer takes advantage of every opportunity to demonstrate his wares. With the blue-print as an aid his opportunities along these lines are unlimited. First, a set should be constructed following the blue-prints to the letter. Then, it should be operated and demonstrated to show the critical and cynical purchaser its real worth.

purpose of creating a demand for new parts which the

dealer must obtain and stock. The secret of success lies

in giving to the radio fan a set of blue-prints which will

allow him to construct as many of his own home-made coils

as possible and to use standard store parts readily obtain-

(Continued on page 92)

Retailing Radio at a Profit

The Proper Use of Certain Fundamentals and Successful Retail Policies Will Increase Merchandise Sales

By R. M. KLEIN, General Manager, F. A. D. Andrea, Inc., New York

As a radio dealer you are vitally interested in the volume of business that you can do. Total sales per day, per week, per month and per year are the vital figures. If you are located in a medium sized city, you can figure the total volume of your radio sales for the next twelve months at approximately \$2.50 per capita of population. For example, if your city has a population of 30,000 with a surrounding suburban population of 10,000 additional, by multiplying this total of 40,000 people to serve by \$2.50, you will see that there is approximately \$100,000 worth of radio business in your locality.

To shift \$100,000 worth of radio business from prospective customers to the profit side of your ledger means but one thing—that you must progressively and energetically go after this business and expect to spend money to get it. The success of any business (be it a bootblack parlor, a peanut stand, a radio store, the Standard Oil Co., the Pennsylvania Railroad, or the United States Steel Corp.), is dependent upon only two things, namely, men and materials.

First let us consider the man. I think that it is an easily understood fact that too many radio stores give over the operation and control of their radio department to young men who although they have a knowledge of radio circuits and can operate a receiving set, do not have the addition of business ability and basic common-sense which qualify them to satisfactorily make a success of the business of selling radio merchandise. The element of radio brains is present but the element of business brains is lacking.

This element of personnel is all important. Be sure of your judgment in picking your man and do not place such authority under his control as will jeopardize your business until your judgment has proven itself justified. Prove that your radio department manager is a business man as well as a radio man. Pay him what he is worth to you (on the basis of what he earns for you). Watch and direct his work carefully to insure that he will become an even more valuable asset to your business.

By purchasing and placing radio receivers and equipment on your shelves you have not made yourself a radio merchant. You have merely started and your next move is also an important one in comparison to the selection of personnel and the actual purchase of your stock. To merchandise the stock on your store shelves to advantage you must first locate your prospective customers: second, sell your customers, and third, make your sale a permanent one. Under the various paragraph headings which follow we shall discuss these three functions.

If you sell radio (and that's your day's work) tell every man, woman and child who passes by your store that that's what your there for. Tell them all day long and up until twelve

The accompanying article was delivered by Mr. Klein at the recent convention of the Association of Electragists, held at West Baden, Ind., where it made a profound impression. The original article has been slightly abridged to conform with the space limitations of the current issue of The Radio Dealer.

Radio retailers will find a wealth of valuable trade suggestions contained in Mr. Klein's masterly article which is based on many years of successful selling in the radio fields of this country.

o'clock at night. The best way in the world to do this is to swing out a good radio sign over your door and preferably have it illuminated. A clock control is easily arranged which turns the lights on your sign and also in your windows at midnight. Such an arrangement is one of the best investments that you can make. Do it!

Decorate your windows neatly, but don't make the mistake of crowding a sample of every item that you sell into a single window. The majority of radio show windows are over crowded deplorably. No better radio window display of complete receivers can be made than by showing a single piece of high-grade equipment displayed with a proper background and with a proper window lighting system. Put a single thought across and as it were "through the plate glass' so simply that anyone passing by your windows can't help but absorb the idea and unconsciously

come through your door to be sold merchandise.

Advertise in your local newspapers and bear in mind that liberal space used less frequently is more suitable than small space used daily. As a suggestion, use about twenty inches (three column by seven inches) say twice a week and use this space to the best advantage. Don't be content with the average radio ad, filled up with every bit of copy and illustration that can be squeezed inside the border line. Insist on a one-third, two-thirds, proportion of white space to copy and illustration and your ad will not only be readable and artistic in its layout but it will have a much greater "sales ability."

Having made no mistake of carrying in stock little known and unadvertised lines of merchandise you can readilv arrange with the manufacturers of the reliable and nationally advertised merchandise that you do handle to supply you with electro cuts, or mats of the equipment that you have in stock such that your newspaper advertising becomes most effective. Following this plan it not only advertises your local store, but also causes your prospective customer to associate your advertising and the product that you are selling with the national newspaper and magazine adverising on that same product that you locally advertise under vour own name.

Now as to your store itself. Is the arrangement of your counters, shelves showcases such as to be pleasing to the eve of a prospective customer as he enters your door? It should be. A little study given to the proper arrangement will work wonders. No doubt there are certain items which you consider as stable merchandise, which you sell regularly on demand and which do not demand extensive sales effort. If you are an electrical dealer this applies to lamps, fuses, sockets etc; if you are a music dealer, it applies to records, needles, etc.; if you are a radio dealer, it applies to tubes, aerial wire, insulators and the like.

Possibly the first thought would be that these products should be displayed up in front of your store where your customers can come in, get quick ser-

(Continued on page 86)

Service Vs. Psychology in Retailing

Satisfying the Customer Pointed Out as the Best Foundation for Success in Business

By JOHN H. COLLINS

This is the second of a series of articles touching on retailing topics. The first appeared in the November issue of The Radio Dealer.

"In the business world of today," declares Mr. Collins,

"the word 'service' stands out as a rock upon which

no business ship can possibly founder. The term in

its real significance is fitting evidence that the sales-man has studied his trade and market. His close study

of the problems involved is the sure and basic road

to business growth.'

TERVICE, according to the recognized students of salesmanship, is more essential to sales success than psychology. that is the modern idea, to the writer's way of There was a time when "supersalesmen" selling stunts talked psychology and urged the would-be premier salesman to study his fellow men, particularly the chap who was

about to be approached.

Would-be "super-salesmen" were assured that blue-eyed men were best approached on rainy Mondays, while if the train to Tarrytown was ten minutes late and you had an appointment with Storekeeper Slater, you were a wise individual if you got off the train and immediately went to the nearest hotel and sent for a doctor and at the same time advised Storekeeper Slater you were ill.

These are not idle fancies. In other days most

of us "feel" for a lot of fanciful tales concerning selling, while today we have other ideas and ideals. In the business world of today the word "service" stands out as a rock upon which no business ship can possibly founder. The term may be over-

done-but we are not speaking of excesses. Service means "things thought out" much more than so-called "sales psychology." vice genuinely means that the salesman has really studied his trade and market and that scientific study is the sure way to basic business growth. It is only necessary to look around and see the successful business groups. founded on merit? Does part of that include service? You surely can wager on that.

It is beginning to be a truism in business that the bigger the concern, the more service can expect. Obviously every business man in the radio field aims to do bigger and better things. Not all of radio folk can expect seats among the biggest men, but in our every endeavor we can emulate them.

Most business men seem to believe that our big business men always have time to do a number of things, outside of their business and even play. Is it because they have no patience for their own details, or because they are lazy? Neither. The answer is that in the matter of service they have (in their big business minds) developed a group of associates who, because of their ability to give service, are making it quite easy for The Big Boss to come and go as he pleases.

Your big business man, your good business man, is the man who develops subordinates who are capable of handling the biggest tasks in the organization and further develops them to the point where they, too, can efficiently and effectively create working associates. Obviously service, in a business, does not always mean that a customer must be catered to beyond reasonable limits at all the time. The customer is always right—of course, except when he is wrong.

A customer who does not meet his bills; who is always complaining, and at all times desirous of returning goods properly ordered—can not be always right, so "the good house" gradually stops selling this type-to the end that the other customers

shall not be expected to pay for this expensive type of customers.

That can be regarded as service, to patrons, whether you are retailer, wholesaler or manufacturer. Service, it does appear, is a very broad business idea. To the salesmen it means more than greeting the customer and merely smiling. To the retail clerk it means more than standing behind the counter, ready to answer inquiries.

The conscientious concerns give service in every department—from buying to selling and delivering. As the salesman and clerk serves his house so is he respected and by the same token so is the house regarded. It is not a simple matter to differentiate; and business houses are too short to make the attempt.

(To be continued in the January issue of THE RADIO DEALER.)

The Interior of a Retail Store

Practical Suggestions Which Will Tend to Make the Establishment Appeal to the Customer

By WALTER S. BLANEY

EARLY every retail storekeeper knows the importance of a good location and what an asset a neat and attractive store really is. To try to make a store pay when the location and interior arrangements are not what they should be is the height of folly. An attractive window entices a passerby, but after all, it is an inviting interior which brings a customer a second time and converts him into a regular patron. The deportment and efficiency of the men behind the counter may leave nothing to be desired in that respect, but unless both the store and its stock are clean and the general interior attractive there is not that power of attracting a customer back again.

The chief object of arranging a store is to facilitate the work of conducting the establishment, and thus make a

saving of both time and money. Therefore when the interior arrangement is as it should be, increased labor is necessary to keep things in order, but the expense of running a business is lessened. Not only the manager but all employed in a store should know the exact location of the stock. This should be learned so thoroughly that a manager or any one connected with a store would be able to p'ace a hand upon any article asked for. without the slightest hesitation.

Few things create a more unfavorable impression in the mind of the average customer than to have a man behind the counter start on a searching expedi-

tion among the shelves and drawers for some particular article that is asked for though it may not be an every-day staple. It means much more to the credit of a store if a customer can walk in and call for something a little out of the ordinary; then walk out with the article without delay. The store that is so arranged that every clerk can immediately place his hand on anything in the stock has a marked advantage over the establishment where the clerks have to stop and think before they can deliver the article requested.

The question of fixtures in the up-to-date store is an important one and requires some study and discriminating judgment. An enterprising retailer who is establishing a new store will find it greatly to his advantage to make a

tour of investigation and ascertain what other storekeepers are using as fixtures, and select and embody the best ideas for his own establishment. That is a wise policy to pursue. If a retailer is wide-awake he will note that there are many new and advantageous departures in the general equipment of a store.

Cheap store fixtures and unsuitable appliances represent money ill-spent that will never offer a commensurate return. A retailer who invests his money in fixture and other incidentals in connection with his store must figure upon a suitable return for every dollar he spends. In so far as the old established store is concerned, a little fresh paint now and then applied with taste for color effects will always prove a good investment, adds to the appearance of the

retail and has a beneficial influence upon all who have occasion to enter the premises.

The question of artificial light in a store is one which must be carefully considered by an upto-date retailer. No rule can be laid down as to store lighting, but it may be suggested that a retailer who is located on a busy street must light his store with a view to attracting customers some distance away, therefore powerful lighting effects are of great value in such an instance.
The large electric signs of the day upon which are inscribed the name of the business or its character or a radio feature, can be seen from afar and that has a decided ten-

Annual RADIO EXPOSITION Welcome

In honor of the second radio exposition staged in its New York store J. L. Lewis, Inc., tastefully decorated the interior with a variety of autumn leaves, and other timely trimmings. The illustration shows the type of well arranged retail establishment urged by Mr. Blaney, and one that creates a favorable impression in the minds of prospective customers.

dency to impress upon the minds of people in the neighborhood, as well as passerby, that such a business is conducted where the sign emblazons forth. The expense incidental to such electric display is well worth the outlay and any experienced retailer knows that such an expenditure is money spent in just as essential as regular rent-paying.

Shelf and counter displays in a store interior are what create the "first impression" upon a customer who wants to see various merchandise offered. That "first impression" should be a favorable one. When a prospective customer enters a strange store, regardless of the manner or method by which he has been attracted, his primary quest is for merchandise in which he is interested. If such a visitor

(Continued on Page 94)

From the Editorial Viewpoint

Christmas Greetings

Every good wish for Christmastide is extended to the radio industry, our advertisers, and subscribers, by the staff of,

—THE RADIO DEALER.

The Blue Ribbon Event

NTERNATIONAL RADIO WEEK can justly be called the "Blue Ribbon Event" in radio judging by the world-wide observance which marked the celebration during the week of November 23rd to 28th, inclusive. Every factor which could contribute to the successful culmination of the observance exerted earnest effort to insure a pleasing outcome. That the efforts put forth met with the greatest results possible can be gleaned from the fact that virtually every nation of the world "listened on" in on programmes which were specially arranged for the event.

The layman in radio asked one question which was fittingly answered during International Radio Week. That query was: "What is the real purpose of Radio Week" The value is apparent without any lengthy answer being necessary. But for the benefit of the inquisitive the question is being answered. International Radio Week served one real purpose, that of bringing radio more prominently to the forefront than has been possible during the past year. Reading the programmes arranged each day by the broadcasting stations throughout the United States and Canada does not give a fitting picture of the breadth and scope of radio in all its greatness.

The International broadcasting tests with overseas stations served to educate the mind of the general public and the peoples of the world with the far-reaching influence exerted by radio not only as a source of entertainment but as an educational medium to mankind in general. Many of our present-day mediums are regarded too lightly in the face of the world's progress. Radio has made such rapid and important strides that its real value cannot be lost sight of too easily in the world's advancement.

One great result stands out more than any other. That was the pleasure derived by the average listener in. Not only did he tune in for the overseas stations, but was joined by his neighbor, who did not possess a set. The value should be apparent at a time like International Radio Week when interest in radio is spurred to greater heights than ever before.

The dealer stands to benefit by the increasing public interest in radio and receiving sets. He is the one individual who can successfully capitalize the interest taken by the public in the possession of a set.

Many people have been awakened to the pleasure to be derived from possessing a set. It goes without saying that the months to come will see a marked increase in the number of sets sold. If that is all that International Radio Week has accomplished its work has not been in vain.

Chicago Show Makes History

NCE again the people of Chicago and surrounding territory have rallied to the cause of radio. This was convincingly demonstrated at the Third Annual Chicago Radio Exposition which closed in the historic Coliscum on November 23rd. For seven afternoons and seven evenings the spacious building was crowded with radio enthusiasts all eager to view the latest in the science and to answer that growing question asked by the American public: "What set will we buy for the family?"

Among the outstanding incidents in connection with the Chicago show was the keen interest manifested by the visitors who were intent on making Christmas gifts of sets for members of their family. The exhibitors declared that there was greater interest evinced in getting the right angle on buying by the public than ever before. Naturally it was a source of satisfaction to all concerned.

The right kind of a radio show staged at the proper time under right conditions can serve to educate the public en masse more effectively than ever would be possible with five successive editions of illustrated books. In this respect the Chicago exposition set a new record and established a precedent among trade shows in this country.

It indicated growing interest in all things pertaining to radio and was the closing argument in favor of bigger and greater radio expositions in the future.

Keeping Cost Records

HE practice of keeping stock and cost records has been successfully followed in other industries. Gradually the radio industry has "followed suit," after a fashion, and is at last finding the actual cost of production

and margin of profit in the finished article with greater accuracy. When radio first became a commercial proposition the sudden rise in manufacturing quantities caused the producers to forget the cost end and concentrate their efforts on shipping.

As conditions have become stabilized in the industry they have found that it is the wisest course to devote more attention to basic costs rather than figure on mythical shipments with consequent losses entailed in selling at prices inconsistent with a fair margin of profit.

The current issue of THE RADIO DEALER carries an article on cost accounting in the radio industry, written especially for this magazine by Ludwig R. Prosnitz, well-known certified public accountant of New York City. Mr. Prosnitz' knowledge of cost accounting problems affecting the radio manufacturer, jobber and radio retailer furnishes rich material for his article. There is much to be gained by learning his viewpoint on what is the best course of action to take in reference to keeping the cost down and increasing the general margin.

Other industries know their production costs to a decimal. It would be wisdom for the radio industry to "fall in line" if a better average is desired on the right side of the ledger at the close of the fiscal year.

Courtesy Plus Sales

CERTAIN Eastern telephone company lays stress on its slogan: "The voice with the smile wins." Just across Broadway a well-known hotel greets the guest with the motto: "The public is right." Recently a well-known sales manager in discussing trade ethics with friends declared that a combination of the two qualities on the part of radio retailers and their sales people would be greater influences for better business than some of the methods now in vogue.

He cited a number of instances where salespeople lacking in courtesy, and more anxious to watch the clock, paid little attention to the wants of customers. Human nature varies little in Palo Alto, Cal., Little Rock, Ark., and Toronto, Canada. The public appreciates courtesy and consideration at the hands of salespeople. And radio shops are no exception to the courtesy element being minus. Greater dividends will be received from being prompt, courteous and acquainted with the selling points of your merchandise than to treat customer, in such amanner as to make them sorry they came to your store.

The little extra effort entailed in smiling, and satisfying the customer will return one hun-

dred fold in increased business and a reputation for fair dealing which is beyond the influence of the most substantial checkbook.

Territory Worth Considering

DEALER has urged the radio trade to bestir itself in the matter of selling radio in the rural and farming sections of the land because observations indicated that the cities of the land are well supplied in the matter of capable retailers and wholesalers in radio but the rural sections have yet to enjoy the intensive group salesmanship that has been developed in and around our big cities.

Market specialists for the Department of Agriculture recently released figures, following their survey, which must further convince the great radio set manufacturing group that there is something amiss in their several sales organizations because the Government survey indicates there are just 364,000 farms now equipped with radio. Who will dare say there are not more talking-machines and pianos on the farm than there are radio sets?

Of course the rural citizen has not had the advartages of the city dweller, in the matter of radio, because of the lack of personal get-together ability. Many a city man does buy a radio set just because he did see that sort of a set perform wonderfully at the home of a friend. If farmers do not possess a radio set, naturally the visitors are amused by the piano or the phonograph.

There is really a great virgin field to be developed for the radio trade. The wholesalers of electrical supplies and hardware who handle radio, apparently, have made no impression on the rural radio market. The mail-order houses have done a fair share of the farm business, but radio sets are "hard to sell" in a complete manner to a person who can do nothing with the set when it is delivered, so the big sales will be made among the farmers of our land when some of the very smart folks, now engaged in radio selling in the big cities, visualize the field.

Display Windows

HE interior of any retail store is an important factor in its success. This, therefore, seems to be the important moment to again dwell upon the fact that the window display is akin to the front cover of a magazine on the newsstand in its appeal.

Many people are attracted to stores by their windows; many are possible customers, so if front windows are not attractive dealers should awaken to their importance.



HE comprehensive view of the whole radio industry afforded by the recent important Radio Shows has made it possible for far-sighted dealers to choose their merchandise on the basis of rock bottom *values*.

The most rigorous comparisons favor Magnavox Radio all along the line—in the degree of interest shown by the general public for the Magnavox exhibits; their established faith in the good will and fairness of The Magnavox Company; the distinctive appearance and unfailing operating excellence of every Magnavox product; and in the exceptional service given by Magnavox to every Registered Dealer.

At the height of the holiday season, it is the Registered Magnavox Dealer who is best equipped to take full advantage of

the enormous impetus which the radio business has received this year.

A Magnavox Radio Product for Every Customer

From the man who drops in to replace a burnt-out tube, to the one who calls to purchase a complete receiver with reproducer built in, or as a separate unit, the Registered Magnavox Dealer can supply practically every demand.

Thanks to the favorable influence exerted by the Magnavox National Advertising and selling policy, the individual Registered Dealer soon finds his own merchandising efforts multiplied in efficiency and results. Every Registered Magnavox dealer receives direct assistance permitting him to operate over an unusually large consumer territory.

How to Become a Registered Magnavox Dealer

Application for enrollment as a Registered Magnavox Dealer should be made on the regular form provided for that purpose by representatives of Magnavox Distributors and Jobbers.

In passing upon these applications, an exceedingly high standard for qualification is required by the Magnavox Company consistent with the degree of service given each Registered Dealer, and the great value of the Magnavox franchise. As the number of dealers will be limited to the point where each dealer can be assured a large volume of Magnavox business, application should be made promptly.

> We will be pleased to send you our broadside announcement describing the complete Magnavox Radio line and dealer policy. A personal representative will also call upon you on request made to nearest Magnavox Distributor or Jobber, whose name will be sent you on application.

THE MAGNAVOX COMPANY

OAKLAND, CALIFORNIA

NEW YORK: 350 West 31st St.

CHICAGO: 162 N. State St. SAN FRANCISCO: 274 Brannan St.

Canadian Distributors: Perkins Electric Limited, Toronto, Montreal, Winnipeg



Magnavox Reproducers for all receiving sets

The first radio Reproducer ever made was the famous Magnavox electro-dynamic

These instruments contain reproducing units of extreme sensitivity and power.

M4 - \$25

R3 - \$35 R2 - \$50



Magnavox Tubes

Can be substituted for ordinary tubes to great advantage in any receiver . \$5



Magnavox Receiving Set TRF-5

A 5-tube tuned radio frequency receiver with Unit Control, in carved mahogany



Magnavox Receiving Set TRF-50

Identical with the above as to circuit and panel but encased in carved mahogany period cabinet with built-in Magnavox Reproducer: (shown large on facing page).



Cost Accounting in the Radio Trade

(Continued from page 56) going, so we will begin with them in tracing our system.

Copies of all orders received are made out in duplicate, on regular forms provided for that purpose. One copy goes to the shipping department and the other remains in the office. Suitable provision is made for taking care of part shipments on orders. Every order is numbered consecutively. As an additional precaution against neglected orders or unbilled orders, each order is listed in an order book in numerical sequence, so that at a glance, it is possible to ascertain whether full shipment has been made, and whether all bills have been rendered. The shipping department returns its copy of the order to the office, upon completion of the final shipment. It is then billed. and filed with the office copy.

Purchase orders are made out in triplicate. One goes to the vendor, one to the stock room, and the other remains in the office. The office copy is used to check the invoices when received. This copy is also used to post to stock record cards the information that certain materials have been ordered.

When merchandise is received, a packing slip accompanies the shipment. This is checked with the mer-

chandise and the copy of the order, and approved by the receiving clerk if found correct. This packing slip is turned into the office, where it is held until the invoice is received. Upon receipt of the invoice, the packing slip, office copy of the purchase order and invoice are compared, and if the invoice is correct, it is approved and ready for entry in the purchase book, and on the stock record cards. A rubber stamp is provided for insertion on the invoice. which makes it compulsory to have all necessary details approved checked by the proper persons, and makes certain that the invoice is properly recorded on the financial and stock records, before it is filed. Invoices are first filed in an "Unpaid" file, and upon payment are removed from this file, compared with the ledger account and the vendor's statement, then attached to the check so that the officers signing the checks can have all details at their command. After the check is signed, the invoices are stamped "Paid," and filed among the paid in-

Stock record cards are used to record the movement of all raw materials. All invoices for raw materials that are entered on the books are also recorded on the stock record cards. The cards are assorted according to kinds and sizes of materials. Where material is ordered according to blue print specifications, it is sometimes more advisable to indicate on some of the cards the blue print numbers, and assort

them accordingly. In such cases the copy of the purchase order is also marked to indicate the proper blue print numbers, and the invoice is readily charged to the proper stock card. Each stock card, in addition to providing for the complete recording of a description of the material, and its location in the stock room, has columns to record quantities received, used, balance on hand, on order, etc., and also provides for listing the part numbers for which the material is used.

Proper stock record cards are contingent upon an efficient stock room. Material requirements are gauged by the foreman, and numbered requisitions are made out for all material as it is taken from the stock room. These material requisitions are sent to the office for posting to the stock record cards, whereon the quantities used are indicated. The requisitions are priced and summarized at the end of the month so that it is an easy matter to ascertain the amount and cost of the material consumed during the month. At the same time, the stock record cards show the balance of each kind of material on hand, and by pricing these cards the inventory can be ascertained at any time. Furthermore, the cards are periodically checked, a few at a time, with the actual physical stock on hand, and discrepancies ironed out from time to time, thus obviating the necessity of a detailed annual inventory. Proper entries are made at (Continued on page 98)

FORM B-5 M	1-12-1-24	XYZ		O CO		RATION	
ARTIC	ARTICLE QUANTITY REQUIRED						
BLUE PRII					E PRINT NO.	.	
LABOR							
DATE	NO.	NAME	HOURS	QUANTITY	RATE	AMOUNT	REMARKS
	+						

Labor cost records are carried on the card shown above. In the opinion of Mr. Prosnitz, the labor and material costs against a specified lot of parts are completely summarized.

Scenes at Recent Chicago Radio Exposition



Panoramic glimpse of capacity throng which attended the opening night of third annual Chicago Radio Exposition, Nov. 17, held in the Coliseum, that city.

The crowds increased each day 50 that when the curtain was rung down on the closing night the greatest attendance in the history of radio expositions in the Windy City was recorded.



The radio industry was well represented at the banquet held in the Morrison Hotel, Chicago, under the auspices of the Electric Club, in conjunction with the Chicago Radio Exposition. There were speeches, music and merriment galore, not forgetting an appetizing repast all of which were thoroughly enjoyed by each and every one of the happy individuals shown in the above photograph.

Radio Personalities



S. O. Martin, first vice-president and general manager of the Sonora Phonograph Co., Inc., New York City is author of an interesting trade outlook story in the current issue of "Sonora Bell" the concern's monthly magazine. He is regarded as one of the foremost authorities on phonograph topics in this country.



S. Kaplin, president of the Belltone Radio Corp., New York City, is a well known figure in the industry and was among the pioneers in the field.



Prior to becoming sales and advertising manager for the Th. Goldschmidt Corp., New York City, J. B. Price was eastern sales manager for a large publishing house. He is well known in the phonograph industry.

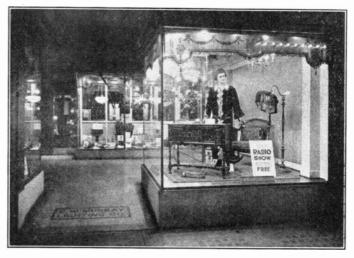


Robert W. Porter, recently became general sales manager for R. E. Thompson Mfg. Co., New York City, after a most successful career in the merchandising of phonographs, The appointment was the source of much favorable comment in the trade.

Radio Trade Pictures



Major Herbert H. Frost, of Chicago, recently won the cup shown above for successfully constructing the first radio horn from bakelite.



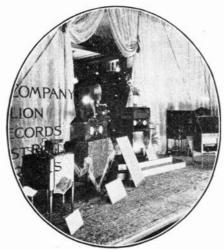
The E. W. Murray Lighting Co., Youngstown, O., demonstrates the effectiveness of a radio display in conjunction with its other lines of merchandise.



Miss Helen Filkey of Chicago, winner of the 100 yard dash at the recent Radio Festival in that city, which was attended by 60,000 people. The set was her reward.



A homelike touch is lent the above display of a receiving set and loud speaker in one corner of a dealer's showroom. The sales appeal is positive.



A corner of the radio display window featured by the Aeolian Co., New York City. At night the lighting arrangements add to the beauty of the windows.

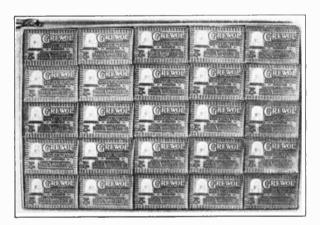


A glimpse of the radio editors and writers present at the recent dinner tendered members of the Fourth Estate in New York City by the De Forest Radio Co. of Jersey City, N. J.

Displays that Help the Dealer to Sell



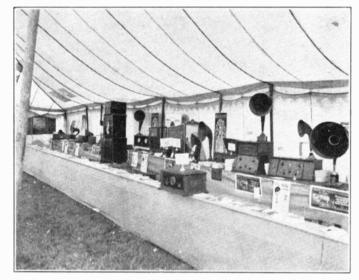
One of the show windows of Ludwig Hommel & Co., Pittsburgh, Pa. The other is an interior view of the concern's establishment in that city. Both are striking examples of carefully planned and artistically arranged radio displays.



The Grewol Mfg., Co., Newark, N. J., popularizes its well known Detector by means of appealing cartons such as are shown in the above illustration. They make a real selling appeal when neatly arranged on the dealer's shelves.



Parts for set building are more likely to appeal to the prospective patron when attractively packed than in any other way. The C. D. Tuska Co., Hartford, Conn., features this container among its dealers.



Many dealers took advantage of Fall fairs during the past season and leased display space "under the white tops." Needless to say, an arrangement of radio sets and accessories similar to that shown at a fair held in Pennsylvania last Fall should prove a business getter for the enterprising dealer.



Twenty sizes, and twenty kinds of screws are contained in the above carton featuring the Eclipse Screw Assortment, distributed by Henry Frank, Jr., New York City. He claims that this method of packing assures the purchaser being satisfied.

Radio Trade Pictures



A section of the radio department in Bamberger's department store, Newark, N. J. The store is the home of WOR, well known broadcasting station.



The De Forest Radio Co., Jersey City, offered an attractive booth at the recent National Radio Exposition in New York City. The color scheme proved very effective.



Autumn leaves and Cunningham tubes are pleasingly blended in this window display. "Tie-ups" with the season can be worked to good advantage.

Joseph Haydon, of the firm of Haydon & Haydon, New York City, recently came into national prominence when he rendered a number of vocal selections over leading broadcasting stations in this city. His many frieads in the radio industry never knew that the genial executive, and radio manufacturer, possessed this unusual talent.

They were further surprised to learn that Mr.

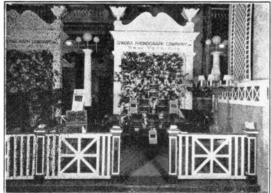
1



JOSEPH HAYDON

Haydon played in light opera in Daly's Theatre, London. Shortly after arriving in this country he played extensive tours under the management of Charles Dillingham and Daniel Frohman for many years.

The lure of radio claimed the stage star and soon after the well known partnership was formed. Now both the man and his products are known from coast to coast.



A partial view of the large booth of the Sonora Phonograph Co., at the recent National Radio Exposition, Grand Central Palace, New York City.



The Thurman Coil, measuring three feet in height was featured by the Radio Requirements Co., Philadelphia, at the recent radio exposition held in that city.



An attractive array of Federal receiving sets are shown in the above window presented by the Overland Radio & Equipment Co., New York City.

WHERE TO BUY RADIO EQUIPMENT

A Classified List of Our Advertisers

AERIALS, LOOP

Bodine Elect. Co., 2225 W. Ohio St., Chicago, Ill.

Philmore Mfg. Co., 105 Chambers St., New York City. Radio Corporation of America, 233 Broad-

way, New York City. Radio Units, Inc., 1302 First Ave., May-

wood. Ill.

AMPLIFIERS, POWER
The Bristol Co., Waterbury, Conn.
Magnavox Co., Oakland, Cal.; 350 West
31st St., New York City.

AMPLIFIER UNITS

Atwater Kent Mfg. Co., 4941 Stenton Ave., Philadelphia, Pa. Federal Tel. & Tel. Co., Buffalo, N. Y. Kellogg Switchboard & Supply Co., Adams & Aberdeen Sts., Chicago, Ill.

ANTENNA EQUIPMENT

American Hard Rubber Co., 11 Mercer St., New York City. S. Brach Mfg. Co., 129 Sussex Ave., Newark, N. J.

ASSOCIATIONS

Radio Trade Association, 1133 Broadway, New York City. Henry M. Shaw, President; H. H. Eby, Treasurer; L. A. Nixon, Secretary.

BATTERIES, "A"

National Carbon Co., Inc., New York,

Standard Elec. Novelty Co., 19 Bond St., New York City.

Wireless Dry Cells, Ltd., Niagara Falls,

"B" BATTERIES

Burgess Battery Co., Harris Trust Bldg.,

Chicago, Ill.
Cleveland Eng. Lab., Cleveland, Ohio.
Diamond Elec. Specialty Co., 101 S. Orange Ave., Newark, N. J.
Electrad, Inc., 428-A B'way, New York

Electrical Mfg. Agency, 25 N. Dearborn
St., Chicago, Ill.

St., Chicago, Ill.

Eureka Battery Co., 101 Wooster St.,
New York City.

National Carbon Co., Inc., 30 East 42nd
St., New York City.

The Radio Rabat Co., 1765 St. Clair Ave.,
Claysland Co.

Cleveland, O.

Standard Elec. Novelty Co., 19 Bond St., New York City

Wireless Dry Cells, Ltd., Niagara Falls.

BATTERY CHARGERS

Forest Elect. Co., New & Wilsey Sts., Newark, N. J. Mohawk Elec. Mfg. Co., 17 Kirk Place,

Newark, N. J.
Niles Mfg. Co., Ypsilanti, Mich.

BATTERY MATS

May Rubber Co., 27 Warren St., New York City.

BEZELS

Electrical Research Labs., 2515 N. Michi-

gan Ave., Chicago, Ill.

Sheffield Trimming & Stamping Co.,
211 Centre St., New York City.

BINDING POSTS

H. H. Eby Mfg. Co., 40 South 7th St., Philadelphia, Pa.

BINDING POSTS

Globe Phone Mfg. Co., Reading, Mass. Kay Radio Co., 364 Thirty-ninth St., Brooklyn, N. Y.

Kellogg Switchboard & Supply Co., Adams & Aberdeen Sts., Chicago, Ill. Marshall Gerken Co., Dept. E, Toledo, O.

BINDING POSTS

Spee Dee Specialty Co., 271 Canal St., St., New York City.

BINDING POSTS, INITIALED

H. H. Eby Mfg. Co., Philadelphia, Pa. The Marshall-Gerken Co., Dept. E, Toledo, Ohio.

Philmore Mfg. Co., 165 Chambers St., New York City.

BINDING POSTS, MOUNTED

Bel-Tone Radio Company, 161 Jamaica Ave., Brooklyn, N. Y.

BINDING POSTS, REMOVABLE KNOB

Marshall-Gerken Co., Toledo, Ohio.

American Cabinet Wks., Belmar, N. J. American Radio Cabinet Co., Grand Rapids, Mich.

Diamond State Fibre Co., Bridgeport, Pa. Ebco Radio Cabinet Co., 410 W. 27th St., New York City.

Empire United Hat Block Co., 312 East 22nd St., New York City.

Excello Products Corp., 4826 West 16 St.,

Cicero, Ill.

Excluso Auto Trunk & Spec. Corp., 120 Crosby St., New York City. Irving Furn. Factories, Inc., 469-7th Ave.,

New York City. Knockdown Radio Cabinet Corp., 262

Railroad Ave., Jersey City, N. J.
Trenton Wood Spec. Co., Trenton, N. J.
Xcluso Auto Trunk Spec. Co., 588 Broadway, New York City.

CLARIFIERS

A. H. Grebe & Co., Richmond Hill, N. Y.

CLIPS

Fahnestock Electric Co., Long Island City, New York City. Sheffield Trimming & Stamping Co., 211 Centre St., New York City.

COILS

Berstan Radio Products Co., 99 Bedford

St., Boston, Mass.
Coto-Coil Co., Providence, R. I.
Federal Tel. & Tel. Co., Buffalo, N. Y. General Radio Winding Co., 214 Fulton

St., New York City. Haydon & Haydon, 73 Warren St., New

York City.
Stiers Radio Corp., 993 4th Ave., Brooklyn, N. Y.

COILS, COCKADAY

The Precision Coil Co., 209 Centre St., New York City.

COILS. TUNING

Electrad, Inc., 428 Broadway, New York City.

Kellogg Switchboard & Supply Co., 1066
West Adams St., Chicago, Ill. Transcontinental Sales Co., 241 Market

St., Newark, N. J.

(Continued on page 73)

COMPLETE LINE

Atwater Kent Mfg. Co., 4941 Stenton Ave., Philadelphia, Pa.

Crosley Radio Corp., 232 Alfred St., Cincinnati, Ohio.

Federal Tel. & Tel. Co., Buffalo, N. Y.

General Radio Co., Cambridge, Mass. Edward J. Goetz, 2409 Harris Ave., Cincinnati, Ohio. Kellogg Switchboard & Supply Co., 1066

W. Adams St., Chicago, Ill.
The Premier Electric Co., 1801 Grace St., Chicago, Ill.

Radio Corporation of America, 233 Broadway, New York City.

CONDENSERS, FIXED

Berstan Radio Prods. Co., 99 Bedford St., Boston, Mass.

Electrad, Inc., 428 Broadway, New York

Federal Tel. & Tel. Co., Buffalo, N. Y. Chas. Freshman Co., Inc., 106 Seventh Ave., New York City. Marshall-Gerken Co., Toledo, Ohio.

CONDENSERS, NEUTRALIZING

Reliable Parts Mfg. Co., 2819 Prospect Ave., Cleveland, Ohio.

CONDENSERS, VARIABLE

Adams Morgan Co., 12 Alvin Ave., Upper Montclair, N. J

American Brand Corp., 8 West Park St.,

Newark, N. J.

American Specialty Co., Bridgeport, Conn.

Beacon Radio Mfg. Co., 195 Wooster St., New York City. Bruno Radio Corp., 300 Water St., New

York City De Luxe Elec. Co., 1152 Bedford Ave.. Brooklyn, N. Y.

Duplex Engine Governor Co., 48 Flatbush Ave.. Ext.. Brooklyn, N. Y.

Ave., Ext., Brooklyn, N. Y. Eagle Mfg. Co., 72 York St., Jersey City,

Eagle Condensers, Inc., 858 Bedford Ave.,

Brooklyn, N. Y.
Chas. Freshman Co., Inc., 106 Seventh
Ave., New York City.
Gardiner & Hepburn, Inc., Philadelphia,

General Instrument Co., 423 Broome St., New York City.

General Radio Co., 11 Windsor St., Cam-

d

bridge, Mass.
Grewol Mfg. Co., Newark, N. J.
Hammarlund Mfg. Co., 144 West 18th
St., New York City.
Heath Radio & Electric Corp., 210 First

St., Newark, N. J. Imperial Elec. Mfg. Co., 50 Columbia St.,

Newark, N. J. Elgin Radio Corp., 71 State St., Elgin,

Federal Tel. & Tel. Co., Buffalo, N. Y. Kellogg Switchboard & Supply Co., 1066 West Adams St., Chicago, Ill. Lincoln Radio Corp., 224 N. Wells St.,

Chicago, Ill.

Philmore Mfg. Co., 105 Chambers St.,
New York City.

The Premier Electric Co., 1801 Grace St.,

Chicago, Ill. Radio Corporation of America, 233 Broad-

way, New York City. Radio Industries Corp., 131 Duane St., New York City.

WHERE TO BUY RADIO EQUIPMENT

A Classified List of Our Advertisers

(Continued from page 72)

CONDENSERS, VARIABLE

kenable Parts Mfg. Co., 2819-35 Prospect Ave., Cleveland, O.

United Radio Lab., 1333 Fulton St.,
Brooklyn, N. Y. United Scientific Labs., 92 E. 10th St., New York City. U. S. Tool Co., 117 Mechanic St., New-

ark, N. J. W. B. Sales Co., 78 Fifth Ave., New York City.

CONNECTOR, CLIPS

The Sheffield Trimming & Stamping Co., 211 Centre St., New York City.

CONNECTORS

Gotham Radio Corp., 50 Park Place.

CONTACT POINTS

Radio Mfrs. Outlet, Inc., 123 Liberty St., New York City. Kellogg Switchboard & Supply Co., 1066
West Adams St., Chicago, Ill.

B-Metal Refining Co., 525 Woodard Ave., Detroit, Mich.

Curry & Coutellier Labs., 2845 W. 9th St., Los Angeles, Cal. E-Z-Y Crystal Co., 521 Arch St., Philadelphia, Pa. Federal Tel. & Tel. Co., Butfalo, N. Y. Rusonite Products Corp., Dept. D, 15 Park Row, New York City.

DETECTORS, CRYSTAL

Chas. Freshman Co., Inc., 106 Seventh Ave., New York City. The Erisman Lab., 3785 Broadway, New York City.
Federal Tel. & Tel. Co., Buffalo, N. Y.
Foote Radio Corp., 107 N. 19th St., Philadelphia, Pa. Grewol Mfg. Co., Newark, N. J. Lego Corp., 605 West 43rd St., New York City.

DIALS

American Hard Rubber Co., 11 Mercer American Hard Kubber Co., 11 Mercer St., New York City.
Federal Tel. & Tel. Co., Buffalo, N. Y.
Chas. Freshman Co., Inc., 106 Seventh Ave., New York City.
Kellogg Switchboard & Supply Co., 1066
West Adams St., Chicago, Ill.
Marshall-Gerken Co., Toledo, Ohio.
Spee-Dee Specialty Co., 271 Canal St.,
New York City.

New York City.

DIALS (Micrometer)

Jewett Radio & Phono. Co., 5662 12th St., Detroit, Mich. Mydar Radio Co., 11 Campbell St., Newark, N. J.

DISTRIBUTORS (Illinois)

The Barsook Co., 523 W. Jackson Blvd., Chicago, Ill. Hudson-Ross, 123 W. Madison St., Chicago, Ill. Jackson Sales Co., 28 East Jackson Blvd., Chicago, Ill.

Reliance Radio Sales Co., 186 N. La Salle St., Chicago, Ill.

DISTRIBUTORS, (Illinois)

Wakem & McLaughlin, 225 E. Illinois St., Chicago, Ill. The Western Radio Mfg. Co., 138 W. Lake St., Chicago, III.
Westphal Co., 224 So. Michigan Ave.,

Chicago, Ill.

DISTRIBUTORS (Kansas)
Radio Brokerage Co., 1311 Grand Ave.,
Kansas City, Mo.

DISTRIBUTORS (New Jersey) The Mydar Radio Co., 11 Campbell St.,

Newark, N. J.

DISTRIBUTORS (New York)
American Wireless Corp., 34 W. 23rd St.,

New York, N. Y Peter J. Constant Inc., 91 Seventh Ave., New York City.

Cosmopolitan Radio Appliance Co., 26 Cortland St., New York City. Friedlander-Kopple Radio Service, 149 Church St., New York City. Manhattan Radio Corp., 112 Trinity Pl.,

New York City.
Radio Mfrs. Outlet, Inc., 123 Liberty St.,
New York City.

Sunbeam Radio Co., 1834 Broadway, New York City.

Triangle Radio Sup. Co., 120 W. 23nd St., New York City. Wolfe Radio Co., 71 West Broadway, New York City.

DISTRIBUTORS (Ohio)

The Edw. J. Goetz Co., 2409 Harris Ave., Cincinnati, Ohio.
Ohio Rubber & Textile Co., 228 West 7th St., Cincinnati, Ohio.

DISTRIBUTORS (Pennsylvania)

Northeastern Radio, 302 Adams Ave., Scranton, Pa.

DRY CELL SETS

Q. T. Light Co., Dept. D-2, East Orange, N. J.

Radio Corporation of America, 233 Broadway, New York City.

DRY CELL TUBE SOCKETS

Federal Tel. & Tel. Co., Buffalo, N. Y. Radio Corporation of America, 233 Broadway, New York City.

EAR CUSHIONS

May Rubber Co., 25 Church St., New York City. Miller Rubber Co., Akron, Ohio.

ENGRAVING MACHINES

H. P. Preis, 9 Campbell St., Newark, N. J.

ENGRAVINGS

Bruno Radio Corp., 300 Water St., New York City. Welbar Mfg. Co., Room 534, Monadnock Bldg., Chicago, Ill. Roselle Mfg. Co., 215 Ninth Ave., Roselle, N. J.

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FINDINGS

Radio Specialty Co., 96 Park Place, New York City.

GRID LEAKS

Electrad, Inc., 428 Broadway, New York City. Federal Tel. & Tel. Co., Buffalo, N. Y. Chas. Freshman Co., Inc., 106 Seventh Avenue, New York City.

Durham & Co., 1936 Market St., Philadelphia, Pa.

D. X. Instrument Co., Harrisburg, Pa. Pudlin Eng. Co., 91-7th Ave., New York City.

Radio Corporation of America, 233 Broad-

way. New York City. Star Fuse Co., Inc., 168 Center St., New York City.

Tridot Elect. Co., 16 Hudson St., New York City.

Wireless Products Corp., 136 Prince St., New York City.

GROUND CLAMPS

Blackburn Specialty Co., 1964 E. 66th St., Cleveland, Ohio.

HAND TOOLS

Bridgeport Hdwe. Mfg. Co., Bridgeport, Conn.

HEAD SETS (also see Phones)

American Radiophone & Mfg. Co., 26 Prospect St., Newark, N. J. Berstan Radio Products Co., 99 Bedford St., Boston, Mass.

Best Mfg. Co., 75 Hudson St., Newark,

Bi Metalic Radio Products Co., 480-18th Ave., Newark, N. J. C. Brandes, Inc., 237 Lafayette St., New

York City.

Dictograph Products Corporation, 220 W. 42d St., New York.

Federal Tel & Tel. Co., Buffalo, N. Y. Globe Phone Mfg. Co., Reading, Mass. Th. Goldschmidt Corp., 15 William St., New York City.

Kellogg Switchboard & Supply Co., 1066 West Adams St., Chicago, III. Radio Industries Corp., 131 Duane St., New York City.

Royal Electrical Laboratories, 117 Tichenor St., Newark, N. J.

The Tower Mfg. Corp., 98 Brookline Ave., Boston, Mass.

True Tone Mfg. Company, 186 North La Salle St., Chicago, Ill Union Fabric Co., Derby, Conn.

HORNS

Best Radio Horn Mfg. Co., 398 First Ave., New York City. Belltone Radio Corp., 81 Crosby St., New York City. Howard Papier Mache Co., Inc., 315 W. 47th St., New York City.

HYDROMETERS

Bemco Mfg. Co., 243 W. 55th St., New York City. Scranton Glass Instrument Co., Scranton, Testrite Ins't Co., 101 Fifth Ave., New

York City.

WHERE TO BUY RADIO **EQUIPMENT**

A Classified List of Our Advertisers

(Continued from page 73)

INDUCTANCES

Nolte Mfg. Co., 61 Gautier Ave., Jersey City, N. J.

INFORMATION ABOUT RADIO Service Bureau, Radio Dealer, 1133 Broadway, New York.

INSULATION

American Hard Rubber Co., 11 Mercer Street, New York City. Bakelite Corp., 247 Park Ave., New York

City. Diamond State Fibre Co., Bridgeport, Pa. Fleron & Son, Inc., M. M., 113 North Broad St., Trenton, N. J.

INSULATION, MOLDED

Shaw Insulator Co., 150 Coit St., Irvington, Newark, N. J.

INSULATORS

American Hard Rubber Co., 11 Mercei St., New York City.

Electrical Mfg. Agency, 25 N. Dearborn St., Chicago, Ill.

Spee-Dee Specialty Co., 271 Canal St.,

New York City.

TACKS

Brooklyn Metal Stamping Co., 718 Atlan-

tic Ave., Brooklyn, N. Y. Carter Radio Co., 1811 Republic Bldg.,

Carter Radio Co., 1811 Republic Bldg., Chicago, Ill.
Consolidated Inst. Co. of America, 41 E. 42nd St., New York City.
Federal Tel. & Tel. Co., Buffalo, N. Y. Kellogg Switchboard & Supply Co., 1066 West Adams St., Chicago, Ill.
The Saturn Mfg. & Sales Co., Inc., Dept. D., 48 Beekman St., New York City. Yaxley Mfg. Co., 217 N. Desplaines St., Chicago, Ill.

Brilliantone Radio Corp., 324 W. 42nd St., New York City. Chas. Freshman & Co., 106-7th Ave., New

York City.

Electrical Research Labs., 2515 Michigan Ave., Chicago, Ill.

Phenix Radio Labs., 3 Beekman St., New York City. Richardson Radio Corp., 45 Lispenard St.,

Richardson Raulo Col.
New York City.
Radio Industries Corp., 131 Duane St.,
New York City.
Shamrock Mfg. Co., 314 Market St.,

Electrical Mfg. Agency, 25 N. Dearborn St., Chicago, Ill.

LIGHTNING ARRESTERS

Ackerman Bros. Co., Inc., Dept RD, 301 W. 4th St., New York City. L. S. Brach Mfg. Co., 129 Sussex Ave.,

Newark, N. J. D. X. Instrument Co., Harrisburg, Pa. Electrad, Inc., 428 Broadway, New York

City.

Electric Service Supplies Co., 17th & Cambria Sts., Philadelphia.
Federal Tel. & Tel. Co., Buffalo, N. Y. Radio Corporation of America, 233 Broadway. New York City.

Simplex Radio Company, Philadelphia,

LOUD SPEAKERS (also see Am-

Atwater-Kent Mfg. Co., 4941 Stenton Ave., Philadelphia, Pa. Best Mfg. Co., 75 Hudson St., Newark,

The Bristol Co., Waterbury, Conn.
C. Brandes, Inc., 237 Lafayette St., New York City.
Dictograph Products Corporation, 220

W. 42nd St., New York City.

Dual Loud Speaker Co., 210 W. 54th St.,

New York City.

Federal Tel. & Tel. Co., Buffalo, N. Y.

Firth Radio Corp., 25 Beaver St., New

Th. Goldschmidt Corp., 15 William St., New York City.

Halliwell Elec. Co., 113-119 Fourth Ave., New York City.
Lightrite Co., Bloomfield, N. J.

Kellogg Switchboard & Supply Co., 1066

West Adams St., Chicago, Ill. agnavox Co., Oakland, Cal.; Magnavox Co., Oakland, Cal.; New York Office, 350 West 31st St.
D. W. May & Co., 89 Central Ave., Newark, N. J.

Mu-Rad Labs., 800 Fifth Ave., Asbury Park, New Jersey.

Music Master Corp., S. W. Cor. 10th & Cherry Sts.. Philadelphia, Pa.

National Radio Outlet, 54 Lispenard St.,
New York City.

Radiolamp Co., Inc., New York City.
Radio Corporation of America, 233 Broadway, New York City.
Reichman Co., 4801 S. Morgan St., Chicago, Ill.

Royal Elec. Labs., 117 Tichenor St., Newark, N. J.

Sonora Co., 479 Broadway, New York

Spartan Elec. Corp., 99 Chambers St., New York City. R. E. Thompson Mfg. Co., 30 Church St., New York City.

Tonk Bros. Co., High Street, Newark, Voluma Products Co, Hempstead, N. Y.

LOUD SPEAKER UNITS

American Radiophone & Mfg. Co., 26 Prospect St., Newark, N. Electrical Mfg. Agency, 25 N. Dearborn

St., Chicago, Ill. Firth Radio Corp., 25 Beaver St., New York City. Th. Goldschmidt Corp., 15 William St.,

New York City. Royal Elec. Lab Labs., 117 Tichenor St., Newark, N. J.

LUGS, COPPER

F. R. Ziereck Machine Works, 207 Canal St., New York City.

MAILING LISTS

Ross-Gould Co., N. 10th, St. Louis, Mo. Trade Circular Addressing Co., 166 W. Adams St., Chicago, Ill.

MICA CONDENSERS

Spee-Dee Specialty Co., 271 Canal St., New York City. (Continued on page 76)

MICA CONDENSERS, VARIABLE Reliable Parts Mfg. Co., 2819 Prospect Ave., Cleveland, O.

MICROPHONES

Federal Tel. & Tel. Co., Buffalo, N. Y. Globe Phone Mfg. Co., Reading, Mass. Kellogg Switchboard & Supply Co., 1066 West Adams St., Chicago, Ill.

MOULDS

Micrometric Foundry & Mach. Co., 141 Van Duzer St., Tompkinsville, N. J.

NEUTRODYNE PARTS

Harold M. Schwab, 55 Vesey St., New York City.

OFFICE EFFICIENCY HELPS

Ross-Gould, 538 North 10th St., St. Louis, Mo.

ORGANIZATIONS

Radio Trade Association, 1133 Broadway, New York City.

PANELS

American Hard Rubber Co., 11 Mercer St., New York City.

Allied Radio Co., 162 West 34th St., New York City.

Diamond State Fibre Co., Bridgeport, Pa. Fleron & Son, Inc., M. M., 113 North Broad St., Trenton, N. J.

Pittsburgh Radio & Appliance Co., Desk D, 112 Diamond St., Pittsburgh, Pa. Spaulding Fibre Co., Wheeler St., Tona-

wanda, N. Y.
Universal Insulation Co., 49 Mechanic St., Newark, N. J.

American Hard Rubber Co., 11 Mercer St., New York City. Amsco Products, Inc., Fairbanks Bldg.,

Broome and Lafayette Sts., New York

Atwater Kent Mfg. Co., 4941 Stenton Ave., Philadelphia, Pa.

Electrad Inc., 428 Broadway, New York City. Hart & Hegeman Mfg. Co., Hartford,

Conn.

Jos. W. Jones, 40-46 W. 25th St., New York City.

105 Chambers St.,

Philmore Mfg. Co., 105 Chambers St., New York City.

The Premier Electric Co., 1801 Grace St., Chicago, Ill.

Richardson Radio, Inc., 45 Lispenard St., New York City. Harold M. Schwab, Inc., 55 Vesey St.,

New York City.

Spee Dee Specialty Co., 271 Canal St.,
New York City.

Yaxley Mfg. Co., 217 N. Desplaines St.,

Chicago, Ill.

PATENTS

Manufacturers Patent Company, 520

Fifth Ave., New York City.

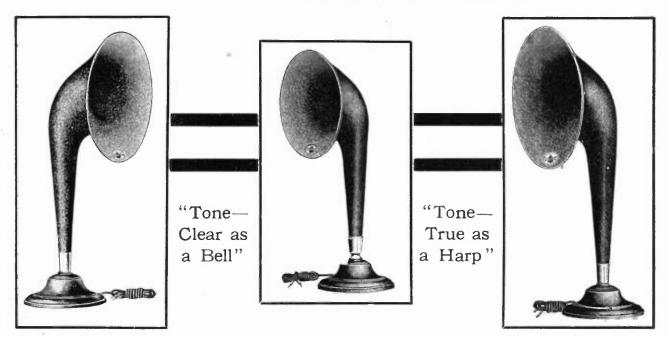
Richard B. Cwen, 2276 Woolworth
Building, New York; 32 Owen Bldg., Washington, D. C.

PHONE CONNECTORS

Kay Radio Co., 364 Thirty-ninth St., Brooklyn, N. Y.

BELLTONE

LOUD SPEAKERS



Made of unbreakable fibre, with solid heavy metal bases and nickel or gold plated ferrules. Every Belltone Loud Speaker is made by accoustical experts—men who have been trained in this particular work for many years back—long before radio became generally popular. Belltone speakers are as beautiful and perfect as the most discriminating radio fan could wish for. Guaranteed absolutely to be mechanically perfect.

Jobbers and Distributors

Some exclusive territories are still available for live-sales organizations of good standing. Write or wire today for our proposition.



WHERE TO BUY RADIO **EQUIPMENT**

A Classified List of Our Advertisers

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PHONES (See Head Sets)

PHONOGRAPH UNITS

Th. Goldschmidt Corp., 15 William St., New York City.

PHUSIFORMERS

De Roy Radio Corp., 280 Plane St., Newark, N. J. Cosmopolitan Phusiformer Co., 15 W.

18th St., New York City.

PLUGS

Brooklyn Metal Stamping Co., 718 Atlantic Ave., Brooklyn, N. Y.

Carter Radio Co., 1811 Republic Bldg.,
Chicago, Ill.

Consolidated Inst. Co. of America, 41 E. 42nd St., New York City.

Federal Tel & Tel. Co., Buffalo, N. Y.
General Instrument Co., 123 Liberty St., New York City.

New York City.

Kellogg Switchboard & Supply Co., 1066
West Adams St. Chicago !!!

Philmore Mfg. Co., 165 Chambers St.,
New York City.

Polymet Mfg. Co., Inc., 74 Lafayette St.,
New York City.

The Saturn Mfg. & Sales Co., Inc., Dept. D., 48 Beekman St., New York City.

Yaxley Mfg. Co., 217 N. Desplaines St.,
Chicago, Ill.

POTENTIOMETERS

Adams Morgan Co., 12 Alvin Ave., Upper Montclair, N. J.

Electrical Mfg. Agency, 25 N. Dearborn St., Chicago, Ill. Federal Tel. & Tel. Co., Buffalo, N. Y.

The Premier Electric Co., 1801 Grace St., Chicago, Ill.

Radio Corporation of America, 233 Broadway, New York City.

Spee-Dee Specialty Co., 271 Canal St., New York City.
United Radio Labs., 1333 Fulton St.,
Brooklyn, N. Y.

United Scientific Lab., 92 East 10th St., New York City.

PUBLICATIONS

The Phonograph Radio Dealer, 1133 Broadway, New York City. Broadway.

The Radio Dealer, 1133 Broadway, New York City.

The Radio Manufacturer, 1133 Broadway, New York City.

The Radio Dealer YEAR BOOK, 1133 Broadway, New York City.

RADIO TRADE MARKS

Carter, Chauncey P., 4907 Potomac Ave., N. W., Washington. D. C.

RESISTANCE UNITS

L. S. Brach Mfg. Co., Newark, N. J.

Adams Morgan Co., 12 Alvin Ave., Upper Mortclair, N. J.

Aeolus Corp., 161 Grand St., New York

American Spec. Co., Bridgeport, Conn. Amsco Products, Broome and Lafayette

Sts., New York City.

De Jur Products Co., 199 Lafayette St.,
New York City.

D. X. Inst. Co., Harrisburg. Pa.

RHEOSTATS

Electrical Mfg. Agency, 25 N. Dearborn

St., Chicago, Ill. Federal Tel. & Tel. Co., Buffalo, N. Y. Kellogg Switchboard & Supply Co., 1066

West Adams St., Chicago, Ill.
Philmore Mfg. Co., 105 Chambers St.,
New York City.
Polymet Mfg. Co., Inc., 74 Lafayette St.,
New York City.

The Premier Electric Co., 1801 Grace St., Chicago, Ill.

Radio Corporation of America, 233 Broad-

way. New York City.

The Sheffield Trimming & Stamping Co.,
211 Center St., New York City.

Spee-Dee Specialty Co., 271 Canal St.,

New York City.

United Radio Labs., 1333 Fulton St., Brooklyn, N. Y.

United Scientific Lab., Inc., 92 East 10th St., New York City.

Yaxley Mfg. Co., 217 N. Desplaines St.,

Chicago, Ill.

RHEOSTATS, VERNIER

Allen-Bradley Co., 487 Clinton St., Milwaukee, Wis.

D. X. Instrument Co., Harrisburg, Pa. SAFETY SIGNALS

Apex Radio Co., 503 Fifth Ave., New York City.

SCREWS

Spear Mfg. Co., New Brunswick, N. J.

SETS, CRYSTAL RECEIVING

Chelsea Radio Co., Chelsea, Mass. Curry & Coutellier Lab., 2845 West 9th St., Los Angeles, Cal. Federal Tel. & Tel. Co., Buffalo, N. Y.

SETS, NEUTRODYNE

F. A. D. Andrea, Inc., 1581 Jerome Ave.,
 New York City.
 Eagle Radio Corp., 16 Boyden Place,

Newark, N. J. Freed-Eisemann Corp., 36 Flatbush Ave. Ext. Brooklyn. N. Y.

Ext., Brooklyn, N. Y. Garod Corp., 120 Pacific St., Newark, N. I.

Gilfillan Bros., 1815 W. 16th St., Los Angeles, Calif. R. E. Thompson Mfg. Co., 30 Church St.,

New York City.

SETS. PORTABLE
The Aeolus Corporation, 161 Grand St.,
New York City.

Bristol Co., Waterbury, Conn. Q. T. Light Co., 140 Park Ave., East Orange, N. J.

Radio Corporation of America, 233 Broadway, New York City.

SETS, RADIO FREQUENCY

Amsco Products Co., Broome & Lafayette Sts., New York City. Crosley Mfg. Co., 832 Alfred St., Cincin-

nati, Ohio.

A. H. Grebe & Co., 82 Van Wyck Blvd., Richmond Hill, N. Y.

Mu-Rad Laboratories, 800 Fifth Ave., Asbury Park, N. J.

Radio Corporation of America, 233 Broadway, New York City.
Radio Manufacturers Outlet, Inc., 123
Liberty St., New York City.

(Continued on page 78)

SETS, RECEIVING (also see Crystal Sets and Sets; Regenerative and Cabinet Sets and Unit Type Sets).

A-C Electrical Mfg. Co., Dayton, Ohio. Andrews Radio Company, 327 South La Salle St., Chicago, Ill.

Amsco Products, Inc., Dept. R. D., Fairbanks Bldg., Broome and Lafayette Sts., New York City. Atwater-Kent Mfg. Co., 4941 Stenton

Ave., Philadelphia, Pa.

Biltmore Radio Co., Boston, Chas. Freshman Co., Inc., 106-7th Ave., New York City.
Colonial Radio Corp., East Ave. & 10th St., Long Island City, N. Y.
Crosley Radio Corp., 232 Alfred St., Cincinnati Chin

cinnati, Ohio.

De Forest Radio Company, Jersey City,

Eisemann Magneto Corp., 165 Broadway, New York City.

El-Paige Mfg. Co., 1416 Broadway, New York City. Farrand Mfg. Co., 28 South Sixth St.,

Newark, N. J.
Federal Tel. & Tel. Co., Buffalo, N. Y.
Herzog Radio Corp., 718 Atlantic Ave.,
Brooklyn, N. Y.
Heteroplex Mfg. Co., 423 Market St.,
Philadelphia, Pa.

Lightrite Co., Bloomfield, N. J. The Magnavox Co., Oakland, Calif.

The Mazda Radio Mfg. Co., 3407 Perkins Ave., Cleveland, Ohio. Mu-Rad Laboratories, Inc., 800 Fifth

Ave., Asbury Park, N. J.

National Airphone Co., 20 Hudson St., New York City.

New York City.

New York City.

New York City.

Operadio Corp., Chicago, Ill.

The Q. T. Light Co., Dept. D-2, East

Orange N I

Orange, N. J

Racon Elect. Co., Inc., 537 Broadway New York City. Radio Mfg. Outlet, 123 Liberty St, New York City

Radio Industries, Inc., 131 Duane St., New York City. Radio Corporation of America, Wool-

worth Bldg., New York City. Ramstone Corp., New York City. Resas, Inc., 112 Chambers St., New York

City.

E. Singer Co., 187 Greenwich St., New York City. Starr Equipment Co., 368 Hamilton Ave., Brooklyn, N. Y. Thermiodyne Radio Corp., Plattsburg,

Westphal Mfg. Co., 224 So. Michigan Ave., Chicago, Ill.

SETS, REGENERATIVE

Adams-Morgan Co., 12 Alvin Place, Upper Montclair, N. J. Chelsea Radio Co., Chelsea, Mass.

Crosley Radio Corp., 232 Alfred St., Cincinnati, Ohio.

A. H. Grebe & Co., 82 Van Wyck Blvd., Richmond Hill, N. Y.

Radio Corporation of America, 233 Broadway, New York City. Thompson, R. E., 150 Nassau St., New

Zenith Radio Corp., 328 So. Michigan



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In the Kardon 5 tube Radio Frequency Receiver, you have a most vital feature, exclusively a Kardon development found in no other receiver.

The Kardon Receiver assures absolute prevention against squealing and howling! Tunes local and DX alike! Achieved by the "KOMPENTROL", radio's newest important invention which cuts out all interference, enables fans to tune in practically any station desired, local or long distance—and builds up weak DX signals until they vie with the most powerful local station!

Just what your customers need—and want! The entire story of the sales stimulating KARDON KOMPENTROL 5 tube Tuned Radio Frequency Receiver which retails for \$75, less tubes, batteries and speaker—cannot be told here.

Write for complete information—today!

KARDON PRODUCTS CO., Inc. 101 Varick St. New York City





Kardon Standard Unit Audio Transformer

Kardon Standard Units are made for every circuit. Furnished with all the routine wiring of accessories. You just add the tuner you wish in space designed for it. Good items with a good profit.



WHERE TO BUY RADIO **EQUIPMENT**

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SOCKETS

Adams Morgan Co., 12 Alvin Ave., Upper Montclair, N. J

Aeolus Corp., 161 Grand St., New York

Amsco Products Co., Broome & Lafayette Sts., New York City.
Benjamin Elect. Co., 120 S. Sangamore St., Chicago, Ill.

Eagle Mfg. Co., 72 York St., Jersey City, N. J.

Federal Tel. & Tel. Co., Buffalo, N. Y. Marshall-Gerken Co., Toledo. Ohio. Mazda Radio Mfg. Co., 3405 Perkins Ave.,

Cleveland, Ohio.
United Radio Mfg. Co., 191 Greenwich St., New York City.

SOLDERING FLUID Firth Radio Corp., 25 Beaver St., New York City.

SOLDERING IRONS

Frank E. Wolcott Mfg., Hartford, Conn.

SOLDERING PASTE

Solderall Company, Newark, N. J.

SPAGHETTI

Alpha Radio Supply Co., 611 Broadway, New York City. Wolf Radio Co., 71 West Broadway, New

York City.

Uptown Mfg. & Sup. Co., 7624 N. Paulina
Ave., Chicago, Ill.

SUPERHETERODYNE PARTS

Friedlander Kopple Radio Service, 149 Church St., New York City. Radio Eng. Labs., 406 Marquette Bldg., Detroit, Mich.

Radio Receptor Co., 59 W. Bank St.,

New York City.
Resas, Inc., 112 Chambers St., New York

City.

City.

City.

Sunbeam Radio, Inc., 45 Lispenard St., New York City.

Sunbeam Radio Co., 1834 Broadway.

New York City.

W. B. Sales Co., 78-5th Ave., New York

SWITCH BATTERIES

Benjamin Elect. Co., 247 W. 27th St., Chicago, Ill.

SWITCH LEVERS

Federal Tel. & Tel. Co., Buffalo, N. Y. Marshall-Gerken Co., Toledo, Ohio.

D. X. Instrument Co., Harrisburg, Pa. Electrical Mfg. Agency, 25 N. Dearborn

St., Chicago, Ill. Federal Tel. & Tel. Co., Buffalo, N. Y. Globe Phone Mfg. Co., Reading, Mass. Kellogg Switchboard & Supply Co., 1066

West Adams St., Chicago, Ill.
United Radio Mfg. Co., 191 Greenwich
St., New York City.

TESTERS

R. M. Peffer, 334 Chestnut St., Harrisburg, Pa.

Bridgeport Hdwe. Mfg. Co., Bridgeport,

TRADE ASSOCIATIONS

Radio Trade Association, 1133 Broadway, New York City.

TRANSFORMERS, AUDIO FREQ. Adams Morgan Co., 12 Alvin Ave., Upper Montclair, N. J.

American Spec. Co., Bridgeport, Conn. Berstan Radio Prods. Co., 99 Bedford St.,

Boston, Mass.
Brooklyn Metal Stamping Co., 718 Atlan-

tic Ave., Brooklyn, N. Y.
Eagle Mfg. Co., 72 York St., Jersey City,

Electrical Research Labs., 2500 Cottage Grove Ave., Chicago, Ill. Federal Fel. & Tel. Co., Buffalo, N. Y. Ford Mica Co., Dept. RS, 14 Christopher St., New York City.

Kellogg Switchboard & Supply Co., 1066 West Adams St., Chicago, Ill.
National Airphone Co., 20 Hudson St.,
New York City.

National Transformer Company, 154
Whiting St., Chicago, Ill.
Premier Elec. Co., 1801 Grace St., Chicago, Ill.

Rauland Mfg. Co., Coyne St., Chicago,

Raven Radio, Inc., 8 Learned St., Albany.

Radio Corporation of America, 233 Broad-

way. New York City.

Reliable Parts Mfg. Co., 2819-35 Prospect Ave.. Cleveland, O.

Sunbeam Radio Co., 1834 Broadway,
New York City.

TRANSFORMERS, RADIO FREQ.

Brooklyn Metal Stamping Co., 718 Atlantic Ave., Brooklyn, N. Y. Federal Tel. & Tel. Co., Buffalo, N. Y. Henry Hyman & Co., 476 Broadway, New

York City Kellogg Switchboard & Supply Co., 1066 West Adams St., Chicago, Ill. Marle Engineering Co., Orange, N. J.

Radio Corporation of America, 233 Broadway, New York City. Radio Receptor Co., 59 Bank St., New

TRANSFORMERS, MODULATION Federal Tel. & Tel. Co., Buffalo, N. Y. Radio Corporation of America, 233 Broadway, New York City.

TRANSMITTERS

American Sales Agency, 38 Park Row, New York City.

TUBES, INSULATED

American Hard Rubber Co., 11 Mercer

St., New York City. TUBE PROTECTORS

Apex Radio Company, 503 Fifth Ave., New York City. VACUUM TUBES

Connewev Electric Lab., 309 Fifth Ave., New York City Continental Sales Co., 17 N. Washington

St., Chicago, III.

Dougal Sales Service, 327 So. La Salle St., Chicago, III.

Dutch Radio Valve Importing Co., 515 Orange St., Newark, N. J.

Electrad, Inc., 428 Broadway, New York

De Forest Radio Company, Jersey City,

VACUUM TUBES

Magnavox Products, Oakland. Calif. Radio Corporation of America, Wool-worth Bldg., New York City. Radio Electro Lab., 152 West 42nd St.,

New York City.

VACUUM TUBES

Radio Tube Lab., 296 Broadway, New York City. Royal Mfg. Co., 208 Broadway, New York

Schickerling Radio Products Mfg. Co., 313 Halsey St., Newark, N. J. O. T. Distributing, 72—5th Ave., New O. T. Vork City.

Victor Radio Mfg. Co., 32 Union Sq., New York City.

VARIABLE GRID LEAKS

The Electrad Inc., 428 Broadway, New York City.

Grewol Mfg. Co., Newark, N. J.
Wireless Products Co., 136 Prince St.,
New York City.

VARIABLE HIGH RESISTANCES Wireless Products Corp., 136 Prince St., New York City.

VARIO COUPLERS

Adams Morgan Co., 12 Alvin Ave., Upper

Montclair, N. J.
The Bel-Tone Radic Co., 161 Jamaica Ave., Brooklyn, N. Y.

Avc., Brooklyn, N. Y.
Electrical Mfg. Agency, 25 N. Dearborn
St., Chicago, Ill.
Excelsior Radio Co., 226 Grand St.,
Brooklyn, N. Y.
Federal Tel. & Tel. Co., Buffalo, N. Y.
Kellogg Switchboard & Supply Co., 1066
West Adams St., Chicago, Ill.
Shamrock Mfg. Co., 316 Market St., Newark, N. I.

ark, N. J.

ark, N. J.
Simplex Radio Co., 1013 Ridge Ave.,
Philadelphia. Pa.
Stiers Radio Corp., 993-4th Ave.. Brooklyn, N. Y.
Sunbeam Radio Co., 1834 Broadway,
New York City.

VARIOMETERS

Adams-Morgan Co., Upper Montclair, American Radio & Research Corp., Med-

ford Hillside, Mass.

Atwater Kent Mfg. Co., 4941 Stenton

Ave., Philadelphia, Pa.

The Bel-Tone Radio Co., 161 Jamaica Ave., Brooklyn, N. Y.

Columbia Radio Corp., 155 N. Union St.,

Chicago, Ill.
Electrical Mfg. Agency, 25 N. Dearborn St., Chicago, Ill.
Federal Tel. & Tel. Co., Buffalo, N. Y.
Gehman & Weinert, 42 Walnut St., New-

ark, N. J.

Kellogg Switchboard & Supply Co., 1066 West Adams St., Chicago, Ill. Shamrock Mfg. Co., 316 Market St., New-

Stiers Radio Corp., 933-4th Ave., Brooklyn, N. Y.

VERNIER ADJUSTERS

Radio Units, Inc., Suite 505, Webster Bldg., Chicago, Ill.

WINDING

General Radio Winding Co., 214 Fulton St., New York City.

WIRE

Radio Mfrs. Outlet, Inc., 123 Liberty St., New York City.

WIRE, BUS BAR

New York City.

Bi-Metalic Radio Parts Co., 476 18th
Ave., Newark, N. J.

AMONG THE TRAVELING MEN

A Regular Department of The Radio Dealer to Which Contributions are Invited

Conducted by L. N. ALLEN



R. J. MEYERS

Among Western Hills

The trade and natives of Hastings, Neb., are well acquainted with R. J. Meyers, sales manager of the radio supply department for W. M. Dutton & Sons Co., in that city. Each year the genial executive stages a radio show in the concern's store. People from Nebraska, Kansas and Colorado, interested in radio flocked to this year's show held a few months ago.

Mr. Meyers is an ardent radio enthusiast and has been very successful in creating sales prospects out in the western country where tiny homesteads fifty miles from a railroad enjoy the same programmes as does the city dweller within sight of transmitting towers.

Sees Conditions Improving

The recent appointment of W. R. Dunn as sales manager for the American Specialty Co., Bridgeport, Conn., attracted wide in-terest in the trade. Mr. Dunn was formerly one of the best known knights of the grip in radio circles. He is a firm believer in greater

i,



W. R. DUNN

Contributions to this department are welcomed by the editor. Photographs and data should be sent in the same envelope, first class mail, or the pictures should be carefully marked so as to pre-vent any error. Address all communications to "Among the Traveling Men," care THE RADIO DEALER, 1133 Broadway, New York City.

co-operation existing between the manufacturers, jobbers and dealer organizations, and

declares that it is vital to business success.

Conditions, he believes, have improved greatly, and manufacturers no longer feel that their responsibility ceases when a shipment is made. His sound selling policies have evidently been big factors in his advancement,

"Ken" Steps Ahead

Kenneth B. Cadugan has been connected with the radio industry for the past three and one-half years. He was formerly with the Pioneer Radio Sales Co., manufacturers'



KENNETH B. CADUGAN

agents, New York City. He resigned to cover metropolitan territory for the Radio Stores Corp., New York City.

In March of the current year he organized the sales department, and now is in charge of sales and purchasing. This marks a pleasing scale of progress for "Ken" as he is better known in the trade.

Finds Daytime Too Short

Leo Freed has a wide circle of friends in radio fields extending from New York to Buffalo and Boston, points which he is con-stantly covering. He is associated with the Freed-Eisemann Radio Corp., Brooklyn. N. Y., and took a prominent part in the activities in connection with the recent Third Annual Radio Show at Grand Central Palace, New York City.
Mr. Freed is strong on sales but short on



LEO FREED

pictures, which accounts for the handsome golfing attire shown above. His only regret is that the day is so short, making it a diffi-cult task for him to completely cover the business entailed in the wonderful expansion of the radio industry.

A Mohawk Booster

The many friends of Dave Lipsey, sales manager for the Mohawk Electric Corp., Chicago, will hardly recognize him in the photograph below due to the absence of an otherwise dashing mustache. He sported the above-mentioned adornment while in the

east recently, but has decided to abandon it.
The loss has not affected his sales average
as can be gleaned from reports received in cities from coast to coast which he covers. He is a familiar figure at all radio shows, and an individual who is a wholehearted missionary for Mohawk products.



DAVID LIPSEY



Definite angles, perfect eyes, and straight wire from point to point does make a difference in radio reception.

THE NESTOR BEND-RITE List Price \$1.00



RADIO PRODUCTS

Unqualifiedly Guaranteed

Fast Sellers Standard Goods Nationally Advertised

CONSOLIDATED INSTRUMENT CO., OF AMERICA 41 East 42nd Street, New York



CICO BAKELITE RHEOSTAT

One point mounting. Binding post connections. Vernier or plain types. 6-10-20-30 ohms. Absolutely uniform resistance. Plain \$1.00. Vernier \$1.25.



CICO 2-WAY PLUG

Two sets of headphones or loudspeaker and one set of phones may be connected simultaneously. Fits all standard jacks. Takes all types of tips. Price 40c.



Gives instantaneous connection.
A slight pressure on the wings releases tips for change.
Nothing to take apart—no tools—no set screws.
Bakelite body. Metal parts nickleplated.
Takes all tips. Price 750.

CICO BAKELITE JACK

Something entirely new. An improved new principle. No soldering necessary. Connections made to neat binding posts. Moulded completely from bakelite.

No metal in frame.
Short springs of special phosphor bronze, which is noncorrosive.
Steriing silver contact points.



No. 30—Single circuit open..\$.80 No. 31—Single circuit closed. .85 No. 32—Double circuit90 No. 33—"A" Battery Switch. .90 No. 34—"A" & "B" Battery

DOLLAR PULLERS

Sure Winner Sales Ideas for Radio Men

Sales Possibilities

Educating The Public' was the title of the contribution appearing in last month's issue of The Radio Dealer which was deemed the best submitted to this department. Eric M. Unmack, of the Westwood Electric Co., 1608 Ocean Avenue, Westwood Park, San Francisco, Cal., was the author of the fortunate suggestion which showed considerable ingenuity and sales bassibilities.

and sales possibilities.

According to Mr. Unmack, the idea has been used to good advantage in his section of the country, which is sufficient proof that wideowake dealers in other localities can adopt it with execllent results.

The radio retailer should "Speed-Up" his contributions to this department. There are many ideas which can be converted into real profit, and Live wire dealers are not losing any opportunities. By giving other dealers the benefit of original Dollar Puller, they can serve a two-fold purpose. First they demonstrate their aggressiveness, and secondly come in for consideration on one of the awards made each month for the best suggestion submitted.

Sets As Gifts

The use of special features in advance of Christmas season deserves the best consideration of the wideawake dealer. Sets of various types offer suitable holiday gifts and are such as to warrant being featured in show window displays. Last Christmas we arranged two very attractive window displays and found that they served to awaken the desire among many of our customers of the wisdom of choosing a set as a gift for a friend or member of their immediate family.

This subject is one that can be regarded as a real "Dollar Puller." That was our experience last year and the volume of sales convinced us completely. The past year has been one marked by many happenings of interest in radio. The opportunity now remains with the dealer to capitalize.

M. B. Wis.

New Bazaar Novelty

One of the local churches recently held a bazaar and the usual array of attractions were offered. The writer took a portable set, and a regular standard set, with batteries and complete equipment and arranged with the bazaar authorities to display them during the period of the festivities.

The week passed very pleasantly, and a number of interesting concerts were given, from local and distant sta-

tions. The number of inquiries received regarding the two sets proved very gratifying. We traced a number of sales to the display, and felt that our enterprise was well rewarded.

G. M. W. Va.

A Vivid Demonstration

The window in my shop directly on the main street was made over to allow any one to work in it comfortably. I moved a greater part of my construction tools to the window, then, with my back to the shop and the set open to the window did my construction work where the public could see me from the street and those in the shop could also watch the work. In the window I put a sign reading, "Watch the construction of the set before you buy and buy where you can see what is put in the set." On another corner I made a sign reading "You are invited to come in and watch the work." I was extremely careful to make it plain to those looking on as to where I put each and every part.

By putting different sets under construction each night and prolonging some of the complicated parts I was able to keep up the interest of most of the people so that the ones who were there first kept coming to the store and brought more with them. Once the people were there they were almost sure to buy something before they left as their interest was aroused by the set under construction.

Another great help which worked well with the above idea was a sign on the window reading "Bring in your set and see it overhauled and repaired by an expert in this window." By carefully showing the different operations as stated in the above I was able to create a greater interest than any other way, with good sales results.—G. G. C., Vt.

These contributions are termed "Dollar Pullers" because they can be used to attract many additional dollars of profit for every radio retailer and contributor as well.

FIVE DOLLARS will be paid for the "DOLLAR PULLER" printed each month which in the opinion of the editors of THE RADIO DEALER is deemed of the most value to our readers. One Dollar will be paid for every other "Dollar Puller" printed.

This offer is open to everyone in the radio trade except employees of THE RADIO DEALER organization.



As popular as radio itself

AS more and more radio novices become seasoned fans, the popularity of Celoron Panels multiplies.

Celoron does not chip or crack. It does not soften, warp, or buckle. It is infusible and will stand up under atmospheric changes.

Celoron Panels are widely advertised. Your customers know Celoron. Be sure that your stock is ample. Let your customers see the Celoron display cabinet.

Celoron is also made into tubing which has all the insulating qualities of sheet Celoron. It is used extensively by manufacturers of the best radio instruments. It is made in all sizes and diameters.

Diamond State Fibre Company

Bridgeport, Pa., and Chicago, Ill.

The oldest and largest manufacturer of vulcanized hard fibre and laminated bakelite materials in the world.

Wherever chimneys smoke and wheels turn, there are countless electrical and mechanical uses for Celoron and Diamond Tibre.



Is this Celoron sales-starter on your counter?

CELORON

BAKELITE PANELS



Proven popularity has placed Grewol detectors on the shelves of thousands of dealers thruout the country. Because they are a distinct departure in detectors the public has taken to the "permanent" crystals with a demand that quickly unloads the stock of every dealer handling the Grewol. Send a trial order now and get the proof for yourself,

Patented May 15, 1923 Serial No. 1454997

Infringement subject to prosecution

GREWOL 2 in One Crystal

Γwo surfaces instead of one; double life; double value



Reflex Crystal

Insures greater distance, selectivity, sensitiveness, exactly what your customers want. Stock the Grewol Fixed Detector and make detectors a bigger profit booster in your store. All that is needed to improve your customer's set.

Send a trial order TODAY

The way they sell will amaze you!



Chicago Radio Exposition Proves Brilliant Spectacle

By J. L. ADAMS

The Third Annual Radio Exposition which closed in the Coliseum, Chicago, on Nov. 23rd was the most successful radio show ever held in the Windy City. Over 225 manufacturers exhibiting every type of sets and accessories were represented at the event. The Radio Manufacturers' Show Association staged the exposition, and is already laving plans for next year's event which is also slated for the Coliseum.

Managing Director U. J. Herrmann, General Manager J. H. Kerr, were the recipients of many congratulations on the successful outcome of the event. The wealth of displays together with the business done at the exposition proved a pleasing source of gratification to the show authorities.

The following concerns exhibited at the Chicago Show:

A-C Electrical Mfg. Co.: Acme Apparatus Co.: Wire Co.; Adams Morgan Co., Inc.: Adler Mfg. Co.; Aeolus Corp.: Airway Electric Appliance Corp.; Aleo Electric Co., Inc.: Alden Mfg. Co.: Allen-Bradley Co.: Alpha Radio & Supply Co.: American Art Mache Co.: American Electric Co.: American Hard Ruber Co.

American Evening, Chicago; American Radiophone Mfg. Co.; American Specialty Co.: American Transformer Co.; Amplion Corp. of American Transformer Co.; Amplion Co.: And Institute of Radio Research: Ando Kaku Co.: Andrews Radio Co.: Apex Mfg. Co.; Apex Electric Mfg. Co.: Apex Radio Co.; Armac Radio Co.: Atwater Kent Mfg. Co.; Automatic Electrical devices Co.

stitute of Radio Research: Ando Makil Co.; Andrews Radio Co.; Apex Radio Co.; Armac Radio Co.; Armac Radio Co.; Atwater Kent Mfg. Co.; Automatic Electrical devices Co.

Baldwin, Nathaniel, Inc.; Barnett-Lloyd Co.; Brossenault G. Corp.; Brach, L. S., Mfg. Co.; Brossenault G. Corp.; Brach, L. S., Mfg. Co.; Brossenault G. Corp.; Brach, L. S., Mfg. Co.; Brosklyn Metal Stamping Co.; Buell Mfg. Co.; Burgess Battery Co.; Burndept, Ltd.

Capital Phonograph & Radio Corp.; Carter Radio Co.; Chicago Solder Co.; Christian Science Monitor; Colonial Radio Corp.; Commonwealth Battery Service Co.; Coto-Coil Co.; Coyne Electrical School; Crosley Radio Corp.

Deutsche Telephonwerke & Kabelindustrie; Diamond State Fibre Co.; Dictograph Products Corp.; Don-Mac Co.; Donahue, L. R., Lumber Co.; Dual Loud Speaker Co.; Dubilier Condenser & Radio Corp.; Dupont, Nemours Co.

Eagle Radio Co.; Eiseman Magneto Corp.; Ekko Company; Electrad, Inc.; Electrical Research Laboratories; Electric Storage Batery Co.; Equitable Radio Corp.; Everet Radio Mfg. Co.; Express Body Corp.; E-7-Toon Radio Co.

Federal Tel. & Tel. Co.; Formica Insulation Co.; Frost, Herbert H., Inc.; Freed-Eisemann Radio Corp.

Garod Corp.; Gaumont Loud Speaker Co.; General Radio Co.; Grayland Electric Co.; Grebe, A. H., & Co.; Grigsby-Grunow-Hinds Co.

Halldorson Co.; Haynes-Griffin Radio Service; Herald & Examiner (Chicago); Hill. A. E., Mfg. Co.; Hornig. August W.; Howard Radio Co.; Hornig. August W.; Howard Ro.; Hornig. August W.; Howard Radio Co.; Kardon Products Co.; Kennedy, Colin B., Corp.; Krasco Mfg. Co.; Kurz-Kasch Co.

Lane Mfg. Co.; Liberty Transformer Co., Inc.; Lincoln Radio Corp.; Lytno, Walter, Inc.

Magnavox Co.; Marinete Elec. Corp.; Marshall Electric Co.; Master Radio Supply Co.; M.L Magneto Syndicate, Ltd.; Mohawk Electric Corp.;

Multiple Elect. Products Co.: Murdock. Wm. I., Co.; Music Master Corp.; Muter, Leslie F., Co. National Carbon Co.; National Transformer Co.; Netto, Chicago; Niles Mfg. Co.: O'Neil Mfg. Co.; Operadio Corp.
Pacent Electric Co.: Pathe Freres Co.; Pathe Phonograph & Radio Corp.; Pericaud, G., Co.; Perry-Fay Co.; Pfanstiehl Radio Service Co.; Perry-Fay Co.; Pfanstiehl Radio Service Co.; Phenix Radio Corp.; Philadelphia Storage Battery; Pooley Furniture Co.: Popular Radio, Inc.; Post. Chicago: Pratt Radio Tube Co.; Preis, H. P., & Co., Inc.; Premier Electric Co.; Presto-O-Lite Co., Inc. Rader Appliance Co.: Radio Age; Radio Corp. of Ame ica: Radio Digest Publishing Co.; Radio Industries Corp.; Radiolamp Co.; Radio Products Mfg. Co.; Radio Rabat Co.; Rathbun Mfg. Co.; Rauland Mfg. Co.; Raven Radio Co.; Reichmann Co.; Resas, Inc.; Robertson-Davis Co. Samson Electric Co.; Saturn Mfg. & Sales Co.; Scars, Roebuck & Co.; Shakeproof Lock Washer Co.; Shamrock Mfg. Co.; Signal Electric Co.; Silver-Marshall, Inc.; Sleeper, M. B., Copp.; Sleeper Radio Corp.; Societa Generale Radio de Bologna; Sonora Phonograph Co.; Stevens & Co.; Stromberg Carlson Telephone Mfg. Co.; St. James Laboratories.

Sterling Mfg. Co.; Stevens & Co.; Stromberg Carlson Telephone Mfg. Co.; St. James Laboratories.

Thompson, R. E., Mfg. Co.; Thordarson Elec. Mfg. Co.; Timmons Talker, Inc.; Tokyo Invention Laboratory; Trim Radio Mfg. Co.; Tribune Company (Chicago); Tuska, C. D., Co.

United Mfg. & Dist. Co.; United Radio Corp.; U. S. Tool Co, Inc.; Valley Electric Co.; Walbert Mfg. Co.; Walnart Electric Co.; Weston Electric Instrument Co.; Willard Storage Battery Co.; Windsor Furniture Co.; Wireless Dry Cells, Ltd.; Workrite Mfg. Co.; Zenith Radio Corp.

American Radio & Research Corp.; Auburn Button Works; Battery Equipment & Supply Co.; Brunswick-Balke-Collender Co.; Caswell-Runyan Co.; Cleartone Radio Co.; Cornell Wood Products Co.; Cornish-Knowles Radio Co.; Economy Screw Corp.; Edison Storage Battery Co.; Excello Products Corp.; Experimenter Pub. Co.; Freshman Co., Gollos Radio Corp.

Journal. Chicago Daily: Kansas Electric Co.;

menter Pub. Co.; Freshman Co., Corp.
Corp.
Journal. Chicago Daily; Kansas Electric Co.;
King Electric Mig. Co.; Math eson-Sandberg Co.;
National Airphone Co.; Neely, Henry M. Pub.
Co.; Precise Mfg. Co.; Radio Institute, Inc.;
Radio News; Ramstone Corporation; Star Equipment Corp.; Teagle Co.; Tower Mfg. Co.; Triple
A. Specialty Co.; Unity Mfg. Co.; Utah Radio Products Co.; Yaxley Mfg. Co.

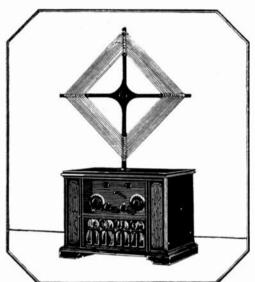
Sees Buying Market Trend

That so far, the radio industry has been a buyers' market, and that it is rapidly becoming a sellers' market is the opinion expressed by Henry Anchester, well known radio man and now associated with the Equitable Radio Corporation of New York City, after visiting the radio exposition in Chicago. "The manufacturers who are not conscious of this gradual change, and who do not take steps to adjust their sales and merchandising plans to cope with the new state of affairs will fall by the wayside," said Mr. Anchester.

"The technical side of radio has developed at a greater rate than the sales end. It is not a difficult thing to design and build a good radio set today, but it is a problem to get in production and merchandise it in a satisfactory way. The future of the radio industry is in the hands of those far-sighted and capable executives who understand its engineering angle," declared Mr. Anchester.

Which would your customers rather buy?

This?—



"WITHOUT ACCESSORIES"

Radio instrument
Antenna wire
Connection wires
Clips
Lightning arrester
Tubes

Loud a Window
Window
Window
Tourner
Tubes

Loud speaker Ground clamp
Window lead in Antenna spring
Mechanic's labor
Storage battery Nails
"B" batteries Screws
Stubes Staples

Separate price for each of these items, plus your time

or this?



In the De Forest D-12 you sell a complete unit

SOME of your customers think it is fun to hook up a radio set, to string antenna from tree to house, to connect ground-wire. At least it is fun if they are mechanically minded.

If they are not, and want an instrument which is ready to operate when they buy it and which is based on the highest kind of engineering skill, what they want is a De Forest Radiophone.

No need for a customer to ask "How many extras must I buy?" or "How much more will accessories cost?" when you show him a De Forest.

With a De Forest you sell every needed accessory. Your customer wastes no time in buying; you waste no valuable time or effort in selling parts, batteries, wire, etc. And because he buys the De Forest as a self-contained, complete unit, your customer can use it as soon as you install it in his home. Your work is quickly done. Your

customer will be pleased with your service.

The De Forest Radiophone is based on the highest engineering skill. It is an instrument that the owner can use—and be proud to demonstrate to his friends. It is the leader in the field and has a clear, natural tone almost beyond belief—and it is *remarkably* selective.

The De Forest D-12 is easily movable from room to room. It doesn't need either antenna or ground connections, or attachment to outside batteries. The D-12 is an instrument whose self-contained qualities and performance will appeal to thousands of prospective customers of yours. And it stamps you as a merchant ever on the alert to give your customers the best possible service.

There is still an opportunity for a few responsible, progressive merchants to become De Forest agents and build a greater business by selling De Forest instruments and parts. Write to us today for full information.

DE FOREST RADIO COMPANY, Jersey City, N. J. Also makers of De Forest Tubes—the "Magic Lamp" of Radio

DE FOREST RADIOPHONE



NEW | HEXAGON SHAFT

Insures Condenser Perfection

To eliminate fanning, rotor blades are stamped with a hexagon hole and held rigidly on hexagon shaft. Found in types 3 (plain) and 4 (all-vernier), CELORON END PLATES; types 5 (plain) a nd 6 (all-vernier), METAL END PLATES.



Four New Types—Five Unique Features

Types 3 (plain) and 4 (all-Vernier) have celoron end plates and all the new features. All capacities.

Types 5 (plain) and 6 (all-Vernier) ("patent-applied-for" friction Vernier mechanism)—metal end plates.

Capacity guaranteed not to vary 3%, plus or minus from that indicated.

One Piece Stator eliminates broken contacts and soldered joints. Positive results; no leakage.

Pigtail Connection soldered to rotor shaft; best positive type of connection.

Mounting Lugs—three lugs create 3 point suspension, mechanically correct; keeps condenser in alignment without undue strains on front end plate or panel.

Profitable Improvements

Demand for U. S. Tool Condensers evidenced by a pronounced sales increase of all types—an unprecedented jump since the announcement of our new types.

100% GUARANTEED

Write for Proposition.

U.S. Tool Co., Inc.

117 Mechanic Street, Newark, N. J.

Mfrs. of special tools, dies, jigs, automatic machinery and sub presses.

The Permanency of Radio in America

By S. O. MARTIN

President, Sonora Phonograph Co., New York City

S. O. Martin, president of the Sonora Phonograph Company, Inc., New York City, recently made the following statement regarding the permanency of radio in America: "Before answering the question, permit me to point out the disadvantage from a volume sales standpoint under which the phonograph has suffered since January, 1924. I wrote in December, 1923, that general business conditions for 1924 were noted as being less promising than in 1923. thereby affecting unfavorably the prospects of the phonograph business because of its peculiar sensitiveness to general business conditions. The warning seems to have been justified as the reports from the phono-

graph industry indicate.

"Yet, with the recent improvement in general business conditions comes a constantly increasing demand for phonographs and radio-phonographs. We believe that phonograph companies must make a proper connection with the radio industry since the situation in regard to radio is not at all a question of whether the phonograph business will be extinguished by radio, but on the contrary as to how far the phonograph business can safely ally itself with radio.

"Radio despite the multiplicity of makes become sufficiently standardized so that certain makes have dependability and are becoming generally known for that quality. Radio is really not so tremendously new. It has been in practical operation for telegraphic purposes for a decade. Receiving sets used as early as 1913 are still in operation and phonograph records have been regularly broadcast for several years.

"Now that radio is being dressed up in appropriate cabinets, it is becoming a drawing room feature instead of an attic experiment. The advent of the cabinet type radio speaker to which the phonograph manufacturer has contributed his acoustic experiences is making even more rapid headway than in the old phonograph days when the enclosed type horn began to supersede the visible talking machine horn. This horn with its curves and decorations was then regarded as picturesque but is now practically obsolete.

"The experience of the phonograph manufacturer in cabinet de-

sign as well as acoustics is also rapidly being directly utilized in the radio field. Few people are aware of the active part now taken by phonograph companies in the design and manufacture of the better grade cabinets used by radio manufacturers. The American taste in furniture is excellent, and the progress made in the design of radio and radio-phonograph cabinets within the last months does credit to the executive minds engaged in supplying the greatest home entertainment devices known to history.

"In their intense interest in radio many people have lost sight of the fact that phonograph development as evidenced in the performance of the better phonographs has not stood still. It will not be surprising if the combination radio-phonograph becomes the standard household entertainment and educational instrument of the future."

New Firm Progressing

Although barely two months old, the Capitol Distributing Co., 25 West 18th Street, New York City, is already established to completely serve the needs of the radio music dealer. This new entrant in the field of wholesaling radio have equipped elaborate showrooms with 10,000 square feet of space allotted to facilitate the "super-service" that the Capitol organization has pledged to give.

Besides the nationally known Dynergy reciever, the Capitol will wholesale Murdock Neutrodynes, Prestoplugs, Gothic Art Speakers, Song Bird receivers, Brilliantone loud speakers, Dual loud speakers, Mozart grand horns, Ambler-Holman receivers, N & K products, Exide Batteries, Ray-O-Vac Batteries, Marion Loops, Bright Star "B" Batteries, Ajax Storage Batteries, Sampson Tubes, Electrad products and R. C. A. Tubes.

In discussing the future of radio. and the plans of his organization, Ira Greene, president, said: "While radio is basically a technical industry, we have endeavored to avoid technicalities. in order to give the ultimate consumer a product that will embellish their homes. We intend to adopt originally designed products for the trade."



We have a jobber in your territory write for his name.

are enjoying a fast turn-over with generous profits.

Written money back guarantee protects the buyer.

THE TOWER MFG. CORP.

98 BROOKLINE AVE. Dept. V

BOSTON, MASS.

(Scientific)



Non-Dielectric **CONDENSERS**



MARCONIPHONE

"Used by MARCONI"— Another Powerful Sales Appeal

"This is the condenser selected by the Marconi Wireless Telegraph Co. for all their receivers"—THAT'S the last word that closes the sale of the Heath Condenser. Heath advertising, read by your customers, tells the same story. Easy to sell a condenser with such proof of lasting dependability. Well worth a trial order. Send it

Permanently Flat Plates

Stamped under huge presses to absolute flatness to prevent

Micrometer Geared Vernier

Ordinary adjustments reduced by separate geared adjustment to hairbreadth distinction. We guarantee the Heath Vernier Condenser to be more highly selective than any condenser employing a vernier which actuates

List Prices for Vernier Condensers

	With	Without
	Dial	
No. 12AV 12 Plate	\$5.00	\$4.35
No. 24AV 24 Plate		
No. 44AV 44 Plate	6.50	5.85
Non-Vernier types in all	capaci	ties.
Heath Sockets with the E	xclusiv	e Shock
Absorber Feature, 75c. 1	leath	Bakelite
dials in 3 diameters.		

Ask for Details of Our Dealer Respresentation Plan.

HEATH RADIO & ELECTRIC MFG. CO. O First St. Newark, N. J.

Canadian Distributors:
Marconi Wireless Telegraph Co., of Canada, Ltd. 210 First St.

Retailing Radio at a Profit

(Continued from page 66)

vice and get out-but why have your high priced items out of sight (and out of sight is out of mind) of the people who enter your store? Department stores have learned by experience the advisability of having their staple items well back to the rear of their stores so that every customer must walk down a long aisle of counters and showcases on which are displayed many other items of merchandise.

Also remember that under this arrangement after the purchase has been made this same customer must again walk the entire length of these attractive showcases and counters displaying merchandise and one of the most difficult things not to do is not to let your money "burn a hole in your pocket." By all means take advantage of this simple fact in arranging your own store display. This means that your complete radio sets should be on display in the front part of your store and that your showcases and counters should range backward to the rear of the store where at the extreme rear the most simple and stable merchandise may be displayed.

Radio in the past three years has taken a similar trend and today there are any number of customers right in your own home town who are ready, willing and anxious after demonstration to pay \$300, \$400 or even \$500 for a high grade radio receiving set complete with all equipment. man or woman (and the woman is of great consideration for she buys to a much larger extent than the man) is your best customer. To cultivate their acquaintance and through courtesy and good service to have their repeat patronage is the big problem of intensive merchandising and sales effort.

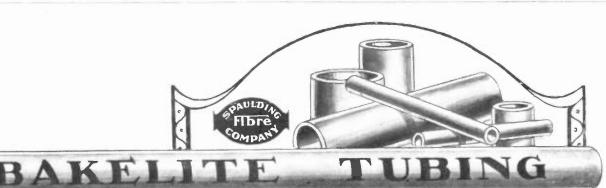
The radio public of today has certain likes and dislikes. They want and demand radio receivers that will receive from long distances. They want such long distance reception under poor conditions and under good conditions. They do not discriminate because they don't know what bad conditions or good conditions are. Cater to their demand and sell them the kind of receiving equipment they want.

There are a number of receiving sets and reasonably good ones which will operate on dry cell tubes and will be easier to sell because they can be carried into a customer's home selfcontained and be put into operation immediately, but your problem is not only to sell this receiver but to make it stay sold. Any reliable radio engineer whose opinion is not controlled or biased by his commercial connections will conceive without qualification that a well-designed receiving set adapted for the use of storage batteries and the more powerful tubes as well as an outdoor aerial antenna will give far superior results than can possibly be obtained from any radio receiver using dry cells and a loop antenna.

Many of your prospective customers will say: "I don't want distance, I will be satisfied with local programs if I get them clearly" but experience has shown that these people do not know their own minds, because they have no realization before their purchase of the extent or limitations of radio broadcast entertainment.

One of your problems as a successful radio merchant is not to give the customer what he thinks he wants, but to give him what will eventually please him. Seemingly, some problem, but not so hard as it looks. Think of how many people who in buying an automobile state "What do I care about sixty or seventy miles an hour. I never drive over thirty-five," but bear in mind that additional speed is a necessary reserve, that it comes in handy when pulling around a crowd in congested traffic, when beating home the rain storm or in giving you the desired thirty-five miles an hour when the engine is still filled with carbon or the carburetor is out of adjustment, a condition which with a normal thirty-five mile car would only permit a possible fifteen miles per hour and possibly no running at all.

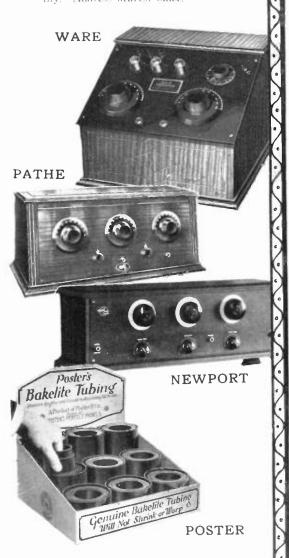
Be sure vou take fullest advantage of the prospects with whom you come in contact. Do you ever enter a clothing store, particularly one in a large city to purchase a collar? Of course, you have. You walk up to the clerk and say: "I want such and such a collar, size 151/4" and the clerk with a pleasing expression says, "Yes, sir." He reaches on the shelf back of the counter, takes down the box containing that particular collar and wraps it up, hands you the package and says, "20c. please"—but does he stop there? Not by any means. Even before you can hand him the money he reaches on his left to a rack of neckties conveniently located, whisks one off the rack, quickly twists it around his finger to simulate its appearance on your neck and says, "Here are some real nice neckties, only 75c, can you not use a couple? Possibly you buy a necktie but he politely and diplomatically runs you through a whole gamut of questions involving handkerchiefs, hose, gloves, shirts, underwear, etc. He is a salesman who has studied human nature. He takes advantage of his prospect, yet without annoving him and sales are greatly increased through these tactics.



Prompt Shipments From

With warehouses conveniently located on the Atlantic and Pacific Coasts and Mid-Continent, shipments can be made promptly in any quantity. Address nearest office.

Conveniently Located Warehouses



For more convenient retail selling, Spaulding Bakelite Tuling is also obtainable in standard sizes through this Poster and Co Kit.

Specially Processed for Radio Coils

Supplied in all diameters. Shipped in standard 36-inch lengths to the jobbing trade and cut to length in accordance with manufacturers' own specifications.

Spaulding-Bakelite tubing for coils of every description is an assurance of supreme service—of the same dependable quality of manufacture characterizing all Spaulding products.

Highest in dielectric properties—does not absorb moisture—insures low leakage—low distributive capacity, low resistance—does not laminate.

Spaulding Fibre Company, Inc.

Tonawanda, N. Y.

Factory-Tonawanda, N. Y.

Offices-Warehouses

484 Broome St., N. Y. City 659 W. Lake St., Chicago 141 N. 4th St., Phila.

N. Y. City
t., Chicago
St., Phila.
15 Elkins St., Boston
310 E. 4th St., Los Angeles
171 2nd St., San Francisco
179 First Na'l. Bank Bldg., Milwaukee

Spaulding.
-BAKELITE

Display Booths at the Chicago Radio Exposition



The variety of exhibits covering every phase of the industry in a background of colors and attractive decorations added to the brilliance of the Chicago Radio Show, held in the Coliseum, week of Nov. 17th. The booths shown above are: 1. Dupont Nemours Co., 2. Kellogg Switchboard & Supply Co., 3. Dual Loud Speaker Co., 4. F. A. D. Andrea, Inc., 5. Reichmann Co., 6. Atwater Kent Mfg. Co.

Visitors injoy Exhibits at Windy City Event



Many unique displays were presented at the Chicago Show by manufacturers, jobbers, and the trade press. A number of the exhibits showed careful consideration in their arrangement with a view of attracting the thousands who thronged the Coliseum. The booths shown above are: 7. Alden Mfg. Co., 8. Carter Radio Co., 9. Diamond State Fibre Co., 10. Henry Hyman & Co., 11. Pfanstiehl Radio Co., 12. H. P. Preis & Co.

FIRST-BEST!

SUPPLY LIMITED!

The

RADIO DEALER YEAR BOOK

SECOND YEAR 1924-1925

The First, largest and most complete directory and catalogue of theradio industry.

Listing manufacturers of radio parts, sets and accessories by their products, showing full address and list prices.

The most complete compilation of radio information ever made.

Single copies \$1.00, or FREE with a year subscription to The Radio Dealer, the trade monthly.

Send all orders to the publishers,

THE RADIO DEALER

1133 Broadway

New York City

Here and There With the Editor

The increase in the num-Retail Shops ber of new radio shops
On The springing up in various secspringing up in various sec-Increase tions of the country is prov-

ing a very gratifying sign. It has been noted that the newcomers are not inexperienced amateurs or prospectors in the field from lines far different to that

which constitutes this industry.

The newcomers have taken pains to acquaint themselves with merchandise of value, and the proper methods in which to insure rapid turnovers. They are injecting more personality, pep and service into their new organizations which augurs well for the future in the business.

Among the queries asked Credit Where by a recent visitor to the edi-It Justly torial sanctum was how does it feel to be an editor of a radio trade magazine? The Belongs same question has also been asked by correspondents. A visit to the office of any modern progressive publication will furnish the answer. The average editor finds little time to ponder over the question. His chief interest is devoted to the preparation of matter for his paper, and a thousand and one other incidentals which round out the sphere of a busy existence. While the editor may be a real factor on his paper the staff also deserves consideration. Superiors and subordinates comprising the staff are vital influences in the success of a radio magazine and for that matter any other class of publication. A perfect and harmonious organization is the greatest help to the humble editor. That being the case in this instance we can only add, the feeling is akin to that derived when a seemingly "dead" set suddenly starts out for DX records. The thrill of working it grips one stronger than ever, and we strive for greater achievements.

Fitting Tribute to Radio

The observance of International Radio Week throughout the world beginning November 23 to 30 was given added importance by

reason of the keen interest taken by the people of the world in the advancement made by radio during the past year. The Blue Ribbon event in radio was opened auspiciously by world-wide observance of radio in all its importance. To the layman in radio, the purpose of the world-wide observance of International Radio Week, is to mark the progress made by radio in every civilized country of the world where it has been a vital influence in the development of

mankind's activities.

The period was devoted primarily to a time in which the world at large was acquainted with radio and the industry in a more international way than ever before. The rapid progress made since radio first became a commercial reality was pictured very vividly, by means of the stage, screen, press and broadcasting stations of the world. From every part of the globe the executive committee in charge of Radio Week activities received many offers of co-operation. Newspapers, periodicals of every class mention of the event was carried in their columns.

Radio has proved a source of universal enjoyment and education and, therefore, can take its place among the greatest achievements in the world's history.

a new and better low loss Condenser

-with new and better selling points-at a better price. features of an ideal condenser are embodied in the BEACON variable condensers. And some new features are added, too, making BEACON the best. Some improvements incorporated are: Diecast stator and rotor assemblies. Anti-friction bearings are monel metal and bronze in brass. Contact is made through a watch-spring pig-tail. Details regarding BEACON'S new features will be sent on request.

	,	LAI	114			V	ERN.	IER
7 Plate 3 Plate	.00037 .0005	mfd. mfd.	\$3.25 \$3.50 \$3.75 \$4.75	17 23	Plate Plate	.00037	mfd. mfd.	\$4.50

BEACON PLUG



GENUINE BAKELITE

The BEACON plug, too, is of improved design and construction. It is of the new automatic type, which requires no new automatic type, which requires no tools for the insertion of cord tips. Connections once made "stay put" until deliberately removed. They're as tight as a sailor's knot. The body of the plug is genuine Bakelite.

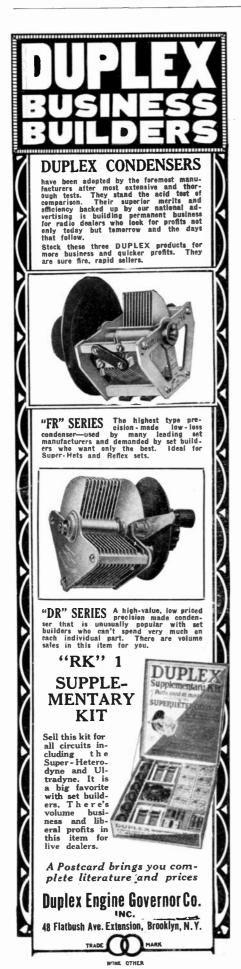
BEACON RHEOSTAT



And the BEACON rheostat! It suits experimenters as well as set builders, because its reversible genuine Bakelite body accommodates it to either table or panel mounting. The extra heavy, tempered slider with the Convex Contact assures uniform, non-microphonic contact, Resistances are furnished in 6, 20 or 30 ohms. Large Bakelite knob with raised arraw.

Jobbers, write for proposition, territories open.





The Field the Jobber Serves

(Concluded from page 55)

the better and the jobbing trade is beginning to realize that mere ordertaking will not do.

Many retailers in the radio field, as in other industries, do not measure up, in a commercial survey as modern business men. Some of their activities are not approved by students of practical merchandising. Whenever the jobber has a customer who is not merchandising effectively, the conditions not being against him, it behooves that wholesaler to bestir himself.

Aid the retailer financially-not by loaning him money, or by overstocking him but, for instance, by showing him a proper invoice system. Show him how he should figure his true costs and what condition his business is in. It is now supposed that the management of wholesale houses in our industry is in the hands of men of considerable trade experience. It is assumed these men have given special attention to their goods and understand their markets. Assuming these experts are really in touch with their trade, they must not neglect every opportunity to increase profit-making business ideas for their customers.

Jobbers are necessary because of their closeness to the retailer and to eliminate the wholesaler would mean the destruction of all small retailers and would easily effect a real combination of manufacturers and large retailers. The ultimate consumer is best served by the manufacturer-jobber-retailer route. This makes for a regulated price, which is essential to everyone. If there was no theoretic middleman the consumer would never know the "right" price. This jobber regulates the price, he acts for the manufacturer and for the consumer.

Blue-prints — The Dealer's Silent Salesman

(Concluded from page 55)

The window display is one of the dealer's greatest aid in selling.

A blue-print or a pattern displayed in the window of a radio store never fails to gather its crowd of interested radio enthusiasts. keen-observing Here's where the energetic dealer should display the pattern and parts to the best of advantage. One good scheme is to mount the blue-print on a cardboard back and hang it in the rear of the window. The parts necessary for the construction of the receiver illustrated are symetrically arranged in the front section of the window.

Then, to effectively link up these parts with the blue-prints one end of a narrow white tape is pasted to the instrument and the other to the symbol of the part shown on the blue-print. That's a direct tie-up and it's the stuff that the man-in-the-street wants. Anyone can crowd windows full of all sorts of radio apparatus but the successful dealer is the one who contemplates the unasked questions of the windowviewers and dresses his window in such a fashion that the prospective customer's thinking and question answering is at least confined to very definite lines.

Make your windows mean something. Make them put over the big selling message that is expected of all good, right living windows. Utilize the patterns as a window aid. Don't keep parts—sell them.

STATEMENT OF THE OWNERSHIP, MAN-AGEMENT, CIRCULATION, ETC., QUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of the RADIO DEALER, published monthly at New York, N. Y., for October 1, 1924.

State of New York (State of New

Before me, a notary public in and for the State and county aforesaid, personally appeared Laurence A. Nixon, who, having been duly sworn according to law, deposes and says that he is the managing editor of the Radio Dealer, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations.

Regulations.
1. That the names and addresses of the publisher,

Regulations.

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:
Publisher, Harry M. Konwiser, 1133 Broadway, New York City; Editor, Walter A. Schilling, Bayonne, N. J.: Managing Editor, L. A. Nixon, 1133 Broadway, New York City; Business Manager, J. Maurice Casper, 1133 Broadway, New York City.

2. That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of ethe stockholders owning or holding one per cent or more of the total amount of stock should be given.)

The L. A. Nixon Publishing Corp., H. M. Konwiser, L. A. Nixon, J. M. Casper, A. L. Konwiser, the addresses of all being 1133 Broadway, New York City.

3. That the known bondholders, mortgages, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving

or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is: (This information is required from daily publications only.)

cations only.)

LAURENCE A. NIXON, Business Manager. Sworn and subscribed before me this 5th day of October, 1924.

(Seal) Archie Gidden.

(My commission expires November 30, 1925.)



The Strongest Indication—

of the real worth of the Newport Radio Receiver is evidenced by the many who have patiently waited up to this time for the models ordered.

This delay in shipping your Newport has been occasioned by the impossibility of keeping pace with the unexpectedly heavy demand. Allow us to thank you for your kindness and forebearance.

Plans are being consummated (5 to 10 days at the most) whereby the Newport production will be large enough to adequately handle the rapidly increasing demand. This larger production will mean the same skillful craftmanship, the same careful workmanship, and the same rigorous tests that have heretofore characterized this receiver.

This extraordinary and gratifying demand has proven two things: It has proven that the quality of the Newport was instantly recognized; and it has proven that our many friends are willing to deny themselves the pleasure of the ordinary receiver in order that they may know the joy of a Newport.

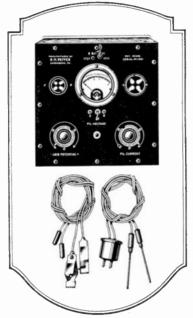
Such a confidence in this product has doubly intensified our efforts to make the Newport a product that requires no apologies, anywhere, at any time.

The Newport is a Good Receiver

Built in a Piece of Fine Furniture

250 West 54th Stree New York City

PEFFER TESTER



Patents Pending

The Peffer Tester accurately tests and matches tubes.

Tests Transformers, coils, phones, for opens, shorts or grounds.

Tests fixed condensers for leakage or shorts.

Tests panels and other insulations for leakage.

A necessity in every Radio Dept. will save its cost many times over.

DEALERS PRICE
Complete with leads

NET

\$44.00

Manufactured by

R. M. PEFFER

Harrisburg - Pa.

The Interior of a Retail Store

(Concluded from page 61)

finds a display upon the shelves which is often called "monotonous," the effect upon him is most discouraging and depressing. The possibilities of interior displays are too often neglected by many dealers, as they think all that is necessary is to get a customer into a store, and that a purchase will be made in the natural course of trade.

If a customer's eye has been attracted by a store's exterior appearance, it is just as essential to have the interior so arranged as to reattract and fasten his attention. In such a case a buyer is likely to return again and become a regular patron. A display inside the store which has been cleverly conceived and executed brightens the aspect of things in general and softens the otherwise hard business effect by appealing to the artistic sense.

The public is always attracted to a retail shop where the mercenary aims and objects are apparently consigned to the rear. Glance at the real, high-class department store windows—if you please—for an object lesson.

The owner of a store often overlooks such fine points, but the prospective customer, who has the outside impression on the store still on his mind, expects that the inside displays will appeal also. When arranging a store's interior, it is not necessary to try and display everything that the store contains. It is true that many people will not think of asking for something unless they see it once in awhile, but a too various and complicated display is confusing and a prospective purchaser really does not know what he wants if he was undecided anyway before he entered the store.

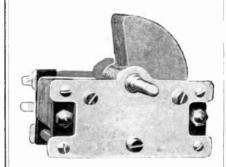
Every available square foot in a retail store should be devoted to the selling of goods and not to surplus storage. The little corners and other nooks in a store should not be allowed to become of no value. Such places may be used for advertising purposes, and their effectiveness may be most advantageous when utilized in such a way.

Planning 1925 Show

NEW YORK.—The fourth annual radio exposition will be held in New York at the Grand Central Palace in the latter part of August or the first week of September next year, according to Harold Bolster, director of the show. The exact date will be announced when a survey of leading exhibitors now under way definitely discloses the plans of the industry. A similar exposition is planned for Chicago in the early part of October, 1925. The fourth exposition in New York will occupy the first three floors of the Grand Central Palace.

Watch the "Imperial Radio Line" Grow!

We manufacture first class LOW LOSS Condensers for High Class Standard Radio Manufacturers.



Our policy is:

- 1. Guaranteed Merchandise.
- 2. Highest Grade Products at Lowest Prices.
- 3. Prompt Service.

We are specialists in manufacturing the following:

Polydyne Kits (Self-balanced Low Loss Tuned Radio Frequency Kits) List, \$20.00 Airtrols (Three Circuit Tuning Coils) wound with Litz Wire No. 56, List, \$4.00 Airtrols (Three Circuit Tuning Coils) wound with Litz Wire, No. 57, List, \$5.00 Variocouplers (Bakelite), List\$3.00 Variometers (Bakelite), List.\$3.00 Low Loss Condensers, Capacity .001, List, \$4.25 Low Loss Condensers, Capacity .0005, List \$3.50 Low Loss Condensers, Capacity .00038, List \$3.25 Low Loss Condensers, Capacity .0003, \$3.00 Low Loss Condensers, Capacity .0002 \$2.75 Vernier Attachments for all Con-

Jobbers and Dealers write for Attractive Discounts.

Imperial Electric Mfg. Co. 50-58 Columbia St., Newark, N. J.

Announcing (18)



Radio Material

Complete from Aerial Insulator to Ground Clamp

THE LINE leads straight to your next step in Radio selling. The step toward a standardized stock—away from odd parts; part-lines. Slowly—in the end completely —you can replace with standardized parts; interchangeable, radio-electrically balanced. All one family, all one quality; the outgrowth of 35 years' growth in electrical manufacturing. Would you see how far this will simplify your business and satisfy set-owners? Then fill out the coupon at bottom of page -which brings you our catalogue.



Real Power Amplifi-cation! Produces strong, natural tone without blare or chat-ter. Adjustable to in-dividual set and loca-tion conditions. No extra batteries needed.







THE RADIO DIVISION OF

THE HART & HEGEMAN MFG. CO.

HARTFORD, CONN.

The After Dinner Speaker Dial Control Rheostats

Low Loss Condensers (Plain and Vernier)

Variocouplers

Sockets-All Kinds

(Plain and Vernier)

Variable Grid Leaks

Head Sets, Variometers, Transformers, Jacks, Plugs

The	Radio	Division,	The	Hart	&	Hegeman	Mfg.	Co.,
F	Hartfor	d. Conn.						

Dials

Please send me copy of your new Radio Catalogue.

City

Address

State



BOOK REVIEWS

Brandes Broadcast. Published by C. Brandes, Inc., New York City.

A splendidly arranged and cleverly edited house organ which should prove a real dealer help to the concern's customers. It is complete in every respect and carries interesting information concerning Brandes products and effective displays.

Henley's Workable Radio Receivers.
Published by The Norman W.
Henley Pub. Co., New York
City. Price \$1.00.

Practical receiving sets of modern design with complete directions for building them are included in the pages of this recent publication. The receivers which from the viewpoint of selectivity, sensitivity, convenience and economy of operation, dependability and quality of reproduction are all covered within the pages of the volume.

Circuit and wiring diagrams, panel and baseboard layouts and drilling templates, are explained in such simple terms that it is an easy matter to build a successful set for the directions given.

How Long Will "B" Batteries Last?
By W. B. Schulte for Burgess
Battery Co., Chicago, Ill.

This comprehensive report and answer to an interesting question presents the shelf life, discharge and capacity characteristics of "B" or plate batteries classified according to battery weight in pounds. Examples are given showing how approximate service hours may be computed for all standard combinations of tubes and batteries. Tube plate current with various grid bias voltages are shown by curves. The volume should prove an interesting and instructive medium to those who are seeking full and detailed data regarding "B" batteries and getting the best results.

The American. 1924-1925 Catalog published by the American Electric Co., St. Joseph, Mo.

The products of nationally known manufacturers are listed in the new catalogue now being distributed to the trade by this well-known middle western radio concern. Over twenty pages are devoted to illustrations and descriptions of sets, apparatus, etc.

The fore part of the catalog resembles a modern magazine rather than a wholesaler's messenger, with its directory of products and other useful information for the dealer. A touch of color has served to offset the sombre black which predominates in an otherwise well arranged and fitting organ for the St. Joseph concern.



5 novel features

make this Radio Horn a fast and easy seller!

THE CHARMITONE LOUD SINGER is rapidly becoming more popular, due to its patented mechanical features, its musical excellence, its ease of operation, and its beautiful appearance. These five exclusive features enable any Radio Dealer to make money with this horn:

DUAL ACTION: tuning and amplifying off the same master phone.
 NO HEAD PHONES NEEDED: Supersensitive Stethoscope Attachment makes head phones unnecessary.

3—EASY TO OPERATE: tuning is done with Stethoscope in ears; then one turn on lever transfers to horn. No plugging in and out of set.

4—ANY NUMBER OF STETHO-SCOPES may be used for listening without extra tax on batteries or loss of volume.

5—ADJUSTABLE VOLUME CONTROL: same lever controls volume in Stethoscope and Horn.

Model J-10 shown above. Model H-8 has straight horn; \$18.50. One piece horns, sparkling finish, with silver plated metal parts; perfect workmanship in every detail.

If your Jobber does not handle CHARMI-TONE, write to us for dealers' terms.

DUAL LOUD SPEAKER CO. 210 West 54th Street, New York City



THE picture tells the story—seven practical, sensible reasons why Federal sockets should be in your "pet" hook up.

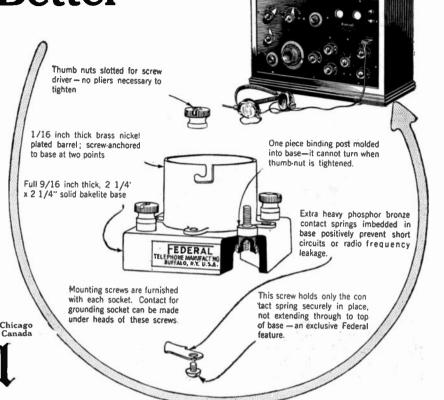
Federal sockets are but another evidence of the care and engineering skill used in designing and making Federal Standard Radio Parts.

There are over 130 standard parts bearing the Federal iron-clad performance guarantee — their use means—"Balanced Circuits" with better performance.

Federal Telephone & Telegraph Co. Buffalo, N. Y.

Boston New York Philadelphia Chicago Pittsburgh San Francisco Bridgeburg, Canada

Standard RADIO Products







AT LAST A SET THAT SATISFIES EXACTING PEOPLE

S ATISFIES the quality ear—the ear that demands true musical tone, clear, rich, natural. Satisfies the quality eye—the eye that demands beauty of cabinet making, beauty of line and color. Satis-

fies the quality mind—the mind that demands perfection in electrical design, construction and results. A set absolutely unique in the radio field. Write for the new Starr Quality Merchandising Plan.

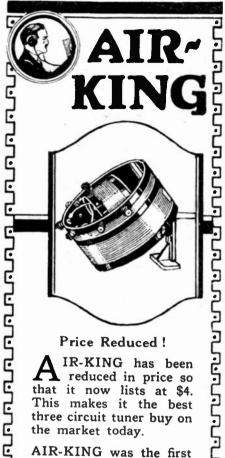
MODEL D, the newest Starr Quality Model. Exquisitely designed case of matched, quartered, burled walnut with carved base and inlaid pilasters. Employs the sensational new, non-radiating Star Harmonic Circuit, distinguished for selectivity, long range and amazing CLEARNESS. Standard panel arrangement. B batteries enclosed, all wiring concealed. Retail list \$150. Picture can not do justice to this case. Sample sent on application.

STARR EQUIPMENT CORP.

374 Hamilton Avenue, Brooklyn, N. Y.



WATCH FOR THE NEW STARR QUALITY CONSOLE MODEL



Price Reduced!

IR-KING has been reduced in price so that it now lists at \$4. This makes it the best three circuit tuner buy on the market today.

AIR-KING was the first three circuit tuner. It is still the most efficient and the most popular. Consider that fact when stocking up.

AIR-KING is a precision job throughout. Genuine bakelite is used exclusively, together with genuine litzendracht wire, die-cast aluminum mounting brackets, and real pigtail connections.

National advertising is backing the AIR-KING. Territories are still open. Get busy!

Selling Agents

BIRNBACH RADIO CO. 370 Seventh Ave. New York

Manufactured By

EXCELSIOR

RADIO COMPANY 222 Grand St., Brooklyn., N.Y.

Cost Accounting in the Radio Trade

(Continued from page 66) the end of the month on the financial books of account to record the movement of the materials. The books of account are always made to represent actual conditions prevailing in the organization.

A typical example of a stock record card follows:

Labor Cost Records. In the manufacture of radio parts it is desirable that factory orders be issued for as large quantities as possible. The management therefore figures out the requirements and orders the production department to proceed with the manufacture of the specified number of parts. A factory order number is designated, and all labor and material costs against this lot are charged to this order number, on cost sheets hereinafter referred to. The labor is charged by means of time slips, which are made out daily. Sometimes a weekly examination of the payroll will readily yield an analysis of the work of the week before. In such cases, daily time slips are not necessary. Where piece work prevails, these slips must be filled out daily.

Cost sheets are kept in the office for each type of part manufactured. For example, there should be a separate sheet for Rheostats, another for Transformers, and separate sheets for each type of Transformer, and if Condensers are manufactured, separate cost sheets are used for these. All labor and material is entered on these sheets. Production reports specifying quantities produced are sent to the office, and by comparing the cost sheets with the production reports, the cost of a definite quantity of parts can be readily ascertained. The material requisitions above referred to, in addition to being posted to the stock cards, are also posted to these cost sheets. manner the labor and material costs against a specific lot of parts are summarized.

The next step is to take into account our overhead. We know from experience what our overhead expenses under normal conditions of production are, and from this data we establish a unit overhead cost, which when applied to our cost sheets gives us the final unit cost per part. We then determine a desired rate of profit, take into account market conditions, etc., and are now in a position to establish the adequacy of our selling price.

A cost sheet form that has been used with considerable success, follows:

Finished Stock Records. production reports referred to above furnish the basis of our Finished (Continued on page 102)

ROYALTRON **TUBES**



"WHY?" The secret is in our special filament.

Ordinary tubes use a Tungsten filament coated with thorium. After a short time this thorium burns off and the tube looses its usefulness-THE FILAMENT USED IN ROYALTRON TUBES HAS THE THORIUM IMPREGNATED THROUGH THE FILAMENT and when the outside thorium burns off new thorium comes to the surface, giving this tube exceptionally long life and power.

DEALERS will find it to their advantage to sell Royaltron Tubes as they are exceptionally profitable and consistent repeaters.

DISTRIBUTORS will find our exclusive territory policy to their advantage.

GUARANTEE Defective Tubes are Replaced same day received.

Types 412-419-401A-402 Transmitter

Royal Manfg. Co.
206 Broadway N. Y. City Dept. D.R.

Rapidly Taking the Lead in Volume Sales

Increasing orders from all our dealers indicate great popularity and top sales for the famous

CONDENSER

Endorsement by leading technical writers plus adequate national advertising places Continental Lo Loss at the top of the list.

Increased manufacturing facilities were necessary to fill orders

Most dealers are ready to meet the big fall demand. How about you? Write at once for full particulars and attractive discounts.

							P	LAIN	VERNIER
13	plate—Cap.	.00025			 			\$4.50	\$5.50
18	plate—Cap.	.00035			 			4.75	5.75
25	plate—Cap.	.0005			 			5.00	6.00
45	plate—Cap.	.001			 	,		6.00	7.00

GARDINER & HEPBURN, Inc.

611 Widener Bldg., Philadelphia 2100 Washington Ave., Philadelphia Factory



The Question of "B" Battery Current Has Been Solved with the Trans-B-former

The Kellogg Trans-B-former furnishes the necessary plate voltages for the radio set, from 110 AC, 60 cycle, electric light socket, without any interference of any kind.

This unvarying current is furnished at less than onefifth cent per hour.

The Kellogg Trans-B-former will:

Improve reception.

Reduce operating cost to a minimum.

Add to the appearance of your set.

Increase DX possibilities.

Developed, perfected and guaranteed by the Kellogg Switchboard and Supply Company.

Place your order now for prompt shipment.



No. 502



KELLOGG SWITCHBOARD & SUPPLY COMPANY

1066 W. Adams St., Chicago, Ill.

արբանական արգարացությունների արգարանական արգանական արգանական արգանական արգանական արգանական արգանական արգանական

Professional_

Your Profits Safeguarded and Increased Sales Assured through our Special Franchised Dealers Plan

YOU cannot sell a considerable volume of any Radio article at a fair and liberal profit if indiscriminate competition continually offers the same merchandise at ruinous prices. You cannot build and serve or hold a retail following without a fair profit—Can you?

Retail outlets for "Professional"

Retail outlets for "Professional" Radio Reproducers are limited to specially Franchised Dealers of the better grade. This means that your store can be "Professional" Headquarters for your entire neighborhood.

The "Professional" sells readily be-

The "Professional" sells readily because when given a side by side test with any other Loud Speaker—regardless of type or price it will clearly demonstrate its amazing superiority.

It marks the first radical improvement in sound reproduction in 46 years. Cannot choke or blast—no rattling echoes—extremely sensitive to low signals—unlimited in volume. The only Radio Reproducer on the market today licensed under Voluma Patents (diverged not converged sound waves).

A Professional Radio Reproducer will be sent to any responsible dealer for a 10 day test. The instrument will be sent C.O.D. with return privilege.

Write us today.

VOLUMA PRODUCTS, Inc. HEMPSTEAD NEW YORK

New England Distributors,
THE WHITALL RADIO CO., Springfield, Mass.
Other Distributors:
ECONOMY DRUG CO., Knoxville, Tenn.,
MOTOR PARTS CO., Philadelphia, Pa.



The Work of Radio Scientists

By Dr. Alfred N. Goldsmith

In a paper submitted to the Associated Manufacturers of Electrical Supplies, Dr. Goldsmith, the noted radio scientist, develops the fact that real advances have been made in developing specilization in electrical engineering—to the point where the radio scientists are indeed a class unto themselves.

Dr. Goldsmith points out that further development along these lines appears not unlikely. Broadcasting is calling into being the broadcasting engineer, and we may soon have college degrees for the radio telegraph engineer and the radio telephone engineer, in the same way as we have electrical, mechanical and civil engineering degrees. Even these divisions may be split up into receiving engineers and transmission engineers.

The experimental work now being done in American laboratories leading engineers promises sweeping improvements and farreaching innovations in the radio art, says Dr. Goldsmith. Discussing the lines along which radio is now advancing, he predicts that radio broadcasting is sure to be extended until there can be sent to every home in the country the best available music, the most important educational material or political information, and all that can be appreciated by the sense of hearing. The reproduction of the messages that broadcasting brings into the home will be completely faithful in character.

The paper, continues as follows: Indeed, even now, the best radio receiving sets with their modern loud speakers can give a fidelity of reproduction which will satisfy even discriminating musicians and it may be stated that the electro-acoustic art of sound reproduction by electrical means is advancing by leaps and bounds.

So far as ordinary radio telegraph communication over long distances is concerned, it is clear that the range of the stations of to-day for reliable communication will be greatly increased and that their freedom from extraneous disturbances of reception will be increasingly insured.

Teledynamics, or the control of mechanisms at a distance, can also be accomplished by radio. Ships, torpedoes and aircraft have been directed to a distant target or caused to pursue a desired course by radio. Such systems may be an addition to the war or an asset to peace.

"In tune with the Cosmos"



COSMOPOLITAN

LOUD SPEAKER

List Price \$1000

The speaker that meets all demands for quality, volume and price.

CONSTRUCTION

Fibre Horn, with a fine crystal glazed finish. A 10" bell, $22\frac{1}{2}$ " in height.

TONE

Full, rich and clear. Reproduces perfectly every note of the voice and instrument.

THE SEAL OF



SATISFACTION

COSMOPOLITAN RADIO A'PPLIANCE CO., Inc. 25 Church St., New York City

Good Bye "B" Batteries



Here Comes the Acme Powr-Bee

Complete control of both detector and amplifier voltages. Detector 0-45.

Amplifier 0-130.

Output sufficient to handle sets up to nine tubes.

Uses any standard 201 A or 301 A tube that may have been discarded as worthless for radio reception.

71/2", 41/2" wide, 8" long, finished in beautiful crystalized black and fully guaranteed.

No Hum. No Noise.

Reduces the cost of radio operation and makes reception 100% perfect at all times.

Built for AC 60 cycles 105-120 volts, also for DC and special requirements.

Price \$32.50 at your dealers or prepaid on receipt of price.

3250

The Acme Engineering Co. Dept. 7 Kentucky Louisville

A Cabinet Loud Speaker "De Luxe"

ITS TONE IS VOICE-LIKE

OUR ACHIEVEMENTS IN CABINET BUILDING ARE YOURS



HIS speaker in a cabinet of handsome Colonial design and appearance AT A PRICE.

Cabinet is built of three-ply, well-seasoned veneer wood, and covered in the richest of Spanish leatherette Fabrikoid.

Acoustics is perfect as the horn is built-in with a full goose-neck, eliminating any discord or raspy sound, thereby giving its true, voice-like tone.

Each loud speaker is packed in a corrugated carton.

Action is direct and control adjustable or permanent.

Dimensions are 123/4" long, 7" wide and 6" long.

Price is \$10.00 less Xcluso's liberal discount to dealers.

SPECIALTY CORP. TRUNK & AUTO XCLUSO RADIO CABINET DIVISION

General Offices: 588-590 Broadway, New York

Factory: 120-22-24-26 Crosby Street, New York

ForEveryRadio Requirement—



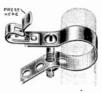
-there is a proper FAHNESTOCK Clip

The above Display Case contains 14 varieties which are selling very rapidly. It is designed to stimulate the Dealer's Sales of Fahnestock Clips and

EVERY DEALER NEEDS IT.

Shows the customer instantly the suitable piece for his set.

Initial orders filled for \$17.50 (west of Mississipi, \$18.50). Contents retails for \$51.50, when sold at regular syndicate store prices. Transportation charges prepaid, when order is accompanied by check or money order. Subsequent orders filled at regular prices of \$20 F. O. B.—L. I. C. Refills supplied at regular 100 lot prices, shown in catalogue which comes with case, less discount shown on enclosed sheet.



Improved Ground Clamp

Equipped with Fahnestock Patent Wire Connectors, Easily attached.

No Soldering— For Radio Use Only

A SK Your Dealer to tell you about the FAHNESTOCK Antenna Connector, which assures a Perfect Connection.

None genuine without our stamp

FAHNESTOCK ELECTRIC CO. LONG ISLAND CITY, N. Y.

Cost Accounting in the Radio Industry

(Continued on page 98)

Stock Book. This records quantities manufactured, quantities shipped, as indicated by the charges to customers. and the balance on hand. A few additional columns and we can at a glance tell how many parts have been ordered by customers. An intelligent analysis of this book, in addition to giving us our finished stock inventory at all times. also portrays the requirements of fu-ture production. The physical verification of the finished stock is accomplished in the same manner as the verification of the raw material stock record cards. The form for the Finished Stock Book is composed on the same principle as the Raw Material Stock Record Card illustrated above.

There are many details in connection with our accounting scheme which cannot be entered into here. The general books of account are so organized as to take into consideration the requirements of the business and the cost records in use.

The system outlined enables us to obtain unit costs of production, inventories of raw materials, work in process, and finished stock. Embodying this information in the general books of account, we then proceed to give an analysis of the concern's operations, and with this information at his command, the radio manufacturer is in a position to steer his ship in the right direction.

Cost accounting for individual concerns in the radio industry would constitute but a beginning-a first step. The ultimate goal should be uniform cost accounting methods for concerns manufacturing identical or related products. This has already been accomplished in other industries, usually through the medium of the various trade associations. Individual concerns in these trade associations have found it to their mutual advantage to exchange certain cost data among themselves, with a consequent lowering of costs and more efficient operation all around. Radio manufacturers can with profit, take cognizance of the experiences of others in the older indus-

Fischer Co. Adds Radio Department

MILWAKEE, Wis.—The C. W. Fischer Furniture Co., recently announced the opening of a new radio department. The sets are tastefully displayed, and on several of the floors the unique Fischer bungalows are equipped with the latest type of receiving apparatus.



But Such Results Are Possible Only With

BODINE LOOP AERIAL

The Bodine Folding Loop is the first to meet the low-loss requirements now demanded of all radio equipment.

It has every loop advantage, including directional effect, elimination of interference, reduction of static, easier tuning and greater convenience.

In addition, it has original features that place it years ahead in loop development. The stranded wire is bankwound in the approved basket-weave manner. The sides are 24 inches—larger than ordinary loops. An adjusting handle prevents the effects of body capacity, and a graduated dial permits directional logging of stations. It is beautiful in appearance, and folds conveniently.

The Low-Loss Loop Nothing Else Like It

The distinctive features of the Bodine give results not obtainable with ordinary loops. Lowered resistance and less losses through distributed capacity insure greater volume and clarity. Selectivity and directional effect greatly increased.

The Bodine "Standard" meets the needs of every circuit except superheterodyne that can use a loop aerial. The "Super-Het Special" has the necessary center tap and suits all superheterodyne circuits. These retail for \$8.50. For the Inverse-Duplex circuit we furnish a tapped Loop at \$10.

Dealers are Making More Sales and Larger Profits

Increasing interference, and the buying of better sets, are bringing a growing demand for a really efficient loop. The Bodine represents the greatest advance in loop construction yet made, and will be the one most in demand. Write for details and get your share of this growing business.

BODINE ELECTRIC CO.
2252 W. Ohio St., Chicago, Ill.
Quality electrical products for eighteen
years.

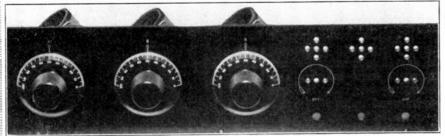
RACON HORNS ARE STANDARD



RACON ELECTRICAL CO., Inc.

14 Greene Street, N. Y. City

5 Tube Radio Frequency Receiver



IMPROVEMENT ON SO-CALLED NEUTRODYNE SETS Packed in individual cartons consisting of the following

1-7x26 Drilled and Engraved Celeron Bakelite Panel. 3-Coils, mounted on Celeron Bakelite. 3—17-plate Variable Condensers, Pigtailed Contact. 2—Transformers 3—4-inch Dials. 5—Metal Top Sockets. 1—30 ohm Rheostat. 2—Jacks. 2—Equalizing Condensers. 1—6-ohm Rheostat. 1—2-meg. Tested Gridleak. 1—Set of Binding Posts. 2—.006 Fixed Condensers. 10—Lengths of Buss Bar. One Wiring Plan Wiring Plan.

The Coils and Condensers are all mounted and properly spaced on a Celeron Bakelite Panel with 3 four-inch Dials.

COMPLETE

THE ABOVE PRICE IS ABSOLUTELY NET C. O. D.

The New

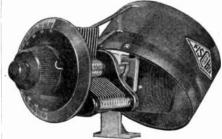
FISCHER SINGLETROL

has taken the radio public by storm.

A three circuit tuner with a lowloss condenser attached, making the most simple and effective tuning unit ever produced.

> RECOMMENDED BY **RADIO FANS** ADVISED BY

EXPERT ENGINEERS



PRICE C. O. D.

Lots of 100 or over 10% discount.

MANUFACTURERS OUTLET, INC. EXCLUSIVE DISTRIBUTORS OF RAMO RADIO PRODUCTS

123 LIBERTY STREET

NEW YORK CITY

f's Brand New/

Here, at last, is an inexpensive fuse that is guaranteed to protect radio tubes from blowing out due to short circuits.

Think of the money these fuses will save! A large percentage of the 4,000,000 or more radio set owners will surely want one when they read our strong, persuasive advertisements pointing out how they can protect their tubes by installing the

"GEM" Radio Fuse

We are going to spend thousands of dollars to advertise the Gem Radio Fuse in leading radio magazines and in other ways. This will not be a fly-by-night campaign—but a steady hammering at your customers month after month. You are certain to receive scores of calls for the "Gem" Radio Fuse as soon as it is

Advertised Nationally

Put in a small stock now and be ready to make the nice profit you will otherwise lose.

We have spent hundreds of thousands of dollars advertising our "Union" Renewable and Non-Renewable Fuses during the past 35 years. So every fuse owner knows that we make good, dependable fuses. That will make it easier to sell "Gem" Radio Fuses.

Order from your jobber. If he hasn't put in his stock, give us his name and we will see that you are supplied.

Write for interesting book-let.

Chicago Fuse Mfg.Co.

Manufacturers of
Electrical Protecting Materials and
Conduit Fittings

1503 W. 15th St., Chicago



A. M. E. S. Discuss Trade Problems

By I. N. Norr

Radio problems affecting the public as well as radio manufacturers and distributors formed the basis of the discussions at the semi-annual meeting of the Radio Section of the Associated Manufacturers of Electrical Supplies held November 10, 11, 12, at the Hotel Roosevelt, New York City. The leading scientific, manufacturing and electrical interests of the country were represented at the gathering. Important questions involving standardization of radio apparatus, and the problem of interference between broadcast stations were among the subjects considered, according to a report issued by E. B. Mallory, Chairman of the Radio Section. Mr. Mallory's address dwe't upon the phenomenal growth of the radio industry, which, he declared, already had surpassed the mark of every prediction.

Important recommendations were made at the meeting for standardization, both in nomenclature and apparatus. The general use of frequency rather than wave length to describe the assignments of broadcasting stations, was urged by the Transmitting and Receiving Set Committee. Where tuning dial markings involved frequency or wave length values, the Committee held, frequency markings only should be used.

As a result of the informative campaign conducted by the Radio Section of the A. M. E. S. and the splendid educational work by the many newspapers and other publications in familiarizing the general public with technical, as well as industrial developments both in the radio industry and in the broadcasting art, radio had become an all-year-round industry, it was generally conceded at the meeting. Measures were taken to continue this work by the Radio Section, with publications to be issued from time to time reflecting the scientific, technical and industrial progress of the art.

Dr. Alfred N. Goldsmith, reporting for the Ship and Shore Committee of the Radio Section of the A. M. E. S., declared that efforts to reduce the interference with broadcast reception arising from code stations afloat and ashore had been measurably successful. During 1924, he pointed out, there had been increased use of continuous wave transmitters and vacuum receiving apparatus on ships. The replacement of the older spark equipment not only lessened interference, but increased capability of the ships for handling shipto shore wireless traffic.

ECLIPSE

SCREW ASSORTMENTS

MAHOGANY FINISHED WOOD COUNTER DISPLAY, SOLID COVER



No. 6780

Each compartment clearly marked with size and kind, thereby reducing the selling to a minimum.

Full capacity of a compartment is 200 pieces, if lesser quantity is placed in display, reserve stock can be kept in original package.

SEND FOR BULLETIN NO. 67 DE-SCRIBES OTHER DISPLAYS — GLASS, ETC.



Cut No. 6782

SPECIAL OFFER:—Mail this coupon with your name and address plainly written and we will send you our proposition how to obtain, FREE, a Mahogany Finished Wood Counter Display, Cut 6782, each compartment plainly marked with size and kind.

Name	 	 	

Address.

HENRY FRANK, Jr., Inc. 380 Hudson St. New York

Hardware, Tools, Supplies Electrical Division

GLASS GRID LEAKS

With the Famous Impregnated Resistance Element

DEMAND THE BEST

Your Trade Deserves It



NO PENCIL MARKS NO INDIA INK

USED IN THE CONSTRUCTION OF OUR LEAKS

WE USE THE

GENUINE IMPREGNATED

RESISTANCE ELEMENT, MACHINED FERRULES ***********

YOUR OWN NAME OR TRADE-MARK IF DESIRED

LEAD-INS

With the Copper Riveted Fahnstock Type Clips

NO MORE LOOSE EYELET CLIPS TO CONTEND WITH ALL CLIPS ARE COPPER RIVETED-

TRIDOT

WRITE FOR PRICE LIST

ELECTRIC CO., INC.

16 HUDSON ST., NEW YORK CITY

WHOLESALE ONLY

NOTE: MANUFACTURERS, JOBBERS - WE ARE THE SOLE MANUFACTURERS OF "IMPREGNATED" ELEMENT GRID LEAKS.

LEAD-IN

ATEC BEZEL HOLE CUTTER

Fits any drill or brace. Cuts rapid and clean. Cutting blade renewable.

Made in 3/4-1-11/2 inch diameters.

Net 39c. Ea.

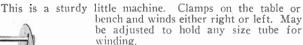
Extra blades, package of ten .99



RED BAND BAKELITE END CONDENSERS

NET PRICES 11 P. Plain 13 " 17 " .75 23 " .80 With Dial & Knob

ATEC COIL WINDER



It has automatic spring stop which holds crank in position so operator may use both hands to put on or take off work. Made of heavy metal. All shops and experimenters can use it to great advantage.

Price \$1.95 Net

NEW WONDER LONG DISTANT BEARCAT TUBE SET

Most efficient detector unit ever designed. Entirely new circuit. Super-selective. Long range. Non-regenerative. No



squeals. All tuning on one dial. Genuine Bakelite Panel. Finely finished cabinet accommodates all batteries. List price \$15.00. Big Discount. Thousands being sold. Write for our un-Thousands being equaled proposition.

JOBBERS WRITE FOR DISCOUNTS

Dungan-Sternfield Radio Sales

NATIONAL DISTRIBUTORS OF FACTORY OUTPUTS

25 N. Dearborn Street

Chicago, III.

KAY RADIO CO.

364 Thirty Ninth Street BROOKLYN, N. Y.

Kay Five-in-One PHONE CONNECTORS

No One Tube Set Complete without a Pair



Allows the use of from One to Headsets

Just attach a pair of Kay Fivein-One Phone Connectors and plug in from one to six Head Sets. Net price, in lots of 100 pr., 12c pr.

COMPOSITION DIALS

Net Prices

Lo	ts of	Black Mal	Mahogany			
2"	200	$.07\frac{1}{2}$.09			
3"	200	.12	.14			
4"	100	.20	.221/2			

With Tapered Knob and 1/4" Brass Bushing

ENGRAVED STRIPS

Assembled with METAL BINDING POSTS (Non-Removable Top) And Copper Soldering Lugs

Net Prices Lots of 200 strips24 ea. 100 strips25 ea. Less than 100...28 ea.



ANT.

SWITCH LEVERS Tapered Knob and Adjustable Arm

Net Prices Type A. .05 lots of 250 Type B. .06½ " " 250

SAMPLES ON REQUEST

Detroit Show Is Well Attended

Arena Gardens presented a brilliant scene on Wednesday evening, Nov. 12th, when the third annual radio show was officially opened. The widespread interest manifested in advance of the event culminated the first night in one of the largest attendances that ever graced a radio exposition in the Automobile City. The fan element turned out with enthusiasm and declared that the show was the best they ever at-

The event was staged under the supervision of the Radio Trade Association of Michigan and the Detroit News. The various committee working for the success of the affair received numerous congratulations on the successful outcome of their efforts.

The officials in charge of the exposition were: H. E. Hagerty, president Radio Trade Association of Michigan; Radio Trade Association of Michigan; Robert Kirchner, vice-president: F. A. Krue, Jr., secretary; Henry J. Van Baalen, treasurer; George W. Russell, Jr., chairman radio show committee; N. B. Kopley, chairman publicity committee; A. M. Edwards, executive chairman of committee; Corley W. Kirby, George O. Seeley, and H. D.

The following concerns exhibited at the Detroit show:

M. B. Sleeper, Inc., Crescent Electric Co., Peoples Outfitting Co., Deutch Sales Co., Acme Apparatus Co., B. Metal Refining Co., Seeley Radio Co., Washington Radio Shop, Serlin & Co., Commercial Electric Co., Radio Journal, Michigan National Guard, Wireless Age, Detroit Electric Co., Willard Storage Battery oC., Phonograph Co. of Detroit, Republic Radio Co., J. L. Hudson Co.

Jewett Radio & Phonograph Co., Electrical Research Laboratory, Mohawk Radio Corp., Russell Electric Sales Co., S. S. Corp., Russell Electric Sales Co., S. S. Kresge Co., Koploy & Ross, Electric Storage Battery Co., Electrical Specialties Co., A. T. Knowlson Co., Collin B. Kenedy Co., Auto Electric Sales Co., H. L. Walker Co., Multiple Electric Sales Co., Express Body Co., Henry Hyman Co., Crowley-Milner Co., H. B. Robertson Co., U. S. L. Battery Co., Colonial Clothes Shop, Dongan Electric Co., National Carbon Co., Beckley-Ralston Co., Moon Bros., Bristol Co., B. J. Fitzner Co., O. C. Radio Stores Co., A. R. Wildauer O. C. Radio Stores Co., A. R. Wildauer, Wolverine Radio o.

Radio Dealer in Larger Quarters

The editorial and business staffs of the Radio Dealer Publications recently moved to Rooms 1325-1327, four floors above their present location in St. James Building, 1133 Broadway, New York City. The tremendous development of the radio industry has reflected itself in the need for larger quarters by the publication, which will now be better able to handle increased business.



Without touching the dials, you can adjust the volume of reception to the taste of the listeners and the size of the room. The control knob on the back of the Royalfone Unit permits a full range of adjustment from very soft to very loud without a trace of muffling, blare or any distortion. Makes a high class loud speaker out of any phonograph or horn, at a minimum

Price with heavily nickle plated nezzle and ample connecting cord. \$5.00





Greater distance by using the Royalfone Headset because it reproduces the faintest signals your set can detect.

LIST PRICE \$4.50

A Real Sales Appeal

Features sell a product. What greater feature can you offer your customers in a loud speaker unit than a volume control which makes the loud speaker adjustable to individual acoustics the same way as a phonograph? Install a Royalfone Unit on your demonstrating set and let your customers show you the profits in this item.

Send a trial order TODAY

Whatever your sales of loudspeaker units and headsets may be, give the Royalfone Unit and Headset an opportunity to show you greater profits. Send your order Now.

ROYAL ELECTRICAL LABORATORIES

NEW JERSEY

DEPT. R.D. SUCCESSION OF SU

Radio Engineers Everywhere have been thrilled by the magic of the new PARAMOUNT LOOP

DOES WORK OF LOOPS 4 TIMES ITS SIZE!

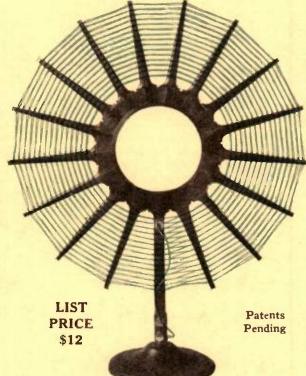
Spider-Web Wound With Silk Over Phosphor - Bronze Wire, Mounted on Genuine Bakelite Frame (Lowest in Dielectric Losses). The PARA-MOUNT LOOP Gathers and Sends Direct to the Receiver Every Electron of Current.

These Super Qualities of the PARA-MOUNT LOOP afford, to a Surprising Extent.

你是你是我你我你是我你是我你是我你是我你是我你是我们是我们是我们

GREATER VOLUME GREATER CLARITY GREATER RECEIV-**ABILITY**

GREATER DIREC-TIONAL EFFECT



As Handsome in Appearance as Scientific in Construction, The PARAMOUNT LOOP is a Worthy Accessory of the Most Elaborate Receiving

Only 15 Inches high, it has the Greatest Possible Directional Effect.

It Reduces Static and Interference to a Minimum-

Will over Entire Board of Wave Lengths-

Works Only on Peak of the Wave Which Makes it Highly Selective in Bringing in Distant

READ WHAT A PROMINENT BUFFALO JOBBER THINKS ABOUT THE PARAMOUNT LOOP

THE RADIO STUDIO

Jobbers of Guaranteed Radio Apparatus

Paramount Radio Corporation, 23 Central Ave., Newark, N. J.

Buffalo, N. Y., Nov. 8, 1924.

We have tested your Loop sent us for our approval under every conceivable condition and it has

met every test applied to it and is heartily endorsed by our engineers.

We wired you to-day ordering initial shipment of Loops. We would also like quotation on quantities running from 200 to 500.

Very truly yours,
THE RADIO STUDIO.

"A Loop Eventually—Why Not The Best?"

Paramount Radio Corporation

23 Central Avenue

Newark. N. J.

Jobbers and Dealers-Write To-Day For Discounts To The Trade

प्रदेश प्रदेश

Music—RADIO—Division

IRVING FURNITURE FACTORIES, INC.

General Offices—Show Rooms

Phone, Longacre 0451

469 Seventh Avenue, New York City



EliMahtal is one of 40 Special Radio Cabinets designed and built by Irving Furniture Factories this season.

Manufacturers—
Submit 1925 Requirements
Special Exclusive Designs
Visit Show Rooms
by Appointment



MEANS
Beauty Utility
IFF - Construction

Announcing

"Commandad"

RADIO DE LUXE

Incorporating the famous

ATWATER-KENT

Model 20 Receiver

Designed—Constructed
Exclusively for

E. B. LATHAM & CO.

NEW YORK CITY

"Break Not"
PAT. NOV. 7, 1918

1100



The Most Popular Battery Tester in the World

Over 3,000,000 already in use by radio and automobile owners

The man who buys a Storage Battery Tester, wants the "Break-Not" because of its many patented features. It has only half as much glass as other hydrometers. The scale is in three colors to be easily read. The bulb is of the best quality rubber.

These are just a few points of this Battery Tester. It is extensively advertised in newspapers, etc. Packed 10 "Break-Nots" in a handsome counter display.

Price, Each \$1.00 and WORTH it.

West of the Rockies and Canada, \$1.25



"RADIO SPECIAL" "A" & "B" Battery Tester

This Battery Tester fills a long felt want with users of "A" and "B" radio batteries. The narrow rubber tip is designed to fit wet radio "B" batteries with small vent openings. Can also be used for automobile storage batteries. It is accurate and dependable. Every radio owner will buy it on sight.

Packed in a strong carton with full directions.

Price, each, 65c

"RADIO SPECIAL"

Distilled Water Jar with "A" and "B" Battery Tester

The Radio Special "A" and "B" Battery Tester fitted into a 32-oz, dis-tilled water jar. The tester can also be used for filling the battery. It takes up little room and is conveniently handy.

Your trade will be sure to buy it!

Price, Complete, Jar and Tester, \$1.25



THE "GEM" ELECTRIC CIGAR LIGHTER AND TROUBLE LAMP

Every radio fan wants one! Every automobile owner needs one!

Useful for lighting cigars, etc. Can also be used as a trouble light. Easily attached to panel or dash.

Put a Card On the Counter



Sales Will Astonish You

Price The \$1.25

No need to interrupt a good radio concert to find a match. The "GEM" is always ready for business.

trated folder of complete line of rapid selling Radio special-

Write for illus-



This Counter Display FREE with 10 Gem Lighters

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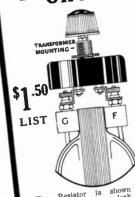
75/4

LOGAN BLVD

CHICAGO

Sales Hints

-one resistor for all purposes



The Resistor is shown above mounted as leak across the secondary of a transformer. It can be mounted on the panel and read through a peep-hole. Also equipped with bracket for baseboard mounting.

Here's a Resistor that is individually calibrated by hand over a range of 5,000 to 250,000 ohms. It's the new Fil-Ko-Resistor made for panel, baseboard or transformer mounting. brackets included in package.) When mounted on panel the resistance in ohms can be read through a peephole. Once set, it stays put it's not affected by atmospheric conditions, wear or jarring. And, what is of interest to you, is the fact that Fil-Ko-Resistor is a universal resistor. One model is used for first, second and third stages of resistance coupled amplification and as a leak across the secondary of audio frequency transformers, to decrease distortion. Fil-Ko-Resistor is unconditionally guaranteed!

— tell 'em to "tune the Grid"

When someone comes in to buy a fixed grid leak, tell him about the variable Fil-Ko-Leak. It's individually hand calibrated in megohms and can be set for whatever resistance he wants from ¼ to 5 megohms (the operating range for all tubes), and can be adjusted for best results. Fil-Ko-Leak will enable him to clear up distortion and increase volume. (The chart at the right will cinch your argument as to the wide range of grid control variation needed.) Fil-Ko-Leak is unconditionally guaranteed. It is equipped for baseboard or panel mounting.



Readings can be taken through peep-hole and logged. Terminal posts fit standard grid condensers. Resistance element is constant and accurate, and not affected by atmospheric conditions, wear or jarring.

Here's a typical "grid log" which shows the need of a variable grid leak. A Fil-Ko-Leak was substituted for 1 meg fixed leak. It was adjusted for each station until volume as greatest and distortion eliminated. Note: only four et thirty-one stations came in with the Fil-Ko-Leak set at 1 meg.

stations came in with the FilKe-Leak set at | meg.

WFAA. Dallas, Texas. 5
WMH. Cincinnati, Ohio. 2½
WSB. Atlanta, Ga. 5
WSH. Chicago, Ill. 2
WSAI. Cincinnati, Ohio. 1
WHO. Chicago, Ill. 2
*WSAI. Cincinnati, Ohio. 4
WI. Cincinnati, Ohio. 4
KSD. St. Louis, Mo. 4½
WTAS. Eigin, Ill. 3½
WCED. Zion City, Mo. 4½
WTAS. Eigin, Ill. 3½
WOC. Davenport, Iowa 5
KGO. Oakkand, Cal. 5
KGO. Oakkand, Cal. 5
KGO. Oakkand, Cal. 5
KGO. Oakkand, Cal. 5
WOAR. Philadelphia, Pa. 1½
WIDAR. Philadelphia, Pa. 1½
WIDAR. Springfield, Mass. 1
WASF. New York
WAST. Oartmouth, Mass. 43
WOO. ?hiladelphia, Pa. 4
WOR. Newark, N. J. 3½
WJ. Detroit, Mich. 3½
WJ. Detroit, Mich. 4
WTAM Cleveland, Ohio. 1
WOS. Jefferson City, Mo. 2
WTAK, Oak Park, Ill. 1½
KYW. Chicago, Ill. 324
WDIM. Worcester, Mass. 4½
KYW. Chicago, Ill. 344
WDIM. Kensas City, Mo. 1
WHK. Cleveland, Ohio. 1
WHK. Cleveland, Ohio. 1
WHK. Cleveland, Ohio. 1
WHK. Cleveland, Ohio. 1

-\$2 Well Invested!!!



Most set troubles can be traced to the tubes—noises, inability to "pull-in" the weak signals, inability to separate stations. All these can be cleared up with proper control of filament and grid. The Fil-Ko-Leak is the grid doctor and the Fil-Ko-Stat will cure the tube troubles. Fil-Ko-Stat is the ONLY Scientifically correct Radio Rheostat distinctly designed to control RADIO TUBES. It does what no wire rheostat can possibly do. It gives infinite adjustment of filament heat, assures greatest volume, noiseless reception, and it conquers distance. There's a battery switch packed with the NEW and IMPROVED Fil-Ko-Stat which fits the same mounting screws—a neat little nickel switch so arranged that it practically signals "on" and "off" a protection and convenience. Unconditionally guaranteed, the Fil-Ko-Stat is the best investment a set owner can make.





DISTRICT SALES OFFICES
New York. 342 Madison Ave.
Chicago. Manhattan Bidg.
St. Louis. 915 Olive St.
San Francisco, 464 Howard St.
Seattle. 101 Spokane St.
Address all mail to Dept.
RD1224

First Buffalo Show Proves Gratifying Success

By Walter S. Blaney

The first Buffalo Radio Exposition which closed in the Broadway Auditorium Sunday evening, Nov. 23rd was the greatest and most successful radio exposition ever staged in this city. From the time the doors opened on Monday, Nov. 17th, the attendance increased to gratifying figures and served vividly to demonstrate the interest manifested in radio by the people of the city.

Every branch of the radio industry was on display at the show. Merchandise from the foremost manufacturers in this country was tastefully decorated and attractively illuminated in a large circle around the auditorium floor. In the center of the spacious hall was station WEBR, owned and operated by the Howell Electric Co., which transmitted a brilliant series of afternoon and evening programmes during the week.

Despite the fact that the show was the first great radio exposition ever held in the Bison City, by virtue of the interest displayed, assured it being an annual event. In a large measure credit was due the Radio Dealers' Association of Western New York, the Buffalo Courier and Buffalo Enquirer, for the gratifying success of the event.

The list of exhibitors of the Buffalo Show was as follows:

C. N. Andrews, Atwater Kent, Amateur Radio Ass'n. of Western New York, American Radio Journal, A. C. Electrical Mfg. Co., Buffalo Radiophone Co., B-A. Co., Benttendorf Electric Co., Broadway Radio Service, Charles A. Branston, Inc., Buffalo Talking Machine Co., Barcalo Mfg. Co., Chown Radio Department, Cumberland Young, Cycle and Auto Supply Co., Direct Specialty Co., Denton, Cottier & Daniels, Dunham & Co.

Ever-Ready Batteries, Electric Storage Battery Co., Eastern States Battery Corp., Electrical Research Lab., France Mfg. Co., Federal Telephone & Telegraph Co., Max Freedman, Great Lakes Battery Corp., W. T. Grant Co., Haverford Cycle Co., Howell Electric & Radio Co., Hartford Instrument Co., Hazlet Storage Battery Co., Hoffman Piano Co.

Henderson & Henderson, Jax Federal Radio Shop. Jewett Radio & Phonograph Co., King Electric Mfg. Co., Luzerne Rubber Co., Larkin Co., Modern Electric Co., Medo Electric Corp., Mogadore Insulator Co., Morrison Laboratories Co., Neal, Clark & Neal, North Electric Co., Niagara Battery Corp., Niagara Radio Stores, Inc., National Carbon Co.

Radio Equipment Co., Radio Studio, Radio in the Home, Radio Trade Association, Inc., Roth & Zillig, R. E. Thompson Mfg. Co., Radio Tube Corp., Specialty Sales Co., Seeber-Hoffheins, M. B. Sleeper, Inc., Strauss-Dilcher, S. W. Hull & Co., Joseph Strauss, Inc., Wireless Age, H. R. Weckle, H. W. Wolcott, H. D. Taylor Co.

The New PARAGON doubles its selling field

PARAGON RECEIVERS have always had a strong selling appeal for the radio fan—for the people who know sets and who know radio values and are willing to pay for such values.

The new Paragon line still appeals to these people, but adds the wide field of set buyers who are influenced by price.

Dealers in radio everywhere tell us the new Paragon Four is the biggest value they have seen. Retailing at \$65, it gives the purchaser a good-looking, finely constructed, four-tube set employing the new Paradyne non-radiating circuit, giving clear, strong loudspeaker reception over practically unlimited range. They can't ask more than this of sets costing three times as much and requiring more tubes, greater battery power.

Backing this new receiver is a complete line carrying Paragon quality into the three-tube and two-tube classes. If your jobber is not yet showing these new sets, get in touch with us at once and take advantage of the big advertising drive that is putting Paragon over nationally.

ADAMS MORGAN COMPANY, INC. 12 Alvin Ave., Upper Montclair, N. J.

Makers Since 1915 of Record-holding Radio Receivers



PARAGON TWO \$27.50

Two tubes. Single dial control. Loudspeaker volume over moderate range. Mahogany, 11 inches long.



FOUR \$65



PARAGON FOUR \$65

Four tubes. Single dial control. Range almost unlimited for clear, loudspeaker reception.

New Paradyne non-radiating circuit.

Mahogany case, 21 inches long.



PARAGON THREE \$48.50

Three tubes. Single dial control. Loudspeaker volume over surprising range. Mahogany case, 17 inches long.



Look for the Red Triangle



R. M. A. Outlines Aims

The aims and purpose of the Radio Manufacturers' Association, with headquarters at 123 West Madison St., are outlined in a special bulletin recently issued by the organization. The bulletin follows: The Radio Manufacturers' Association was organized for the purpose of protecting the radio manufacturers of the United States and Canada against injurious legislation, trade practices, and other hostile encroach-It is organized, financed, maintained and administered exclusively by radio manufacturers and without the aid of promoters. Board of Directors meets on an average of once a week and membership meetings are held monthly. At these meetings questions of importance to the industry are discussed and acted upon. An office is maintained where an executive secretary is at the service of the members at al ltimes. The Association is operated on a budget plan which keeps expense at a minimum.

The Association is the only organization of radio manufacturers that is operated continuously and efficiently for the benefit of the manufacturer. It is not controlled or dominated by any faction or clique and covers the entire field of legislation, standardization, credit information, trade practices, etc. Its organization is such that in an emergency, such as the tax matter, it can function one hundred per cent ef-

ficiently immediately.

While being organized, the Association got into the fight against the proposed federal tax of ten per cent on all radio apparatus and, at an expense of less than \$1,700, killed this proposed tax. This was accomplished by sending the General Counsel of the Association to Washington wherein, in cooperation with Senator C. C. Dill, obtained assurance from thirty-eight members of the Senate that they would vote against the proposed tax. This was accomplished after the Senate had once voted the tax into the General Revenue Bill without a dissenting vote. This statement can be verified through Senator Dill. The Association has installed a system for the interchange of credit information without additional cost to members. This system is the first to cover the entire radio field instead of being confined to automotive. electrical, furniture, hardware, music dealer, or other divisions. Its operation is directed by a committee composed of six of the best credit men in the radio industry.

The Standardization Committee has actively begun the assembly and tabulation of data looking toward the standardization of radio parts and accessories. The Merchandising Com-

(Continued on page 116)

The Importance of Good Radio Panels

An inferior panel will reduce the efficiency of your reception through surface leakage. You can avoid this by building your set with

FLECTRASOT



These beautifully finished panels will neither warp nor change color. They are scientifically constructed to reduce surface leakage to a minimum, hence assure increased efficiency of the set.

One of the famous "sote" products introduced by The Pantasote Company, Inc., Electrasote Radio Panels are sold strictly on their meritsyet are

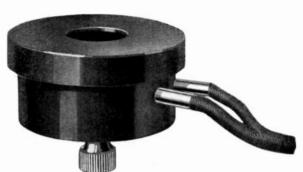
Lower Priced

than other standard panels

Make your Set an "Electrasote Panel Set"-and get results!

On sale at good Radio Dealers

M. M. FLERON & SON, Inc. Sole Sales Agents Trenton, New Jersey



"NIAGARA"
Adjustable Loud Speaking Unit
List Price \$3.50



Adjustable Loud Speaking Unit Phonograph Attachment Head Phones

Best products are manufactured to conform to a high standard under the direct supervision of a corps of telephone engineers.

We manufacture a varied line of headphones and loud speaking units. Let us figure on your requirements.

Write now for attractive proposition and sample.

BEST MFG. CO.
75 Hudson St. Newark, N. J.



List Price \$3.00

"BEST" Phonograph Attachment. This unit is the best. Send for a sample and judge for yourself.



List Price \$4.00

Weight S oz. 2200 Ohms. Cast Aluminum Shell. Composition Cap. Five Foot Cord. Tungsten Steel Magnets. All insulated parts of Bakelite Canvas.

Our all Bakelite Head Phones with leather head band and Brown silk cord. Actual weight $7\frac{1}{2}$ oz.

List Price \$5.00

ALL THAT THE NAME IMPLIES

KODEL <u>500</u> to 3250

Receivers operate without an aerial. Circuit exclusively in Kodel receivers. Uses either dry or storage batteries. Finish is black pebbled leatherette. Parts are made of genuine bakelite. Is compact in size and light in weight. Line includes parts for the Radio Fan.



C-13—A three tube KODEL Masterpiece. Tun frequency, KODEL detector, reflex and audio amplification gives 5 tube volume and range. \$28.00



\$18.00



\$5.00



C-11—One tube receiver—Range up to 1.500 Miles.

\$10.00

ALSO PORTABLES

P-12—Two tube portable, weighs only 8 lbs. complete. Gives loud speaker volume on local and many distant stations.

\$22.50

P-11—A one tube portable—the Camera of Radio—fits in the corner of hand bag, weighs only 4% lbs. complete.

\$16.00

DEALERS

It will add to your financial gain and prestige in your community to represent this new complete line. KODEL representatives will be backed by Sales coperation in the nature of an extensive national newspaper advertising campaign in over one hundred leading newspapers and leading Radio publications. In order that you may be the one to secure full benefit of this intensive KODEL coperation policy, telegraph or write immediately for catalog showing detailed complete information.

The WESTPHAL Co.

224 South Michigan Ave.

Wisconsin Dealers Unanimously Adopt Trade Code

All members of the Wisconsin Radio Trade Association in Milwaukee and in other cities throughout the state have pledged themselves to observe a new retailing code which was recently adopted unanimously by the organization. The members believe that the new rules embodying nine phases of radio retailing will be a decided step in stabilizing the retailing of radio sets and acces-

According to the viewpoint of the association the rules are important to the purchasers of radio equipment, as they indicate the rapid development and stabilization of the industry. The code adopted by the association was formulated to protect the patron as well as the dealer, and further eliminates many of the methods which have been in vogue in the industry. The rules follow:

1. No radio receiver sent out on approval except on payment of a delivery charge of \$10 and purchase of antenna equipped if needed. Delivery charge will be refunded if receiver is purchased.

2. Sets on approval will be considered sold if not returned within three days. Antenna equipment is not returnable.

3. Any material on trial not returned in good condition must be paid for.

4. A charge of 1 per cent per month is made on all time payment sales. One-third of the total price must be paid in cash.

5. No free instruction service on receivers after thirty days. Any service after that period will be charged for at \$1.50 per hour and expenses; minimum charge 75 cents.

6. All batteries and tubes are tested before delivery. No exchange will be made except for manufacturing defects and after factory inspection.

7. Extra charge of special testing of tubes to meet exacting specifications, \$1.00 per tube.

8. Don't ask us for discounts. Our goods and our service are worth the price we ask.

9. No radio merchandise is returnable for credit.

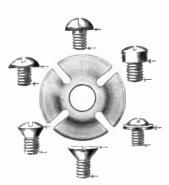
Garod Set at N. A. C.

NEWARK, N. J.—The Newark Athletic Club has on its mezzanine floor a radio set that is a constant advertising for "radio at its best." The set was presented to the club by A. W. Corwin, J. C. Elms, Jr., I. P. Rodman and L. Gardner, and is a Garod five-tube with loud speaker and proving a drawing

SPECIAL COILS TO ORDER

Send your specifications We will solve your coil problems

RADIO HARDWARE



Nickel Plated Wood and Machine Screws, Washers, Hex. Nuts, Panel Supports, Extension Rods, Etc.



ANGLE BRACKETS ALL STYLES

Write for catalogue

HAYDON & HAYDON

73 Warren Street **NEW YORK CITY**

Great News for Radio Fans and Dealers!



STAT PEND J. JOST PEND J. JO

Patents Pending in All Countries.

THE NEW REVERSO PLUG

and the polarity is instantly reversed. No more changing wires. You will at once know whether or not you have the proper polarity of your loudspeaker or headset.

The
Merit
Of This
Unique
Plug
Banishes
All
Competition

AMERICAN LOUD SPEAKER UNIT

Clear as a Bell!

Owing to Quantity Production and Increased Sales, the American Loud Speaker can now be offered at

\$3.50 LIST



A MASTER PRODUCT!

It took five years experimentation to produce a loud speaker that would dominate every other loud speaker on the market. In loudness, clarity and mellowness of tone and accuracy of reproduction no instrument can approach it—even at double the price.

ARCO SUPER-TONE LOUD SPEAKER UNIT---TYPE "B"

The increased demand for an improved loud speaking unit is fully satisfied by our ARCO LOUD SPEAKER UNIT, which is the latest production of our engineers.

Has Bakelite top and Specially Designed Diaphragm.

\$5.00 LIST



Dealers and Jobbers: Write or wire for special Discount Rates and Sales Promotion Details.

American Radio Phone & Mfg. Co., Inc.

Arco Supertone
26-28 PROSPECT STREET
Newark, N. J.

The SINGER Compendyne



A New Price

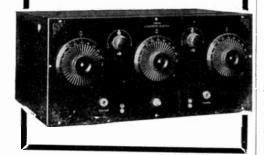
The SINGER Compendyne (patent pending) has gone over BIG. It has sold so well that increased production has enabled us to reduce the price \$16.00. The SINGER Compendyne five tube tuned R.F. receiver is now an even better value than before. Not only is it extremely efficient and beautiful, with mahogany cabinet and panel trimmed in gold, but it is now the cheapest quality set made. It is up-to-the-minute — using low loss coils, low loss condensers and the best audio transformers and small parts. "More talking points than any other set."

And it's advertised

in leading consumer publications. Fans and potential fans are hearing about it and talking about it,—and asking dealers about it. Be ready to sell to them when they come to you. Write for literature and proposition.

E. SINGER CO.

40 Hudson St. New York, N. Y.



*Dealers who still have in stock SINGER Compendynes bought at the old \$95.00 list, communicate with the factory for adjustment.

R. M. A. Outlines Aims

(Concluded from page 112)

mittee is meeting regularly to formulate methods for combating and eventually eliminating various evils of the industry. The Association has actively encouraged and will continue to encourage the formation and co-ordination of listeners' organizations all over the United States as a proper means of protecting radio from oppressive or hostile legislation.

The Association has caused to be created the Chicago City Radio Commission and plans to make it a model which can be adopted by other cities for the general good of radio, all elements in radio being represented on, and being brought into co-operation through this commission. These are many, varied and important, but following the policy adopted at the first meeting of the Association, they will not be announced until they have taken concrete form. The Association has not and will not solicit applications for membership on the basis of promises of what may or may not be done.

New York Show Officials Issue Report

Ten millions of dollars in business was transacted at the New York exposition, which closed Nov. 8, according to figures just made public by officials of the exposition staged in Grand Central Palace. The show was attended by 200,000 people, says the report, and the record daily attendance was 37,000—this on the closing day. About 200 radio manufacturers had exhibits on display.

The next radio national exposition, which will be the fourth one, will be held during the last week in August or the first week in September, the management has announced. The date has been moved ahead so that a Chicago show may be held in October, 1925.

The national exposition management plans to use the Grand Central palace again next year in New York—the entire first three floors of it. An attempt is now being made to find a suitable place in Chicago. Those in charge of the show plan to elevate the class of the show and feature the huge cabinet sets and other outstanding, high-class manufactured radio sets.

The Radio Manufacturer, is presenting a wealth of live news dispatches each week from every section of North America, and merits the distinction of being the manufacturer's best medium.

DUTCH RADIO VALVE



List Price \$4.00

Distributors

CALIF.-Marshank Sales Co., 1240 South Main St., Los Angeles, Cal.

MISSOURI-St. Louis Radio Tube Laboratory, 3572 Olive Street, St. Louis, Mo. CANADA-Consolidated Electric Lamp Co., 43 Queen St. East, Toronto, Ontario

Dealers and Distributors Wire Now for Attractive Proposition.

D. R. V. IMPORTING CO. 515 Orange St. Newark, N. J.

FOR ANY CIRCUIT IN ANY SET "YOU CAN'T BEAT THE DUTCH"

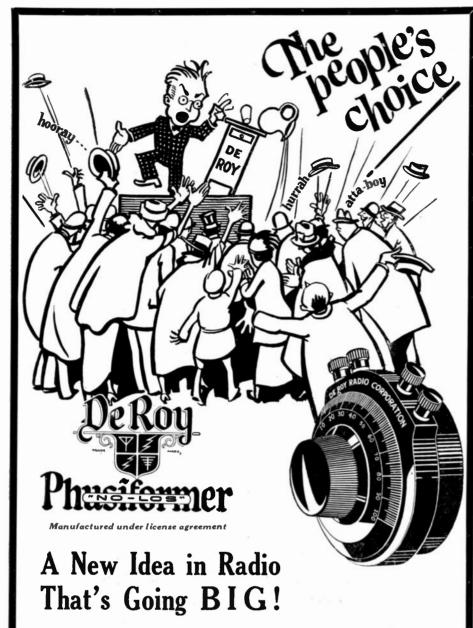


AMERICAN RADIO AND RESEARCH CORPORATION

Dept. D



Medford Hillside, Mass.



Step-by-step building of sets by the **De-Roy Phusiformer Unit** method has taken the public by storm. Here's the simplicity everybody wants. When an idea like this takes such tremendous hold on thousands of radio fans, some dealers are due to make a lot of money—the dealers that hurry up and get their names on the list. Get the edge on competition; send that trial order TO-DAY.

List Price With Dial

\$9.00 each

Write for Literature and Full Details

DeROY RADIO CORPORATION

282 Plane Street

Newark, N. J.

Polymet Grows

According to trade releases from N. Green, of the Polymet Mfg. Co., 74 Lafayette St., New York City, another floor has been leased to take care of the increasing output of Polymet plugs and rheostats.

Precel Receiver

The Precel Radio Mfg. Co., with main offices and factory at 714 Monroe St., Toledo, Ohio, announce the concentration of production on the new Precel Superfive Radio Receiver. With increased space already taken on announcement is made that production is rapidly keeping up with the incoming orders.

The Factory Sales Co., 5173 Euclid Ave., Cleveland, Ohio, who are handling the sales of the Precel Superfive have as their manager, Paul K. Solan, who was recently with the sales department of the McCray Refrigerator Co.

Atlas Speaker

The Multiple Electric Products Co., Inc., Newark, N. J., is now featuring their Atlas speakers into two distinct models. The first is that with the straight horn, while the second is of the popular goose-neck type, both models being made with a harmonizer adjustment. In both models the adjustment works on the same principle, that of a varying primary diaphragm distant from the magnet pole and tension on the secondary diaphragm.

In exterior arrangement they are different as on the goose-neck model there is a dial scale through which the speaker adjustment is made by merely turning the dial itself, while on the straight horn type adjustment is made by turning the milled head bronze screw placed on the base of the speaker.

The heart of both these is the Atlas unit which, although improved by months of experimentation, is basically the same unit which has been used since Atlas speakers first come into the radio market. To care for national distribution, the Multiple Electric Products Co., Inc., has branches in eight principal cities in the United States.

Two Newcomers

Hollywood, Cal., movie centre has a new station, KNX, which opened recently. It is owned by the Los Angeles Express, which in its announcement fails to give either the output power or wave length used.

Station KFGZ. Berrin Springs, Mich., has reopened for the winter on 268 metres wave length. Emanuel Missionary College, operating the staion, plans educational numbers.

HIGH SPOTS!

Absolute clarity of tone

3 Tubes equal 6 Uses UV-201 As or UV-1998

Two stages of tuned radio

Detector

Three stages of audio

Indoor or outdoor aerial

Pronounced selectivity

Three-dial control

Suspension sockets, eliminating microphonic noises

Standard approved parts throughout

Ahead of its time in features that make for simplicity and efficiency

Mahogany cabinet (English Brown) hand-rubbed finish

Room for A and B batteries within cabinet



Natural Tone Quality in Radio

You want more than mere distance—the new Grimes Type 3X-P gives you DX in abundant measure.

You want more than perfect selectivity— Type 3X-P makes you the master of your reception.

You want tone quality—the refined purity in tone color that mirrors the low and high frequency of the human voice, the ensemble of symphonies, the organ's full diapason.

All these qualities of radio reception perfected by David Grimes, the acknowledged genius of Radio, are now assured by exercising the same care in the choice of a radio or phonograph.

For when Type 3X-P floods the room, quality of tone is no longer a matter of doubt. It is here—here for you to listen to—here to gladden a million homes with soft voices and sweet harmonies. It adds no sputtering or tube noises to the original tone. It subtracts none of its beauties.

Type 3X-P is and brings the greatest message to the broadcast listener.

Backed by leaders in the music trade industry and by that indefatigable radio genius, David Grimes, Type 3X-P merits the confidence you have so long wanted to place in a receiver.

To the trade and to the public it is a boon—a thing of beauty—"a joy forever."

Dealers apply to your jobber for information.

Jobbers, write direct to

DAVID GRIMES, Inc.

1571 Broadway, New York

Strand Theatre Building

INVERSE DUPLEX

Insures Natural Tone Quality

LICENSED UNDER PATENTS ISSUED AND PENDING

Type 3X-P
Official Laboratory
Model

RETAIL \$85



THE HIGHEST CLASS TEN DOLLAR LOUD SPEAKER ON THE MARKET



Write today to any of the following distributors Act! IMMEDIATE DELIVERY

PROGRESSIVE MUSICAL INSTRUMENT CO., 319 Sixth Avenue, New York YAHR & LANGE OHIO MUSICAL SALES CO. 207 East Water Street, Milwaukee, Wis. 1747 Chester Ave., Cleveland, O. GIBSON-SNOW COMPANY, Inc. H. A. McRAE & CO., Inc. 137 River Street, Troy, N. Y.

306 West Willow St., Syracuse, N. Y.

KIEFER-STEWART CO.
Capitol Avenue and Georgia Sts., Indianapolis, Ind.

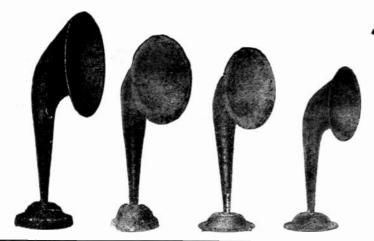
LUCKER SALES COMPANY 17 South Sixth Street, Minneapolis, Minn. AMERICAN RADIO CORPORATION 3-11 North Central Avenue, Baltimore, Md.

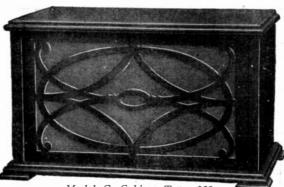
Factory Representatives: PACIFIC STATES COMMERCIAL CO., 443 South San Pedro Street, Los Angeles. Canadian Distributors: THE OTTO HIGEL CO., Ltd., King and Bathurst Streets, Toronto.

The New AUDIOPHONE SPEAKER

This Cabinet Model "C" is the latest Audiophone. It was made to satisfy the ever-growing wish of thousands of admirers of the full, round, musical voice of our Model "S" horn type.

It is selling as rapidly as we can produce it, and we urge you to order early so as to have it on hand for the peak of the radio season.





Model C, Cabinet Type, \$30

The case is real mahogany. The design is in keeping with the best furnishings. The size, $17 \times 10 \times 10^{1/4}$, is just right for the top of phonograph or receiving set. The reproducer is the same as our Model "S".

The voice of the Audiophone is not a "Phone unit," but an electric tone reproducer which results in an instrument which reproduces with natural quality in most powerful tones, yet has a sensitiveness equal to any loud speaker developed. Retails at \$30.00.

The Bristol line includes five Audiophones to retail from \$12.50 to \$30.00.

The Bristol Company, Waterbury, Conn.

TRIANGLE ATLANTIC VARIABLE CONDENSERS

When it comes to being "Fool Proof"—This is the Last Word

LOW LOSS

STRAIGHT LINE VARIABLE

SILENT GEARS

GROUNDED ROTOR PLATES

SOLDERED BRASS PLATES

3	Plate,																		\$3. 3.	
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GEARS OPERATE 25 TO 1

ADJUSTABLE TENSION SPRING

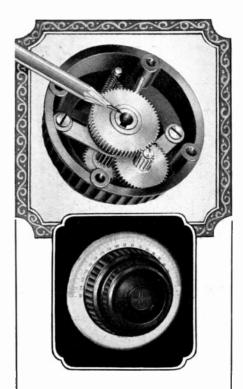
ADJUSTABLE ROTOR SHAFT

ABSOLUTELY NO SIDE OR END PLAY

SEND FOR

New catalog sheets now off the press, describing our various products. Fixed Detectors, Enclosed Detectors, Phono-Units, Headsets, Non-Removable Head Binding Posts, etc., etc.

BIG THREE RADIO CORPORATION
16 HUDSON STREET, N. Y. CITY



All Wobble Eliminated

By Long Center Bushing

Look at that long center bushing!

Watch the new model Accuratune

when you tune in—how smooth it operates—how precise its movements without the slightest indication of wobble.

Few vernier dials. built as they must be to take all standard condenser shafts, are designed as the Accuratune to positively eliminate this universal objection—dial wobble.

And just this one point of refinement characterizes the complete makeup of the Accuratune Micrometer Control—features that assure most unusual tuning efficiency.

New Accuratune Features

Geared 80-1 ratio. No back lash. No cutting of condenser shafts. Flush panel mounting.

Micrometer Controls easily replace ordinary dials without any set alterations. Just tighten the set screw on the large knob. \$3.50.

DEALERS: Write for prices and our dealer proposition.

ACCURATUNE

GEARED 80-1
MICROMETER CONTROLS

MYDAR RADIO COMPANY 9-C Campbell St., Newark, N. J.

Canadian Representative RADIO, LTD., MONTREAL

Radio Week Commemorates Progress Made by Industry

By Walter A. Schilling
Publicity Director, International Radio
Week

The observance of International Radio Week throughout the world beginning on Monday, Nov. 24th, was given added importance by reason of the keen interest taken by the people of the world in the advancement made by radio during the past year. Blue Ribbon event in radio was opened auspiciously by world-wide observance of radio in all its importance. To the layman in radio, the purpose of the world-wide observance of International Radio Week, can be said to mark the progress made by radio in every civilized country of the world where it has been a vital influence in the development of mankind's activities.

The period has been devoted primarily to a time in which the world at large is acquainted with radio and the industry in a more international way than ever before. The rapid progress made since radio first became a commercial reality was pictured very vividly, by means of the stage, screen, press and broadcasting stations of the world. From every part of the globe the executive committee in charge of Radio Week activities received many offers of co-operation. Newspapers, periodicals of every class carried mention of the event in their columns. The general executive committee for International Radio Week headed by Powel Crosley, Jr., president of Crosley Radio Corporation, Cincinnati, left no stone unturned to insure the success of the event. East and west coast stations "listened in" on programmes sent by overseas stations during the week. Special programmes were broadcast by practically every Class B station in the country.

The keen interest manifested by the American stations was clearly exemplified when they observed silent hour during the week. British and Continental stations also prepared elaborate programmes, many of which were received with unusual clarity in this country.

The general executive committee in charge of details for this country during "Radio Week" declared that by strict observance of the event and acquainting the general public with the work, there was only one result that would accrue and that was the increasing of public interest in the rapid strides made by the radio industry. It

was also pointed out that the general public had now come to regard radio as no longer an attic experiment, but a living room necessity. This theme has been carried out largely by the Radio Week sponsors in general.

Radio has proved a source of universal enjoyment and education and, therefore, can take its place among the greatest achievements in the world's history. To acquaint the general public with the progress made by radio and its real value to mankind in general, not only as a source of amusement but as a necessity, was one lesson clearly demonstrated.

There is every reason to believe that Radio Week in 1924 has been the greatest success of any similar event staged in the interest and advancement of the science. It has been a fitting tribute to the widespread benefits derived from radio by the civilized nations of the world.

Jefferson Co. in New Quarters

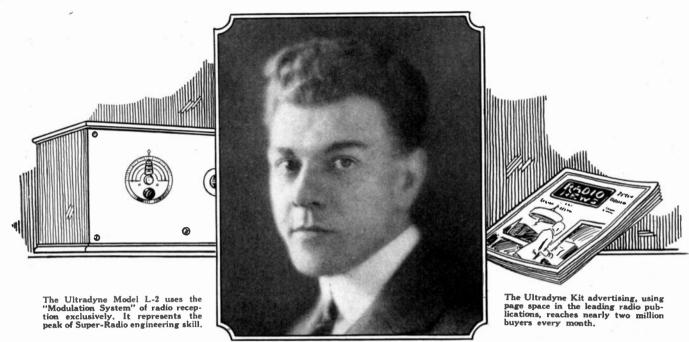
The Jefferson Electric Mfg. Co. of Chicago, is moving into splendid new quarters. The new factory will provide greatly increased floor space to take care of the rapid expansion in business. The company is one of the earliest pioneers in the field of small transformers and ignition coils.

Phonograph Radio Dealer Makes First Appearance

The specimen edition of the *Phonograph Radio Dealer* made its initial appearance in the trade Nov. 20. The book was attractively arranged and contained a number of interesting trade articles and many departments designed for the benefit of the phonograph dealer for the retailing of radio sets.

The publishers announced from their offices, 1133 Broadway. New York City, that the first standard number would be issued about December 15th and would contain many features in addition to those already included in the first edition.

The publishers received considerable encouragement in the development of the magazine and all signs point toward its being a progressive trade journal. It is particularly suited to the music dealer who has either added radio to the merchandise being sold, or who is at present carrying standard sets.



Your (ustomers Know R.E. Lacault



The ULTRADYNE Kit

consists of 1 Low Loss Tuning Coil, 1 special Low Loss Coupler, 1 type "A" Ultraformer, 3 type "B" Ultraformers, 4 matched fixed Condensers.

To protect the public, Mr. Lacault's personal monogram seal (R.E.L.) is placed on all genuine Ultraformers.

\$3000

R. E. Lacault, E.E., A.M.I.R.E., inventor of the Ultradyne, is known the world over. Any radio product designed and endorsed by him is your tip—you may be assured of consistent demand and quick turnover.

With this kit, anyone can build the Model L-2 Ultradyne. To the "Modulation System" which made the Ultradyne famous, regeneration is added in the Model L-2. The result is Ultra-sensitivity. This use of regeneration allows the Ultradyne to respond to infinitely weak signals because it provides greater rectification.

Stock Ultradyne Kits—our national advertising will sell them!



How to Build and Operate the ULTRADYNE

32-page illustrated book giving the latest authentic information on drilling, wiring, assembling, and tuning the Model L-2 Ultradyne Receiver.

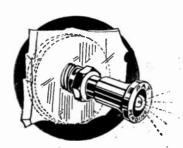
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ULTRADYNE

MODEL L-2

PHENIX RADIO CORPORATION

3-E BEEKMAN ST., NEW YORK



ZIP! \$20 GONE!

"Every Tube Blown Out Again"

-Ever Happen to You?

YOU can't foresee when it will occur—loose connection, bit of solder, slipping screwdriver—and there's all five tubes gone in a flash! Not only money loss but the evening spoiled.

These Costly Accidents Can be Prevented

A KANT-BLO on your set gives absolute, permanent protection for any number of tubes. Just install it and forget it.

Not Additional Apparatus

K ANT-BLO simply takes the place of a binding post or battery switch. Only one needed for any set and then you are protected indefinitely. Not only prevents blow outs but warns you that there is

something wrong. If your dealer is out of stock, send us \$2 for a KANT-BLO Binding Post Style, or \$3 for the Switch Style and we will ship direct to you charges prepaid.



Manufactured by Ganio-Kramer Co. Inc., New York

Sole Distributors Apex Radio Co. Inc.,

503 Fifth Ave., New York

Move to Standardize Radio

By L. M. Thorp

During the past year there has been increasing interest and a beginning of organized effort in the standardization of radio apparatus, and progress in this direction continues. The bureau of standards participates in this work through representation on the various committees and boards which are engaged in the several phases of the movement.

A sectional committee on radio has been organized under the procedure of the American Engineering Standards committee. This sectional committee deals with standardization of apparatus and nomenclature. It has twenty-six members, representing various producing, consuming, distributing and general radio interests. Its technical work will be carried on by subcommittees on the following subjects: Transmitting and receiving sets and installations, component parts and wiring, electron tubes, electroacoustic devices, power supply and outside plant.

The interdepartment radio advisory committee gives attention to standardization of radio equipment for government use through the work of the subcommittee on technical problems. It has recently adopted a standard receiving electron tube, which is recommended for use by the government departments. Before a company can submit bids for these tubes, it must submit a sample of fifty tubes on which specified tests must be made.

The bureau of standards, signal corps and bureau of engineering, navy department, co-operate in making these tests. One company has already submitted samples. The committee is now working on the standardization of fifty-watt transmitting tubes and condensers for government use.

A committee on radio apparatus has been formed by the Federal Specifications board. This committee will adopt standard specifications for use in purchase of radio equipment by all government departments.

The standardization committee of the Institute of Radio Engineers is preparing a revision of the "Definitions of Terms and Standard Graphical Symbols."

The Service Bureau merits the interest of the industry due to the opportunity it affords the retailer and jobber to open new channels of trade.

SIMERIME

For the past three y e a r s Silvertone tubes have been making a reputation for quality, strength and long life. The demand for them last year was many times beyond our capacity. Every sale means a steady customer and a constantly increasing demand.



We have more than doubled our output this year and Silvertones are better than ever. Every tube is rigidly tested and backed by an absolute guarantee.

Our sales policy is liberal and our guarantee means something.

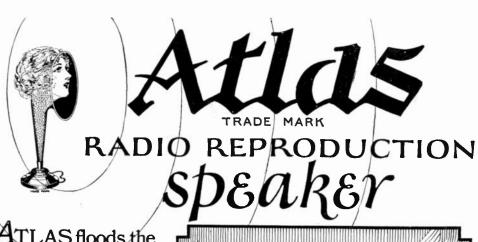
We have a few good contracts open to jobbers and dealers who can qualify

YOUR GOLDEN OPPORTUNITY

A SILVERTONE CONTRACT ASSURES A GOOD INCOME INCREASING YEARLY

The Silvertone Distributing Co.
1819 Broadway, N. Y. City
Exclusive distributors for Silvertone tubes
Formerly manufactured by the

De Forest Tel. & Tel. Co.



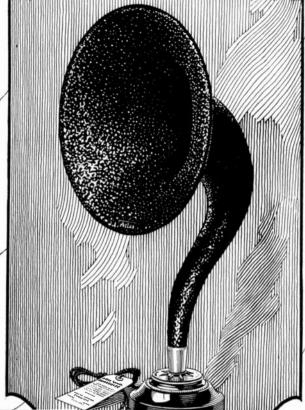
ATLAS floods the room with the best that's in your set. Write for the interesting booklet you ought to read before buying any speaker.

Multiple Electric Products Co., Inc., 365 Ogden Street, Newark, N. J., Dept. W. New York, Boston, Philadelphia, Baltimore, Pittsburgh, Detroit, Chicago, St. Louis, Rialto Building, San Francisco.

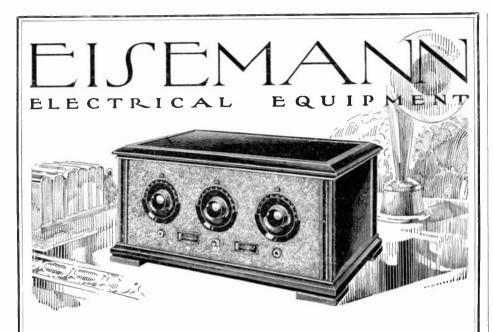
Marconi Wireless Telegraph Co. of Canada, Ltd. Sole Canadian Distributors



A slight turn of the exclusive Atlas harmonizer (Pat. applied for) — and your speaker is harmonized with the broadcast you are hearing and the set you are using. It gives you radio—as you ought to hear it.



Atlas unit, with attachment couplings to fit all standard phonographs. New type Atlas with the strikingly beautiful bronze-brown ripple-finish gooseneck horn.



Type 6-D Broadcast Receiver

Non-oscillating ~ Non-radiating

SPECIFICATIONS

Circuit: Two stages of tuned radio frequency amplification, detector and two stages of detector and two stages of audiofrequencyamplification. Non-oscillating. Non-radi-ating. Astaric transformers used to minimize mutual induction. Tubar: Five in all. Jacks provided for either five or four tube operation.

Cables: Complete set supplied for "A" and "B" batteries.

Warel ingibs: 200 to 600 ineters, with uniform efficiency of reception.

Aerial: 75 to 125 feet, single

Panel: Alominum, with attractive crystal black finish. A perfect body capacity shield.

Dials: Sunken design, Shaped to fit the hand and permit a natural position in tuning.

Rhostats: Adequateresistance for all standard base commercial tubes.

Condensors: Single bearing, low leakage losses.

Sockets: Suspended on cushion springs which absorb vibrations.

Cabinet: Mahogany, with distinctive lines and high finish. Ample space provided for "B"



THE real, intrinsic value of the 6-D Receiver can be fully appreciated only by making direct, sideby-side tests with other makes.

Such comparisons need not be confined to sets in the same price-class. The 6-D is the equal, in every detail, of many receivers priced \$25, \$50 and even \$75 higher.

Performance of the highest order, strikingly attractive appearance and moderate price—all these elements of true worth are found in the 6-D.

You will note its clarity and the full, generous volume. You will also observe the unusual sharpness of tuning. And the finely carved, high finish mahogany cabinet will make a strong appeal.

> Price \$125.00 without accessories. If your jobber cannot supply you, write to us.

ELSEMANN · MAGNETO · CORPORATION

General Offices: 165 Broadway; New York FRANCISCO CHICAGO DETROIT

Radio Has Come to Stay-Ert

The benefit derived from an association composed of retail radio dealers is pointed out by Michael Ert, president of the Wisconsin Radio Trade Association, in a recent statement which follows:

The radio merchant in Milwaukee has realized the necessity of assisting each other and the growth of the Radio Trades association to nearly fifty members in a short while shows the spirit in this organization. They realize more than any one else that radio has come to stav—that radio is a staple business.

The phenomenal growth of radio in the last three years has never been equaled in history. We were amazed at the growth of the motor car industry-we were surprised at the headway made by airships, but compared to the radio industry they will be insignificant, and what this business will amount to in a very short time can hardly be realized.

The estimated radio business for 1924 is \$350,000,000. There are over 250,000 people connected with the radio industry. The number of retail radio dealers are being increased daily by furniture stores, music houses, electrical supply stores, etc., beginning to handle radio.

There are over 3,000,000 receiving sets this minute in use in the United States. There are 12,000,000 radio listeners, 3,000 radio manufacturers and five hundred and sixty-three broadcasting stations.

Radio will be in twenty million homes in time to come. The farmer, the rancher and the lumberman, isolated from the rest of the world, will hail this new invention as the greatest benefit to their homes. Above all radio is a legalized business and its steady growth protected by wise government rules.

WTAM Increases Power

WTAM, the broadcasting station of the Willard Storage Battery Co., Cleveland, has been granted a license by the Department of Commerce, to increase its power output from 1,000 watts to 1,500 watts.

The Willard station is the first to be granted such a license. It follows close upon the recent Radio Conference at which Secretary Hoover advocated the policy of higher power stations.

Experiments lead to the belief that higher power such as WTAM is now licensed to use, will be of material benefit to the receiving set owner, and insure good clear reception, all year round, regardless of weather conditions at the point of sending, receiving or points between.

EVERY JOBBER EVERY DEALER EVERY MANUFACTURER THE RADIO TRADE



Should be a Member of

The Radio Trade Association

Application blank and details may be obtained at headquarters

The Radio Trade Association, 1133 Broadway, New York City

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HUGH H. EBY, H. H. Eby Co. Philadelphia, Penna. Treasurer

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Radio Distributing Co.
Newark, N. J.
First Vice-President
Committee on Expositions

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ARTHUR HALLORAN, Editor, Radio San Francisco, Calif.

GEO. H. FISCHER, Arnold-Edwards Piano Co. Jacksonville, Fla.

WM. A. DEBOLD,
Oklahoma Radio Co.
Oklahoma City, Okla.

D. MACGREGOR, Rauland Mfg. Co. Chicago, Ill.

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H. H. CORY, Northwestern Radio Trade Assn Minneapolis, Minn.

H. A. BRENNAN, Cutting and Washington Co. Minneapolis, Minn.

What the Manufacturers Are Doing

New Mu-Rad Products

The Mu-Rad Laboratories, Inc., Asbury Park, N. J., recently announced three of its newest productions. This concern is well known as the manufacturer of the MU-RAD six tube loop receiver. Type MA-15. and the five tube single control receiver. Type MA-18. These two receivers are continued as standard equipment for the present season. In addition, this company has just announced its Type MA-20 Receiver, its Recto-Filter Unit, and its B-Radicator Unit.

The Type MA-20 Receiver should prove to be one of the most remarkable developments in radio for some years hence. It is a three dial, tuned radio frequency set, designed especially to permit the elimination of



strong interference from local broadcasting stations, while distant reception is being conducted. It may be used with batteries like all other previous types of receivers, but presents an especially unique installation when used with the Mu-Rad Recto-Filter Unit, with which arrangement no storage batteries or B batteries are required, nor is an antenna or loop necessary.

All that is required is to plug into the ordinary 110 volt, 60 cycle A C lighting socket. The energy required for operating the plates and filaments of the receiver is supplied by the light lines through the Recto-Filter and the light lines simultaneously act as an antenna. The receiver employs five tubes. The volume and faithfulness of signal reproduction is said to be remarkable.

The Recto-Filter Unit is a device which changes the 110 volt, 60 cycle



alternating current from the light lines into current of the proper magnitude and at the proper voltages and other characteristics suitable for operating the MA-20 Receiver. The Recto-Filter cannot be used with any other type of receiver than the Mu-Rad MA-20. This unit uses either one or two standard UV-201A or similar tubes.

The Mu-Rad B-Radicator is a unit whose function is well defined by its name. It eliminates B bat-



teries. It can be used with any type of circuit or any type of receiving set. It is provided with a cord at one end which plugs into the 110 volt, 60 cycle alternating light socket in the house and at the other end of the unit is a bakelite terminal board with binding posts to supply rectified direct current for the detector and amplifier plate voltage of the receiving set. This unit is said to supply energy without any trace of alternating current hum whatever. It is remarkable on account of its small size and weight. The dimensions are 10 inches by 41/2 inches by 6 inches. The weight is 13 pounds. Like the Recto-Filter, it uses either one or two standard UV-201A tubes.

There are no adjustments to be made on this unit as automatic regulation of the voltages is provided by the unique electrical design of the unit. The device may be short circuited on its D C end without blowing fuses or causing any damage to the unit itself or to the light lines to which it is connected.

The Type MA-20 is also furnished in handsome Console Cabinet, if desired, with built-in loud speaker of specially powerful and faithful reproduction characteristics.

New Jewett Distributors

The North American Radio Corporation of New York City has taken on the Jewett line of Quality Products, including the Jewett "Superspeaker," the "Micro-Dial," "Parkay Cabinet" and the "Vemco" Loud speaking unit, and is planning for greatly increased activities in radio fields during the coming year.

Cutler-Hammer Socket

Announcement has been made by The Cutler-Hammer Mfg. Co. of Milwaukee, Wis., that they have recently put on the market a new and distinctly designed socket which provides a per-



fect contact for radio r e c e ption. It is the result of many months of experiment and research and contains features not

found in any other type. The tube is simply pushed down—not twisted—into the socket, thereby preventing any chance of severing the bond between glass and base of tube. Each contact is a spring clip that clinches the tube prong without strain, and cleans it bright (without wear on its soldered end) whenever the tube is inserted or removed.

The contacts are silverplated so that their contact resistance does not increase even after years of operation. A significant feature, however, is that the binding post is not a part of the circuit—the wire always touching the contact strip itself which carries the current direct to the tube prong. This eliminates losses due to joints. The terminals are very convenient for soldering and the current carrying parts widely spaced. Capacity is said to be minimized without sacrifice of mechanical strength.

As to appearance this socket is exceptionally attractive and neatly arranged. It is finished in a bright orange colored shell of thin Bakelite with a base of ebony black Thermoplax, which adds greatly to the appearance of any radio set.

Amplion Speaker

Alfred Graham & Co., London, announce through their American representatives. The Amplion Corporation of America, with offices at 280 Madison Avenue, New York City, a new Amplion loud speaker, model AR-19 called "The Dragon." The horn is made of mahogany wood, handsomely finished and is 14½ inches in diameter at the mouth and 20½ inches above the base. The feature of this Amplion loud

speaker is the unit with a floating diaphragm which is said to result in permanent sensitivity, purity and clarity of natural tones.

This floating or vibratory diaphragm is made of a special alloy which is insulated from the other metals in the unit by means of rubber rings and gaskets which the makers claim result in



true reproduction without distortion of speech or music. Still another feature of the Amplion Dragon is the tuning adjustment which when turned moves the electromagnets toward or away from the diaphragm without moving the diaphragm itself. To enhance the beauty of the speaker both sound conduit and unit are finished with a crystalline enamel.

No additional batteries or power amplifying units are required to operate the Dragon from the usual loud speaking receiving set.

Snap-On Posts

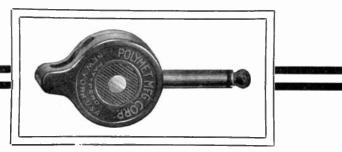
A binding post which the makers claim will take flat or round terminals or buss wire and make as good a joint as may be obtained by sol-



dering is being manufactured by the Snap-On Electric Co., 1456 Rascher Avenue, Chicago. To make a connection with this device the instrument is placed in

position on the board or the panel, the Snap-On post is fastened, and wherever a connection is desired, the wire or terminal is inserted in the slot by pressing the button downward and a firm connection is made when the pressure is released.

The inserted wire may then be turned in any direction making short leads possible. This binding post is made of brass, or finished nickle and can be furnished with either plain or hard rubber insulation caps with different terminal signs engraved on top of the button.



POLYPLUG

Fastest Selling Item in Radio

Because—

You can pull and jar it all you want but positive contact is always maintained. The tension slot —an exclusive Poly Plug feature—is the reason. Made of genuine Bakelite too. Consistent advertising throughout the country makes the Poly Plug easy to sell.

JOBBERS

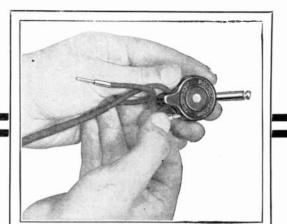
There is still some good territory open for wide awake jobbers. Write or wire for details of our attractive proposition.

POLYMET MANUFACTURING CO.

70-74 Lafayette Street

New York City

Lists for only 75c.



Lists for only 75c.

Duo Spiral Tolding Loop List Price The most con-\$8.50 venient aerial Increases Selectivity Reduces static

Easily Portable Patents Pending

The DUO-SPIRAL FOLDING LOOP is a favorite because of its great convenience, handsome appearance and superior performance. It brings in the far distant stations. It is a superior loop for permanent installations or portable sets.

The DUO-SPIRAL winding-an exclusive feature-makes possible an aerial wire of unusual length, giving greater signal strength without sacrificing neatness or compactness. The wire is stranded copper with heavy silk insulation. Tension is always just right for maximum efficiency. Direct connection prevents losses. The base has a silvered dial graduated for calibration. The handle permits adjustment without body capacity effects.

DUO-SPIRAL is handsomely finished in silver and mahogany and harmonizes with the finest home furnishings. It is built for those who want the best in radio equipment. Each loop is packed in an attractive individual box.

iny Turn Vernier Control

Makes perfect tuning easy. Has a gear ration of 30 to 1. Friction drive eliminates Price lost motion. Rotates 75 cts. in same direction as dials. Can be disengaged leaving dials free. Easy to install on any set.



Handsome nickel and ebony black finish. Packed in individual cartons with complete instructions for installation and operation. We furnish counter display boards.

DUO-SPIRAL and TINY-TURN are extensively advertised and enjoy a ready sale. Write for complete infor-mation and discounts.

Radio Units Inc. Maywood Illinois

1302 First Avenue Canadian Representative Perkins Electric Ltd., Montreal

What the Manufacturers Are Doing

Diamond State Fibre Co. Markets New Cabinet

A radio cabinet that can resist a current of 45,000 volts and comes in both assembled and knock-down form is one of the latest addition to the radio fiield. This cabinet follows out the theory, that no set can do itself full justice unless it is installed in a cabinet that is a complete insulator. It is well known that losses and body capacities are one of the chief hindrances to clear reception.

This article is constructed by the Diamond State Fibre Co. of Bridgeport, Pa. It is made of vulcawood, which is a combination of fibre and celoron bakelite. The figure cited above as the guage of this material's

material is a noteworthy addition to radio engineering.

In appearance, it resembles real mahogany or walnut, for the finish is applied by photography and a copper plate reproducing process. In assembled form, it has a hingled lid with inside angle irons. In knockdown form, it has a sliding lid with outside angle irons of nickeled brass that cover the edges in a dressy fashion. It comes with all needed screws and bolts, and a screw-driver. The panels of both cabinets are of ce'oron and are handsome in appearance.

The article is strongly supported



The Diamond State Fibre Co., Bridgeport, Pa., is featuring this handsome new radio cabinet which is made of vulcawood and can resist a current of 45,000 volts.

insulating power was reached after extensve tests made by the U. S. Bureau of Standards, which showed that in dielectric strength, surface resistivity, tensile strength, and durability under heat, light, and age tests, this by advertising in newspapers and magazines all over the country. Attractive and interesting circulars, in three colors, and booklet of scientific information on vulcawood and celoron are furnished with the cabinet.

Selectron Pleasingly Blends Phonograph and Radio

The use of a talking machine to greater advantage in the reception of radio programmes is stressed by the Audak Co., 565 Fifth Avenue, New York City, manufacturers of the Selectron. The instrument makes possible the use of the highly developed tone chamber for either talking machine or

radio reproduction by adjusting dial.

The Selectron avoids the use of the tone arm and sounding box owing to the scientific construction of the acoustic chambers in the device. The instrument is attractively made and presents a pleasing appearance when mounted on any talking machine.



The Selectron, manufactured by the Audak Co., New York City, which makes use of the highly developed tone chamber of the phonograph for the reproduction of records or radio at will.

The Equi-Flux

A new audio transformer, the Equi-Flux, manufactured by James C. Doran & Sons, Providence, R. I., represents an advance in audio amplification. The construction is based on the principle that magnetic flux travels radially from the end of the core.

The core in the new Doran product is composed of split iron tubes. At the end of each core is a series of lamin-



ated split discs. These disc guide the flux to and from the outer field of laminated shells. All these parts are made of iron containing the correct percentage of silicon.

In addition to the above product the Doran Co., manufactures a complete line of radio frequency transformers, variometers and variocouplers, bus bar wire, variable condensers, wave traps, double contact sockets, jacks, plugs, fixed condensers and rheostats, and other radio accessories. The concern maintains an office at 3 West 29th Street, New York City.

Brilliantone Offers New Set

The Brilliantone Radio Products Co., 324 West 42nd Street, announce their new Brilliantone De-Luxe DL-5, a five tube, tuned radio frequency set which is self-balanced and incorporates the Zig-Zag Coil, which is a patented coil and is reputed to prevent all form of howling and squealing. The Brilliantone De-Luxe is contained in a cabinet which provides room for both "A" and "B" batteries and has a self-contained loud speaker.

The same firm also markets the X-O-Dyne, a one tube set which may be operated without either loop, ground or aerial and which is being marketed both complete and in kit form. The Brilliantone Co. has leased another floor in its present building.



Fred Exmunn Butio Corporation





SATURN

Improved Automatic Plug and Perfect Jack

The big manufacturers' choice is bound to be the choice of your customers. Saturn advertising is telling your customers how and why Freed-Eisemann, Fada and other big manufacturers chose Saturn Plugs and Jacks. Tie up with this great news by sending your trial order Now.



For Better Connections





Saturn Mrs. & Sales Comp. 48 Sections - treet. New York City.

In by JINING the new Maxel fine five two Emitrody Reciever, we have conducted exhaustive Emitrody Jacks for this set. bo sort officient type or

are pleased to state that we have decided on Frodel En. Fourtodyne Baceiver colusively in

feel that you will be flad to hear tont your same being incorporated to hear tont your operant in the radio art. In this latest de-

Yours very truly, FREID-EISTMAN PURP CORPOR

Gentlemen: _

Efficient connection every time, in the hardest kind of phone cord tips. Instantly gripped by automatic jaws and ejected by a slight touch on the handy lug. Genuine Bakelite case,—no metal projecting to produce short circuit or capacity effects. New reduced **PRICE 75c**

SATURN Perfect Jacks

Perfect Jacks with rounded corner brass brackets, nickel-plated; German silver blades; Sterling Silver contact points and crowfoot offset feature; described in the adjoining panel. Unconditionally guaranteed.

SATURN Battery Switch

Delightfully efficient due to exclusive balanced blade construction. Easy pull makes, light touch breaks connection. Neat and sturdy. Fits all panels, whatever the thickness.

The SATURN Mfg. & Sales Co., Inc.

48 Beekman Street

New York, N. Y.



Crowfoot Offset

This exclusive feature of SATURN Perfect Jacks and Switches makes soldering extremely easy. The blades easy. The blades are offset at the terminals and are tinned with a noncorrosive solder flux compound so that a little heat is all that is needed to complete the job.

3-6-10-20-25-30 Ohms

Price **\$1**75

Pat. 7-10-'23

CARTER

VERNIER Control Rheostat

Entirely new original and exclusive Carter Smooth, noiseless-positive. will find it a big seller and a sure repeater. Any jobber can supply.

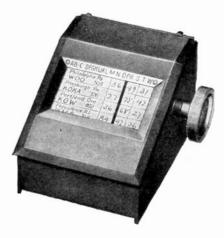


In Canada-Carter Radio Co., Limited, Toronto

Bates Radio Index

A practical and compact method of recording dial readings on multiple control receiving sets is utilized by the Bates Mfg. Co., Orange, N. J., in the manufacture of the Bates Radio Index. This index does away with loose papers, thumbing of pages, or searching files, since all the desired information is contained in a small attractive little metal box.

To operate the index the little knob on the right hand side is spun until a moving red line reaches the initial letter of the city whose broad-



casting stations are desired. The spinning knob is then stopped and the dial readings of the particular city are visible. The index strip is ten feet long and lists 320 of the principal broadcasting stations in the United States, Canada, Cuba, and Porto Rico, giving wave lengths as well as call letters.

If the user wishes to typewrite his recordings instead of writing them by hand, he may easily remove the strip and replace without harming the mechanism of the index. The Bates Radio Index is finished in a beautiful copper green.

Striegel-Eschner Organize

The firm of Striegel & Eschner, Inc., with offices at 457 Peoples Gas Bldg., Chicago, has been organized by E. H. Striegel and Leroy Eschner who were formerly associated with the Hartzell Sales Co. Striegel & Eschner. Inc., have been appointed Central States Representatives for the King Mfg. Corp., Radioceive Mfg. Co., Langbein & Kaufman and Stadeker Mfg. Co.

The King Manufacturing Corporation is bringing out a five tube neutrodyne set, a five tube TRF set, complete line of new improved jacks, potentiometer, genuine bakelite dials in addition to a complete line of King radio parts which this corporation has been manufacturing for several years.

New Kennedy Set

The new Kennedy uses two stages of tuned radio frequency, a non-regenerative detector tube and two stages of audio frequency amplification. A unique feature is the graduated selectivity control which fixes the degree of selectivity at exactly the right point for the local conditions under which the set is to be operated. At the low point of the control, the set is more selective than the average receiver, but as this control is advanced, the tuning becomes super-selective, enabling the operator to tune out interfering stations easily. When this selectivity control is once adjusted to the best point for local conditions (including the particular antenna to which it is connected), it does not require further adjustment.

While all circuits are tuned, the number of tuning controls is reduced



to two. Legging this set for the various stations, so that given settings will bring in certain stations, has been reduced to a very simple matter. It is necessary to log only one dial, the other being set by ear.

The new Kennedy operates well on an indoor aerial or on a loop, and a jack is provided for plugging in the loop. Three other jacks are provided —one for the detector and one for each stage of audio frequency. These jacks have an automatic filament control.

This receiver is said to be nonradiating and, therefore, can cause no annoyance to neighboring receivers. The amount of radio frequency amplification is easily controlled at the will of the operator so that a change in tubes or batteries will not affect results.

The matter of appearance has been well taken care of. The polished black panel slopes at the usual Kennedy angle, making for good appearance and convenience in operating. The cabinet is of solid mahogany and has a beautiful finish in the popular brown tone.

Formica Co. Doubles Floor Space

The rapidly expanding industrial importance of radio is indicated by the fact that the Formica Insulation Co. has doubled its factory space during the past year, and has added over 100,000 square feet of floor space.



Buy Your Rheostats From Headquarters

There is always one best place to buy any particular product or line of products. This house is the place to buy Rheostats, Potentiometers or any of the other radio products listed below.

We Manufacture:

Vernier Dial Control Bakelite Rheostats Mica Condensers Open Detectors Telephone Jacks Dials Dials with Vernier Kr

Dials with Vernier Knob for Vernier Condensers

Mica Condensers with Grid Leak
Mountings
Glass Enclosed Grid Leak
Glass Enclosed Variable Grid Leak
Bakelite Grid Leak Mounting
Switch Levers Tapered Knob
Series Parallel Switch Levers
High Heat Di-Electric Rheostat
With Dial

High Heat Di-Electric Potentiometers with the popularity of radio. We are an old reliable house, that has been manufacturing and selling electrical products for years. Our factory facilities are ample and modern and our workmen are skilled and seasoned craftsmen.

Ours is not a business that has sprung into existence

Look over our list of products here. If you are in the market for any, get in touch with us. We send samples to established firms upon receipt of specifications.

Spee Dee Specialty Co.

199 Lafayette Street

: New York

DEALERS?

We are distributors for all standard lines of merchandise. Write at once for our large free catalogue. Be sure to write on your business stationery.

STANDARD RADIO CORPORATION

Manufacturers, Distributors and Jobbers 227-229-231 West Madison St. Chicago, Ill.

Sell the Charger as Part of the Set With Every Xmas Sale

E VERY buyer of a Christmas Radio Set, is a readyto-purchase customer for a dependable battery charger. Why let him drift away when you've won his confidence?

Every set needs batteries and all batteries need recharging. Whose sale will it be? Who will profit when the charger *docs* go into the radio home?





This is the Model 00 It Sells For

^{\$}18

No profits were ever more easily made than the profits from Unitron Battery Chargers. Once upon a time the radio purchaser bought his set in one place, batteries in another and tubes in another. And once upon a time also, he had to depend on outside-thehome service to keep his battery charged. No more.

Today the dealer sells the fan all he needs for radio enjoyment, and makes all the profit *himself*.

Complete your selling work and make your *full* profit this Xmas by selling the charger too—a dependable, foolproof, fireproof charger that costs little to own, never needs repairs and is economical to operate. Sell a Unitron.

If you'd like to know all about the profit, send a post card.

Forest Electric Company

Pioneer Manufacturer of Industrial Current Rectifiers

NEW AND WILSEY STREETS NEWARK, N. J.

Advertising by Picard-Sohn, Inc., New York

Trade-Marks Secure Trade Registrations Secure Trade-Marks I Secure Registrations

CHAUNCEY P. CARTER

Radio Trade-Mark Specialist

4907 Potomac Avenue, N. W.

Washington, D. C.

Correspondents in all countries

A Remarkable Head Set

Duryea Bense!, well-known radio designer and inventor has been receiving many tributes from the trade due to the announcement of a new $5\frac{1}{2}$ oz. headset without a head band which he recently announced. The new set is as thin as a watch yet capable of carrying 2,200 ohms.

The units are absolutely fool proof and cannot be taken apart. The head set is held securely to the ear with the clamp device so that it cannot be easily displaced. Yet they can be removed from the ears with a slight pull of the hands. By extending the ear clamps to their full extent and placing the



units on a cigar box with springs down and plugging in on the second stage of any set signals equal to those given by a loud speaker can be received, is the maker's claim.

maker's claim.

The Bel Canto Radio Telephone
Equipment Co., 872 Broadway, New
York City, with whom Mr. Bensel is
affiliated is manufacturing the new set
for the trade.

Announces "Little Giant"

The Q-T Radio Products Co., East Orange, N. J., which has been manufacturing radio sets for several years, recently announced a new five tube receiving set, to be know as "The Little Giant." The Q-T Co. reports that a new development in Q-T Split Coils makes this set possible. These coils are said to have no external field, thereby doing away with inter-tube coupling.

The set is finished with a genuine buffed bakelite panel in a polished mahogany cabinet. A die cast low loss condenser is used in the construction of this five tube receiver, adding to the efficiency of the radio frequency stages. Special winding of the split coils makes possible the use of the three dials to tune the set.

The Q-T Co. plans production to meet the holiday trade.

The Ultravernier

The Ultravernier, a vernier tuning control, has been announced by the Phenix Radio Corp., 3 Beekman Street, New York City. With the Ultravernier, one recording can be made and any station gotten without any delay The Ultravernier, which in tuning. may easily be made to replace old dials, has a beautifully silvered disk.

It is only necessary to turn the station finder, with its gage for pencil markings, to that particular pencil-



mark. All pencil-marks may be erased and the dial left like new, if it becomes necessary to revise markings, due to moving, or a station discontinuing or wavelengths changing. In addition, the Ultravernier is a single control, a further ideal simplification.

This ingenious tuning control was designed by R. E. Lacault, well-known radio engineer, and the inventor of the Ultradyne. It is manufactured by the Hammarlund Mfg. Co. and produced only for the Phenix Radio Corporation who will furnish any information concerning it upon request.

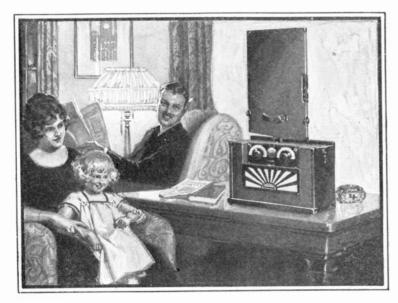
Glass Tubes for Radio

Exclusively engaged in the manufacture of glass tubes. Friedrich & Dimmock, of 7 East 42nd Street, New York City, have now concentrated their efforts on tubes used in radio.

This firm, with a factory in Millville. N. J., offers glass tubes to the trade for use in crystal detectors. condenser protectors or covers, grid leaks, lightning arresters, fuses, or other radio apparatus. Glass tubes are kept in stock or can be made to specifications. Two of the glass products of the company are here illustrated, showing the styles of glass tubes which are now being used in radio manufacturing.

Great care must be taken in manufacturing tubes for radio to exact size and specification. As specialists in glass tubing, Friedrich & Dimmock claim to be able to satisfy this requirement in the production of scientific glass tubing.

10 Upstairs-Downstairs Wherever You Go



A Powerful Long Range Set Engineered to Compact Proportions

EASIEST TO DEMONSTRATE AND SELL

The widespread popularity of the 1925 Operadio is due chiefly to the fact that here is a receiving set of the highest efficiency, so compactly and skillfully designed that it may be used anywhere—upstairs, downstairs, or wherever you go.

Enclosed in a convenient case that may be closed and carried, and operating without outside wires or connections, the Operadio is the most convenient set for the dealer to demonstrate and for any family to own.

In the case, which measures 17 in. x 9 in. x 12 in., are contained six "A" batteries and four of the largest "B" batteries, loud

speaker, six tubes and all parts. Radio and audio units are removable and contain all the finely adjusted parts in hermetically scaled containers. It is by such construction and disign that the remarkable compactness of the set has been obtained.

Attractive in appearance, extremely simple to tune in on long-distance; razor-sharp in slectifity; and widely praised for its clear, natural tone, as well as its volume. Write or wire to lay for information about the Operadio franchise. There are big stilling months abend—profit by them.

The Operadio Corporation 8 So. Dearborn St., Chicago, Ill.

No Wires or **Connections**

Is The Aerial

The Cover

The Original Self-Contained Radio Set

PANEL BAKELITE—DILECTO

Standard sizes—Special sizes—Sheet stock—Machined and finished-Immediate delivery. Bell Sockets and Dials—Moulded parts.

UNIVERSAL INSULATION COMPANY 215 EMMETT STREET, NEWARK, N. J.

Terrace 2978 and 2979

KLEERTONE

LOUD SPEAKERS

Extract from the air

Entertaining programmes

Right into the homes—

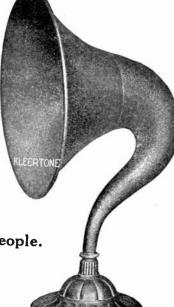
They make life happier

On all occasions

Never have they failed to please

Even the most discriminating people.

Distributors will find an attractive proposition if they will write to us immediately



NATIONAL RADIO OUTLET CO.

Mfr's Kleertone Radio Products

54 Lispenard St.

New York

THE WORNER

Reg. U. S. Pat. Off. U. S. and Foreign Patents Pending



Quality Instrument!

Outstanding Features:

- 1. Non-radiating.
- No whistles, squeals or howls.
- Faultless Reproduction.
- Highest Grade Materials and Workmanship.
- Neat and Compact Design.
- Efficient over entire Broadcasting Band.
- Extremely easy to operate.

 Loudspeaker Reception on Distance.
- No Binding Posts.
- 10. Equally efficient on loop or antenna.

Price \$75

Distributors, Jobbers and Dealers. Write for details.

Manufactured by

HETEROPLEX MANUFACTURING CO. 423 Market Stree Philadelphia, Pa.

Polymet Products

The Polymet Mfg. Corp., 70 Lafayette Street, New York City, widely known as producers of the "Polyplug" is now featuring two additional radio



units, which have been welcomed by manufacturers of radio sets. One is a rheostat called the "E-Z" Stat, and the other a potentiometer called the

"E-Z" Ometer.
The popularity of these two units is due to the construction which helps the manufacturer of sets "speed up" assembly production. These items remove all necessity for adjustments because the adjustment is permanently fixed. The rheostat incorporates the following features: Precision element winding guarantees the proper resistance; the wire is wound in grooves by special process which prevents loosening; the element is held securely by metallic holders, while a phosphor bronze spring insures proper contact.

The insistent demand has led the Polymet Mfg. Corp. to produce rheostats and potentiometers for the jobbers. For the distributors these units are put up in very attractive containers. A particular feature is the insert included with each box, showing a complete vacuum tube control chart for the assistance of the fan in constructing his set.

The Eby Catalog

During the latter part of November approximately fifteen thousand unusually attractive catalogues were mailed to dealers and jobbers by the H. H. Eby Mig. Co., Philadelphia.

Anticipating the demand for a quality binding post the concern has confidently gone ahead and steadily improved their product and its merchandising. It was the first company in the business to manufacture a binding post with a top which did not come off and the first to package, display and advertise such a product.

The catalogue illustrates the varicus styles of posts which they manufacture, including metallic and hard rubber types, and the way in which they are packaged. The progressiveness of the company is illustrated by the fact that they are placing on the market hard rubber posts engraved in twenty-five different markings which will accommodate all the latest hook-ups.

Many of the best known set manufacturers have adopted the Eby Post as standard equipment.

Comet Batteries

With the experience of having manufactured standard flashlight batteries, which have proven to be among the best, The Comet Battery Co., Cleveland, O., has placed on the market an extensive line of "B" batteries, with voltages ranging from 221/2 volts to



45 volts. The best seller of the Comet line is the model 562 pictured here with an initial voltage of 22½ volts possessing taps to give 16½, 18, 19½, 21 and 22½ volts. This battery is said to possess high capacity and long life and is especially recommended for service where space and weight are not of prime importance.

Where table space and cabinet headroom are at premium model 572, an upright "B' battery is furnished in width of 31% inches and a length of only 43% inches. The Electrical Manufacturers Agency, of 25 North Dearborn Street, Chicago, Ill., who handle national distribution for Comet "B" Batteries. guarantee shelf life for every Comet battery shipped out.

Teletone Products

The Teletone Company of America has opened extensive new manufacturing and distributing quarters at 449 West 42nd street, New York City. Here in addition to splendidly lighted factory space, the concern will have its executvie offices and artistically arranged demonstration studios, covering in all 55,000 square feet of floor space. The company was formerly located at 7 East 44th street, New York City. where it has been perfecting a product of cabinet design. R. Richard Spira is director of the concern.

The radio set manufactured by the Teletone Company represents perfected standard circuits. Through radio frequency varying from two to five stages of amplification a high degree of selectivity is attained, ample volume and particularly clear musical tone. The leading unit in the line is a Tudor cabinet of individual design enclosing a five-tube set, which is controlled by only two dials. This set has proved exceedingly popular among New York dealers and Mr. Spira states that the reorders from dealers are coming in at a highly satisfactory rate.



These new coils aroused a vast amount of popular enthusiasm at recent radio shows. This enthusiasm is sure to be realized by dealers in terms of turnovers and profits.

For use as oscillator coils and antenna coupling coils in superheterodyne circuits these coils are highly recommended. They are real low loss coils with a big feature—as easy to mount as a vacuum tube. A set of these coils may be used interchangeably to cover a wavelength range from 50 to 600 meters.

Write for our new catalog and price sheet if you have not already received one.







SILVER PLATED

WIRE AND INSTRUMENTS

Are the answer to the important question: "What is the next big step in low loss construction?"

EXISTING CIRCUITS

Can be and will be improved by set-owners by silver plating the aerial, con-densers, bus bar, etc., with

SILVOPLATE

EVER-READY SILVERPLATING COMPOUND

Newspaper articles in every section of the country are featuring articles on the application of the minimum resistance of silver to the problem of this new demand.

reaturing SILVOPLATE will help you cash in on the problem of this new demand.

Dealers and Johners: Write for prices, discounts and territory. Manufactured and guaranteed by the

SILVOPLATE CO.
125 Church Street New York City

CIR-KIT brings these



Greater Circuits



Erla Push-Pull Transformer is exclusive in core design and shielding. Indispen-sable for safe operation of high resistance loud speakers under full power. \$10 pr.



Only the special spring arm, the perfected bearing and winding of Erla Precision Rheostats permit such supersensitiveness. Single-hole mounting. Price, \$1.10.



Neatest, most convenient in form, Erla Autogrip 2-Way Phone Plugs assure way Phone Plugs associated in the smoothest connection of tips associated most positive contact. and most positive contact, with no manipulation. 75c.

In a motor car-the engine. In a skyscraper -the substructure. In a radio receiver-the circuit. The circuit, Erla knew, must be the foundation of finest possible radio. So Erla first evolved those circuits which have ever since been rated inherently more powerful, tube for tube. Today's trend clearly indicates that Erla Supereflex may be selected in full confidence of continued pre-eminence.

That these fundamentally superior circuits are also easiest to construct, with utmost economy, is another Erla attainment, made possible by the Erla CIR-KIT. With CIR-KIT anybody can construct Erla Supereflex circuits from genuine Erla apparatus, specially designed to assure most efficient functioning of Erla Supereflex principles.

Erla CIR-KIT supplies everything needed, in a factory-sealed carton, sold under warranty. Erla Synchronizing Transformers, Erla Miniloss Condensers, Erla Precision Rheostats, Erla Cushion Spring Sockets, Erla Tested Crystals, and all the other matchless Erla units are provided. Perfect assembly is assured by full-sized blueprints, drilled and lettered panel, stenciled baseboard, precisely locating every unit and connection. There is no soldering, thanks to Erla Solderless Connectors. Just pliers and screwdriver bring the de luxe radio of Erla Supereflex circuits, at lowest cost. No wonder CIR-KIT is an irresistible seller everywhere.

Electrical Research Laboratories Dept. D, 2500 Cottage Grove Ave., CHICAGO



the eastern low loss coupler



Designed by M. B. Sleeper

The Eastern Low Loss Tuner is different from any other tuning device—maximum of inductance attained by elimination of all tubing and winding in pickle bottle form. Fans everywhere are replacing their coils with this new efficient Coupler and in every case are enthusiastic over the improved results

Jobbers and Dealers Write for Discounts — Manufacturers

EASTERN COIL CORP.
REN ST. Barclay 6807 NEW YORK CITY

22 WARREN ST. **PRICE \$6.00**

Colonial Radio Corporation Organized

The Colonial Radio Corporation, with sales offices and factory at East Avenue and Tenth Street, Long Island City, has recently been organized. While new in organization, the company has two engineers on its staff who are known throughout the entire world of radio,-Dr. Fulton Cutting and Mr. Bowden Washington. W. R. Edrington, the President of the Colonial Radio Corporation, was for years President of the Traders National Bank of Fort Worth, Texas, and until last year, Vice-President of the Farmers & Mechanics National Bank of Fort Worth. As a banker, Mr. Edrington has had intimate and continuous contact with many and varied industries. He brings to Colonial the widest possible business experience.

Dr. Fulton Cutting, vice-president of Colonial, stands in the foremost ranks of radio engineers. His contributions to radio engineering and radio science are recognized the world over, and the radio fraternity proclaimed his skill by electing him president of the Institute of Radio Engineers. Dr. Cutting has the distinction of being the first graduate of Harvard to receive his Doctor's

Degree on a radio subject.

Bowden Washington, vice-president of Colonial, built his first radio set in 1903. In 1908 he took a special course in radio at Columbia University. In 1913 he was a member of the engineering staff of the Clapp Eastham Co., and a year later, in 1914, was radio engineer at Harvard University. Following that, Mr. Washington joined Dr. Cutting in University. radio research work. From 1916 to 1924, Mr. Washington was Chief Engineer of the Cutting & Washington Radio Corporation.

G. R. Brainerd, vice-president and director of sales of Colonial, has had very wide and varied managerial and sales experience. He is President of the G. R. Brainerd Co. of Chicago, pioneer in the automobile field, and he is now pioneering on a new order of things in the merchandising of radio. He has made an enviable record in automotive sales, and the foundation on which he is building Colonial policy assures a continuance of his notable successes in the field of radio. Horace Keane, assistant sales manager of Colonial, is one of the pioneers in aeronautics and organizer and president of Horace Keane Aeroplanes, Incorporated.

Frank C. Clark, works and factory

manager, is a B. S. of Electrical Engineering of Armour Institute. He helped build the Panama Canal, where he held the positions of Assistant Engineer. Assistant Superintendent of Erection and Superintendent of Locks from 1911 to 1916.

The first two radio receivers offered to the radio trade by the new concern are Colonial 16 and 17. Colonial 16 is a five-tube receiver, employing two stages of tuned compensated radio frequency amplification, detector, and two stages of audio amplification. All circuits are shielded and compensated to give uniform response on all waves. There is no regeneration, no radiation and no howling. The set operates on dry batteries and for sensitivity, selectivity and purity of tone, it has very few equals. For the first time, in the Colonial 16, cabinets by Brewster, well known automobile body builders, have been made available to the radio public.

able to the radio public.

The Colonial 17 is a four-tube, dry battery operated receiver. It employs one stage of tuned compensated radio frequency amplification, detector and two stages of audio amplification. All batteries are enclosed in the cabinet and are easily accessible. The panel and cabinet are a novel combination of beautifully decorated metal and natural grained, lightly polished wood. The Colonial 17 is very sensitive and its selectivity is well above the average.

tivity is well above the average.

Colonial 16 and 17 were shown for the first time at the Chicago Radio Show; and the excellence of their design and beautiful appearance attracted very favorable comment from the trade and from the public.

Stadco Jumbo

In order to fill the need of a hydrometer that will measure the specific gravity of the electrolyte in both "A" and "B" batteries the Stadeker Mfg. Co., 229 West Illinois Street, Chicago, recently placed on the market the Stadco Jumbo. This hydrometer has two readings on the float, one for the "A" battery fluid and the other for the "B" battery. To prevent the sticking of the



float to the barrel of the hydrometer beads are inserted which give the float free play.

The makers claim that due to its sturdy construction of extra strength glass and its non-collapsible bulb of high grade live rubber, the Jumbo can rough usage. It is eleven inches long and has a one-half inch bulb being shipped in standard packages of 100.

The Development of Variable Condensers

By L. Le Roy Hepburn, Pres., Gardiner & Hepburn, Philadelphia

As a manufacturer, it has been most interesting to watch the progress of variable condenser for radio work, and to note the reasons for the vast number of changes in design and construction. Undoubtedly the public is under the impression that such changes were brought about by new discoveries, perfected design, and the natural benefits of past experience. This, however, is not the case. For it was the buying public which influenced the development of a finer instrument through demands for a more efficient circuit. Then, too, marked changes in the hookups themselves called for a better condenser to keep abreast with the progress of broadcast reception.

Three or four years ago, when radio first received the impetus of national publicity, the well-known public was in its usual cautious mood regarding the possibilities of new ideas. Consequently Smith gave it little thought until he saw Jones before a maze of wires, knobs, and coils, with ear phones glued to his head and ecstatic wonder Thus initiated into the in his eyes. wonders of the "wireless telephone" Smith gave himself over to the intricacies of building his own, and marched to the nearest shop in search of parts which would put him in touch with the outside world. To Smith, radio was but a fad, with no possibilities except for the electrically and mechanically inclined. With Smith were the thousands of others who created the enormous demand for cheap variable condensers, in 1921, 1922 and 1923.

The condenser at this time was a hit-or-miss affair of thin aluminum plates, spaced with washers, and the rotor separated from the stator by a fibre washer or disc. To prevent the rotor dropping down from its own weight a set-screw was threaded into the fibre washer, and an adjustable friction thereby kept the rotor in any dialed position. This type of condenser was fairly satisfactory on a crystal or one tube set when placed in the aerial circuit, but the plates would frequently warp or touch, due to the absence of positive relative spacing between the rotor and stator. Frequently friction adjustment was also necessary.

In the meanwhile circuits were all undergoing a change; with the trend naturally toward the more efficient high frequency types that demanded the use of real low loss instruments—especially low loss condensers. Aside from the low loss feature, increasing use of the sets necessitates an instrument of ex-

(Continued on Page 144)

ESTABLISHED IN 1855

MAURICE O'MEARA CO.

MANUFACTURERS,
IMPORTERS
AND
FXPORTERS

MEARACO

RESISTANCE PAPER

FOR

GRID LEAKS

WE SPECIALIZE IN HIGH RESISTANCE CARBON PAPER

MAIN OFFICE 448-450-452 Pearl Street New York City

MILLS

Westfield - - Mass.

DO YOU WANT MORE SALES

? ? ? ? ? ? ? ? ? ? ? ? ? Stiers 3 Specials Bring Them

THERE'S nothing that boosts your sales as much as "Word of Mouth Advertising" the kind of advertising that costs you nothing yet can't be bought at any price! Radio fans the country over are talking about these "Big Three Specials". Carry them in stock! SELL THEM! BOOST YOUR SALES! START SOMETHING!!

ORDER TODAY!

List \$3.00

180° Variocoupler

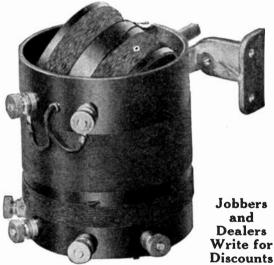
Made for use in any one, two or three circuit hookup. Green silk wire on pure bakelite tubes. Pigtail connections. Single or double taps. Mounted base or panel. Die-cast aluminum base.

-o-

3 Circuit Tuner
LIST PRICE

\$5.50

Perfect design. Wound with Litz wire on pure Bakelite tubing. Die cast aluminum base or panel. Pigtail connections. Wave length range 200 to 600 meters.



STIERS RADIO CORP.

993 Fourth Avenue

Brooklyn, N. Y.



BRILLIANTONE PRESENTS A REAL SET ACHIEVEMENT

Brilliantone De-Luxe, DL-5, five tube tuned Radio Frequency Sets, Self Balanced, Zig-Zag Coii, patented August 21, 1923. Wonderful results, no squealing or howling. All in a cabinet.

Constructed of Solid Mahogany. 7 x 18 x 15" Panel. Furnished complete with an aluminum horn which is machined to fit any standard loud speaker unit and will contain batteries.

BRILLIANTONE RADIO PRODUCTS, INC. 324 West 42nd St. Tel. Penn. 4975 New York City

Cico Rheostats

A one hole mounting rheostat whose body and knob are made of molded bakelite is manufactured by the Consolidated Instrument Company of



America, Inc., 41 East 42nd Street, New York City. The claim of the makers is that the Cico rheostat will maintain positive and firm contact in all positions at all times. The resistance unit is wound tightly on a

a specially treated fiber strip which insures insulation throughout.

The metal constituents of the rheostat are nickel plated and to make easier connections special bus wire binding posts are provided. Plain and vernier types are both furnished with resistance units of 6, 10, 20 and 30 ohms. A bakelite potentiometer is put forth by the same firm with resistances of 200 and 400 ohms. Both articles are shipped in packages of 72.

Royalty Products

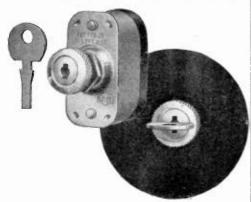
The new line of variable grid leaks and variable high resistances recently introduced by the Wireless Products Corp., 136 Prince Street, New York City, under the trade name of Royalty incorporates a revolutionary feature in the form of a resistance element that is wire wound. Instead of the usual high resistance materials along which the contact lever slides, the Royalty units make use of a wire winding much like that used on conventional radio rheostats.

The effect of this outstanding improvement can readily be seen. Instead of having the contact lever continually scraping away a portion of the resistance element as is the case in some of the variable high resistances, the Royalty contact lever moves from one wire to another and does not touch the actual resistance element. The change in resistance value as the contact lever moves from one wire to the next is positive and always the same. This makes it possible to calibrate either the Royalty variable grid leaks or the Royalty variable high resistances with the assurance that the calibrations mean something.

The appearance of the Royalty units suggests the ordinary rheostat. The size is the same and the spacing for the screw holes is standard. The base as well as the knob are made of solid bakelite. The shaft for the knob is so constructed that provision can be made for any thickness panel without removing the contact lever from the assembly.

Radioloc Switch

In order to prevent the possible blowout of vacuum tubes through careless handling the Cutler-Hammer Mfg. Co., Milwaukee, has designed the Radioloc which is really a locking switch. The switch is installed in the filament battery circuit making interrupted reception possible without loss of the desired sta-



tion. The set is in operation when a key is in its slot and is not working when the key is out of its slot.

To assure high efficiency and freedom from noise, broad contacts are provided. The mechanism of the switch itself is said to be direct and firm, thus insuring quiet operation. The Radioloc is easily installed.

Heyer Products

The Heyer Products Co., 34 Valey Road, Montclair, N. J., is featuring its "Everyman's" Charger, made in two sizes, one having a charging rate of 6 amperes and the other 2 amperes. Both outfits charge "B" batteries at from 1/10 to 1/3 amperes and will take from one to five of these units at a time.

The charger is a compact and foolproof unit designed for the radio owner who desires to recharge his own batteries. It operates from any A. C. light socket, is automatic in operation, and costs but a small amount for current. It can be used for charging Radio "A" batteries, either of 6 or 12 volt size. It can also be used to charge radio "B" (24 volt units) batteries and from 1 to 5 can be charged at a time.

The device consists of a transformer for stepping the 110 volts of the house current down to the 7½ to 15 volts required for battery charging. A rectifying bulb which permits the current to flow only into the battery, a case, fuses and wires necessary to make all connections.

The bulb type of charger is entirely automatic in operation, practically noiseless, no moving parts to get out of order, no liquids to spill nor contacts to stick. The cost of operation is very low being less than one-half that of an ordinary electric iron.



De JUR TR

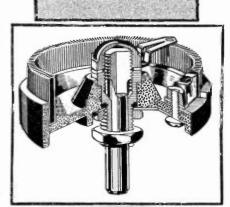
COMMERCIAL RHEOSTATS

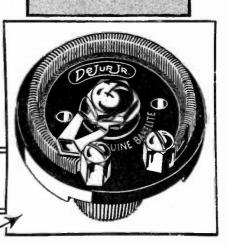
The DeJur is the only rheostat that does not have to be taken apart in order to mount. There is nothing to get loose in back of the panel. Positive connections throughout assure permanent contact. There really is a difference between DeJur and other rheostats. All manufacturers of rheostats make various claims about their product, but when you come right down to cases their rheostats are practically alike. Again we say DeJur Rheostats are different, better, more efficient—use them, compare them—then you will SEE the difference.

MANUFACTURERS—Write for sample and prices

DeJur Products Co.

Lafayette and Broome Sts., New York





ASK OUR SERVICE Bureau to fill your wants. There is no charge.

A Radio Moneymaker!



New Scientific Lamp Marvelous Loud Speaker

Do you want a Radio item that will crowd men and women around your window? Do you want to handle a radio loud speaker that will bring people into your store full of questions and ready to spend money? Put this beautiful, practical loud speaker into your window. See what a money-maker the Radialamp will be for you.

T last you can offer a perfect Loud Speaker—reproducing with flaw-less tone the slightest register of human voice—with magical accuracy and sweetness the finest sounds of any instrument. Examine the wonderful scientific detail that makes this a super Loud Speaker. From the perfected microphone in the base, sound is amplified upward in the tapered tone chamber of the stem. The sound mirror in the top deflects it downward, increasing the volume of the high and low notes. When the user desires light, he snaps on the electric current, which further clarifies the tone with the hot currents of air coming from the lighted bulbs. And the astonishing feature of this wonderful instrument is this—it is also a beautiful table lamp. The handsome parchment shade floods the room with soft, mellow light—it floods it with beautiful music. It is two in one for less than the price of either a good lamp or a good loud speaker. Even if your customer already has a loud speaker he can use the RADIALAMP in an adjoining room—easily connected.

The Radialamp makes an instant appeal to Radio lovers. It has beauty. It is a splendid lamp—a perfect loud speaker. It is sure to bring you splendid profits the moment it is put on display Write for full details and our proposition.

RADIOLAMP CO.

Dept. 1212 334 Fifth Avenue, New York City

RADIALAMP TRADE MARK LOUD SPEAKER

(Mfd. under U. S. Pats. No. 1,185,987, 1,272,843. Other patents pending.)

Remo Trumpet

The attractive design of the Remo Trumpet manufactured by the Remo Corp., Meriden, Conn., has been causing the instrument to find favor in the trade. It is a loud speaker, possessing



volume and tone and an appearance which makes it an ornamental adjunct to any receiving set.

The speaker measures 13 inches in height, while the diameter of the horn is 12 inches. The finish is of grained mahogany, making it have a pleasing appearance on any table or the top of a receiving set.

Amperehour Meter

An accurate means of checking the condition of radio batteries is now given the radio owner by the development of a Radio Amperehour meter by the Sangamo Electric Co., Springfield. Ill. This meter operates on the same principle as other Sangamo Ampere hour Meters which are used extensively on commercial and industrial storage-battery applications of all kinds. It is of simple, staunch construction and may be relied upon to record accurately in years.

The radio battery meter eliminates all uncertainty about the condition of a battery. A hand passing over a scale graduated in amperehours gives at all times an accurate visual indication of the true condition of the battery in amperehours of discharge. A movable red pointer on the meter is set at the point where the battery should be recharged. When the indicating hand approaches closely to or overlaps this pointer, it is a visual warning that the battery should be recharged.

Business Getting Better

According to *The Industrial Digest* business conditions are "on the boom" in the many manufacturing centres of the United States. Radio equipment sales are also improving.

The Development of Variable Condensers

(Concluded from Page 141)

ceptional strength to stand up under the wear of every day use without frequent adjustment of friction, spacing or bearings.

Thus the demands of the 1924 radio fan has brought the condenser out of the "price" class into the quality class, and by the use of the higher graded instruments is eliminating the so-called static, and getting loud clear reception from the most distant broadcast stations. In the short space of three years the buying public proved to manufacturers that "necessity is the mother of invention."

Heretofore, the manufacturer spent much valuable time in an effort to guess which way the public would jump from season to season, and consequently, a practical working plan was impossible, and both manufacturer, jobber, and dealer suffered many lapses in what should have been volume-business seasons. Now, however, condenser design, demand, and production are stabilized to a point where profitable sales are made throughout the year, allowing the dealer to drop the practice of buying inconsiderate quantities.

It is the general belief among authorities that the approximate ultimate in radio circuits has been reached, and that the big improvement in reception will come from the use of quality parts in existing circuits. Such an opinion can only mean that inferior parts are due to go out entirely, leaving a big field to quality instruments.

Roger Babson states that the American public will spend approximately \$300,000,000.00 this year on radio sets and parts, and of this vast amount we can safely estimate 10 per cent will be spent on condensers. If one figures on average price of \$5.00 per instrument, it shows a market for 7,500,000 condensers.

"Buying a Radio"

Thousands of copies of a new book entitled "Buying a Radio" have been distributed by the Freed-Eisemann Radio Corp., Brooklyn, N. Y. This book gives the information that every radio devotee desires. Those who know little or nothing about radio but are anxious to attain best results in their first experiment in reception find "Buying a Radio" complete with answers to the first questions that occur to them, in addition to which there are clear-cut statements relating to all kinds of sets, considered most satisfactory for broad-

cast reception and entertainment.

This quotation is taken from "Buy-

ing a Radio:"
"You will be offered all sorts of apparatus with strange names and even stranger claims. Beware of the nondescript makes and the type put together by the neighborhood electrician. Many sets are merely ingenious in the naming . . . and ingenious nowhere else. Most are innocent variations of the types described, and if sold by reputable dealers are likely to be good of their kind.

Descriptions of all the Freed-Eisemann models, including the new loud speaker, the console and the receivers to fit various Victrola phonographs, are given with illustrations.

The book contains "A word to the Technical Reader"-although the descriptions therein used regarding variable condensers and radio frequency amplifier coils are in language that is understood by all.

"Crofoot" Variable Condenser

The Premier Electric Co., 3800 Ravenswood avenue, Chicago, has developed a new variable condenser known under the trade name, "Crofoot," which is said to embody all the good points that a variable condenser should have, principal of which is an extremely low minimum capacity which, of course, greatly increases its tuning ratio. This condenser is of the so-called "low-loss" design and has extremely high di-electric or insulation resistance, for it employs hard rubber in the very small cross-sectional area as insulator of the rotor and stator groups.

The entire condenser is made of hard brass and is beautifully finished and the generally accepted requisites of a good condenser, in addition to its low minimum capacity and high tuning ratio. The rotor and stator plates are of heavy gauge brass and are electrically connected by soldered connections. These stator and rotor plates are of a semi-straight line plate design which makes tuning easy and accurate. Its size for capacity is said to be the smallest of any variable condenser made. This feature of small size and light weight will appeal strongly to manufacturers and fans who are all endeavoring to design their sets as small and light in weight as possible, and this is especially desirable in the portable sets.

Although the Premier Electric Co. has a very fine factory and equipment for the manufacture of radio parts and is increasing the factory capacity 100 per cent for the coming season, the new items which they have added to their line of parts will undoubtedly tax production capacity to the limit.

"Silvoplate" Compound

A compound, capitalizing the new demand for silver-plated radio aerials and instruments, has been placed on the market by the Silvoplate Co., 125 Church Street, New York City.

The solution is guaranteed to deposit a pure metallic silver plating on copper, brass, bronze, silver and German silver. As the radio frequency



currents travel on the outside of the wires, silver, having the lowest resistance of any metal, forms an ideal coating for aerial wire, bus-bar, condenser plates, socket contacts and any other part of the receiver in which low resistance is demanded.

Several condenser manufacturers already have placed on the market low loss brass condensers with silver plated plates. A number of newspapers have recently carried feature articles on the application of the low resistance of silver to the low loss problem.

By the use of "Silvoplate," the wires and instruments in existing circuits may be silver-plated by the operator himself with little trouble or expense, thus increasing the efficiency of his apparatus without having to buy the new instruments.

Keelock Switch

The Keelock Switch which operates with a key and unlocks radio battery circuits is now being marketed by the Metro Electric Mfg.



Co., 121 Prince street, New York City, makers of the new device.

The switch is absolutely fool proof and pro-

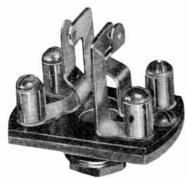
tects the set from people who are not familiar with the correct operation. Two keys are in sight and an engraved sign for panel mounting are included with each switch.

METRO NON-SOLDER RADIO PARTS



"KEELOCK" THE METRO SAFETY SWITCH

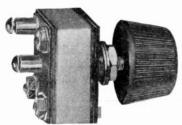
Operates with a key just like the ignition switch on your automobile. "On" and "Off" positions clearly in-



Double Jack, List. 60c Single Jack, List.....

> COMPACT RUGGED 100% CONVENIENCE 100% PERFECT

Phosphor Bronze Springs, Bakelite Insulation, Silver Contacts.



COMPRESSION RHEOSTAT

Second to none. A scientific instrument that provides a smoooth working micrometer adjustment.

Nothing better for DX stations.

Ask for attractive counter display boards.

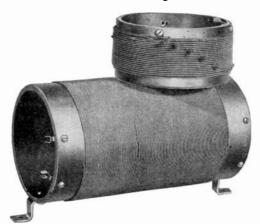
METRO

ELECTRIC MFG. CO., Inc. 121 PRINCE ST. NEW YORK, N. Y.

The Authorized Cockaday Coil

\$5.50

Specified in October
POPULAR RADIO



Cockaday Precision Coil

The only coil specified by Mr. Cockaday in his New Four Circuit Tuner, with resistance coupled amplification, because it meets all his specifications.

The only authorized Cockaday Coil, made in strict accordance with specifications of Laurence M. Cockaday, inventor of the famous Cockaday Four Circuit Tuner. Wound on hard rubber tubing, ½ inch wall, with No. 18 D.S.C. copper wire which insured selectivity, greater volume, sharp tuning and maximum sensitivity. Guaranteed.

Gets distant stations easily and clearly. Hundreds have substituted this quality coil for those of inferior make and are amazed at the improved reception, selectivity and general D-X results.

Dealers

Publicity given this new circuit together with our national advertising will help you sell this Cockaday coil. Write for descriptive circular and discounts.

PRECISION COIL CO., INC. 209-A Center Street New York

In Canada, \$7.75. Canadian Distributor, Perkins, Ltd., Montreal.



NEW! Get the popular special 45 volt upright. FITS ANY CABINET.



Batteries with either your own label or ours. Made of the best materials and fully guaranteed. Distributors write for territory.

EUREKA BATTERY CO., 101 Wooster St., New York City

The Paramount Loop

The latest creation of the Paramount Radio Corporation, 23 Central Ave., Newark, N. J., is the Paramount Loop—a new type of antenna that gives promise of gaining great popularity among rad.o enthusiasts generally.

The Paramount Loop is spiderweb wound with silk over phospherbronze wire and mounted on a Bakelite frame, extremely low in dielectric losses. And, standing but fifteen inches in height, this unique Loop



affords exceptional directional effect.

By virtue of its original scientific construction, a greater volume, receivability and clarity of tone, is assured for this new indoor antenna by its manufacturers.

Stewart C. Whitman, inventor of the Paramount Loop, is President and Engineer of the Paramount Radio Corporation. This does not mark his first creation in the electrical field, as he is the originator of a "B" battery eliminator soon to be placed on the market, and of other radio and high frequency apparatus.

Allen Paste

The L. B. Allen Co., 4553 North Lincoln Street, Chicago, has been enjoying a wide market for its Special Radio Soldering Paste. The prepara-



tion is a non-corrosive, acidless paste which has been in great demand among radio enthusiasts in various sections of the country.

According to reports made in connection with the

preparation, potential noise centers are eliminated when joints and wiring are fluxed with the paste. It eliminates all unnecessary noises, squeals, caused by loose connections in lead-ins, ground or set connections.

Joints fluxed with the paste are guaranteed noncorrosive. Volume is increased and wide reception assured, the concern claims.

Iones Multi-Plug

Howard B. Jones, 618 South Canal Street, Chicago, manufacturer of the Jones Multi-Plug Cable for instantly and simultaneously connecting or disconnecting the ground, antenna, "A" and "B" batteries to or from a set, announces that Jones sockets may now be had with bracket mountings. The bracket mounting permits the plug to be placed inside the set on the sides or bottom of the cabinet as convenient.

It is, in addition to both the Jones Multi-Plug panel mounting type, and the Jones Multi-Plug binding post type, extensively used as standard equipment on sets, and is provided with seven color coded leads for attaching to the binding posts of any set. Any Jones Multi-Plug Cable, it is stated, will fit any of the Jones sockets of the three types mentioned.

The Multi-Plug Cable now regularly supplied is eight feet long. All leads in it are coded by color to insure being properly connected to the ground, antenna, and A and B battery terminals. The ground and antenna wires are separate leads. One of the features of this long cable is that it may be lowered through a hole in the floor, or run under a closet door, to the batteries, enabling one to keep his batteries out of the way and near the charger.

It is also stated that use of the Jones Multi-Plug makes any set portable, permitting it to be moved about or taken to a store for inspection without the necessity of disturbing battery connections. "key" in the socket and a keyed slot on the Multi-Plug allows the two to be plugged together in one waythe right way-which, the maker states, affords absolute protection against burning out tubes or draining batteries due to poor connections.

Standard Electrical Dictionary. Recently issued by the Norman W. Henley Pub. Co., New York City. Price \$5.00.

The new volume has been revised and enlarged so that it now comprises one of the most complete volumes of its kind. To the casual observer it is really more than a mere handbook, or dictionary. It is a reference book and carries definitions of 6,000 distinct words, terms, and phrases. Simple language is used in defining the various words. A dictionary of radio terms is also included in the present volume.

Every person interested in the progress and development of the electrical and radio industry will do well to possess a copy of the book.

Take Us Up on This

We want to send you a Yaxley Rheostat on trial. See for yourself the correct design and superior construction of this splendid device. Put the rheostat to every test. If you do not pronounce the Yaxley Rheostat a remarkable value and a sales maker, you can return it. We're betting you'll like it. Will you take us up on this?

Rheostat and Potentiometer



Entirely new and improved in design. One nut mounting in single panel hole. Smooth in operation. Gives fine tuning without use of vernier attachment. All connections soldered through to terminals.

Yaxley Rheostat has been adopted as standard equipment by many of the leading manufacturers of high grade receiving

Potentiometer has exactly the same construction as rheostat.

Code No.	Price
16-K-6 ohm Rheostat with knob	\$1.35
16-D-6 ohm Rheostat with dial	. 1.60
120-K-20 ohm Rheostat with knob	. 1.35
120-D-20 ohm Rheostat with dial	1.60
130-K-30 ohm Rheostat with knob	1.35
130-D-30 ohm Rheostat with dial	1.60
200-200 ohm Potentiometer	1.85
100-400 ohm Potentiometer	. 1.85

YAXLEY MFG. CO.

Dept. D.

217 No. Desplaines St. **CHICAGO**

Jacks

"Yaxley Jacks are good

Jacks."
That's the verdict of the radio industry. Thousands bought every day. Your customers will like these features:



Code No. 4 Interstage \$1.00

Single Nut Mounting—Solid Brass Frames.
Phosphor Bronze Springs
Pure Silver, self-cleaning contact rivets.
A permanent, pleasing nickel finish. Here's a good trial assortment: Quantity Code No. Description

Use the coupon while it is handy. Advertising supplies will be furnished free.

YAXLEY MFG. CO. Dept. D, 217 No. Desplaines St. Chicago, Ill.

With the understanding that I may return any or all items without obligation, send me at my maximum discounts the devices described below. Ship to

My jobber is..... Code No. Description Rheostats... Use margins for additional items.

The ENGRAVING MACHINE

that does the work! The DECKEL

Bench Type No. 0 Built for Single and Small Produc-

tion Panel Engraving as Well as for Large Production Engraving on Small Parts Easy to Operate

Engraves on Any Material Sizes for All Classes of Engraving Write for Details of Machine You Need Special Radio Panel Engraving Cutters Master Copy Types

H. P. PREIS & CO., Inc. Newark, N. J. 9 Campbell St.,



Full Page Advertisements — Bringing Business



There's big business right now for dealers handling National Transformers. They give you several unusual advantages:

- 1. A complete line of radio transformers. One trade name, one high standard of excellence at a price range to meet the demands of your trade.
- 2. National Transformers, no matter the price or the style, possess many unusual features to recommend them to radio buyers. You get all the refinements of appearance and convenience in Nationals backed up by absolutely correct design and splendid construction.
- 3. Don't overlook the business the big smashing National advertisements in Popular Radio, Citizens Radio Call Book and increased space in Radio News and Radio Broadcast are bringing.

National Transformers bring repeat business. Place a trial order now and get your share of this profitable business. Ask your jobber or address

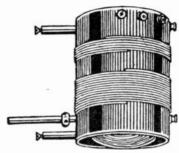
National Transformer Mfg. Co. Manufacturers of Transformers of All Types
Dept.D,154 Whiting St., Chicago, Ill.

When in need of Apparatus or desirous of Service

Ask Our SERVICE BUREAU

Feri DX Tuner

The Feri Radio Mfg. Co., 1167 Bedford Avenue, Brooklyn, N. Y., which has been specializing in the winding of coils for radio use reports a pleasing trade response for their DX tuner. This coil is of the popular three circuit type and can be efficiently used in the assembling of three circuit receiving



sets employing either one or three vacuum tubes. The tubing of the tuner is wound with silk covered Litz wire of green red and blue colors. It is packed in an attractive box together with a circuit diagram and an actual size panel layout.

In addition, a one hundred and eighty degree three circuit tuner, as well as coupler and tuning units, low loss self-sustained inductance coils, filter tuner coils, etc., are also manufactured by the Feri company.

Branston Exhibits Popular

One of the interesting exhibits at the recent Buffalo Radio Show was the line of radio merchandise shown by Charles A. Branston, Inc., of 815 Main street, that city. Notable among these was the Branston Reflexed Super-Heterodyne, a highly efficient loop receiver incorporating radio frequency amplification, reflex, neutralization and regeneration.

E. L. Van Every, technical engineer for the concern was in attendance at the booth and explained the workings of the set to the hundreds who thronged the display during the period of the show.

In addition to the above mentioned set the Branston Co. displayed other products of its own manufacture. These included: lateral wound honeycomb coils, triple, double and single coil mountings, audio and radio frequency transformers, telephone plugs and jacks, regenerative loops, lightning arresters, No. R-199 Super Kits, Cam Vernier Dials and other radio products.

The best way to keep abreast of the latest developments in the industry is to read The Radio Manufacturer. Each week it carries a wealth of news stories which should be the means of keeping readers posted to the minute on matters of trade interest.

100

Amrad's New Offering

A two dial five tube Neutrodyne set is the latest offering made to the trade by the American Radio & Research Co., Medford Hillside, Mass. According to an announcement made by the concern the knowledge gained from nine years' experience in radio manufacturing has been embodied in the new set.

The latest Amrad product has five tubes. A fine clear tone, positive selec-



tivity, easy operation, and popular price all go toward adding to the appeal of the new set.

The new number is an attractive piece of workmanship and graceful in its lines. The refinements and beauty which are included in the set will no doubt prove it to be a real seller and another worthwhile addition to the popular Amrad line.

Kant-Blo Switch

The Apex Radio Co., 503 Fifth Avenue, New York City, announce their taking over the sole distribution of the Kant-Blo signal switch manufac-



tured by the Ganio Kramer Co., Inc., of New York. This protective signal unit is a combin-

ation switch and binding post which can take the place of either a push-pull "A" battery switch or one "B" battery binding post.

When a short circuit occurs or when the plate current supply is attached to the filament circuit a little lamp immediately lights notifying the set operator that there is a wrong connection in the circuit. Thus the Kant-Blo switch can save an inexperienced or careless set owner the cost of his vacuum tubes.

To aid the dealer in his business the Apex Radio Company have prepared many sales helps which make added sales and increase the retailer's volume of business.

N. W. Distributors for Radio Company Named

MINNEAPOLIS, MINN. — Reinhard Brothers, 11 South Ninth street, have been appointed Northwest distributors for the entire line of the Atwater Kent

Mfg. Co., radio manufacturers, of Philadelphia, according to C. T. Stevens, vice-president of the company.

Mr. Stevens returned recently from the factory, where he devoted a week to inspection of the recently completed plant, erected at a cost of \$2,000,000.

"The new manufacturing plant, which will serve as a monumental tribute to A. Atwater Kent, is the most modern building in the country devoted to exclusive manufacture of radio products," said Mr. Stevens. "The building is a one story structure stretching over eleven acres of ground and has a sawtooth skylight roof con-

struction. The windows alone represent an outlay of more than \$44,000.

"That radio as an experiment has passed and its permanency is clearly shown in the forward step taken by the Atwater Kent Co., which will manufacture everything which goes into radio."

Adds Complete Line

GALESBURG, ILL.—Harold Berg, proprietor of the Galesburg Electric Service has added a complete line of radio sets and parts to his present stock. Repairing and rebuilding of sets will also be done in the new establishment.

BAKELTE

A satisfied customer is your best protection

The stability and permanence of Bakelite are two important points to be considered by dealers who sell radio sets on the installment plan.

Bakelite parts retain their insulating properties under all atmospheric conditions and, when tested after years of service, they have shown no signs of deterioration.

Make sure that your radio sets are equipped with Bakelite and you will avoid annoyance of returned merchandise and complaints of faulty insulation.

Send for Our Booklet "J"

BAKELITE CORPORATION

247 Park Avenue, New York, N. Y. Chicago Office: 636 West 22nd Street





THE MATERIAL OF A THOUSAND USES



When concerns like PREST-O-LITE

UNIVERSAL, NATIONAL LEAD BATTERIES and other prominent Battery manufacturers buy a hydrometer for their own use, it's a pretty safe bet that that's good merchandise to handle for making money and building good-will.

Most all the good Jobbers in the country handle and recommend the

AYANBEE Radio Battery Tester

For this isn't a new and untried product that might or might not add to your good-will. No, indeed! It is a *proven*, dependable battery tester that never brings a "kick" from the biggest grouch that ever wore shoe-leather!

The Ayanbee is now packed in attractive, salesmaking Counter Displays containing 12 instruments—each one in its own substantial mailing tube

But you cannot afford to wait around if you mean to handle Ayanbee profits this season. If

your usual Jobber is out of stock, order direct from us, and give us his 75° name.

Scranton Glass Instrument Co. SCRANTON, PA.

Also Makers of KANT STICK Battery Tester KORRECTION Battery Thermometer KWICKWERK Battery Filler Pyro-Alcohol Radiometer

When in need of Apparatus or Desirous of Service Ask Our Service Bureau

Paragon Publicity

The Adams-Morgan Co., Inc., Upper Montclair, N. J., announces a strong schedule of national advertising for the 1924-25 season. Publications of large circulation are included in the schedule as well as newspapers in leading citics, boys' magazines, radio magazines, and trade papers.

The opening guns of the campaign were double page spreads in colors in the leading trade papers for October. These are followed by double pages in colors for November in three trade publications, with full pages in additional trade papers covering radio, electrical, phonograph, music, hardware, and automotive fields. Color pages are being used in some of the national publications while full column space is used in others.

The complete list of publications which carry advertising on the new Paragon line this season are: Saturday Evening Post, American Mazazine, Popular Mechanics, Popular Science Monthly, American Boy, Radio News, Wireless Age, Popular Radio, Radio Broadcasting, Radio Engineering, Radio Age, Radio Age Annual, New York Herald-Tribune, New York Sun, New York Times, Chicago Tribune, Chicago Daily News, The Radio Dealer, Radio Merchandising, Electrical Merchandising, Talking Machine World, Talking Machine Journal, Phonograph & Talking Machine Weekly, The Music Trade Review, Hardware Age, The Radio Trade Directory.

All of the above advertising features the new Paragon Four. This set uses the new Paradyne non-radiating circuit which has extreme sensitivity and gives large speaker volume on an almost unlimited range. The other sets featured in this advertising are the new Paragon Three and the new Paragon Two.

Adams-Morgan Co. is also furnishing a liberal supply of dealer helps in the way of circulars, display cards, window trims, in addition to a very attractive series of dealer and distributor newspaper ads and cuts.

Trade Exports Increase

Based on the August and September radio exports, which averaged over \$500,000 a month, American radio exports during 1925, may aggregate over six and a half millions of dollars, provided theh average holds in the coming twelve months. This estimate for 1925 exceeds forecasts of two months ago by about two million dollars.

In September radio exports from the United States totaled \$567,454.

Jack Plug

The recent invention of a new pole-changing jack plug by George J. Zisch, Radio Engineer of the American Radio Phone & Mfg. Co., Inc., of Newark, N. J., is especially worthy of note.

The plug switches the current leads while connected up in the circuit, so that current polarity leading to the receiver may be changed and the result thereby obtained may be observed or "listened to" without shifting the head-set or changing any other previously made adjustments. Thus the important, and often necessary, time-saving elements in radio reception are insured. The necessary switching mechanism is enclosed within the hollow handle, so that the pole-changing may take place without inconvenience.

"In the operation of radio-telephone receiving sets," Mr. Zisch declared, "it very often occurs that the changing or reversing of the receiver leads will result in improved reception. Again, it is often found that incorrect receiver connections, that is, wrong polarity connections, will result in what is technically termed 'bleeding' the receiver magnet of its permanent magnetism, and gradually the latter will grow weaker, until it becomes practically useless.

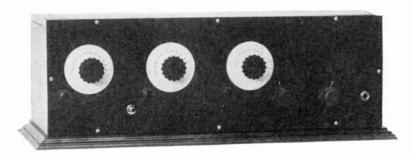
"To correct this difficulty requires, ordinarily, the shifting of the leads, either at the receiver or at the plug. This operation consumes time, and is otherwise inconvenient. Further, while it is being done, the receiver head set must be removed, which in turn means that the results of the change cannot be quickly observed. The new polarity-changing jack plug with its push-button device for switching the current leads overcomes these several objections."

Commerce Dept. Sees Trade Increase

A year ago it was predicted that demand for radio receiving sets would slacken, since it was believed that the market was becoming saturated, but a review of developments in the last twelve months has convinced the Department of Commerce that the reverse is true. A notable increase in the sale of radio receivers was shown in the last year, declared the report.

Biltmore Master Reflex

=4 and 5 tube Models \$100 and \$125=



Which Receiver is the Best Seller?

THE MOST HANDSOME IN APPEARANCE?
THE MOST SENSITIVE?
THE MOST SELECTIVE?
THE EASIEST TO OPERATE?
THE MOST ECONOMICAL?
THE PUREST IN TONE?

WHAT OTHERS SAY

We have received 26 outside stations in one evening, through three powerful local (Pittsburgh) stations, all on the loudspeaker, and with but an electric light plug. This includes Los Angeles.(We seldom ''pull'' the receiver to full volume.

The R. F. Miller Co., 113 Frederick St., Mt. Oliver, Penn.

The five tube BILTMORE MASTER REFLEX is absolutely the best set that money can buy.

Kenneth B. Hutchinson, Box 295, Fennville, Michigan

D:
BILTMORE MASTER REFLEX receivers have been tested and approved by POPULAR RADIO LABORATORIES

Write for Literature and Prices

THE BILTMORE RADIO COMPANY DEPT. L. BOSTON 30, MASS.

ESTABLISHED 1855

MAURICE O'MEARA CO.

MANUFACTURERS, IMPORTERS AND EXPORTERS

MEARACO

RESISTANCE PAPER

GRID LEAKS

WE SPECIALIZE IN HIGH RESISTANCE CARBON PAPER

MAIN OFFICE 448-450-452 PEARL ST., N. Y. CITY MILLS WESTFIELD, MASS.

We do not sacrifice quality for production

ACCURATE EFFICIENT CONSTANT

are necessary to make a satisfied customer. Try it.



Compare it with others.

The difference is in the result of elaborate experiment and extended scientific study. The MALTZ RESISTANCE UNIT is extraordinary in appearance; it has gold-plated hexagon terminals which give it neat appearance and makes it desirable to the last degree. We also stock them in round terminals as well, brass or nickel plated in various sizes arranging from ¼ to 10 megohms.

Reliable dealers should not be without them.

If you want to see a sample—tell your jobber, or write to us.

MALTZ ELECTRIC COMPANY

158 Belmont Avenue

Dept G

Newark, N. J.



ASK OUR
SERVICE
BUREAU



Transatlantic Condenser

A recent addition to the family of low loss condensers, which is finding favor in the trade, is that which is known as the "Transatlantic," manufactured by the W. B. Sales Company, 78 Fifth avenue, New York City.

Exceptional care was taken in the design of the condenser to eliminate losses, which is of prime importance in obtaining that elusive distant station.

The rotor and stator plates are of aluminum. Hard rubber is used for its insulation, with plates so spaced as to give a straight line reading of capacity, which also helps in separating the broadcasting stations on the lower wave lengths, where they are most congested. These plates are on cone-shaped bearings, making perfect contact with a special spring, grounding it.

The spacing washers are accurately machined to a thousandth of an inch, and are highly nickel-plated, as in the entire condenser unit, all of which gives a general appearance of neat and ac-

curate workmanship.

They are made in three sizes—fifteen, twenty-one and forty-three plates. having a capacity of .0003, .00051 and .001 respectively. Each condenser is given three rigid tests before leaving the factory as to losses, capacity reading and accuracy in workmanship, as well as a 1,000-volt AC breakdown test, assuring a perfect condenser.

Features Aggressive Publicity

The Dungan-Sternfield Radio Sales, 25 North Dearborn street, Chicago, well-known manufacturers representative, have been kept busy supplying the wants of the trade on products of the Adams Radio Mfg. Co., Chicago, American Cabinet Works, Brooklyn, N. Y., and Syco Radio Products Corp., Philadelphia.

The Adams Co. features a perfected radio jack which is well constructed and made in five sizes. A collapsible tuner loop is manufactured by the American Cabinet Works, which also serves as a wave trap enabling any station to be tuned in and out at will. The Little Kelcoil is manufactured by the Syco Corp., which has been proving a satisfactory three circuit tuning coil.

Apex Vernier Dial

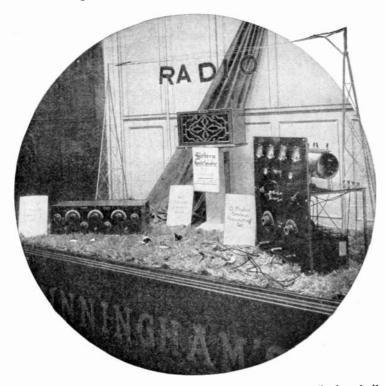
A new vernier dial has been placed on the market by the Apex Electric Manufacturing Company, 154 Nassau Street, New York City.

The Apex dial provides on any condenser the exact performance of the high grade geared condensers, without the installation trouble or resultant noise of the separate pinion shaft.

Stresses Value of Attractive Window Displayes

"It has been stated that 87 per cent of sales are made through the appeal to the eye," writes W. S. Wing, Manager of the Cunningham Electric Co., Detroit, Mich. 'And with this in mind we have spent a great deal of thought and time on

only due to the proper window displays, but service to the customer as well. For this store has employed experienced salespeople who can solve the radio buyer's problems and in addition a well equipped repair shop that can handle any size job



The accompanying photograph shows an ingenious display built around a Sonora Speaker, by W. S. Wing, Manager of the Cunning-ham Electric Co., Detroit, Mich.

the display of radio equipment in our from a crystal set to a transmitter." windows.

"This shop opened for business a little less than six years ago with about 800 square feet of floor space and has constantly grown, now being four times its original size.

"We believe this growth is not

The accompanying photograph shows an ingenious display built around a Sonora Speaker, by Mr. Wing. The transmitting and receiving sets alongside the speaker and the model radio antenna installation brought the "fans" to the windows in throngs.

New Michigan Station Goes on the Air

Michigan third Class B broadcasting station WREO, Reo Motor Car Co., Lansing, Mich, recently went into service. Following the initial concert the station will broadcast every Tuesday, Thursday, Saturday and Sunday.

When test programs were broadcast from WREO, communications were received from 33 states assuring the men in charge that they were "coming in fine." It is believed that Lansing has a strategic geographical location for broadcasting so that even less powerful receiving sets any place in the United States can receive programs.

"B-Liminator"

Timmons "B-Liminator" is the name of a new device being featured by the Timmons Radio Products Corp., Germantown, Philadelphia, which operates from any house lighting circuit and eliminates "B" batteries. The "B-Liminator" gives accurate control over all plate voltages, detector and amplifier, and is adapted to any make of set.

The rapid strides being made by the radio industry should be convincing proof to the widewake retailer to keep posted to-the-minute on these developments. The Radio Manufacturer, the weekly newspaper of the trade, and thoroughly covers the field.

More profit in spaghetti /

You will sell a lot more spaghetti by hanging this handy container in a prominent place. It will save shelf room and keep your stock clean. It will remind fans that they want spaghetti and tempt them to take some home to keep on hand. The carton holds 100 pieces.



Carton holds 100 pieces

ALPHA is better spaghetti, too. It is well known and guaranteed. We back it with real selling aid.

WRITE US A POST CARD for this attractive proposition! Get the Alpha container and let it sell more spaghetti for

Manufacturers of sets and parts write for prices on Alpha "Special" in bulk.

WE ALSO CUT AND STRAIGHTEN **BUS WIRE**

RADIO SUPPLY CO.,

611 BROADWAY, NEW YORK CITY

The Antennaphone

The Antennaphone Company of 90 West Street, New York City, has developed a device that, when placed under a desk telephone, will act as an antenna. Enough wire is furnished with the antennaphone to reach from its location to the receiving set.

When the antennaphone has been attached to the set the tuning is accomplished in the usual manner. The intensity of signals can be varied and interference eliminated by partially moving he telephone off the antennaphone. This action is similar to that of a variable condenser placed between the antenna and the receiving set. With

loop sets connect the antennaphone wire to one loop binding post and ground to the other. Where grounding difficulty exists the antennaphone can be used as a ground instead of an antenna by attaching the loose end of the wire to the ground post of the receiving set instead of making the connection to the antenna post.

Fada Opens Chicago Office

An office has been opened at 325 Madison Avenue, Chicago, by F. A. D. Andrea, Inc., of New York City, to care for business in the middle western section of the country. L. J. Chatten will be in charge.





The Christmas Gift of Gifts



This wonderful \$12.00 Loud Speaker will grace the homes of thousands this Christmas. Its beauty, exceptional volume, and quality of tone will make it the ideal Christmas gift of the season. The Holtzer-Cabot Phonograph Attachment at

The Holtzer-Cabot Phonograph Attachment at \$10.00, Universal Headset at \$9.50 and the National Headset at \$6.00 comprise a complete line of receiving instruments that move exceptionally fast at Christmas time. Stock these instruments at once for your Christmas trade.

If your jobber cannot supply you, write us direct

Dept. RD

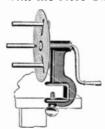
THE HOLTZER-CABOT ELECTRIC CO.

125 Amory St. Boston, Mass.

6161-65 South State St., Chicago, Ill.

Atec Products

The Dungan-Sternfield Radio Sales Co., 25 North Dearborn street, Chicago, has been finding business brisk with the Atec Time and Labor Savers

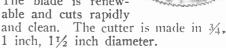


being manufactured by the Atec Products Co., of Chicago. The Atec Coil Winder, one of the several products being featured, clamps on the table or bench and winds either to the right or the left. It is adjustable to hold

any size tube for winding. An automatic spring stop holds the crank in

position so the operator may use both hands to put on or take off work.

The device is made of heavy metal. Another Atec products which has been giving unusual service is a bezel hole cutter which fits any drill or brace. The blade is renewable and cuts rapidly



Du Pont Develops Panel

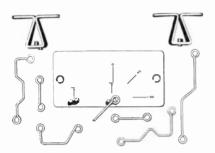
Chemists of the Du Pont Co., Wilmington. Del., announce the development of a new radio panel which revealed unusual qualities under tests. Recent experiments conducted at the Cruft high tension laboratory of Harvard University, to which the panels were submitted, show that the new material, submerged in water for six hours, absorbed less than .03 of one per cent. Owing to this minimum amount of absorption of water, the electrical constants remain practically unchanged under varying atmospheric conditions.

They also showed that the material had a column of resistivity of 8,000,000 megohms per cm. cube and a surface resistivity of 20,000,000 megohms per cm. square. It had a power factor of .036 radians or 2.1 degrees at all frequencies and the dielectric constant was 5.7 at 1 kilocycle and 4.8 at 500 kilocycles. This technical detail summed up means that the panels are completely satisfactory from a dielectric standpoint.

The new panel, which is known as Pyradiolin, has the further advantage that it can be handled by the amateur builder as easily as a piece of soft pine. It will not chip, crack, warp, or shrink and is extremely easy to cut. saw, drill, engrave and stamp is the claim made by the Du Pont Co.

Nestor Bend-Rite

In addition to its line of jacks, plugs, rheostats, potentiometers, etc.. The Consolidated Instrument Company of America, Inc., 41 East 42nd St., New York City, is marketing the Nestor Bend-Rite, a device which helps the set builder to speed up the somewhat tedious work in as-



sembling his favorite hook-up. This product can readily be used to make the necessary eyes, bends and offsets that are required in every circuit, thus making the homemade set have a factory finish to it when completed.

Because of its ability to bend and offset both square and round buss bar, the Nestor Bend-Rite is a product which will prove universal in its applications to the various phases of assembling sets where the diagrams call for compactness.

The Remler Unit

The Remler Mfg. Co., San Francisco, recently placed on the market a remarkable new variable condenser under the trade name of Remler Capacity Unit. The use of twin rotors with no stator plates combined with marked developments in mechanical and electrical design.

Comparative test of the device show a much lower loss than some semi-circular plate types, as this construction permits reducing insulation to a minimum. No metallic connection to condenser plates extends through the panel. Both sets of plates are insulated. Lowest minimum of capacity insures a tuning range of great distance.

The rotation is 360° between maximum and minimum setting. The entire capacity is subject to vernier tuning through the use of bakelite gears constructed to eliminate back lash. The condenser gearing can be meshed so condensers can be mounted in "gangs" of two or more and controlled from a single dial.

The Radio Manufacturer is presenting a wealth of live news dispatches each week from every section of North America, and merits the distinction of being the industry's best medium.

Lower priced for bigger sales



"AMPL-TONE"
Full 2200 Ohms

WHEN the AMPL-TONE Guaranteed Radio Headset was first brought out three years ago, the price was very much higher because we did not foresee such a sweeping demand.

Our costs have permitted us to lower the price to \$5, also improving the set, thus passing on to the trade an advantage that spells TURNOVER! We believe this is the lowest price ever on an instrument with such outstanding merits. NOTICE:—Our new modern and up-to-date factory at Derby, Connecticut, is in a position to resume prompt deliveries on all orders.

Sells for \$5

For loud, clear, equalized tone, we have found no equal to the AMPL-TONE Headset selling at a price a nywhere within the popular range. We use only the best materials.

We cannot make all of the headsets used, so we make the best. Once tried always satisfied. Our Loud Speaker Units (including blue print for horn) list \$3.00.

Responsible jobbers and dealers. Write

AMPLATONE GUARANTEED RADIO HEADSETS

The Union Fabric Co. Successors to C. M. French Mfg. Co. Derby, Conn.

Ask Our Service Bureau

EDGCO'S Buyers Guide and Handy Reference

FOR FALL 1924

giving information that should be in every radio dealer's hands, will be off the press on August 15, 1924. If your name is not on our mailing list send us your letterhead or card and we will send you a copy.

THE EDW. J. GOETZ CO.
Radio Distributors Exclusively
2409 Harris Ave.

Norwood Sta.

Cincinnati, Ohio



ALLIED BINDING POSTS ARE BETTER POSTS WITH A BIGGER PROFIT



We do drilling and engraving to your specifications. Let us quote on your panel problem. Prices and samples on request.

ALLIED RADIO CO. Inc. 162 WEST 34th ST., NEW YORK CITY



PAPIER MACHE FIBRE RADIO HORNS

Speak for themselves.

This horn is not metal, fleece lined fabric, burlap, nor composition wood pulp, but a built up papier mache fibre horn of wonderful tone quality and durability.

Owing to the nature of the material, all vibration and distortion is eliminated.

All Styles, Shapes, and Sizes Built for Cabinets or Bases.

Howard Papier Mache Co., Inc., New York City Dept. B, 315-17 W. 47th Street. Longacre 3333.

Thermiodyne Expands

Owing to increased dealers' orders the Thermiodyne Radio Corporation, Plattsburgh, N. Y., has decided on enlargement of the manufacturing plant by 15,000 square feet. The company's December output is expected to exceed \$500,000 gross business.

Bird Cage Line

Peter J. Constant, Inc., 91 Seventh Avenue, New York City, distributors of standard nationally advertised radio products recently became exclusive distributors for the Hansen "Bird-Cage" radio line. These sets sell at popular prices.

The "Bird-Cage" receivers are highgrade and unique in creasing in popularity rapidly. Each model has the name of a bird, such as a "Gold-Finch" a five tube set; Nightingale a four tube radio frequency receiver; Bobolink two tubes, and other models.

Develops New Speaker

After a great amount of experimenting, a radio loud speaker has been developed by the Du Pont Co., Wilmington, Del., which, because of the material from which it is made is claimed to be perfect in performance. The new loud speaker is made of pyroxylin plastic which is a non-vibrating material and therefore, cannot impress a false note upon that set up by the diaphragm. Its shape is the one which is best calculated to eliminate distortion, it is claimed.

The peculiar qualities of pyroxylin plastic have been shown by tests, it is claimed, to reproduce the range of tone, instrumental or vocal, with clarity and fidelity. It recreates the message with particular faithfulness and in pleasing volume.

Public Pleased with WGBS

"Worth the price of a radio set." This expresses the opinion of thousands of radio fans who tuned in the opening program of Station WGBS, Gimbel Brothers, New York, on the night of October 26. The debut on the air of this new broadcasting station was noteworthy not only for the exceptional quality of the program, but for the remarkable strength and clearness of the signals.

Radio experts in charge of the station attribute this to the fact that the broadcasting equipment used is the latest and most highly developed type, consisting of a Standard Western Electric 500 Watt transmitter and amplifier and Philco Diamond Grid Batteries. It is the second big station in the East to operate with Philco Storage Batteries, the other being Station WDAR, Lit Brothers, Philadelphia.

Kellogg Trans-B-former

The Kellog Trans-B-former, which is now being marketed by the Kellog Switchboard and Supply Co., Chicago, Ill., is described in the current issue of Radio Facts the monthly house organ of the concern.

The Kellogg Trans-B-former is a device for bettering average radio reception, lowering the cost of operating a receiving set, and improving the appearance of a radio set. The Kellogg Trans-B-former is not an experiment. Many years of testing in the laboratories of the Kellogg Switchboard and Supply Company have developed this item to a point where it is entirely a commercial proposition providing a constant potential to radio sets.

The size is about that of a 45 volt Jumbo "B" Battery. In fitting with the surroundings in which it must be placed, and that it may compare favorably with the best of radio receiving sets, this Trans-B-former is enclosed in a two tone walnut finish cabinet of exceptional design. Its appearance is an asset to any location in which it may

be placed.

There is only one renewable feature to the Trans-B-former. That is the tubes, which will operate approximately 2000 hours and then are renewed at a cost of only a few dollars. The current that this equipment will consume at the average lighting rate, will be less than 1/5 of a cent per hour. Its consumption at maximum load is less than 20 watts.

Due to a method of limiting current output from the sets, there is no danger in blowing tubes in radio receiving sets, by accidently placing on the filament the "B" voltage, thus making a considerable savings.

Radio receiving sets have been said to balk when their owners attempt to show them. Ninety per cent of this balking is due to "B" batteries being exhausted just at the most important time, or upon the return of the owner of the set from a long vacation. With the Kellogg Trans-B-former this is entirely eliminated. As long as the lights in your home operate, this "B" transformer will provide you a constant potential with sufficient current for any type of receiving set. The Kellogg "B" transformer has successfully operated about 100 types, or makes, of receiving sets.

Tone-A-Dyne Test

Unusual engineering principles were applied in construction of the special receiving equipment, designed for reception of long wave European stations during international Radio Week, Nov.

24th to 30th by the engineers of RE-SAS, Inc., 112 Chambers Street, New York City. A special long wave seven tube Super-Heterodyne was used in conjunction with an ordinary five tube Tone-A-Dyne receiving set and three tube power amplifier. Two especially designed long wave loop aerials were used, one in the customary manner, the other being used as a means of obtaining regeneration.

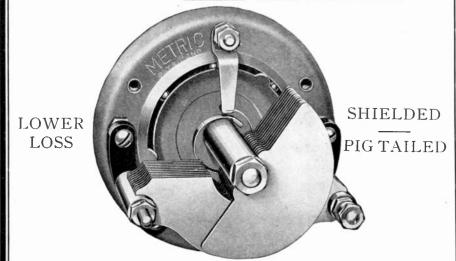
The incoming signals from 1600 to 2600 meters were changed by the first two tubes in the super-heterodyne to a wave length of 10,000 meters, and

then amplified by three stages of audio frequency. They were then changed through use of a special oscillator to a wave of 500 meters, where they were applied to the tuned radio frequency set, the output of which was amplified at audio frequency by a power amplifier using three VT2 tubes.

The object in amplifying at two different radio frequencies Resas engineers claimed, was to prevent undesirable oscillation in the amplifier, as in their opinion it is impractical to use more than three stages of radio frequency, regardless of the wave length.

And NOW -- "METRIC"

the ONLY Condenser in the World Equipped With RADIAL BALL BEARINGS!



PLAIN OR WITH VERNIER

NO MORE CONDENSER **SHORTS**

Here's a blessing for Radio fans ONDENSER SHORT WORR CONDENSER WORRY GONE FOREVER!

The new and far-advanced MET-RIC Condenser is now on the market. Dealers will be quick to note a mass of new and long-needed improvements that will revolutionize Radio.

METRIC is equipped with RA-DIAL BALL BEARINGS—SEVEN of them! They are an exclusive improvement feature with METRIC, appearing in no other condenser in the world!

The METRIC Bearings hold plates firmly in shaft, thereby insuring positive action at all times, reducing possibility of plate contact to a minimum and ABSOLUTELY PREVENT-ING CONDENSER SHORTS!

A BIG TALKING POINT FOR DEALERS

Other remarkable innovations on the METRIC are:

The exclusive METRIC design was constructed as a SHIELD from BODY CAPACITY. This it completely accomplishes.

An improved new type of PIG TAIL assures even more perfect elec-

trical contact.

METRIC is equipped with BIND-ING POSTS, NOT NUTS, posts which are new in idea and are me-chanically perfect. Binding Posts cannot loosen and affect plates. There is no chance of plates warping.

Highest accuracy. Lowest possible Highest accuracy. Lowest possible loss, absorption, resistance and phase angle difference. DISTINCTIVE NEW METHOD OF HOLDING PLATES PROVIDES RIGIDITY. Simple control. Highest grade BRASS. CONSISTENT PERFORMANCE. UNIFORM CAPACITY.



All Inquiries Promptly and Cheerfully Answered. Write Us for Further Information and Price Lists.

The Metric Instrument Co.

141 Wooster St., New York



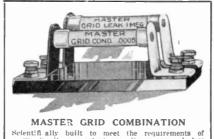
"It's the little things that count"

Masto Products

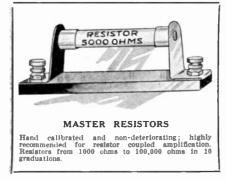
will mean increased sales for you

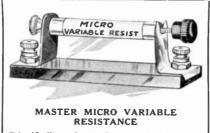
Don't overlook a big possibility. MASTO PRODUCTS take little room on your shelf and produce BIG PROFITS for you. Write now for a sample order of MASTO PRODUCTS. You can't go wrong.





Scientifially built to meet the requirements of very circuit, a constant capacity means noiseless received. Tubular condensers from .00005 mf. to .0005 mf. Tubular grid leaks from ¼ meg. to .10 meg.





Scientifically made to give a constant curve on full range. From 5000 ohms to 100,000 ohms. From 1/10 meg. to 10 meg. Table or panel mounting.

DEALERS! Write at once for descriptive literature and price lists. JOBBERS!

MASTER RADIO INSTRUMENT CO.
153 WRIGHT ST. NEWARK, N. J.

When in need of Apparatus
or desirous of Service
ask our
Service Bureau

The Reflectone

A loud speaker resembling milady's jewel box, or a miniature treasure chest—measuring only 6½ inches by 4¼ inches—is now on the market. It is a new model of the Reflectone, the novel loud speaker which has been attracting wide attention in the trade. The front face of this new Reflectone model has an artistic cut-out design to allow the passage of sound, with a dark-red moire silk lining to conceal the unique interior construction and to add to the attractiveness of the box.

The cover of this new, chest-like model lifts to disclose a cedar tray which offers itself as an excellent receptacle for cigarettes or other items. This practical use of the tray does not affect the quality nor the volume of the tone which are as startlingly satisfactory as that of the smaller, five-inch-high model. Except in shape and size, the construction of this new model is identical with that of the original Reflectone model.

The Reflectone will be remembered as "the midget loud speaker with the giant voice." Composed of a beautiful, highly polished material which looks very much like tortoiseshell, the Reflectone appears as merely an attractive ornament. Men and women have taken it home as a radio novelty-only to find it is in reality a bonafide loud speaker, attractive enough for a woman to place in her drawing room, preferable for home ornamentation because it is small enough to be put on the smallest table or a smoking stand, yet furnishes surprisingly clear, natural reproduction with quality and vol-

This clear, pure tone—whether a reproduction of the gentle nuances of concert music, or of blaring jazz, or the natural modulation of the speaking voice—is produced much as good acoustics carry a man's normal speaking voice to every part of an immense cathedral through voicereflection on a sounding board. Sound is scientifically reflected from one tonal chamber to another in both models of the Reflectone, and distortion is said to be eliminated while the amplification of the sound to fill the room is due to the Reflectone's unique interior construction.

Literature describing the Reflectone may be had from the manufacturers, Rice & Hochster, of 134 Washington Place, New York City.

The Radio Manufacturer, is presenting a wealth of live news dispatches each week from every section of North America, and merits the distinction of being the manufacturer's best medium.

December, 1924

The publishers of THE RADIO DEALER, The Radio Trade Journal

Announce

the early publication of

THE PHONOGRAPH RADIO DEALER

A magazine of Radio Sales Information circulating exclusively among the talking machine trade, reaching every known retailer of phonographs in the continental United States.

> Advertising rates on application to the publishers.

> Forms for the first issue, dated January, close at New York, December 5.

> > Address all inquiries to

THE PHONOGRAPH RADIO DEALER,

1133 Broadway,

New York City

Other Radio Dealer Publications

The Radio Dealer

The Radio Manufacturer (Weekly)

The Radio Dealer Jobbers Directory (Annual)
The Radio Dealer YEAR BOOK (Trade Directory)

Broadcast Station Operation (section of The Radio Dealer).

COMPLETE COVERAGE

The guarantee that goes with every advertising contract on The Phonograph Radio Dealer is shown on this page below.

Advertising rates are low now, only one hundred dollars a page now.

Guarantee

The Publishers of The Phonograph Radio Dealer hereby guarantee that a copy of that publication will be sent each month during the year 1925 to every known retailer of talking machines in the continental United States.

THE PHONOGRAPH RADIO DEALER

1133 Broadway, New York City. November 1st, 1924

L. A. Nixon

Managing Editor.

A Statement of Policy

THE Phonograph Radio Dealer will be a radio publication. It will carry nothing but radio information—sales ideas and selling helps. Reaching every known retailer of phonographs in the United States this publication will be the messenger of the radio industry pointing out the way to larger profits by the sale of radio apparatus in the phonograph trade.

THE Phonograph Radio Dealer will not compete with the other publications issued by this organization, each covering a distinct field.

THE Radio Manufacturer, a weekly newspaper for radio manufacturers, jobbers and large retailers, covers the trade news field in a most thorough way.

THE Radio Dealer, the leading trade monthly, covers the news of the industry as it interests the retailer and jobber, describes new items and presents information about developments in the industry and art. The Radio Dealer also features a great many selling and merchandising articles, several departments being maintained in this connection as well.

THE Phonograph Radio Dealer will cover still another field—the retailer who is just beginning to handle radio, or who has larger interests in the phonograph trade than in the radio industry. No news of any character will appear in this magazine, which will be devoted exclusively to merchandising and sales information.

EDITED by Harry M. Konwiser and Laurence A. Nixon, the original editors of The Radio Dealer, the first issue of this publication will appear on December 15th, forms closing December 5th. Editorial matter is now in course of preparation and a number of the leading writers on radio sales topics will be among those contributing to the first number. Advertising rates, etc., on application to the publishers.

THE PHONOGRAPH RADIO DEALER 1133 BROADWAY : :: NEW YORK CITY

Other publications.
The Radio Dealer YEAR BOOK.
The Radio Dealer Jobbers Directory

The PHONOGRAPH RADIO DEALER

Circulation Guarantee

Alabama	92	Montana	37
Arizona	27	Nebraska	364
Arkansas	62	Nevada	9
California	314	New Hampshire	76
Colorado	102	New Jersey	373
Connecticut	172	New Mexico	36
Delaware	21	New York	479
Washington, D. C	49	North Carolina	126
Florida	72	Ohio	033
Georgia	162	Oklahoma	161
Idaho	•	Oregon	130
Illinois		Pennsylvania	887
Indiana		Rhode Island	39
Iowa		South Carolina	68
Kansas		South Dakota	91
Kentucky		Tennessee	149
Louisiana		Utah	74
Maine		Vermont	48
Maryland			163
Massachusetts			-
Michigan			138
Minnesota	0,5		123
Mississippi		Wisconsin	
Missouri	462	Wyoming	12

Total - - 12320

December, 1924 Vol. 2 No. 11

BROADCASTING Bernard Freedman News Editor STATION OPERATION

The Only Medium in This Field

Published Monthly, at 1133 Broadway, New York City, as a section of The Radio Dealer

Round the World Record Made By Radio Test During Show

The radio signal that flashed out from the third National Radio Exposition held in Grand Central Palace, New York City, Nov. 19, girdled the globe and returned in record breaking time. The letter "S" went westward and returned in six seconds. The letter "C" travelled eastward and made the trip in five seconds.

W. H. Taylor, engineer in charge of the race, attributed the longer time taken on the westward trip to a lag in the relays caused by the human element entering the circuit at the relay points. The signal going east on its journey around the world was at San Francisco almost before the operator could relay the west-bound signal from New York to Honolulu. One telegraph key at the radio show controlled the high power trans-atlantic radio station at Tuckerton, N. J., and another key operated the powerful transmitter at Marion, Mass. The signal sent out from the high towers at Tuckerton was the westbound, and its first stop was San Francisco.

The message from the Cape Cod station was destined for the east and its initial stop was Paris. The signals were on different wave lengths. The westward message, consisting of the letter "S," was repeated three times. The letter "C," traveling eastward, also was repeated three times. This was done so that receiving operators at the chain of world stations could differentiate and time the signals.

When the operator at the San Francisco receiving station heard the signal from Tuckerton he pressed the key of the California transpacific transmitter and relayed the signal to Honolulu. Malabar, Java, received the signal from Honolulu and relayed it to London. The key of the big station at Carnar-

von, Wales, was then closed and the letter "C" was flashed across the Atlantic to the receiving station at Riverhead, L. I. The signal was passed in from Riverhead over land wires to the Radio Corporation of America office, at 66 Broad Street, New York City, where it was recorded on tape. This tape moved at a given rate and was calibrated in seconds, so that the time required for the signal to circumnavigate the globe was registered on the tape.

While the letter "S" was going west the letter "C" was traveling at the speed of sunlight, 186,000 miles a second, in the opposite direction. The Paris operator touched the key controlling the giant transmitter at St. Aisse, France, and the impulse was flashed across the Balkan States, Persia and India, the longest overland radio circuit in existence—6,000 miles—to Saigon, in French Indo-China. Then came the longest jump in the ether over water, from Saigon to San Francisco. The California signal entered Riverhead, L. I., on another wave length than the west-bound signal.

Simultaneous with the arrival of the signals at New York City, electric lights flashed on a large map on the mezzanine floor at the Grand Central Palace, enabling visitors at the radio show to trace and time the signals on their flight around the globe.

The total power radiated on the experiment was 2,250,000 watts, 450 times as powerful as a broadcasting station such as WJZ. Eight different wave lengths were employed, ranging from 11,600 meters to 21,400 meters, and involved the use of seventy high-power water-cooled vacuum tubes.

Engineers who have been engaged in arranging for the experiment said that at no other time have circumstances permitted such a feat. It was explained that the gap in the chain of suitably located high-power commercial stations had not been bridged with ether waves until recently.

One engineer called attention to the fact that the wave going west approached midday in the Orient, while the other wave, in the form of the letter "S," approached the zone of darkness caused by midnight on the continent of Europe.

Covered Wagon Boosts Radio

By William Shelburne

Radio and radio broadcasting is coming in for considerable attention through the Covered Wagon, which has been sent on a trans-continental tour by Radio Broadcast. The long itinerary for this travelling receiving and transmitting station piloted by Captain Jack Irwin includes practically every one of the large cities on a direct line between New York and San Francisco, and a tremendous number of smaller towns en route where radio may not be so popular or well known.

In connection with the cruise of the Covered Wagon, Editor Arthur H. Lynch, the dynamic literary genius of Radio Broadcast, has created a superheterodyne of unusual merit which is one of the series of many Knock-Out receivers perfected in the laboratory of that publication. In a recent conversation with the writer Editor Lynch declared that he was receiving many gratifying reports from the Covered Wagon, which is receiving one of the greatest receptions ever accorded a travelling caravan of this type in many moons.

Captain Jack Irwin, with George A. Eckweiler, of Elmhurst, L. I., is in charge of the car, and is particularly well fitted to spread the gospel of radio. Irwin is one of the best known radio men in the United States. He was the first wireless operator assigned to an airship, and in 1910 saved the crew of six men in Walter Wellman's famous dirigible America after three days of struggle at sea. Prior to that,

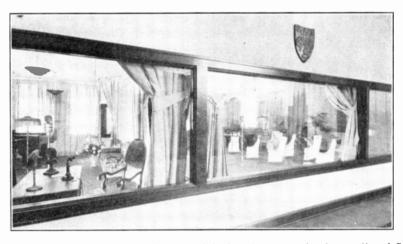
he was the shore operator at the Siasconset wireless station and received the CQD from Operator Jack Binns on the "S.S. Republic," which brought both into worldwide fame. Irwin has been marine superintendent for the Marconi Co., at Seattle, and was recently an operator assigned to the Leviathan, as well as radio editor of the New York *Herald-Sun* syndicate.

The Covered Wagon is going to keep in close touch with radio dealers in every town it enters. Captain Irwin plans to visit every radio shop and aid the dealer in interesting people in radio as much as possible. By proper cooperation between the Wagon and the various dealers, it should be very easy to boost radio most successfully. Apparatus and parts made by about twenty-five or more manufacturers is carried in the sample receivers which are the main cargo of the Wagon.

ranging between 1,500 and 500 kilocycles.

In order to cope with these new conditions radio receivers will require two important qualities: First, maximum selectivity, and, second, ability to tune over the entire band of frequencies without loss in efficiency.

In order to determine the actual effects of the new regulations experimental set-ups were installed in the research laboratory of the Hazeltine Corporation and tests made with a standard neutrodyne receiver. In these tests various forms of coils were tried, but it was found that the single layer coil of the proper inductance value, together with a variable condenser of the correct capacity, gave the most efficient results. The tests also conclusively proved that the use of the fixed coil eliminates all



Through the plate glass windows it is possible for the guests in the studio of Station WLW, owned by the Crosley Radio Corp., Cincinnati, to observe the artists and orchestras putting their efforts on the air. Heavy Monk's cloth covers the walls of both studios and is draped so as to make it possible to adjust it for the variations in voices or instruments and give the best accoustical quality. Both studios are beautifully furnished with antique furniture and tapestries.

Expect Change in Wave-Lengths

Shortly after the opening of the new year several important changes in radio will be inaugurated which will affect every listener. Broadcasting stations throughout the country will be reorganized within six territorial zones and new wave lengths allotted to them by the Department of Commerce in accordance with the recommendation of the Third National Radio Conference. In addition to this, many of the first class stations will begin operation with greatly increased power.

The wave band assigned to broadcasting has been widened to include the frequencies between 200 and 233 meters, so that the entire band is now 200 to 545 meters. This is equivalent to a band of frequencies the losses associated with taps and switches, besides simplifying tuning.

In the laboratory tests conditions equivalent to those which will prevail under the increased power allowed broadcasters were also duplicated. They showed that unless maximum selectivity exists in a receiver interference between stations will be experienced. The threetuned circuits which are incorporated in the neutrodyne system were found to offer maximum impedence to all frequencies other than the one to which they were attuned. Under normal conditions they filtered out everything within twenty kilocycles. This is the separation between stations which will be allowed when the new assignment of wave lengths has been completed. Greater distance will be covered by the more powerful broadcasting stations.

Editorial

Radio Announcing

Radio announcing may now be classed as a profession, for the successful radio announcer must not only have proper ambition to become an announcer but must possess qualifications of an especial character. During the recent radio exposition at New York a contest was arranged for announcers. "Persons interested in this work must first possess a voice suitable for broadcasting.

Obviously vocal training and musical education is no bar to radio broadcasting success. Many bills have been saved by the ability of the announcer to act as a stop-gap because, for one reason or another, an expected "act' has not made its appearance. This possibly limits the field of radio broadcasting announcement, but if it does it brings in the field men and women of the stage, of the talking platform and the concert hall.

Radio impresarios have many things to learn. They are beginning to realize that the radio listener is in no manner interested in their personal viewpoint; these listeners want the facts. One popular announcer loses a lot of radio friends, when he describes fights and baseball or football games and says: "This is the greatest bout or play I have seen."

Who cares, Mr. Announcer? To broadcast one must become impersonal, to tell what is before him in a pleasant manner. Give the sidelights always, but never become personal. Do not advertise personality—let your work do that.

First the voice, then the ease of delivery and with it is required adaptability, for the programs. The announcer must possess the ability to "live" his work.

Radio Broadcasting a Public Necessity

Covering in detail the many phases of the operations of the Bureau of Navigation, Commission D. B. Carson in his annual report to Secretary of Commerce Herbert Hoover, stresses the phenominal growth of radio and the necessity of adequate legislation to provide for future developments in this fiield. Although cooperation has enabled the Supervisory Radio Office of the Bureau of Navigation to function under existing law without serious hardship to anyone, the Commissioner states that a more defined program is desirable.

"It seems probable," he say, "that broadcasting is permanently established as a public necessity and may be considered as indispensable in the average home as the telephone." "The success achieved in this country has encouraged many other countries to utilize this important means of establishing direct contact with the public."

The question of who will pay for broadcasting in the opinion of Mr. Carson does not appear to require immediate consideration. "The public will probably continue to contribute liberally through cost of equipment purchased. At present there does not appear to be a more equitable way of distributing the cost, while, on the other hand, such stations must have considerable advertising value justifying the expense of operation where owners are not benefited through sales of radio apparatus.

The amateur radio operators are searching for new things in radio and they must be given new fields to explore if their interest is to be held according to the report.

Hawaiian Folk Like Radio

The Hawaii Telephone Co., with

BROADCASTING STATION OPERATION

is a section of

THE RADIO DEALER

the leading publication of the radio trade. Issued every month this, the oldest trade journal in the radio field, is invaluable to the radio business man who wants to keep posted on the latest developments in the industry.

Every Broadcaster should immediately subscribe to THE RADIO DEALER in order to have the latest news as contained in this section, as well as for the news of general trade interest in the other pages of this interesting magazine.

The publishers of THE RADIO DEALER also issue The Radio Manufacturer, a news weekly presenting in brief form the latest news of the radio trade for the busy radio business man.

Sample copies of either publication will be sent to any broadcaster absolutely free on request, or the blanks below may be used for subscribing.

Use the order forms below!

headquarters at Hilo, Hawaii, is doing considerable radio business, advertising "the best radio material available" and further offering to procure any set or part desired.

Advertising is featured by mer-

chandise prizes for the best letter, not to exceed 150 words, on why the writer likes to deal with certain concerns. Naturally the business firms are taking page advertisements in daily papers to further this contest.

SUBSCRIPTION ORDER

THE RADIO MANUFACTURER, 1133 Broadway, New York, N. Y.

Please send THE RADIO MANUFACTURER to the address below for one year for which we

{ enclose three dollars. } will send three dollars on receipt of bill.

(Signed)

Address

(Check Here) Please Print Name and Address Plainly

We are:Jobbers.Manufacturers.Retailers.

SUBSCRIPTION ORDER

THE RADIO DEALER, 1133 Broadway, New York, N. Y.

Please send THE RADIO DEALER to the address below for one year for which we

{ enclose two dollars. } will send two dollars on receipt of bill.

(Signed)	 •••••	• • • • • • • • • • • • • • • • • • • •	
Address .	 ••••••		••

(Check Here) Please Print Name and Address Plainly We are:Jobbers.Manufacturers.Retailers.

Conference Big Help to Industry

Many Important Developments in Broadcasting Will Result From Hoover Meet, Declares Maj. H. H. Frost

By Maj. Herbert H. Frost

(Delegate from the Chicago Radio Commission on Secretary Hoover's Advisory Committee and President of the Radio Manufacturers' Asso-

The radio public is going to be greatly benefited by the recent third national radio conference called by Secretary of Commerce Hoover in Washington. The work accomplished by the conference is certain to result in important developments in broadcasting. In fact, the greatest effects of this conference are likely not to be generally appreciated until next summer.

In my opinion, the most forward step taken at the conference was the decision to increase the power of broadcasting stations from 1,000 to 5.000 watts under certain conditions and only after investigation by the radio supervisor in the district from which originates the application for increased power. This increase in power is going to be of the greatest benefit to the small set owner and to the farmer and the resident of small communities far removed from the broadcasting stations.

Up to the present time, it has been impossible for the average farmer to get his market and weather reports during daylight in the summer. This is the time when he is most anxious to get this information, but the power of the broadcasting stations was so limited that they could not reach out far enough to be of the greatest benefit.

The farmer was, therefore, up against the proposition of buying a very high priced receiving set or going without the news which he needed most. The direct result of this was that a small percentage of the farmers installed radio sets. Thus the farmer and his family were all deprived of the amusement and educational advantages of radio.

Also, in the summer it was impossible for the 1,000 watt stations to cut through the atmospheric disturbances and to overcome the absorption of the summer atmosphere. This made it practically impossible for the listener remote from a broadcasting station to get good results at any time during the summer.

The increase in power will overcome these handicaps. With a few

5,000 watt stations properly distributed, the farmer will get his market and weather reports clearly and effectively all hours of the day, both summer and winter. The listener far from the stations will get his entertainment and news without having reception ruined by atmospheric disturbances, unless they are

The increased power is not likely to cause any hardship on other lis-Under the plan approved at the Hoover conference the license for higher power will carry with them an agreement that higher power stations shall not be built in thick-

ly populated areas.

They must be located outside of cities. Then as a further protection for the listener, the person or firm securing such a license must agree to cut the power to 1,000 watts if at any time in the judgment of the radio supervisor the station is causing undue interference with the listeners, or in other words blanketing the small stations which the listeners might prefer to hear.

Agricultural Broadcasting Slated for Discussion

During the Third National Radio Conference, called by the Secretary of Commerce, a number of those interested in the broadcasting of agricultural material requested the Secretary of Agriculture to call a conference to consider, primarily, the scope, organization, conduct and support of agricultural radio broadcasting. Approval was granted for the holding of such a conference in Chicago, Ill., Thursday, Dec. 14, under the auspices of the United States Department of Agricul-

A general invitation has been issued to agricultural colleges, State departments of agriculture, State bureaus of markets, farm organizations, farm papers and broadcasting stations which emphasize the broadcasting of agricultural material, to send representatives to this conference.

The farm population of the United States is greatly interested in radio broadcasting and in the service that it is rendering to agriculture.

Electrical Engineer Outlines Broadcasting Conditions Existing in British Isles

In a recent statement, C. F. Elwell noted English electrical engineer made the following observations of broadcasting conditions as they now exist in the British Isles:

"In the entire British Isles," one concern, the British Broadcasting Company, controls the air, under the supervision of the British Post Office Department. A little more than two years ago, the Government stepped in and turned the whole matter over to the Post Office Department.

"The six leading electrical companies guaranteed \$50,000 each with which to build eight broadcasting stations, which would cover the whole of England. These stations operate on between 350 and 450 metre wave lengths, and once they were completed, all other broadcasting was pro-

"This company, the B. B. C., is not allowed to make more than 7 per cent on its investment. Every person having a radio, pays a license of \$2.50 per annum, these licenses being issued at

any post office. Three-fourths of this money goes to the broadcasting company and the remainder to the Government.

"Already there are more than 1,000,-000 subscribers, which means that the B. B. C. has almost \$2,000,000 a year to spend on their programs. Naturally they get the best of talent. A rigid censorship is enforced, and all advertising matter is taboo.

"During the recent elections, as important in England as were the elections here, each leader was allowed to make one statement over the radio. For these, and all other important announcements, the different stations are linked together.'

New York Stations Lead

New York now leads with twelve broadcasting stations. Philadelphia is second with eleven broadcasters; Los Angeles has ten, Chicago nine, Seattle, New Orleans and St. Louis each have eight stations in actual operation.

The All-American Line

Among new ideas in radio, as distinguished from new parts or hook-ups, probably the most striking novelty on view at the Chicago show was the "Semi-Finished" Reflex Receivers offered by the Rauland Mfg. Co. of Chicago, makers of All-American Transformers.

It is well understood that a radio set that is sold complete must not only be wired at the factory in ornamental style but must be provided with a fancy cabinet to protect the wiring from damage in transit and to give a finished appearance to the set. Both of these features add very materially to the list price which has to be set on the product.

The All-American Co. is now putting out two reflex sets, a one-tube (All-Amax Junior) and a three-tube (All-Amax Senior), which are completely mounted at the factory, and come in heavy pasteboard cartons, with the panel and baseboard, each complete, laid out side by side. The cartons are large size and printed in showy colors so that they can be used for display purposes. Each carton has a hinged cover on the inside of which are photographs showing the successive stages in the wiring of the sets.

In addition to the semi-finished sets the All-American concern exhibited a new laboratory grade audio trans-former which is featured by the endorsement of noted music critics, under Also the the name Rauland-Lyric. Long-Wave Transformer brought out last season is now supplemented by a Radio Frequency Coupler and a Tuned-Type transformer suitable for filter use in Intermediate Frequency sets. Two Short-Wave Transformers were also shown for the first time, known as the Self-Tuned Transformers Type R-199 and R-201-A, each of which is designed to be used with one type of tube only. They are said to show, in consequence of this method of design, a unique broad tuning, being rated at 225 to 550 meters.

The Rauland Mfg. Co. reports business of unprecedented proportions during the show week, having booked orders which will keep the factories busy for many months to come. All-American has recently found it necessary to open a second factory in addition to the larger quarters into which they moved last Spring. E. N. Rauland, president of the company, feels confident that by means of these energetic measures, the volume of orders now on the books will be gotten out on schedule time.

The Dollar Puller Department on page 80 may contain ideas which will prove profitable to you.

GRID LEAKS

Accurate and Durable

We are equipped to manufacture, at the

LOWEST PRICES dependable grid leaks

for set makers and jobbers.

We will imprint your name free and furnish a testing instrument with every large order.

Box 91 The Radio Dealer 1133 Broadway New York City

Q. T. THE LITTLE GIANT

An Intrinsically Balanced Five Tube Set

LIST PRICE \$55.00



UNUSUAL PROPOSITION FOR JOBBER AND DEALER

A new development in coils—the Q. T. split coil—makes this set possible. These coils have no external field which eliminates inter-tube coupling. AMAZ-ING TONE and VOLUME. Genuine bakelite buffed panel, mahogany polished cabinet, die cast low loss condenser. Calibrated dials.

Send for a sample. This set will prove your best Christmas seller.

JOBBERS and DISTRIBUTORS write or wire for exclusive proposition.

The Q. T. RADIO PRODUCTS CO. Dept. D. 2 - East Orange, N. J.

Sell "Increased Signals"

Every Radio fan knows the necessity of accurate, constant, unchanging capacity for increased signals, the greatest possible selectivity, clearness and loudness.

Accurate Capacity Instantly |



with The Ben Franklin Ouick Reading Capacity Testing Instrument

This Instrument inspires confidence -brings customers to your store-reads directly in microfarads from .000005 to ..021—instantly proves the capacity of any condenser (fixed or variable)-enables you to measure and match any condenser value—absolutely necessary if you are assembling or repairing complete radio sets.

MICADENSERS

Made entirely with brass terminal flexible blades and the best grade of Mica Dielectric. Every Micadenser individually tested on Ben Franklin Quick Reading Capacity Testing Instrument before shipment. Micadensers are practically indestructable and permanent in capacity.



CAPACITIES

.0001 to .0005	35c.	.0006 to .0025	40c.
.003 50c.	.004 50c.	.005 60c.	
.006 75c.	.008 \$1.00	.01 \$1.25	
.015 \$1.75	.02 \$2.00		
.00025 with I	Brackets for	Grid Leak	l5c
.00025 with S	elf-contained	Grid Leak	iOc.
.00025 in Mat	tched Pairs,	warranted exactly	
same ca	apacity) per	pair (Э5c.

pairing complete radio sets.

**Dealers: If unable to obtain MICADEN-SERS from your Jobber, we will ship direct on receipt of your order. Dealer discounts are 40% off from above list prices.

THE BEN FRANKLIN RADIO MANUFACTURING COMPANY Superior at East 27th Street Cleveland, Ohio.

It Pays Because It's Popular!

Premier "HEGEHOG" is an audio frequency transformer that sells itself. It is so light, so compact, so amazingly small that it makes an instant appeal to all who see it. And everyone who ever heard

the tone reproduction of a set equipped with the "HEGEHOG" will accept nothing else.

The thousands of "HEGEHOGS" now working on sets are building up a big profitable business for you. Added to this are the thousands of messages being broadcasted through magazines and newspapers telling the facts about "HEGEHOG."

Saves Space—Adds Efficiency

"HEGEHOG" is making transformer history. Never before has a transformer so small accomplished such remarkable results. It occupies half the space of other transformers. For volume and tone quality it is unsurpassed, 100% self shielded against foreign noises. Mounts anywhere. Ideal for portable sets. If you want the profits and the good will that "HEGEHOG" will bring, place your order with your jobber now.

Free to Dealers: Diagrams of the most popular "hookuja" for dealer's imprint. Write for a supply today. Also ask for latest Premier Bulletin No. 94 showing complete line of Premier Quality

Premier Electric Company 3815 Ravenswood Ave.

REMIER Quality
Radio Parts

"Ricophones"

"Ricophones," a well constructed headset manufactured by the Radio Industries Corp., 131 Duane street. are now being merchandised to a number of prominent manufacturers under their own trademark. The head set is well constructed and has



been enjoying wide sales in the trade. A catalog showing the complete line manufactured by the Radio Industries Corp., is now being distribated by the concern

Miller Crystals

Conspicuous among new ideas being introduced into radio is the Miller Battery Crystal, an invention of A. H. Miller, originator of B-Metal and president of the A. H. Miller Radio Co., of Detroit. Much is claimed for this new crystal which acts in the capacity of a battery when charged with what Mr. Miller has named Pep Powder.

Crystals rectify radio signals in proportion to their different resistance in opposite directions, the greater the difference, the greater their rectifying properties. These properties have been amplified in the Battery Crystal by charging or electrifying the crystal and keeping it electrified to a certain potential.

In local work with a one-tube reflex set, about four times the volume received by the use of ordinary crystals is obtained from the Battery Crystal. In fact, there is enough volume to operate a loud speaker with ease. On long distance work, stations one thousand miles away are received on onetube reflex sets using Miller Battery Crystals, it is claimed.

The voltage of the crystal is sufficient to magnetize the transformer; this means that no energy from weak signals is lost in exciting the transformer windings. With each Battery Crystal, there is a generous supply of Pep Powder included.

Careful perusal of the advertisements in The Radio Dealer is the most certain way to acquaint enterprising retailers with merchandise best suited for their individual establishments.

Ratio 1-3, 1-4, 1-5

\$3.50

Ratio 1-10 \$4.50

Jos. W. Jones Opens New **Factory**

The Jos. W. Jones Radio Mfg. Co., lnc., maker of radio parts and sets, has established in New York City a new and thoroughly modern plant of greatly enlarged capacity to handle its growing business. This organization, headed by Jos. W. Jones—for 28 years a successful engineer and builder of precision instruments—has developed a tremendous business upon quality standards. Every Jos. W. Jones part is a scientific precision instrument built to exacting technical specifications both in design and construction. The result



JOSEPH W. JONES

has been a marked improvement in general tone quality, volume, selectivity and distance where Jos. W. Jones parts are used.

The new factory is equipped with the most modern machine tools and every facility provided for accurate, careful workmanship. Throughout the plant, from the receiving department for raw materials to the final testing, inspection and shipment, all work is carried through with a systematic economy of time and effort. This careful attention to details has brought about a low cost production and enabled the company to place Jos. W. Jones parts on the market at a price well within the reach of every radio fan.

All work is under the immediate personal supervision of Jos. W. Jones, one of America's leading inventorswith over 300 patents to his credit, Mr. Jones is the inventor of the new method now used for making disc phonograph records; the Jones Speedometer; the Jones Taximeter; the Jones Aeroplane Tachometer now used by the United States Army and Navv; the Jones Motrola and many other instruments of precision. This natural inventive genius, applied for the past three years to improving ra-



Radio Cabinets

A Message To the Set Manufacturer

Our manufacturing facilities particularly adapt us to meet the cabinet requirements of set manufacturers. We are prepared to quote prices on any type of cabinets.

To the Jobber
Our factory production enables us
to quote prices figured to interest
the jobber.

To the Dealer

Best grade Mahogany or Walnut Cabinets also Birch, Gum or Poplar. Highest grade workmanship and beautiful finish guaranteed.

Trenton Wood Specialty Co.

New Jersey

Stokes Ave. & P. R. R.

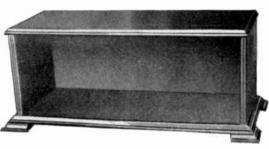
Trenton.

Grand Console Cabinets

With Wood Horn Loud Speaker (or without)

Doors Front and Back Solid Mahogany or Walnut Size: 42" High, 34" Wide, 16" Deep.

Write for Catalogue and Price List.



Let the Radio In-Keep All Others Out!



BENJAMIN E-RA-TONE SOCKET CLEARER RADIO TONE

Benjamin advertising in Radio News, Popular Radio, • Radio Broadcast and the Citizens Radio Call Book will broadcast the message of Cle-Ra-Tone Sockets to millions of Radio users this

Shock absorbing tube holding element "floats" on perfectly balanced springs. Absorb and dissipate jars and mechanical vibrations which interfere with clear reproduction.

Specified in the best sets made in America and included in the famous Cockaday hook up.

In two sizes, for standard and UV199, etc., tubes.

There's profit in so popular a radio part as Benjamin Cle-Ra-Tone Socket.

Get the special introductory offer by sending today. It includes a handsome display stand.

Benjamin Electric Mfg. Co.

120 S. Sangamon St., Chicago, Ill.

247 W. 17th St., New York

448 Bryant St., San Francisco

"Good Parts Make a Good Set"



The Filter Tuner

HE BEL-TONE Low-Loss Filter Tuner has proved an instant hit. Dealers everywhere are selling it. Extensive national advertising is now being done. You, too, can make money on this item!

The BEL-TONE Filter Tuner is the latest addition to the BEL-TONE line of Good Parts. It is built exactly as McGinnis and Maher of the

N. Y. Evening Journal said it should be. It bears the it should be. It bears the signatures of these two men.

The BEL-TONE Filter Tuner is made with genuine bakelite tubes and green silk covered wire. Pigtail connection leads are provided. Each tuner is packed in a handsome hinged cover box together with complete instructions. Stock up now!

Manufactured by

BEL-TONE RADIO CO.

161-167 Jamaica Ave.

Brooklyn, N. Y.

Other BEL-TONE Good Parts Are—
Rel-Tone Kit Type AC-30
Bel-Tone Variocoupler
Bel-Tone Mounted Binding Posts

A Complete Line

Metallic Grid Leaks

Variable Leak on Condenser Base the detector tube combination Leak, 75c; Base, 35c



Single Base for general use



Tested

Fixed Metallic Leak to be used wherever high resistance is needed.

Many new opportunities are opening for grid leak sales—superhets, transformer leaks, resistance coupling, and Marshall-Diede amplification. Guarantee satisfaction with DURHAM production tested parts.



Double Base — for Resis. Amp. Prices: — In individual packages. Metallic Fixed Leaks, over 1/4 meg., 50c; under \$\,\text{Variable Leaks}, 1/10, 5 and 10 meg. sizes. \, \text{75} Single Bases, 30c; with condenser clips. . . \, \text{35} Double Bases. \}

Write for further details

DURHAM&CO..Inc. 1930 Market St., Philadelphia,

Canadian Distributors
De Forest Radio Corp. Ltd., Toronto

dio reception, has developed a notable line of radio sets and parts. Many new features are incorporated and a

new standard of quality assured.

Jos. W. Jones parts include Anticapacity Jacks and Switches, Low Loss Inductance Switches, Potentiometers, Vario-Couplers, Grid Leaks, Rheostats, Sockets and Plugs and a new No-Loss Variable Vernier Condenser built with the precision of a watch. These parts remove one great element of uncertainty in building a radio set. All Jos. W. Jones parts are mechanically and electrically and are designed to do away with the capacity effects and losses that



S. H. MAPES

impair the efficiency of the set-and to eliminate all soldering.

Jos. W. Jones four and five-tube Radio Sets are extremely simple and incorporate the results of three years research and experiment in perfecting a circuit to meet every requirement of the radio listener-unusual selectivity and distance, clear distortionless signals, pure tone values and ample vol-

The Jos. W. Jones Radio Mfg. Co., Inc., main offices are located in New York with branches in Chicago, Boston and Philadelphia. Col. S. H. Mapes is Sales Manager, with headquarters at the New York office, 40 West 25th Street, New York City. Col. Mapes enjoys a wide acquaintance in the radio field, having formerly been Asst. Vice Pres. and Eastern Sales Manager of the Federal Telephone & Telegraph Co.

Named Western Distributors

The Electrical Mfg. Agency, 25 North Dearborn Street, Chicago, has been appointed Western distributors for the Imperial Electrical Mfg. Co., Newark, N. J., and the Marle Engineering Co., Orange, N. J.

The Imperial company manufactures low loss condensers, while Marle Co. produces an audio transformer.

Colytt Grid Leak

The Colytt Laboratories, 565 West Washington Boulevard, Chicago, have



announced a new adjustable grid leak which they are now placing on the market. The device is designed to meet the need of an easily adjusted grid leak for the grid circuit which is of high grade construction and reasonably priced.

The Colytt leak is of the carbon type and provides a bypass or path of carbon on a bakelite insulating shell thereby allowing the exces-

sive negative charge to leak off the grid. The leak is of the vernier type over its entire range and is non-michrophonic, that is silent in operation or while adjusting.

On account of its design it is compact in form and positive in operation.

Unity Soldering Iron

Special stress is laid on the fact that the Unity Electric Soldering Iron, made by the Unity Mfg. Co., 224 North Halstead Street, Chicago, cannot burn out due to the Nichrome heating



elements which are used in its construction. Pure mica insulation is used under pressure.

Porcelain lining prevents the heat from passing through the handle. The heating element is located in the top of the device, and is air tight. The iron is light in weight, well balanced, and specially designed for difficult and intricate wiring.

Dayton XL-5 Popular

The A-C Dayton XL-5, a popular priced receiver, manufactured by The A-C Electrical Mfg. Co., Dayton, O., has been meeting with remarkable favor among radio, electrical and music dealers in the United States and Canada, declared a recent statement issued by the concern.

The XL-5 is a five-tube set using tuned radio-frequency, detector and audio-frequency amplification. It belongs to the three-dial central type with the three radio-frequency transformers tuned with variable condensers. The transformers are of special design and are an outstanding feature.

EXCELLO RADIO CABINET

Style R-7

This cabinet is the latest development in a wall style console cabinet. It is divided into two compartments. The upper houses the receiving set and amplifying chamber. The lower provides ample storage space for A and B batteries, battery charger, etc. The amplifying chamber is the very latest development in sound distribution. The horn is attached to the top of the cabinet permitting easy access to the receiver parts when the top is raised. The horn is built narrow with a wide flair that distributes the sound waves evenly throughout the room at the level of the ear. The upper panel when open provides a convenient shelf for use of the operator. Will accommodate any panel not exceeding 8 x 32 inches.

Patents Pending



WRITE FOR COMPLETE DESCRIPTIVE BOOKLET ILLUSTRATING OUR FULL LINE OF RADIO CONSOLES, CABINETS, AND STANDS.



Excello Products Corporation

4826 West 16th Street

Cicero, Illinois

RECEPTRAD

"SUPER HET" KITS

"MULTI-FLEX"

Through general use and consistent advertising Receptrad Kits have become favorites among fans throughout the country.

The Receptrad Super-Het Kit contains all the essential parts for a "Super-Het" set, with complete instructions for making and simple, easy to follow blue prints. Super-Het Kit with all essential parts sells for \$53.50. The smaller Kit containing most essential parts.



MULTIFLEX

Four Tube Circuit
LOOP OPERATING

The Greiff Double Selector can be assembled by any one in a few hours. For simplicity and ease of tuning, as well as power and quality of reception, it is far superior to a Five Tube Neutrodyne.

\$29.50 Containing principal parts. \$50 Including all parts.

Write Today— For complete interesting jobber's proposition.

RADIO RECEPTOR CO. 59 Bank St., New York

EMCOTRAN

AMPLIFICATION WITH **OUALITY**

TRUE REPRODUCTION WITHOUT DISTORTION



Shielded Type Enameled and Nickel Finish THE TRANSFORMER WITH A PERSONALITY

THREE DISTINCT TYPES

SATISFY YOUR CUSTOMERS

EAGLE MFG. CO.

72 York St., Jersey City JOBBERS AND DISTRIBUTORS Write for Territory and Trade Proposition

EMCOTRAN



The Star Fuse Variable Resistances

Will give you a smooth and uniform regulation of resistance over the entire range.

Type A 0-100,000 ohms, For use on Journal Filter tuner circuits.

Type B 0-100,000 ohms, For elimination of distortion and as a volume control when placed on secondary of secondary transformers.

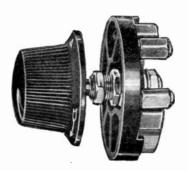
Type C 0-10 megohms, A variable grid leak.

Jobbers Wanted in All States

Star Fuse Co., Inc. 168 Centre St., New York, N. Y. RADIO DIVISION

De Jur Rheostat

The Dejur Rheostat, manufactured by the De Jur Products Co., 199 Lafayette Street, New York City, has been coming in for increased business in the trade according to an officer of the concern. The rheostats are noncorrosive, and heat resisting, with inter-



changeable resistance element held securely in place by special metal brack-

The sliding rod supporting the slide arm has long brass bearing insuring absolute contact. These features embodied in the De Jur product have caused it to be an exceptionally fast seller.

Allied Panels

Four reasons are given for the efficiency of the Allied hard rubber panel distributed by the Allied Radio Co., 132 West 34th Street, New York City. They are: Low phase angle difference, high resistivity, low dielectric constant, low moisture absorption. The panels are made in two colors, mahogany and black.

Real hard rubber is used in the construction of the panels. Complete instructions are given with the various sizes making it an easy matter for the builder to understand the correct way to cut, layout, drill and engrave the panels.

Jobbers' Directory Soon to Be Issued

The first forms for the Radio Dealer's Jobbers' Directory have gone to press, according to a report issued by the publishers from their office at 1133 Broadway, New York City. The forthcoming edition promises to be the most comprehensive and will completely cover this important division of the radio industry.

The editorial staff is at present working on the compilation of the addenda which will include all the listing received too late for inclusion in the earlier forms of the Jobbers' Directory.

According to present plans the book will be mailed to Radio Dealer advertisers, soon after it is issued.

Eastern Electric Company

Manufacturers of Superb Headphones and Loud Speakers

Offers New

Type "C" Loud Speaker Unit

PATENT APPLIED FOR

Clear

Loud

Sweet

List Price \$4.95

Very Attractive Discounts to Manufacturers and Jobbers

Eastern Electric Co. 50 W. Grand St. Elizabeth, N. J.

TRANSCONTINENTAL LOW LOSS TUNER



They're in demand everywhere. Positively no loss of radio energy. Adjustable untuned primary. Covers all wave lengths.

List Price, \$7.00 Transcontinental Sales Co.

241 Market St. NEWARK, N. J.

SCREWS - NUTS - WASHERS

Clean Cut, Brass, Nickel-Plated. Made by the Millions and Sold as you Need Them. Packed 500 to the box. Standard Sizes for Im-mediate Delivery. Special Sizes Quoted on Request

GOTHAM RADIO CORP.
PARK PLACE NEW YORK CITY 50 PARK PLACE

ASK OUR SERVICE BUREAU

R 30000

Apco Chargers

An interesting article touching on the Apco Charger, has been released by Thomas F. Wilson, president of the Apco Mfg. Co., Providence, R. I. An excerpt from the article follows:

"Economy and efficiency go hand in hand. A good storage battery will deliver a certain amount of current for a certain length of time. It is an integral part of a receiving set and should be given the same consideration and care as are other accessories owner of a radio receiver who desires to get the most out of his set with the least cost and bother will do well to watch a few details. If his is a multitube set he should use a storage battery for with the steady and quiet flow of energy from such a source he will obtain maximum battery efficiency. But if he drains the storage battery to the utmost before having it recharged, that particular part of his radio equipment is going to cause him endless trouble and annoyance.

"No one likes to cart a heavy storage battery to a charging station. The chances are, therefore, 99 out of a 100 that the user of a storage battery will nearly fully discharge his battery before taking it out to be recharged. However, if it is possible to keep the battery continuously charged, good results will always be obtained. The question is, how can this be done conveniently and the battery be on hand when needed? Charging at home is the answer.

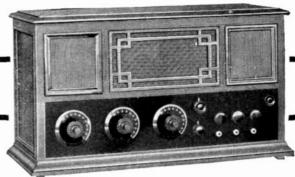
"Nowadays what was formerly considered complicated operation, one to be performed under the supervision of an expert, can now be easily done at home at a very low cost, if a good charger is used. The famous Apco Charger, manufactured by the Apco Mfg. Co., of Providence, R. I., is just such a charger and one that may be used in the home, by those unfamiliar with electrical appliances, without the least danger of damage being done the battery.

"It is as safe to use as a good electric iron. It is made in two models, the 77A, which is an "A" battery charger of 7.5 amperes and the 88B used to recharge "B" batteries of the wet cell type, and may be used to charge a 22.5 as well as a 45-volt battery. The Apco charger is of the vibrating type, considered by experts to be over 50 per cent more efficient than bulb types.

"Attached to a battery, this charger will recharge the battery over night. It is unusually quiet in operation and is self-polarizing, making wrong connections non-harmful, as no matter how the connections with the battery are made, the current will always flow in the right direction."

CONSOMELLO GRAND

VOLUME --- QUALITY --- STABILITY



A Marvelous Achievement

Here are a few of the radio parts which we make:

Sockets
Jacks
Plugs
Rheostats
Condensers
Switches

Stock the com-

This ideal set brings in the distant stations; has volume but not at the sacrifice of quality; is sensitive and selective; is stable and quiet; not affected by body capacity; it does not howl and squeal at the slightest provocation.

squeal at the slightest provocation.

The Consomello Grand is a 6 tube set having two stages of radio frequency amplification, one detector and three stages of audio amplification. The third stage of audio amplification gives extreme volume and through our special control does not in any way distort, its tone being pure and pleasing.

The cabinet is dark walnut, natural finish, a beautiful piece of

The cabinet is dark walnut, natural finish, a beautiful piece of furniture, well balanced and distinctive, having compartments for both "A" and "B" Batteries as well as built in loud speaker.

If your jobber cannot supply you write us direct.

The MAZDA RADIO MFG. CO.
3407 Perkins Avenue Cleveland, Ohio

Save on Tubes!



Dealers and Jobbers Write for Discounts

USE THE AMPLITRON

The Best Radio Tube on the Market

\$4.00

The AMPLITRON is the ultimate achievement in Tube Perfection

"Bonded to Give Service"

MAXIMUM QUALITY AND SERVICE AT A MINIMUM PRICE

Send in your old and burned out Tubes—We will send you a new AMPLITRON—Any Model—at—

ORDER TO-DAY!

WE GUARANTEE SATISFACTION

PENNANT RADIO LABORATORIES 25 Central Ave. Newark, N. J.

Dept. R. D.



DE LUXE

NA VY TYPE

Low Loss Variable Condensers

FREE FROM BACK LASH!

This high grade instrument is so carefully designed and constructed that its electrical characteristics ARE PERFECT.

DE LUXE low loss condensers are made with specially treated brass rotor and stator plates of high conductivity which are set into slotted brass posts and soldered, thus securing the desired electrical effects of one solid mass of metal. A solid brass bar, grounded rotor is used, assuring positive contact at all times. DE LUXE low loss condensers are being introduced by a strong magazine and newspaper advertising campaign.

DE LUXE literature has a real selling "punch." Ask your jobber or write us for full information.

		Capacity	Plain	V crn.e
	plate	 000259	\$4.00	\$5.00
17	plate		4.25	5.25
23	plate	000525	4.50	5.50
43	plate	 000991	5.50	6.50

Guaranteed by the manufacturers

DE LUXE ELECTRIC COMPANY

1152 Bedford Avenue

Brooklyn, N. Y.

For territory and attractive prices, write Dept. D. L. C.

IMMEDIATE DELIVERY

HORNS & LOUD SPEAKERS

Standard Sizes and Standard Shapes

We are also equipped to make Fibre Horns in quantity according to your own moulds or specifications

Write or wire for full details

THE BEST RADIO HORN MFG. CO.

398 First Avenue

New York, N. Y.

Federal's Latest

Designed as a five tube receiver for use with small indoor wire or the larger outdoor antenna systems, the new Federal Type 141, manufactured by Federal Tel. & Tel. Co., Buffalo, offers a range of reception covering practically all the principal broadcasting stations together with a number of smaller ones, through the use of two stages of radio frequency amplification, detector and two stages of audio frequency amplification.

Its exceptionally high degree of super selectivity is obtained through a tuning system of the two circuit type with limited variable coupling. Tuning is accomplished through the use of two specially designed Federal variable air condensers each equipped with unique vernier controls incorporated within the dials. In order that the unit may work most efficiently with all antennas an "Antenna Compensator" has been provided which once adjusted need not be changed unless a change is made in the antenna.

The radio frequency amplifier, which consists of two specially designed Federal R. F. Transformers, is provided with a control whereby the degree of amplification may be varied between wide limits. The Audio Frequency Amplifier consisting of standard Federal parts permits the use of a power tube such as the Western Electric 216-A Type in the second stage offering extreme volume together with a most faithful reproduction. The entire amplifier, including transformers and the five tube sockets, is mounted on a bakelite shelf, the whole being inclosed in a continuous metal shield which is suspended from special damped springs thereby preventing microphonic or mechanical tube noises.

For convenience in adjusting circuit controls and the installation or removal of vacuum tubes, the receiver is fastened to a rugged framework which draws out from the cabinet, sliding with utmost ease over a special roller bearing equipment of the Z bar type.

Provision is made for the use of headsets or loud speaker, a telephone jack permitting the use of headphones equipped with plug while terminals at the rear of the cabinet are provided for the permanent connection of a loud speaker. By a unique method, switching from headset to loud speaker is accomplished when the headset plug is disconnected.

The entire receiving unit is enclosed in a mahogany case, finished in a very dark brown, two doors in the front, opening outward giving access to the panel. The advanced type of merchanical design and housing completes a device which is proving a real seller.

New Eveready Battery

The newest Eveready "B" Battery, No. 770, to be placed on the market by the National Carbon Co., Inc., is designed particularly to reduce the operating cost on heavy current receiving sets. It is built for heavy duty, to give longer service under heavy drain, and it is especially adapted for use with multi-tube sets operating at ninety volts or more. It is a forty-five volt battery, containing extra large cells, and is fitted with three Fahnestock clips, providing taps at 22½ and 45 volts. It is 8 3/16 inches long, 4 7/16 inches wide and 7 3/16 inches high and weighs 13¾ pounds.

The National Carbon Co., recommends this new heavy duty "B" battery "on all receiving sets operating at ninety volts or more, having four tubes without a 'C' battery; on all sets having five or more tubes, with or without a 'C' battery; on all power amplifiers, and on all other sets that pull such heavy currents as 15 milliamperes or more from the 'B' battery." Under the above conditions, the new Eveready heavy duty 5 volt "B" battery will give a much longer service than the usual 45 volt "B" battery.

Preferred Condenser

A variable condenser that is equal to the best in design, material and construction, has been placed on the market by the Preferred Radio Products Corp., 408 East 93rd Street, New York Ctiy. This device, which is called the Preferred "Loloss" variable condenser, incorporates all the best features of condenser design construction and performance, and at a moderate cost. It makes use of brass stator and rotor plates, sweated into brass posts. The end plates are of heavy aluminum, no magnetic metals being used. Insulation is Radion hard rubber, placed outside the electrostatic field. Adjustable cone bearings reduce wear to a minimum and compensate for it when it finally occurs. The rotor is, of course, grounded in accordance with best practice and a pigtail furnishes positive contact between the end plate and the rotor shaft. An adjustable geared vernier attachment that will accommodate dials from three to four inches in diameter is supplied at a slight extra cost.

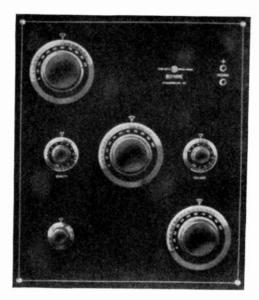
The sales department of the Preferred Radio Products Corp. reports that the condenser has been enthusiastically welcomed by set manufacturers as well as by jobbers and dealers. The corporation also manufactures popular priced plugs and jacks.





And Other Well Known Manufacturers

STANDARD nationally advertised merchandise always on hand for prompt delivery



NEW FADA PANELS For Victor Models—List \$110

The 197A Fits the No. 215 Victor The 196A Fits the Nos. 400-405-410 Victor

Standard radio products, prompt deliveries and courteous dealings constitute the Triangle Pyramid of Service. Phone or wire your requirements to-day.

TRIANGLE RADIO SUPPLY COMPANY, Inc.

120 WEST 23rd ST., NEW YORK, N. Y.

Telephones: CHELSEA 4240-4241-4242

ICTORY SOCKETS ECONOMICAL—UNIQUE—DURABLE Designed to INCREASE EFFICIENCY of All Receiving Sets VICTORY "3 ON 1" SOCKET THE NEW VICTORY UNIT IS A V-I-C-T-O-R-Y in radio performance and beauty of construction. An economical combination of 3 sockets. Bakelite base, sub-base and binding posts ready for use. Adaptable for any 3 tube set: especially for Ambassador and Neutrodyne. Also manufacturers of Single, Double Triple and other Multiple Sockets. Ask for the Victory Grid Leak Mounting. Johbers Write for Prices SET MAKERS! WE ARE SPECIALISTS IN LET US BUILD YOUR SUB-BASE SOCKETS THE BUILDING OF 'ormica Bakelite Panels and tub ing—cut, drilled and engraved. ALL KINDS OF SOCKETS UNITED RADIO MFG. CO., 191 GREENWICH ST., N. Y. C. Phone Cortland 4885

Raven Super Kit

Super-heterodyne enthus asts will find considerable food for thought in the new Raven super-heterodyne kit, manufactured by the Raven Radio Co., Inc., Albany, N. Y. This novel kit is composed of one filter circuit coil, three radio frequency transformers, three sockets for standard base tubes with are wired in a moisture proof wax with plainly marked binding posts, and one oscillator coil.

The air core transformers are tuned to 4,000 meters and are matched at the laboratory, then assembled and wired to the sockets, after which they are inclosed in the bakelite case which is filled with the moisture-proof wax. This method prevents any moisture from reaching the coils and changing their capacity, besides affording the shortest possible grid and plate leads. The unit makes up very compact and with its use it is possible to construct a complete super-heterodyne receiver on a panel measuring 9 x 18 inches.

In the Raven amplifier the transformers are wound on a specially designed winding machine so that all similar coils of primary and secondary have exactly the same number of turns and designed to take care of all the side band frequencies that are common to radio broadcast reception.

There is little doubt that this unit will do much toward popularizing the super-heterodyne method of reception. The wiring of the unit which in reality is the heart of the set, has been done, all that is necessary is the connections to the oscillator and detector on the head end and the second detector and audio amplifier on the tail end.

RCA Dealer Helps

"The RCA Campaign for Radiola Dealers" is the title of a new book issued by the Radio Corporation of America, New York City, which calls attention to the advertising and sales promotion work being done by the concern in the interests of merchandising its products through dealers.

The first two pages of the book, which measures 14 inches by 16½ inches tells in an interesting manner the steps being taken by RCA to insure the success of retailers handling the well-known Radiola line. The balance of the book is devoted to pictorial illustrations of the advertising and sales promotion being carried on for the furtherance of the RCA products. A complete list of distributors appears in the last pages of the book.

The new volume is well arranged and printed. It reflects great credit on the advertising and publicity department of the Radio Corporation.

The Back Page Humorist

The current issue of Fada-Sales, published by F. A. D. Andrea, Inc., of New York City, carries a column headed "Jack Binns Says" which is as unique as it is amusing. Jack Binns was first registered in the Hall of Radio Fame when his call for help was sent from the S.S. Republic which was struck by the Italian liner Florida off Nantucket Lightship, January 23, 1909. At the present time he is director of service for the Hazeltine Corp., with headquarters in New York.

As the humorist of the back page of Fada-Salcs he occupies an enviable position. The characteristic Binns humor is clearly conveyed in brief lines all of which touch on the subject of radio as it applies to the average family. The genial Jack is well qualified to discuss the subject and without wasting many fonts of type he pens a number of crisp paragraphs in the Fada organ.

The Somerset Line

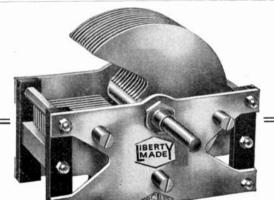
The new Somerset Line of radio receivers being featured by the National Airphone Corp., 16 Hudson street, New York City, embrace four models all of which are very attractive in appearance, and popularly priced. The receivers are substantial and decorative pieces of equipment all cabinets having an exquisite two toned panel effect with hand rubbed finish. Each has compartments to conceal batteries and all necessary wiring.

A brief summary of the four models follows: The Stratford 4-A, is a four tube dual control, tuned radio frequency receiver, operating on storage battery or dry cells. Automatic filament controls insures long life of tubes. The finest low loss condensers and Somerset Calibrated transformers are features of this number. The Shelburn model features a perfected tuned radio frequency circuit with single dial synchronized control.

The Standish model combines a built in loud speaker of the highest type and the four tubed tuned radio frequency circuit with single dial synchronized control. The Somerset-Mars Model 5-A, consists of two stages of tuned radio frequency, detector and two stages of radio frequency.

The Somerset Calibrated Audio Transformer created by the concern's engineer is included in each of the sets. It is also sold separately and has been the means of bringing added prestige to the Somerset Line and the National Airphone Corp., which is giving the four numbers wide publicity.





Low

Loss

CONDENSER

"LIBERTY MADE"—a well made low loss condenser that will sell readily because it is attractively priced.

11	Plate	$.00025\ldots$	\$1.35
15		.0003	1.50
21		.0005	1.75
41	"	.001	2.00



CYCLONE Radio "B" and "C" BATTERIES



Cyclone Batteries are the power behind your plate. Their voltage is constant. Recuperative power high. Appearance pleasing. CYCLONE withstands the test.

Insist on CYCLONES.

All good dealers have them.

Standard Electric Novelty Company

New York, N. Y.

Chicago, Illinois

HUDSON-ROSS

Wholesale radio only.
One of the first and still in the lead.
Write for discounts.

123 W. Madison St. Chicago

--- W. Tidarson St. emcago

ASK OUR SERVICE BUREAU

ELECTRAD

Certified Radio Parts
Ask your Jobber

HUMANTONE LOUD SPEAKER

Immediate deliveries
BRITTANIA SILVER CASTING CO.
Dept. W. 68 93 CROSBY ST., N. Y. C.

HUDSON-ROSS

Sells only nationally advertised radio apparatus. Send for discounts. 123 W. Madison St. Chicago



Cabinets for Every Requirement

The handsome radio table shown above represents the highest perfection of the cabinet-maker's art. It is built of solid walnut or mahogany. Other designs range from inexpensive small models to elaborate consoles.

All American cabinets are designed with a careful regard for radio requirements and built to Grand Rapids standards of woodworking perfection. Write for descriptive folder. Special designs to order.



American Radio Cabinet Co.

Grand Rapids, Michigan

Exclusive Eastern Rep. M. A. Carpell, 110 West 40th St., New York City Exclusive Western Rep.
Coast Radio Supply Co.
648 Howard St.,
San Francisco, Calif.

AMERICAN BRAND
CONDENSERS
with the
~100 to 1~
Worm Drive Vernier
Finest Condenser Made
and the
Greatest Radio Value
Offered the Public
23 PLATE, only 500 in Canada 700
AMERICAN BRAND CORPORATION
NEWARK, N.J.





Low-Loss Condenser Nationally Advertised

The Lincoln 23-plate Low-Loss Condenser is nationally advertised to your customers. Lincoln Condenser advertisements appear this month in such prominent radio publications as Radio Digest, Popular Radio and Wireless Age. And in the January issue of Radio News.

This advertising is run to help make sales for dealers. To tell radio enthusiasts the facts of the efficiency and rugged construction of this fully guaranteed Lincoln Low-Loss Condenser. And every advertisement says, "sold by leading dealers."

Write us for the name of our nearest jobber-for prices and specifica-

LINCOLN RADIO CORPORATION
224 NORTH WELLS ST. CHICAGO



PROFIT in Binding Posts

Popular Radio
Radio Broadcast
Radio Engineering
Wireless Age
Q. S. T.
Radio
Radio in the Home

Advertising nationally in these publications increases turnover and eliminates cheap price competition. That means more profit!

EBY posts can be furnished either plain or engraved in twenty-five different markings.

Properly packaging quality merchandise prevents depreciation and makes it easy to inventory. There's some of the additional profit!



H. H. EBY MFG. CO., Philadelphia, Pa.











December—the sales climax of the year. The dealer who carries salable merchandise reaps the holiday harvest. Window and counter displays and a few attractive cards will move Diamond Batteries off your shelf in double-quick fashion. Order a trial supply. Put them to the holiday rush test.

DIAMOND ELECTRIC SPECIALTIES CORP.

101 South Orange Ave., Newark, N. J. Dealers-Jobbers, Il'rite for Propo-

Andrews Radio Receiving Set

combines tone quality and selectivity with distance and volume. Price \$150 without accessories. Write for literature.

> ANDREWS RADIO CO. 327 S. La Salle St., Chicago

NEW REFLEX DETECTRY IT—PRICE \$1.00 REFLEX DETECTOR RUSONITE CRYSTAL

Price 50c
THE RECOGNIZED STANDARD THE WORLD OVER
Rusonite Catwhisker 14K. Gold Supersensitive, Price 25c.
All Products Guaranteed
Attractive Discounts to the Trade RUSONITE PRODUCTS CORP.,
15 Park Row, New York



WATCH For Our New Sensations



The Barsook Company

53 W. Jackson Blvd.

CHICAGO, ILL.

Your Condenser Makes a Difference



Your customers will appreciate the extra precision of

Elgin Elraco Precision Condensers

The new Elraco Low Loss Condenser is now ready Write for full infor-mation and discounts.

ELGIN RADIO CORPORATION Radio Division, The Elgin Tool Works, Inc. 71 N. State St. Elgin, Ill.



CATALOG Lowest wholesale prices on standard radio parts and complete sets. All well advertised, fast selling items. Prompt service, real dealer cooperation. Write now for our big bargain wholesale catalog No. D-12.

Jobbers and Distributors



Establishing a New Standard

The new and improved

Read 'em'' BINDING POSTS

"The Knobs Can't Come Off"

NEW MARKINGS FULFILL EVERY DEMAND



These Sturdy Posts Improve the Appearance of any Set and Assure Protection on Difficult Hook-ups.

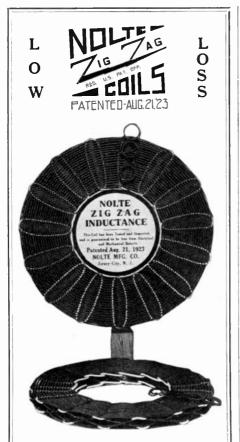
> The Utmost in Quality and Appearance at the Lowest Price

> > Retail Price 15c

The Marshall-Gerken Company

TOLEDO—OHIO





Nolte coils are wound with heavy double covered silk wire in spider web form. Compounds, pins and forms are entirely eliminated. An interlacing of moisture proof linen twine rigidly supports the windings. They offer the highest inductive value and lowest capacity and resistance that can be obtained with a conductor. Nolte coils are deserving of the term "LOW LOSS."

TYPE F23—For "THE JOURNAL FILTER TUNER." The new sensational gold medal set that gives superheterodyne selectivity with one tube. List price per set (2)...\$2.50

TYPE F24-TUNED R.F. TRANSFORM-ER. Self balancing inductances requiring no neutralizing or compensating devices. Pro-vided with mountings to attach direct to condensers. List price per set (3)....\$4.50

Jobbers and set manufacturers write

NOLTE MFG. CO. 61 Gautier Ave., Jersey City, N. J.



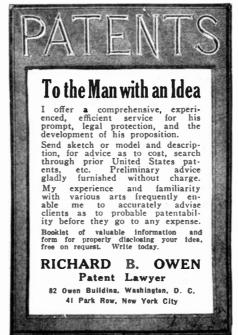
123 W. Madison St. Chicago

"B"-BATTERIES

Give Satisfaction

at all good jobbers or write

ELECTRICAL MFG. AGENCY 25 N. Dearborn St. Chicago



RADIO MAILINGS LISTS

Ask for price list covering Canada and England. Send remittance with order.

TRADE CIRCULAR ADDRESSING CO. 166 W. Adams Street Chicago









PRICE \$2:00

Alladin Tubes are first when quality and prices are considered

JOBBERS AND DEALERS Write us for our attractive sales discounts

CONTINENTAL SALES CO. 77 W. WASHINGTON ST. CHICAGO, ILL.

bers in middle West. Write for discounts. 123 W. Madison St. Chicago

Radio Apparatus.
Send for discounts.

123 W. Madison St. Chicago

MICROMETRIC FOUNDRY & MACHINERY CO.

141 VAN DUZER STREET **TOMPKINSVILLE** N. Y.

Manufacturers of Radio Horn

Every Size

Every Style

Sell **DX**

Three Circuit Tuners



List Price

\$5<u>.00</u>

Genuine Bakelite

Literature and Prices on Send for Complete Line

FERI RADIO MFG. CO. 1167 Bedford Ave., Brooklyn, N. Y.



Original "Uptown" Flexible Spaghetti See us before buying for high quality. Spaghetti, Black, Yellow, Red and Green, Grade "A"

Write for samples, latest prices

SPECIAL INTRODUCTORY OFFER Uptown Manufacturing and Supply Company
724 N. Paulina St. Chicago, Ill. 7724 N. Paulina St.

DEALERS SERVICE

We are distributors for such representative lines as

representative lines as
Freshman Masterpiece
Royal Knight (McCall Pat.)
R. R. Super-Heterodyne Kits
Advance "B" Batteries
Adroit Electric Soldering Irons
Accuratune Dials
Bowman Low Loss Condensers
Benjamin Sockets
Bremer-Tully
Bell Sockets and Dials
Berwick Phones Bell Sockets and Dials
Berwick Phones
Dubilier Mica Condensers
E. Z. Toon Dials
Freshman Sets and Parts
Hoosic Falls Products
Klosner Rheostats
Nazely Loops and Roberts Coils
Millimeter Jacks
Pilot Condensers
Radio Receptor
Royalty Leaks and Resistances Royalty Leaks and Resistances Sterling Instruments Saturn Jacks Triangle Atlantic Low Loss Conden-

And many more standard lines FRIEDLANDER-KOPPLE **RADIO SERVICE**

149 Church Street, New York Telephones Barclay 9337-4919

NORTHEASTERN RADIO CO.

Wholesale Distributors of RADIO APPARATUS, Exclusively

> **302 ADAMS AVENUE** SCRANTON, PA.

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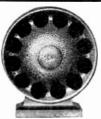
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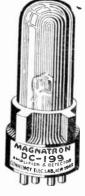
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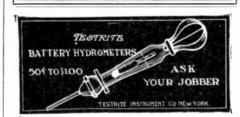


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A set that meets all market conditions and all individual requirements; one that the Dealer may sell to the inexperienced user or the most discriminating expert and be sure that either will attain results satisfactory in every way.

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The latest development in tuned radio frequency with two stages of radio frequency amplification, detector and two stages transformer coupled au-

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Offered without reservation as a set that will give general satisfaction to all broadcast listeners

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AIR-WAY Apparatus is the result of several years' study and development by skilled radio engineers, and is strictly up to the minute in radio design. They are the last word in LOW LOSS construction and tuned radio frequency amplification.

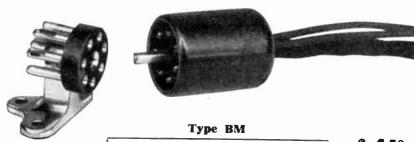
Operation is simplified to the limits of the radio novice, and quality throughout is developed to meet the demands of the most discriminating of radio experts.

AIR-WAY Apparatus is distributed through established Jobbers and Dealers only. Write our Sales Department for Catalog of the complete line.

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This is the

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INSTALL a Jones Multi-Plug and Cable on your set. A plug and cable is to the radio what the socket and cord is to the electric iron—a connector which is efficient, convenient, safe, and indispensable.

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Selectron gives greater volume and finer quality than any so-called loud speaking horn—regardless of price—because:

SELECTRON makes use of the highly developed tone-chamber of your talking machine and absolutely avoids the use of the tone-arm and sound box for radio reproduction—leaving these parts free to perform their intended function, i. e., to reproduce talking machine records.

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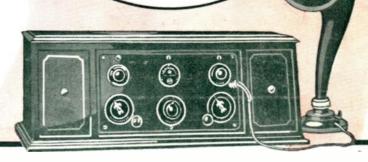
RADIOTRONS: Radiola Loudspeaker

Both are in line for heavy Christmas selling. In the fan magazines—and in newspapers—big advertising for both of these will run straight up to Christmas—and after.





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