

Trade Mark Registration
Applied for

RADIO Electrical Record

APRIL

Monthly

1932



RCA VICTOR DOMINATES

HOME—PUBLIC and INSTITUTIONAL
EDUCATION—ENTERTAINMENT—ENLIGHTENMENT and SERVICE

The ONE and ONLY complete line in the industry!

HERE ARE SOME RCA VICTOR ACHIEVEMENTS

De Luxe Radio	Long Life Battery Set
Super-Heterodyne Automobile Radio	Successful Home Recording
Long and Short Wave Sets	Long Playing Program Transcriptions
First Successful Portable Radio	Coin Operated Electrolas
Two-Speed Combinations	Complete Record Library
Automatic Combinations	Two-Speed Motor Board Assembly
Continuous Playing Combinations	Portable Phonographs
Short Wave Adaptor	Portable Turn-Table
Super-efficient Super-Heterodyne Radio	RCA Victor Synchronous Tone System

COMPLETE PRICE RANGE—\$46.75—\$995.00

RCA Victor instruments are modern—properly engineered!
Successful dealers sell RCA Victor for permanent profit!

LUCKER SALES COMPANY

Distributors

608 FIRST AVENUE NORTH

MINNEAPOLIS, MINNESOTA

"THE RETAIL SALES PROMOTION PAPER"

World Radio History

The Pioneer Air Line of the Northwest



Announcing New Mail and Passenger Schedules
(Now in effect)

TWIN CITIES—CHICAGO

8:15 a. m.	3:00 p. m.	Lv. St. Paul	Ar. 7:40 p. m.	12:30 p. m.
8:30 a. m.	3:15 p. m.	Lv. Minneapolis	Ar. 7:30 p. m.	12:15 p. m.
11:45 a. m.	7:15 p. m.	Ar. Chicago	Lv. 4:00 p. m.	8:30 a. m.

TWIN CITIES—WINNIPEG

8:00 a. m.	Lv. St. Paul	Ar. 6:45 p. m.
8:10 a. m.	Lv. Minneapolis	Ar. 6:30 p. m.
10:35 a. m.	Lv. Fargo	Lv. 4:30 p. m.
11:25 a. m.	Lv. Grand Forks	Lv. 3:35 p. m.
1:00 p. m.	Ar. Winnipeg	Lv. 2:00 p. m.

TWIN CITIES—BISMARCK

8:00 a. m.	Lv. St. Paul	Ar. 6:45 p. m.
8:10 a. m.	Lv. Minneapolis	Ar. 6:30 p. m.
10:35 a. m.	Lv. Fargo	Lv. 4:30 p. m.
11:15 a. m.	Lv. Valley City	Lv. 3:45 p. m.
11:40 a. m.	Lv. Jamestown	Lv. 3:20 p. m.
12:41 p. m.	Ar. Bismarck	Lv. 2:20 p. m.

TWIN CITIES—DULUTH

9:30 a. m.	Lv. St. Paul	Ar. 6:35 p. m.
9:45 a. m.	Lv. Minneapolis	Ar. 6:25 p. m.
11:22 a. m.	Ar. Duluth	Lv. 4:45 p. m.

All Schedules Central Standard Time

**Air Mail and Passenger Service is Now an Established
Part of Modern Business.**

NORTHWEST AIRWAYS, Inc.

Saint Paul
Riverview 4500

Chicago
Franklin 8220

Minneapolis
Dupont 9311

BUY THE ADVERTISED LINES

BIG



*things are in store
.....for all who attend*

RMA SIXTH ANNUAL TRADE SHOW EIGHTH ANNUAL CONVENTION

CHICAGO

• STEVENS HOTEL •

RADIO'S BIG ANNUAL CONCLAVE

EXHIBITING ALL NEW LINES AND THE LATEST RADIO AND TELEVISION PRODUCTS.

ELECTRICAL PRODUCTS ALSO IN TRADE SHOW AND MANUFACTURERS' DEMONSTRATION ROOMS.

EVERYBODY IN RADIO (NEARLY 25,000 RADIO TRADESMEN LAST YEAR) ATTENDS THIS ANNUAL NATIONAL RADIO GATHERING, THE BIG INDUSTRY MEETING EACH YEAR.

Better business early in 1932

The RMA event this year is advanced to start sales early. In June, a few weeks after the RMA exhibits of manufacturers' latest products, there will come the big Republican and Democratic national conventions in Chicago to nominate presidential candidates. In June also another heavyweight championship match between Schmeling and Sharkey is scheduled.

GO TO CHICAGO MAY 23, SEE THE LATEST RADIO AND ALSO ELEC-

REMEMBER THE DATE—MAY 23—AT CHICAGO.

TRICAL PRODUCTS OF RMA MANUFACTURERS, AND GET IN EARLY ON THE 1932 TRADE.

This is the big and only national industry radio show, sponsored by the RMA and under its management, for RMA members, jobbers and dealers.

All exhibitors required to show current merchandise—no vacant booths.

Electrical products also displayed.

Thirty thousand (30,000) square feet of radio and electrical exhibits in the official hotels—the Stevens and Blackstone.

ADMISSION TO THE TRADE ONLY. PUBLIC NOT ADMITTED.

Reduced railroad rates—special trains—one and one-half fare for round trip to Chicago from everywhere.

Official hotels—Stevens and Blackstone—together on Michigan Avenue. Regular rates. Make your reservations early.

Important and interesting business meetings of industry and allied organizations.

Invitation credentials for the trade show will be mailed about April 15th.

Official Hotels—

• • •

Stevens Hotel

Blackstone Hotel

MAY 23-26 1932

RADIO MANUFACTURERS ASSOCIATION

11-WEST 42nd ST. N.Y. CITY • 32 W. RANDOLPH ST. CHICAGO

Volume XII

RADIO

Electrical Record

Monthly

Number 3

Radio-Electrical Record is published monthly exclusively for the Radio and Electrical Trade by the Radio Record Publishing Company, 301 Tribune Annex, 65 South Fourth Street, Minneapolis, Minn.
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Stories, articles, drawings, photos, etc., pertaining to the Radio and Electrical Trade welcomed. Address such communications to the Editor. The publishers waive all responsibility for statements, opinions or partisan expressions contained herein.

RADIO RECORD PUBLISHING COMPANY

301 TRIBUNE ANNEX—MINNEAPOLIS, MINN.

HARRY H. CORY
Publisher

JOHN S. GIBBONS
Editor

I. J. GALLERY
Advertising Manager

GOING ON RECORD

Why Three Years of Worry?

THREE years of wondering, worrying and wishing—that's the sum total effect of the present three-year guarantee on electrical refrigeration on the distributors and dealers who have to bear the brunt of this malicious arrangement, foisted upon them by philanthropic manufacturers.

The dealers and jobbers, from the time the sale of an electrical refrigerator is made wonder just how much money they'll realize if they have to subtract the costs of several service trips; worry about how much time will be lost carrying out this agreement; and wishing that the three-year term would soon be over so that they could at last check the account off the books as a completed sale.

Installation and a few months' servicing costs should be all the dealer should have to bear. Any guarantee lasting longer than six months only tends to spoil the customer, for he runs to the telephone at the slightest pretense and asks that a service man "come right out and see what's making a little squeak when the door is opened."

"The success of any industry rests with the distributor in the final analysis and anything which works to the detriment of their best interest must inevitably retard progress of the whole industry," one leading distributor in this territory pointed out recently. Certainly the manufacturers cannot see any personal advantage in prolonging this long-term guarantee, so with them, let all of us in the industry decide to do away with this three-year agreement.

* * *

Seasonal Window Displays

WHEN President Hoover threw the first baseball opening, with acceptable official ceremony, the baseball season in the United States, he also presented every dealer with a splendid idea for a window display. Broadcasts of baseball games are followed with intense interest, and nearly all the leading stations in the country give play-by-play accounts of some game every afternoon.

All sorts of sporting events lend themselves nicely to a window display theme. For baseball, large cut-outs of uniformed players (in action preferred) placed in an attention-getting spot form the basis for a good display. Balls and bats, masks, catchers' gloves, pads and any of the other paraphernalia used in the great American sport help to carry out the theme.

Always attractive are pictures of games and portraits of reigning stars or popular team managers. A schedule of games placed in a conspicuous spot in the window always draws a good deal of attention. Build some sort of score-

board to record the play of all teams by innings. Then make your tie-up by placing a radio set in a prominent place in the window with a sign that sells the assembled public on the idea of getting baseball results on just such a dependable receiver.

This is just a sample of the sort of seasonal windows the dealer should prepare. Make the displays harmonize with the temperature and the present interests of the people. For other electrical merchandise, the spring clean-up campaigns offers a theme. April showers suggest another; the special days observed in May give ideas.

In general, the outdoor theme is the best at this season of the year for the warm spring weather just naturally turns people out of the house, and they pursue any open-air sport in an effort to shake off the effects of spring fever.

* * *

Battery Sets —and Profit

ALTHOUGH a large part of the United States enjoys the benefits of electricity in individual homes, there still remains many a place, especially in the outlying districts, that's not equipped with electrical wiring, and these homes, collectively, represent the potential market for selling battery-operated receivers.

But where is the profit in such sales? queries a merchant in an eastern town. In the city, he explains, someone buys an A. C. set, and it is taken only a short distance to a home where it is set up immediately. Usually, that's the last heard from that particular customer until he needs some tubes. Or, even if the set does need a bit of further adjustment, a fifteen-minute ride by the service man, a short investigation and everything is fixed up.

On the other hand, the merchant in the small town who is called upon to handle battery-operated sets, gets many a call from homes 30 or 50 miles distant. If a set is ordered, it takes half a day, and sometimes longer to take it out and install it. Then when something goes wrong, the new owner, instead of looking to see if there is anything he can adjust himself, calls the merchant's service man out again on this long trip. Perhaps it was only a loose connection, but the day is wasted.

Then, too, if the customer only wants a demonstration—and in rural communities where everyone knows everyone else how can the dealer refuse?—the trip may have been in vain. Perhaps it takes two or three trips to close the sale. By that time the set shows the wear of its many journeys and no longer can be sold at full list price. The dealer stands the discount.

As this dealer paints it, this is a delicate situation, and one that's none too happy for the dealer. Other small-town merchants certainly have faced the same predicament. Let's hear from them and have them tell us how they profitably handle these country accounts.

Art Promotion

By
Harry B. Hunt

—Promotes Business

BUSINESS promotion of art, in order that art may promote business, is a new cycle that has come into America's development as a result of radio.

It has been a good partnership and has paid undoubted dividends to both business and art. But of far greater value than any monetary earnings to these principals have been the dividends in pleasure and cultural progress that have been shared by the public. Although no yard-stick has yet been devised by which they can be measured, these are recognized as among the most important factors in our national advancement in the last decade.

Inclined to Smile

When A. Atwater Kent first proposed, in 1925, to broadcast a series of concerts presenting outstanding stars of the musical world, both business and art were included to smile at him. To business, the proposal to make radio a medium for broadcasting "high-brow" programs for a supposedly "low-brow" public, seemed questionable policy. To art, the suggestion that famous grand-opera and concert stars would condescend to "cheapen" themselves by going "on the air," was almost laughable.

However, Mr Kent persisted. He had faith not only in radio as a medium for carrying the best in music into the American home, but in the capacity of the average American family to enjoy and appreciate the best in music if it could be made available to them.

From Doubt and Derision

His first concert, featuring Reinald Werrenrath, famous baritone, was broadcast on Sunday evening, October 4, 1925. His 300th concert, presenting Rudolf Friml, composer, and Nanette Guilford, Frederick Jagel and Richard Bonelli, grand opera stars, was given on Sunday evening September 27, 1931. During the intervening six years, virtually every musical artist of note had been featured in the Atwater Kent programs. From doubt and derision, the stars themselves had been converted to whole-hearted acceptance of radio as the best medium for broadening the appeal of their art.

Up to that time radio had been regarded chiefly as a means of "entertainment." Such music as was broadcast was of the so-called "popular" type, consisting chiefly of dance music and jazz. The immediate response to the Atwater Kent programs, however, revealed beyond any doubt the existence of a very real desire for a more substantial and satisfying radio diet. The masterpieces of musical composition, as presented by the great artists

in the Kent series, filled a music hunger that theretofore had been unappeased.

Immediate Approval

The immediate approval by the public of these new programs naturally was followed by the presentation of similar concerts by the sponsors of other broadcasts. The whole level of radio broadcasting was lifted. And as this level was raised, public appreciation and enjoyment kept pace. As a result, musical understanding by the public as a whole has advanced beyond anything this country ever has known before. The public has grown more critical because it has grown more appreciative.

But the presentation of real art via the radio was only one half of Mr. Kent's idea. He also believed that radio offered an unequalled opportunity for the development of new artists. With the growing acceptance of radio and the increasing demands for radio talent of the highest order, he was ready in 1927 to test the other half of his plan. This was the discovery of America's latent musical talent and its development under the finest American teachers.

Seed Had Been Sown

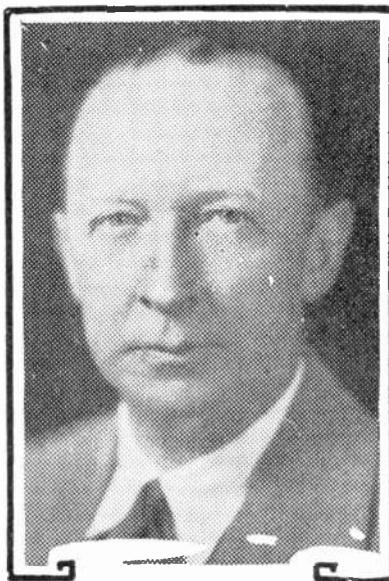
This work was undertaken through the National Radio Audition, under the auspices of the Atwater Kent Foundation, of which Mr. Kent is the head.

The seed that had been sown in two years of grand opera and concert broadcasts was shown, by the response to the first National Audition announcement, to have sprouted and taken firm root. From thousands of communities, boys and girls whose musical ambitions had been sharpened by listening to great singers over the radio, appeared as contestants in the Audition. They typified the new and aroused interest that radio had developed in music. In addition, they demonstrated that—given an opportunity to hear the best—ambition and aspiration are stimulated by good music as perhaps by nothing else.

Advanced Musical Interest

These auditions are now in their fifth year. In the four auditions already held forty young singers—twenty young men and twenty young women—have been selected as possessing voices of outstanding promise and enabled, by cash prizes and by scholarships, to pursue intensive musical studies. Ten more—five boys and five girls—will be added to the ranks of these potential future

(Continued on page 10)



A. ATWATER KENT

MECHANICAL REFRIGERATION and FOOD PRESERVATION

*Spoilage Costs Average American Family
\$50 Annually, Figures Indicate*

By P. B. FORD

FOOD SPOILAGE due to improper refrigeration costs the average American family \$50.00 per year according to the figures compiled by the Department of Agriculture.

The causes underlying food spoilage are now well-known and it is possible to prevent a large amount of this waste to say nothing of eliminating the possibility of illness caused by food improperly kept.

Millions of dollars are spent annually by producers to bring foods to our stores in proper condition for human consumption and unless there is mechanical refrigeration in the home this chain of protection is broken and decomposition and decay set in at once.

The actual spoilage is caused by micro-organisms of which there are many kinds. Some of their micro-organisms are harmful to human health and are called disease germs. Fortunately very few of these organisms thrive in a healthy living animal. Many are useful and are responsible for the action of yeasts, the delicate flavoring of butter and cheese, the seasoning of meats, and the ripening of fruits and vegetables. These changes are all a process of decomposition due to the rapid multiplication of these micro-organisms and if arrested at a certain point the food stuff will remain palatable and in a proper state for human consumption. If this process of multiplication is not arrested, decomposition, decay, and fermentation results, causing complete spoilage of food stuffs.

These micro-organisms are divided into three classes known as: 1. Molds; 2. Yeasts; 3. Bacteria. The conditions under which they multiply most readily are warmth and moisture. The condition which checks or prevents this rapid multiplication is low temperature and lack of moisture.

Molds may be divided into two classes—those that are friendly to man and those that are unfriendly to man. We are all familiar with the

bluish web-like growth that takes place on bread or the mildew on cloth. Still another kind of mold is responsible for the ring worm, another kind gives cheese its flavor.

The growth of molds may be almost entirely stopped by sufficient lowering of temperature.

Yeasts are responsible for fermentation and the raising of bread. Yeast spores are present in the air and come in contact with food stuffs causing fermentation.

This fermentation may be prevented by lowering the temperature.

(Continued on page 7)



Showing the copious interior afforded the housewife by one of Copeland's leading models.

WEST VIRGINIA DEALER PROFITLESS SALES ON BATTERY OPERATED SETS

In the following letter, Mr. McWhorter of Moorefield, West Virginia, makes some interesting comments regarding profit in retailing battery sets. As he indicates it would be a great help to the entire trade to hear the other side of the story from some of the dealers throughout the country who are doing an excellent and successful business with this particular type of set. All dealers, especially those who depend a great deal upon rural patronage, are invited to answer Mr. McWhorter's letter through the columns of this magazine. Please address replies to The Editor, Radio-Electrical Record, 301 Tribune Annex, Minneapolis.

Editor,
Radio Electrical Record,
Minneapolis, Minn.

Dear sir:

I just read your article "Back to the Farm With the New Battery Set," in the last Radio Electrical Record.

This very new battery set has been quite a proposition to us for some time. I run a jewelry store and also handle one of the best radios and electric refrigerators on the market, we have sold a good many radios and refrigerators and have made money on them but it is a rare case

where we can make any money on a battery set, in fact we do not push them or try to sell them, for different reasons, if we are wrong we would be glad to see or hear the opinion of some one else on the subject, but so far we have failed to make any money selling the battery radios, our troubles with battery sets have been as follows.

In the first place the manufacturers advertisers the sets "complete with tubes, less batteries," the prospect sees the advertised price and when he talks turkey we have to raise the price usually about \$20.00 for batteries. Next almost every party who buys a radio wants it put in on trial, and only one out of three buy, and it costs money to put a battery set in on free home demonstration, because the party who has just had a radio put in will run it day and night practically and consequently after about three demonstrations you have a set with batteries almost dead, and to get rid of it you have to buy a new set of batteries.

Besides these troubles a battery set has to be sold in the country, in our case anywhere from one to seventy five miles which requires a trip to deliver and another trip to sell or take up, and if the least thing goes wrong, which sometimes does another trip.

I can't see any money in a battery set unless the manufacturer advertises the set differently and gives the dealer a bigger discount.

Also the adjustment on the new Air Cell Battery is only made after the filling out of a questionnaire which requires a trip to the set to take meter readings, etc., and another trip to install the new battery, all these things soon run into more than the profit on the machine.

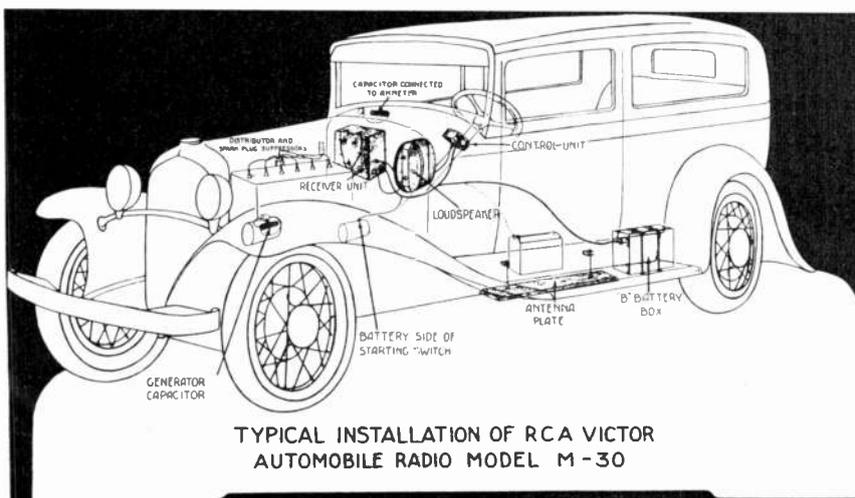
In one case we had an Air Cell go dead on a set in two months, and rather than go through the red tape of going to the set and taking all the readings called for we bought a new Air Cell and sent the man. In another case we had to make five trips to get the sale closed up and the aerial installed and everything up to snuff. We made nothing, each trip amounted to fifteen miles.

Now we do not try to sell battery sets, if a prospect comes in to inquire we tell him we will sell him a set and put it up for him but we will absolutely not give any guarantee whatever on the batteries.

I cannot see any money in battery sets unless there is a larger profit for the dealer.

Very truly yours,
Boyd J. McWhorter,
Moorefield, W. Va.

R. C. A. Automobile Radio Installation



SUIT DISMISSED

In the United States District Court for the Southern District of New York, Judge Patterson dismissed the suit against Grigsby-Grunow Company and B. J. Grigsby brought by Sulzbacher, Granger & Company, stock brokers of New York City.

The suit was for three and one-half million dollars, being a claim for alleged loss of profits and commissions due to the failure of Grigsby-Grunow Company to complete the formation of a British Company in the summer of 1929 for the manufacture of Majestic radio products in Great Britain.

What?—Another!

Another popular California orchestra, Henry Halstead, and his band, is making an Eastern invasion and will open at the Netherland Plaza Hotel in Cincinnati on December 17, with broadcasts over WLW. The Halstead orchestra recently made a great hit in Kansas City where they appeared at the Muehlebach and were heard nightly over WDAF.

What's Going to Be Offered at the Trade Show—and Sold Thereafter

By *McCurdo Silver*

As we go into the annual Trade Show the good old bugaboo of last minute new tubes is with us as in the past, plus a few new designs, or more correctly, sales trends.

Briefly, in order of importance, there are: Combination short-wave and broadcast receivers, multiple speaker sets, new tubes and class B audio amplification.

The distance possibilities of short waves are appealing increasingly to the public, forced to economize by staying at home in the evening and playing with the radio instead of night-clubbing. Hence, more all-wave sets will be offered and sold this year. The only new development in such sets comes from Silver-Marshall in a one dial, accurately logged set—this last point being the most important sales feature of such sets, for it alone insures customer satisfaction.

Sets with two speakers will be more popular, since they can give a little better tone, and certainly give additional sales appeal and higher unit selling prices.

New tubes this year are mostly a joke, for they really serve only one purpose—getting the tube manufacturers out of the “red” caused by less-

than-cost selling prices of tubes. This is some help to the dealer in terms of new sales appeal and higher unit selling prices—which later may prove a boomerang until October or November.

Class B audio amplification is a distinct step backward, for it gives poorer tone quality and costs more to build even acceptably decently than triode or pentode audio systems. Its sole benefits are new sales appeal and price increase—which its poorer tone quality definitely offsets. It is distinctly “bad” in the phrase of the economists.

What about prices and market possibilities? Prices will sag up to the Trade Show and then will be forced up—at the cost of sales. This is because it is always darkest just before the dawn, and the dawn of sustained general business improvement looks to be between October and December of this year. Until then the public is going to pay less, rather than more, for radio sets. The time for an effort to increase unit sale prices is in the spring of 1933—not at the Trade Show when the probable attempt at this will cost many sales which every dealer needs badly *during* 1932, not in 1933—if he is to eat until then.

Henderson to Represent Clago Radio, Refrigerator



In the picture from left to right are: Messrs. Opie, Henderson and Carlson

Clago Manufacturing Corp. of Chicago, who recently released to the trade four models of electric refrigerators listing at \$89.50 to \$179.50, are being represented in the Northwest territory by Radio-Refrigerator Products Company, 529 Andrus Bldg., managed by J. W. A. Henderson. In addition to electric refrigerators Clago Manufacturing Corp. present five models of All-Wave Radio.

Ross Opie and Clark Carlson are associated with Mr. Henderson, operating out of the Minneapolis office.

Mechanical Refrigeration and Food Preservation

(Continued from page 5)

Bacteria are the smallest and most numerous of all micro-organisms. They are present in the air the water and the soil and find their way into any food left unprotected and exposed. They constitute a greater source of danger because they multiply much more rapidly than yeasts or molds and often produce changes in food stuffs before we realize it.

Bacteria consume only parts of the food causing a chemical change or decomposition resulting in the formation of substances entirely different from the original food stuff. In addition to the changes noted there are found substances regarded as bacterial excretions and these are often highly poisonous. The ptomaines which cause ptomaine poisoning are produced by decomposition products and bacterial excretions. Anything which will prevent the growth of bacteria will prevent the formation of

ptomaines and low temperatures below 45 degrees Fahrenheit will almost completely stop such growth.

Dr. John R. Williams a recognized authority on the sanitation aspects of refrigeration stated that “Above 50 degrees Fahrenheit bacteria multiply prolifically. This means that foods favorable for the growth of bacteria, as milk, meat, etc. undergo very slight decomposition when kept at temperatures ranging below 50 degrees Fahrenheit, but above that temperature they spoil very rapidly.”

Moisture is also one of the factors which promotes the growth and multiplication of bacteria.

The Department of Agriculture Farmers' Bulletin No. 375 states.

“Dampness is one of the requirements for bacterial growth.”

From the facts stated we find that there are two factors which are re-

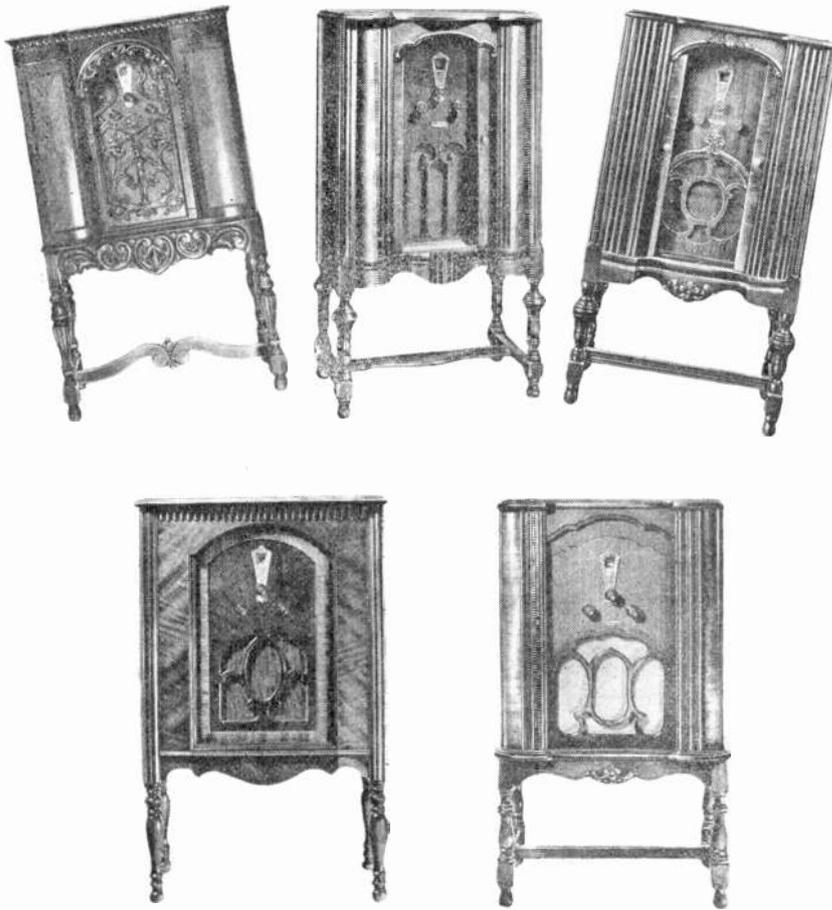
sponsible for the growth and multiplication of destruction organisms. One is a temperature above 50 degrees Fahrenheit and the other is the presence of moisture.

In the modern electro mechanical refrigerator temperatures are automatically maintained below 50 degrees Fahrenheit and the moisture is automatically removed from the air contained in the food compartment by condensing it upon the freezing unit in the form of frost.

All foods placed in the refrigerator, should be covered or protected in such a way as to retain their original moisture content if you wish them to be palatable and remain fresh.

Celery, baked apples, lettuce and foods largely composed of water will dry out unless covered or protected and while the low temperature will prevent decomposition it will not retain their freshness if they are permitted to lose their original moisture.

Bosch Announces New Models



Bosch radio models—top row, left to right: 40L, 40B, 40G; bottom row, left to right: 40J and 91H

The new 8-tube superheterodyne "duo-diode" model 40 American Bosch radio receiver recently announced, has full, not partial automatic volume control, variable, stepless tone control, and a new type duo-diode stage, in which the features of automatic volume control and detector are combined in a 227 tube.

The most pronounced advantage gained by this duo-diode system, according to the manufacturer, in addition to maintenance of the signal volume at a constant level, is the fact that the volume is uniform on all stations. For example, the listener adjusts the volume to suit his fancy for one station, and then, after listening for a time, decides to tune to another station; with the new American Bosch model 40 it is not necessary for him to reset the volume.

Distortion Reduced

Overloading and distortion is reduced to a negligible minimum. A local-distance switch permits cutting down the sensitivity of the receiver when listening to the very nearby local broadcasting station. The hand volume regulator knob turns the receiver on as well as permits setting of the volume to the desired level, the automatic feature keeps it there.

Tuning is simplified through the American Bosch Line-O-Lite dial, graduated into kilocycle calibrations to permit easy location

of the station as listed in the daily newspaper.

The tone quality of the model 40 is said by the manufacturers to be superior to any receiver heretofore built by them. Attention is called to the exceptionally large and sensitive diaphragm. The automatic volume control is sensitive even on reception from distant stations. Selectivity is exceptionally sharp. Complete 10 kilocycle separation of distant stations located side by side on the dial, is claimed to be readily accomplished at all points on the dial.

Complete Shielding

The chassis floats on live spring rubber in the console. Small condensers, filters, and resistors are mounted on unit strips of bakelite which in turn are mounted on the chassis, providing exceptional durability and accessibility for service. Shielding is complete. The chassis frame is of heavy gauge pressed steel with a corrosion-proof heavy nickel plating.

The Model 91 7-tube superheterodyne has full, not partial, automatic volume control, variable (stepless) tone control, which permits the listener to choose the exact shade of tone that pleases him most. Local distance switch, Lime-O-Lite simplified tuning, variable mu tubes, power pentode tube, large electrodynamic speaker, and delicate sensitivity are features.

Roycraft Company, Radio Pioneer, to Distribute Philco

Lou and Roy Cohen Built Successful Business From Early Days

An announcement of marked interest to the trade is the appointment of The Roycraft Company, one of the pioneer distributors of Minnesota, as the new Philco jobber for Minnesota and Western Wisconsin.

A good many radio dealers in this territory will probably remember Lou and Roy Cohen in the first days of the crystal set, sliding rods and switch points. Starting in the early days of radio, 1920 and 1921. The Roycraft Company have gradually built a merchandising organization that has achieved outstanding success. The Cohen brothers have been closely associated with the leaders in the radio industry during the greater portion of this time. It is interesting to note that Lou Cohen, early in 1928, had the distinction of being the first distributor in the United States to sign the Majestic distributor franchise, and during the years of 1928-29 Roycraft territory led the entire country on a per-quota basis of radio set sales.

The experience of ten years of serving the Northwest retail merchants will now be thrown behind an active merchandising campaign on Philco radio beginning April 1st.

In announcing this new connection with Philco, Lou Cohen said: "We certainly feel proud to join an organization of a calibre such as Philco. We have watched their consistent advertising and merchandising campaigns—have noted their thorough understanding of dealer problems—their aggressive sales campaigns in the interest of the dealer—all of which has brought them from 26th place in 1928 to undisputed first place in the industry in 1931.

"Among the various reasons which influenced our decision to tie up with Philco, there were two which are particularly important during the present business period. First of all, Philco management has a basic soundness and integrity in its make-up as well as the necessary youth, energy and dynamic force that is essential in the radio business. Second—Philco products are unquestionably of the highest type, having proved themselves over a long period.

Warm Weather Booms Sales for Karadio Corp.

Sunny skies and balmy spring weather did their bit to boost the sales of automobile radios of the Karadio Corporation of Minneapolis, according to Bob Taylor, president, who's been working long hours lately to keep business moving through his plant.

Equipped to provide the car owner with carefully designed sets that are the last word in convenience and attractiveness, Karadio also manufactures a distinctly new type of "B" battery eliminator in its own factories.

"As long as we have warm weather, and certainly we ought to have some after this long cold spring, we can depend upon a genuine business spurt. Prospects for a good year look exceedingly bright," Mr. Taylor declared.

TOBE

Filterette

Flashing Traffic Beacons Easily Filterized

Filterette FS-110 Applied to Single-Circuit Contactors

With the increasing popularity of automatic traffic control apparatus and electrically operated flashing traffic beacons, radio reception is being seriously impaired, in many communities, by the interference which originates at the various making and breaking contacts upon which the operation of this apparatus depends.

The interference from this source is easily identified by its characteristic indication — a steady clicking occurring from 50 to 70 times a minute. This clicking may occur at the making of the contact, at its breaking, or at both make and break, depending upon local conditions.

Fortunately, the development of a new, extremely compact Filterette has made the filterizing of flashing traffic signals a relatively simple matter. This Filterette, type FS-110, is designed to be installed within the housing in which the flasher control mechanism is mounted and is provided with flexible leads of the correct length to allow its easy installation.

Many Types of Flasher

There are many types of flasher mechanism used to control traffic beacons, but there are only a few fundamental circuits employed. The following outline of their operating principles should be helpful in analyzing the interference and in determining the type and extent of filterizing required.

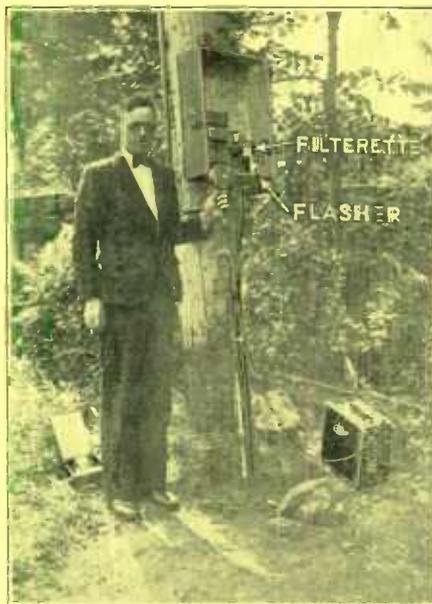


Fig. 1. Massachusetts State Highway Engineer Checking Interference from a Traffic Flasher

One of the simplest forms of traffic beacon flasher is that shown in Figure 1. This mechanism comprises a small synchronous motor of the Telechron type, a toothed wheel composed of an insulating material, and a single circuit mechanical contactor. The contact arms, which are made of spring stock, are mounted in such relation to the toothed wheel that the rotation of the wheel causes the contact to be made slowly and broken rapidly.

In a flasher of this type the motor is connected across the line during the entire operating period of the flasher, and, being of the synchronous type having no commutator or other circuit interrupter, the motor causes no interference. The only in-

(Continued on Page 2)

Automobile Heaters Cause Interference

Automobile Radio Affected by Winter Accessory

A new source of radio interference in automobiles has been discovered by car owners who have installed hot air or hot water heaters of the type employing a small motor driven fan to provide circulation of heat. The motor used is generally a series wound unit connected to the electrical system of the car with long unshielded leads. The motor and its connecting leads are often located within a few inches of the receiver or the antenna system, with the result that the interference created by the fan motor is picked up by the receiver, often being of such intensity that desired broadcast signals are submerged by the interference.

In order to overcome the interference created by the fan motor of either a hot water or a hot air heater, a Filterette JA should be used. This Filterette should be mounted on the frame of the fan motor, as shown in Figure 1. Filterette JA is provided with three flexible leads. The two leads which are brought out of one end of the Filterette should be connected to the two leads which are brought out of the fan motor housing. This connection should be made as close as possible to the motor, and the Filterette leads should be kept as short as possible. The single lead which is brought out of the opposite end of the Filterette should be connected to a carefully cleaned part of the fan motor frame.

(Continued on Page 4)

Flashing Traffic Beacons Easily Filterized

(Continued from Page 1)

terference, therefore, originates at the flasher contact, one side of which is connected to the power supply line and the other side of which is connected to the load wiring. Thus it is readily seen that the interference is conductively impressed on one side of the power supply line and on the wiring connecting the flasher mechanism and the signal.

Distribution of Interference

The distribution of the interference depends to a considerable extent on the manner in which the controller and beacon are installed, the number of beacons controlled by one flasher, the distance between the beacon and the flasher, and the manner in which the supply lines and connecting wiring are carried. If the beacon and control mechanism are contained in a single metal housing, to which the power supply line is carried in metal conduit or lead sheathed cable, the interference will probably be of but slight intensity and will be confined to the immediate vicinity of the installation. Also, if the power service wires and connecting cable between a control mechanism and a distant beacon or group of beacons are carried in underground conduits or lead sheathed cables there will probably be only slight interference. If, however, the service wires and connecting cables are not contained in metal conduits, or are not otherwise shielded, these wires will act as radiating antennae for the interference which they are carrying. Under these circumstances the interference may be distributed over a wide area. Interference from

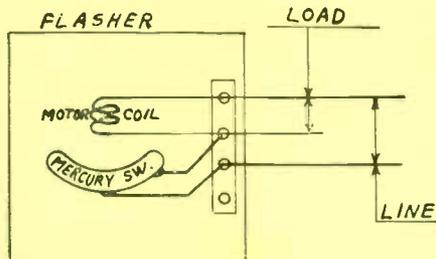


Fig. 4. Diagram of Mercury Switch Flasher in which the Switch Breaks both the Load and Motor Circuits.

a flashing traffic beacon installed in this manner has been found to affect radio receivers several miles from the control mechanism.

Application of Filterette

With these facts in mind, it is obvious that the Filterette applied to the controller of a flashing traffic beacon must prevent the interference from reaching the power supply line or the load wiring. To accomplish this result, Filterette FS-110 should be connected in the contact circuit of the control mechanism as shown in Figure 2. As this figure shows, the Filterette, which is of the inductive-capacitive type, is connected in series with both sides of the contact in such a manner that the interference which originates at the point of contact is dissipated in an inductance coil when it attempts to travel in either direction from the contact.

In most cases it is not necessary to use the Filterette return wire when Filterette FS-110 is applied to a single circuit flasher. A return lead is provided, however, which may be connected to the flasher frame, the flasher housing or to ground if necessary.

Another type of control unit for flashing traffic beacons consists of a disc type induction motor, a cam composed of an insulating material and a single circuit mechanical contactor. The operation of this type of flasher is similar to that of the unit previously described. The cam, which is geared to the induction motor, is so constructed that it closes the flasher contacts slowly and opens the circuit rapidly. The motor causes no interference; consequently it is necessary only to filterize the flasher contacts as previously described.

Mercury Switches

There is a belief that mercury switches, as used in traffic signal flashers, do not cause radio interference. This is a mistaken idea, as experience has shown that the interference created by mercury switches is just as intense and just as widespread as that created by mechanical switches in which the break occurs in the open air. It is, therefore, necessary to filterize such mercury switches in the same manner as has already been outlined.

There are two distinct types of flasher employing mercury tubes. The first type is similar in operation to the mechanical contactors which have been described. This type comprises a motor, a rocking device, and a single-circuit mercury switch. In this type of flasher, the motor is connected to the line during the entire

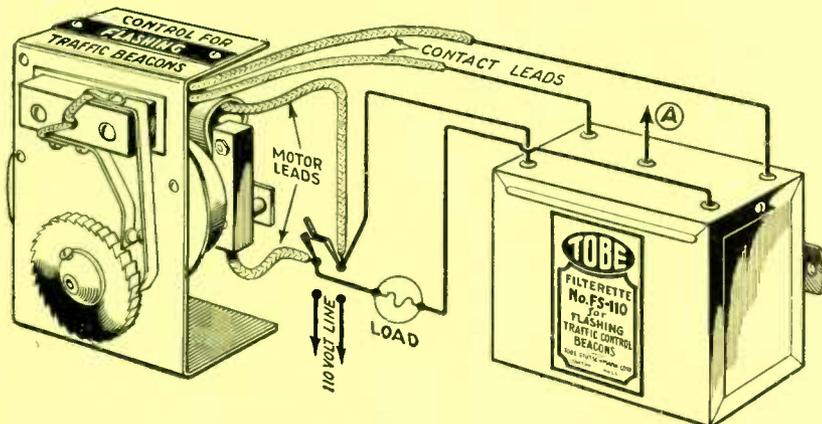


Fig. 2. Single Circuit Mechanical Contactor Used for Controlling Flashing Traffic Beacon.

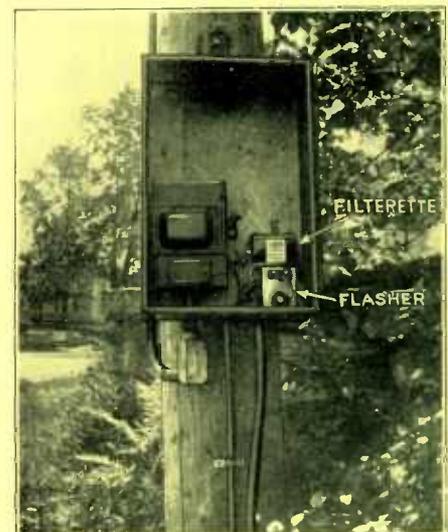


Fig. 3. Photograph Showing Installation of Filterette FS-110 in a Typical Traffic Flasher Control Box.

Flashing Traffic Beacons Easily Filterized

operating period of the unit, and since an induction motor is used, the only filterizing necessary is in the mercury switch circuit. Filterette FS-110, connected in series with both flexible leads to the mercury switch, as shown in Figure 2, effectively prevents the interference from reaching either the power supply line or the load wiring.

Mercury tube flashers operating on this principle employ three general types of construction. In the first, a Telechron type motor drives a disc which has a pin projecting from its face, near the rim. A yoke, pivoted above the disc, is placed over the pin so that as the disc rotates the yoke moves from side to side imparting a rocking motion to a mercury tube mounted on a horizontal cross member at the head of the yoke. In the second type of flasher, a disc type induction motor is substituted for the Telechron motor and a cam movement is utilized to rock the mercury tube. The third type of flasher employs a disc type induction motor driving a disc on which is mounted a ring of glass tubing into which electrodes are sealed. The ring contains mercury in such quantity that when the ring is rotating the mercury, which tends to remain in the lowest section of the ring, closes the circuit between the electrodes as they pass thru the mercury.

Mercury switches of the three types just described are normally mounted in wood or metal housings in which ample space is available for the installation of Filterette FS-110. A typical installation of a flasher control unit installation, as adapted by the Massachusetts High-

way Department, is shown in Figure 3. As this photograph shows the Filterette is mounted as close as possible to the flasher contacts, being connected in the contact circuit in the manner indicated in Figure 2.

There is another common type of

2. The motor coil attracts an armature or causes torque to be developed in a disc. Either of these actions causes sufficient motion of the mercury switch to open the circuit to the load and the motor coil.

3. When the motor coil circuit

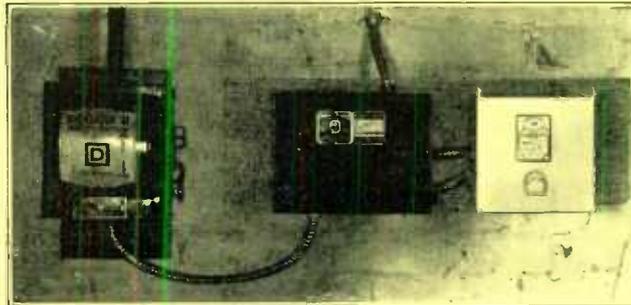


Fig. 6. A Typical Indoor Installation of a Single Circuit Flasher and an OB-110 Filterette.

mercury tube flasher which operates on a somewhat different principle from the flashers previously described. The fundamental circuit of this flasher is shown in Figure 4. This unit comprises a motor and a single-circuit mercury tube switch. It differs from the unit already described in that the motor is not connected across the line during the entire operating period of the flasher, but is connected in parallel with the load so that the motor current flows only when the load circuit is closed.

The operating cycle of this type of flasher is as follows:

1. The mercury switch, which, in its "off duty" position closes the circuit to the motor and load, allows current to flow thru the load and motor coil.

is opened the armature is no longer held up, or the torque is removed with the result that a spring or counter weight causes the mercury tube to assume its original position, thus completing the cycle.

Filterette Carries Both

Load and Motor Current

Since, in a flasher of this type, the motor coil is in parallel with the load, the Filterette must be designed to carry both load and motor currents. In most cases the motor current is relatively small, however, so that an increase in the size of the Filterette is seldom required.

In the filterizing of this type of flasher, Filterette FS-110 is connected in series with the mercury switch leads as indicated in Figure 5. In an installation of this type it is impor-

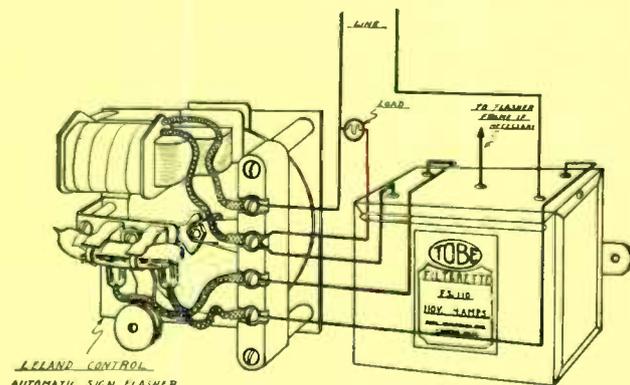


Fig. 8. Application of Filterette FS-110 to the Flasher Shown in Figure 4.

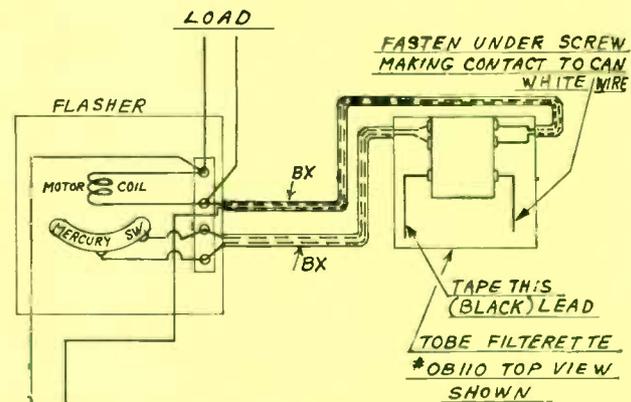


Fig. 7. Wiring Diagram of Installation Shown in Fig. 6.

Flashing Traffic Beacons Easily Filterized

tant to note that the Filterette must be connected between the mercury switch and the motor coil.

Installation of Filterette Outside Flasher Housing

Altho in practically all cases there is sufficient space in the flasher housing to allow the installation of the Filterette, sometimes the flasher is contained in so small a housing that mounting space for the Filterette is not available. When this condition is encountered an inductive-capacitive type Filterette, of the type supplied in a metal cabinet, should be mounted as close as possible to the flasher housing. A workman-like installation of this type is shown in Figure 6.

In this case the flasher was controlling a two hundred watt load and the motor coil of the flasher required an operating current of approximately 0.75 amperes at 110 volts. Since the combined load and motor currents were less than 4 amperes, Filterette OB-110, which is rated at 4 amperes, 110 volts, was installed. In making the Filterette installation, BX was used for all connections. The circuit plan followed is shown in Figure 7.

As indicated in this diagram, the mercury switch was disconnected from the line and was connected to the two "line" leads of the Filterette. The "load" leads of the Filterette were then connected to one side of the power supply line and to one side of the load and motor coil. This connection placed the inductive sections of the Filterette between the mercury switch and the line as well as between the mercury switch and the load. Connecting the Filterette return wire to the metal housing of the flasher completed the filterizing of this unit.

Standard Filterettes Used With Single Circuit Flashers

The filterizing of any single circuit flasher is easily accomplished by installation of standard inductive-capacitive type Filterettes in the manner outlined. To determine which

Filterette should be used it is necessary to know the maximum number of amperes carried by the switch, the voltage across the load, and the space available for mounting the Filterette.

If space is available in the flasher housing, and if the total current carried by the flasher switch does not exceed 4 amperes at 110 volts, Filterette FS-110 is the correct type to be used. This Filterette, however, must not be used outside the flasher cabinet.

If the Filterette must be mounted outside the flasher cabinet a standard inductive-capacitive unit of correct voltage and current rating should be used. The following standard procedure should be followed in the installation of such Filterettes:

1. Mount the Filterette as close as possible to the flasher housing.
2. Provide separate BX leads or conduits for the input and output circuits of the Filterette.
3. Disconnect the switch contact leads from the flasher and connect them to the Filterette terminals marked "line."
4. Connect the Filterette terminals marked "load" to the points, in the flasher circuit, from which the switch contact leads were disconnected.
5. Connect the Filterette return wire to a carefully cleaned part of the metal housing of the flasher.

No difficulty should be encountered in the filterizing of any single-circuit flasher if these instructions are followed.

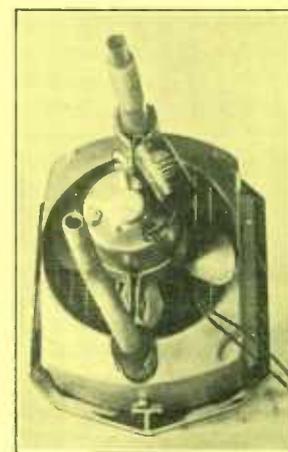
The most frequently used Filterettes for single-circuit flasher application are FS-110, OB-110, 131 and 221. Filterette FS-110 is applied to control units, operating at 400 watts or less, when space is available for mounting the Filterette in the flasher housing. The remaining Filterettes are recommended for installation outside the flasher housing. (If an outdoor installation is to be made a weather-proof housing must be provided for these models).

The following table may be used as a guide in the choice of single-circuit flasher Filterettes.

Filterette	Volts Amps		Price
	A. C. or D. C.		
FS-110	110	4	\$15.00
OB-110	110	4	15.00
131	110	10	20.00
221	220	5	20.00

Automobile Heaters Cause Interference

(Continued from Page 1)



Filterette JA applied to Fan of Auto Heater

In the installation of Filterette JA on the fan motor of an automobile heater, it is essential that the Filterette return connection be made to the fan motor frame. The reason for this is that in the mounting of the fan motor it is common practice to provide a cork gasket between the motor frame and the heater frame. This layer of cork acts as an insulator, and makes it essential that the Filterette return wire be connected to the fan motor frame. When Filterette JA is installed in this way, the interference created by the fan motor is confined to its source, and is thus kept from affecting the operation of the radio receiver installed in the automobile.

TOBE DEUTSCHMANN CORPORATION

Filterette Division

CANTON, MASSACHUSETTS

Form 8490

The Acknowledged Authority on Radio Interference—Makers of FILTERETTES, the Accepted Remedy.

Apex Contrasts Crude Radio of Early Day With Beauty and Perfection of Present Sets

It's a far cry from the early and quite primitive radio receivers produced in the Marion, Indiana, plant of what is now the U. S. Radio & Television Corporation, to the magnificent lines of U. S. Apex and Gloritone radios manufactured by the corporation today.

In the several years that have elapsed between the two periods, the transformation has been so great that there is little point of resemblance left, particularly in the matter of performance. The comparatively crude radio of the early days, its masses of parts, intricate system of dials and other things now obsolete, has given way to beauty in appearance, virtually perfect performance, and a host of mechanical aids heretofore undreamed of.

In addition to its regular U. S. Apex and Gloritone lines, the U. S. Radio & Television Corporation has now placed on the market its custom built model called "The President," a 10-tube superheterodyne with every new and modern aid to perfect reception known to radio engineering science. It has the latest development in full range

mu tubes to prevent cross talk; automatic volume control to prevent blasts and fading; pentode tubes in push-pull for quality volume; tone blender that makes for authentic reception of tone; a local and long distance switch; meter tuning that enables the owner to see as well as hear whether he is getting the maximum results; over-size electro-dynamic speaker; full vision, illuminated dial with kilocycle markings; fully shielded chassis, with exposed parts in satin finish, and other aids to quality performance.

"The President" cabinet presents a new high mark in beauty and craftsmanship. The top and sides are made of genuine solid American walnut, one inch thick, which adds to the appearance and acoustic qualities. Beautiful burl maple, matched grain walnut, overlays of crotched walnut, all hand carved and hand rubbed are incorporated in the cabinet and blended into a symphony of beauty. A metal cane panel, easily removed, encloses the back. The cabinet is 45 inches high, 25½ inches wide, and 15¾ inches deep.

Sparks Donates Radios, Refrigeration Units to New Ontario Hospital

Every room in the new London (Ont.) hospital, which is to be built at a cost of \$1,000,000, will be equipped with a Sparton radio, and a complete electric refrigeration unit will be installed in the building, thanks to the generosity of Capt. William Sparks, president of The Sparks-Withington Company of Jackson, Michigan and Sparton of Canada, Limited. This gift was announced at a dinner in London recently, and is in addition to a very substantial personal contribution which Capt. Sparks had previously made to the hospital fund.

As the guest of A. E. Silverwood, chairman of the hospital trust, Capt. Sparks occupied the place of honor at the speakers' table, at which were grouped many notables from official, commercial, professional and religious life in Canada, including members of the Dominion Parliament, members of the Provincial Cabinet and the City Council. More than 500 prominent citizens of London packed the dining room of the London Hotel to overflowing, and applauded to the echo as Capt. Sparks concluded his characteristically inspiring address.

Sparks Gave Check

More than \$700,000 of the necessary \$1,000,000 for the new hospital was reported subscribed by S. Stalford, Jr., director of the fund-raising campaign. The initial subscription was a check which Capt. Sparks presented to Richard G. Ivey, chairman of the recent good will tour to Jack-

son, when prominent London business men and public officials visited the plants of The Sparks-Withington Company in that city.

During the evening, Capt. Sparks was presented with a golden key to the city and was made a freeman of the City of London by Mayor George Hayman.

1857 Editorial Recalled

Introduced by Mr. Ivey as the principal speaker on the program, Capt. Sparks said in part: "This is a gloomy moment in history. Thousands of our citizens are turned out of work to face the cold winter. France is uncertain, and all the influences of the British Empire are sorely tried, while no man can see the end."

"That is an editorial," published in Harper's Weekly 74 years ago. Yet it covers the feelings you all have today.

"Since 1879 we have had 15 of those 'mild boom' periods, yet I prophesy that the conditions of 1921-22 are going to happen again.

Not Standing Still

"The London plant of our radio product is not standing still. We will enlarge it in the very near future, and likely manufacture a new Sparton refrigeration unit.

"This is the time to place contracts for buildings. We give men work, and save money by doing it.

"This contract is one for the saving of humanity, and with the spirit of fight and teamwork, you will win. It can be done. Pray for divine guidance, and you will be successful."

Sound Trucks Found Useful In Advertising, Amplifying

The excellent adaptability of portable electric plants for radio sound trucks for broadcasting, advertising and amplifying purposes is rapidly opening up new fields of sales promotion.

The R. C. A.-Victor Company is now building portable radio units equipped with Universal Electric Plants which furnish

the necessary power. Either radio programs or records can be reproduced.

Other increasingly important adaptations are installations for amplifying public speeches, concerts, athletic events, etc., where large crowds are gathered.

The possibilities in this sound truck market have barely been scratched, and the wide awake radio merchant will find splendid sales opportunities awaiting any aggressive effort in this direction on his part.

Television Set In Console Form

Complete and self-contained, simple yet efficient, suitable for an audience of one to several dozen persons, the Jenkins Model A Radio-vision Console marks the advent of television in the average living room.

What is more, it offers a choice of either broadcast reception or short-wave reception in addition to the television function, thereby providing maximum entertainment value in a single radio set.

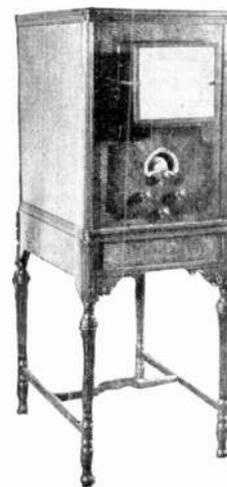
The attractive console cabinet contains an all-purpose receiver and a projector-radiovisor.

The receiver is designed for operation in the television, shortwave or broadcast band, by an ingenious and unique interchangeable tuning system. The proper degree of selectivity is provided for each band—sharp for broadcasting and short-wave, broad for television. The plug-in coils are matched "plug-in" units for ready handling. The receiver, fully A.C. operated, handles the highest frequencies now used for visual broadcasting. The audio-frequency system has an excellent amplification curve from 20 cycles to the highest picture frequency employed. The output stage has two 45's in parallel to provide the distortionless current required for the latest development in crater lamps used in the projector type of radiovisor. A loud-speaker, ingeniously concealed from view, provides ample volume and tone quality for aural programs. A pair of phonograph jacks permits utilizing the exceptional audio system for realistic reproduction of records.

The projector type radiovisor employs the latest form of crater lamp as well as a 60-line lens disc. The pictures are projected on a ground glass screen held in a frame in front of the console. The image may be adjusted and focused for any size up to 8¾ x 10 inches. The silent motor is synchronized with the intercepted television signal by automatic means. By eliminating the usual magnifying lens for enlarging the viewed image, in favor of a flat translucent screen, the pictures may be viewed by a group arranged in a quarter circle, without troublesome distortion.

Nicholas, RCA Executive Elected to RMA Board

E. E. Nicholas, Sales Manager of the RCA-Victor Company of Camden, New Jersey, is a new director of the RMA Board. He succeeds E. E. Shumaker, president of the Camden organization, who is retiring and resigned from the RMA Board. At the November 19th meeting of the Association's Board of Directors, Mr. Nicholas was elected to fill the unexpired term of Mr. Schumaker ending June, 1933.



Art Promotion Promotes Business

(Continued from page 4)

artists by the Audition of 1931, the finals of which will be held in December.

In addition to these national winners, recognition has been won for many hundreds of voices which, while failing to win final honors, have won in their state or district contests. The resultant advancement of musical interest, both locally and nationally, has been inestimable.

That Mr. Kent is primarily a business man, he himself would be the first to admit. Likewise—as with the sponsors of all radio broadcasting—he will acknowledge that his broadcasts were first conceived as an adjunct of his business. Art as art probably was secondary in his thoughts when he first decided to broadcast the greatest musical artists available. But good art proved good business. It brought to the sponsor a maximum of national goodwill, which is the greatest asset of any business man. And it brought him business.

Did Something More

But it did something more. Just as it satisfied the latent music-hunger of the public and furthered their love of music, it gave him a satisfaction and enjoyment which he declares has not been equalled by anything else in his experience. The creation of a new generation of music lovers, in order that they might desire radio sets, may have been his first aim. But his greatest pleasure has come in the development of new artists—and the presentation of the old—in order that the owners of radio sets may get the utmost pleasure from them.

Thus the partnership of business and art has made for real progress!

Lew Bonn Company Serves Northwest Service Men, Dealers

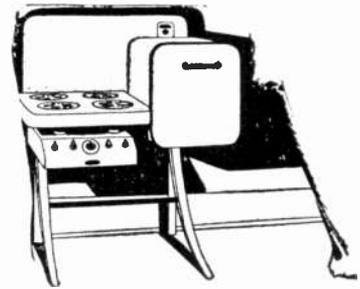
Realizing that the radio dealers and service men in the northwest territory were unable to get rapid service on radio repair parts, the Lew Bonn company, 2504 University avenue, St. Paul, has gone into this business and now are serving hundreds of dealers and service men with a complete line of condensers, volume controls, resistors, voltage controls, switches, etc.

Rex L. Munger, sales engineer for the Lew Bonn Company, is one of the pioneers in the radio repair part business and his knowledge of the dealers and service men needs is such that the trade can secure everything they need from the Lew Bonn company stock.

The lines featured are Dubilier condensers, Electrad volume controls and resistors, Ohio pigtail carbon resistors, Franklin and Standard transformers, Pilot and Clarostat products, Dayrad and Jewell test equipment, Burgess and Supertone B's, and J. R. C. tubes. These lines incorporate the best quality with the lowest prices. The Lew Bonn company is carrying such a complete stock of all radio needs that they have earned the slogan the only complete stock radio wholesaler in the northwest. The Lew Bonn company, 100 per cent wholesale, is glad to send its catalog on request.

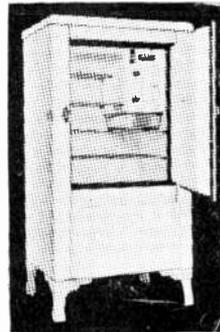
ELECTROCHEF ELECTRIC RANGES

We believe you can make money in the electric range business during the next few years handling *any good range* but just how much money you make depends upon the *range* you select—be sure you choose ELECTROCHEF.



It is so strikingly modern in appearance that it demands attention wherever it is sold. Fast, economical—ELECTROCHEF outdemonstrates any range on the market. Its marvelous cooking performance and a score of other attention-getting features sells ELECTROCHEF to every prospect.

NORGE

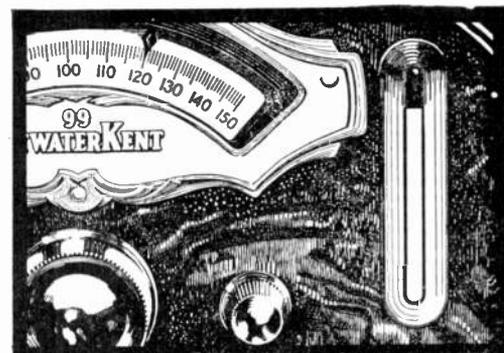


Actual user satisfaction has brought about the enormous popularity of NORGE. It brings additional sales to the NORGE dealer from friends of NORGE users . . . it simplifies selling and cuts selling costs.

The direct benefit of NORGE power to the dealer is the service free feature of the Rollator mechanism. With NORGE the dealer keeps what he makes . . . his profit does not dissolve in excessive service calls. With the NORGE Merchandising Plan, Advertising Program and the Extra Cooling Power of NORGE,

the Rollator Refrigeration dealer is sitting pretty!

NEON TUNING Another Atwater Kent Invention



ATWATER KENT has just closed its Neon Tuning Contest which produced wonderful results for ATWATER KENT Dealers. Again they have enjoyed sales through advanced features of ATWATER KENT Radio and ATWATER KENT Merchandising helps. ATWATER KENT Dealers are continually making sales and will continue to do so for ATWATER KENT is always at the lead with improved Radio.

REINHARD BROTHERS CO.
Aberdeen, S. D. Minneapolis, Minn. Minot, N. D.

BUY THE ADVERTISED LINES

New Wunderlich Tube Boasts 3-Fold Function

Radio engineers who have had an opportunity to experiment with the Wunderlich Tube acclaim it as the first innovation in detection since the advent of the A.C. radio set. The tube is specifically designed to overcome the weaknesses apparent in tubes that have been used as detectors, though developed for other purposes.

The Wunderlich Tube, with one "auto-balanced" set of elements, gives full-wave grid detection with a minimization of overloading, full automatic volume control, and a stage of audio-frequency amplification without adding to the cost of the radio receiver, nor requiring major mechanical changes. Thus it provides an essential and efficient self-governor or floating-control of tone and quality. All signals, weak or strong, are detected and maintained with equal fidelity under the most favorable operating conditions. Tone is not sacrificed with volume, nor mellowness lost through suppression.

It is claimed that the Wunderlich Tube has four times the detector power output of the triode. Because of its three-fold function, this new tube improves tone quality, provides automatic volume control which minimizes fading and practically eliminates detector distortion thereby preventing blasting and choking due to detector overload.



Sales Program Outlined for Norge Refrigeration Dealers at Convention

The coming year will be highly successful for any refrigerator manufacturer whose product fills a definite need, and who supports his product with a sound sales and advertising plan. 33 Norge refrigerator dealers were told at a luncheon at the Nicolle hotel recently.

The meeting was arranged by Reinhard Brothers, northwest Norge distributors. The speaker was John Knapp, vice president in charge of sales.

"We see a big year ahead for Norge, and, indeed, for any other manufacturer whose product is sound and fulfills a definite need, who supports that product with adequate, carefully prepared, well directed sales and advertising plans, and who recognizes the necessity of constant, intimate contact with his entire selling organization," Mr. Knapp said.

"Already our orders are far in excess of a year ago, with the result that our Rollator plant in Detroit, and our cabinet factory at Muskegon Heights, Mich., are operating

with full forces. The recent completion of extensive improvements in both plants, and the installation of various new equipment, places Norge in an exceptionally advantageous position to supply the demand for Rollator refrigeration."

Other speakers at the meeting included H. D. Vestal, vice president of Reinhard Brothers; R. E. Densmore, Norge western sales manager; Fred Fleischer, Norge district representative; T. A. Sterling, Norge sales promotion department, and H. W. Terry, of Cramer-Krasselt Co., advertising agency. Other Reinhard Brothers officials at the meeting were A. C. Reinhard, president; C. T. Stevens, secretary; A. L. Milner, manager of the household utilities department, and W. S. Law, manager of the radio department.

Kolster Acquires New Channel of Distribution

Arrangements have recently been completed by which "1932" Kolster International Radio Receiving Sets will be sold in continental United States by the Westinghouse Electric Supply Company and a group of electric wholesalers doing business with that Company, located in approximately 100 strategic jobbing centers. Thus, Kolster, one of the best equipped manufacturers of radio and other home entertainment products, will be able to serve the American public through one of the best electrical wholesale channels and through the radio dealers served thereby.

The SUPER-DURABLE HUBBARD Silent Electric SAFE . . . QUIET . . . EFFICIENT

The Hubbard Silent Electric automatic oil burner, using *nitralloy* on every moving and wearing part, will last as long as the home in which it is placed. Its distinctive quality, design and engineering principles provide the minimum in operating expense and the maximum in performance,—truly the ultimate in oil burner equipment.

Hubbard Silent Electric, despite its many advantages, is low priced. Convenient terms can be arranged.



THE HUBBARD COMPANY

Makers of Quality Domestic Oil Burners for More Than a Decade
1014 MARQUETTE AVE. MINNEAPOLIS GENEVA 6363-6364
St. Paul Branch—Eudroit Arcade

BUY THE ADVERTISED LINES

Radio Association Appeals to Congress for Fair Treatment

The radio industry, through the Radio Manufacturers Association, the national organization, is prepared to appeal to the United States Senate for fair treatment and relief from the discriminatory excise tax of five per cent on radio and phonograph sales adopted by the House of Representatives.

The proposed radio tax and plans for appeal to the Senate will be considered by the Board of Directors of the Radio Manufacturers Association at a meeting which has been called by President J. Clarke Coit of Chicago on April 8th at Hot Springs, Va.

Would Tax Public

The proposed radio tax would fall on the public, could not be borne by an industry already severely stricken, and calls for radio and a few other "selected" industries to bear the burden of special manufacturers sales taxes, according to a statement issued today by Bond Geddes, Executive Vice President of the Radio Manufacturers Association.

"The radio industry is entirely willing to contribute equally with others to the government's revenue necessities and acquiesced in the House Ways and Means Committee proposal for a general manufacturers sales tax, even to the considerable extent of 2.25 per cent," said Mr. Geddes. "Now, in the 'revolt' of the House against its leadership and in its hasty, hysterical adoption of 'any sort' of taxes, the radio and a dozen other selected industries are penalized and stigmatized as luxuries or semi-luxuries and asked to bear the entire burden of taxation on all industry.

"Ill-Considered"

"The ill-considered, unfair and discriminatory results in the House are obvious and the radio industry is prepared to appeal to the Senate.

"In its widespread service to the public as a great agency of communication, religion, education and daily individual and national development, as well as entertainment, radio cannot be fairly classified as a luxury, semi-luxury or non-essential. Like the daily newspaper, which is carefully exempted in the House Bill from any additional tax burden, radio is a daily and vital means of communication. Its use is universal and we oppose a special discriminatory tax on this great service to the millions of the American radio public. The classification of radio, with cosmetics, candy, etc., as a luxury is absurd.

"Annual reports published today of three prominent radio companies, reflecting industry conditions which are general, report 1931 losses, respectively, of \$182,080, \$215,597 and \$1,447,253. The special excise tax of five per cent on manufacturers sales of radios, phonographs and accessories, therefore, is one which necessarily will be borne directly by the buying public as it cannot be absorbed by the industry.

Below Estimate

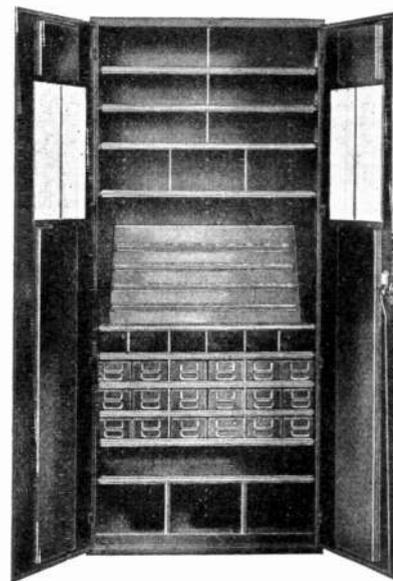
"Furthermore the revenue returns expected from the proposed radio tax will be much below the estimate of federal experts. Not \$11,000,000, as estimated by House and Treasury experts, but \$7,731,750, in taxes would be realized at five per cent based on 1931 sales if equaled in 1932.

Safe Storage for Radio Service Depts.

Here is a new steel storage cabinet for radio service—designed to save its cost by preventing breakage and damage to expensive test instruments and tubes—and to protect against loss and petty thievery.

It stores an average stock of new tubes, complete set of testing instruments, tools, and small parts. The removable tube storage stand for test jobs on the work bench stores 50 tubes, including all the standard sizes.

Cabinet: 36 inches wide, 12 inches deep, 84 inches high. The Stand: 30½ inches wide, 11¾ inches deep, 15 inches high. Doors lock securely and are fitted with stock control boards. All shelves have label holders. Manufactured by Lyon Metal Products, Incorporated.



which is improbable especially if a sales tax is added to reduce volume. Tax burdens always increase sales resistance, prices to the public, and, therefore decrease volume of sales. The radio source of taxes would be unquestionably diminished and thus further decrease the anticipated returns.

"The radio industry, desiring only fair treatment for an essential public service, would cheerfully assume a fair share of the tax necessities of the government but is constrained to oppose the discriminatory burden proposed against it and a few other industries 'selected' in the hysterical program of the House."

Launch Campaign

A group of radio service men in Chicago, members of the Institute of Radio Service Men, have launched a cooperative advertising campaign in the Chicago newspapers.

DEALERS--JOBBER

Here is a sound, efficient, profitable
refrigerator line for 1932

Clago Electric Refrigerator

4 FOOT **\$89.50** MODEL

Five beautiful models listing at \$89.50 to \$179.50 with
the new Clago Pul-su-tur rotary type direct driven unit.

NO BELTS, PULLEYS, FLY WHEELS, PISTONS, VALVES OR SPRINGS

Fast freezing and efficient . . . Over- . . . Direct factory to dealer (freight
powered for extreme temperatures paid) service. Eighteen months
. . . Three-inch Celotex insulation guarantee. Two-color cabinets be-
all around. Interchangeable units sides white at no extra cost.

NEW ALL-WAVE RADIOS LICENSED BY R. C. A.

2 Midget Models (4 and 7 tubes)
3 Consoles (7 and 10 tubes)

Listing at \$22.50 to \$67.50, complete with RCA tubes.

LOW DEALER COSTS

For territory and further information write or phone

Radio Refrigeration Products Co.

529 Andrus Building

Minneapolis, Minn.

Phone, Main 7809

BUY THE ADVERTISED LINES

New "B" Battery Eliminator Built By Pines Company

In addition to manufacturing Winterfronts and other quality products for automobiles, the Pines Winterfront Company recently announced a new auto accessory—the Pines "B" Battery Eliminator for auto, bus, motorboat, and airplane radios. So successful has this new product been in its ability to improve the tone quality and selectivity of radios that many leading manufacturers are recommending its use with their sets.

Pines "B" Battery Eliminator is so simple and rugged in its construction that there is nothing to get out of order, nothing to oil or grease, nothing to adjust. It consists of a "triple-tested" motor in connection with a special rotary transformer.

Current from "A"

It takes the current from the regular "A" battery, steps it up, rectifies and filters it, delivering to the set a constant, smooth D. C. current which produces a clearness of tone heretofore thought impossible in an auto radio.

Before placing the Pines "B" Battery Eliminator on the market, it was subjected to the most rigid tests. It was found that snow, water, or slush did in no way affect its efficiency. One of the most severe temperature tests known—a test under the temperatures of from 35 degrees below zero to 150 degrees above—failed to impair its perfect performance.

Like Home Set

In every respect, the results this "B" Battery Eliminator made possible were comparable in tone, distance, and selectivity to those of home radios operated by electric power. Actual tests also showed that the battery drain is slight—actually less than the amount of current necessary to operate a single headlight.

The installation of the new Pines "B" Battery Eliminator is exceedingly simple. It requires a space of 5 $\frac{3}{4}$ x 8 inches, only 6 $\frac{1}{4}$ inches deep. This is approximately one-third the space required for the ordinary "B" battery which this eliminator now replaces. Its total weight is only fifteen pounds, including a special heavy metal container, which protects it from all possible damage.

Sparton Dealer Stages Parade of Police Cruisers

Sheridan's celebrated ride down the Shenandoah Valley seems likely to be overshadowed in local annals by the recent tour of the Spanton-Ford Police Scout Car under the command of Hugh Snyder, sales manager of the Southern Electric Company, Spanton radio distributors at Staunton, Va. The purpose of the tour was to demonstrate to police and other officials the value of automobile radio in the work of law enforcement.

In Covington a parade was staged in honor of Mr. Snyder's party. The Covington band led the procession, which included county officials and representatives of the state constabulary.

"We had intended to take the scout car to Clifton Forge," said Mr. Snyder, "but time did not permit us to do so. However, when the police heads of Clifton Forge heard that the Spanton-Ford cruiser was in Covington, they drove over of their own accord, and we

100 Leading Firms to Exhibit Products at RMA May Trade Show in Chicago

One hundred leading radio manufacturers will exhibit their radio and electrical products in the Eighth Annual RMA Convention and Trade Show at Chicago, May 23-26. Over eighty-five per cent of the available exhibit space in the Stevens Hotel already has been reserved. Exhibit space of RMA members making advance reservations was assigned March 24 at a public drawing in the Hotel Astor in New York. The drawing was in charge of prominent editors of radio trade magazines. Exhibitors now are being advised of space allotments drawn for their exhibits which are in process of preparation for the big crowd of over 20,000 radio industry visitors expected in Chicago during "radio week." While virtually all prominent manufacturers have arranged for exhibits, new applications are being received. Space for additional exhibitors is still available and the RMA will receive applications until May 15th.

Trade Only

Admission to the RMA trade show will be limited to the trade, with the public excluded as usual. Invitations from President J. Clarke Coit and the Board of Directors of the RMA will be sent May 1 to the trade. Attendance of many electrical jobbers and dealers, interested in the new electrical products of RMA members, also is assured through the recent action of the National Electrical Wholesalers Association in postponing their May convention until next September and thus avoiding a conflict with the RMA events in Chicago.

A large RMA and special train from New York and eastern points to Chicago on the New York Central is being arranged. It is again in charge of L. C. Welling as manager for the RMA. Other special trains from other points also are being arranged. The fare to the RMA events from all points is at the reduced rate of one and one-half fares for the round trip.

Space Drawing Held

The public drawing for space in the trade show at the Stevens Hotel was held under the direction of B. G. Erskine, Chairman of the RMA Show Committee, and in active charge of Meade Brunet of New York, Committee Vice Chairman. Numbers of all exhibitors were placed in a hat and the first name was drawn by O. H. Caldwell, editor of Electronics. The job of holding the "high hat" fell to Glad Henderson, editor of Radio & Electric Appliance Journal. Other prominent radio editors participating in the show space drawing were Curt Wessel of Talking Machine & Radio Weekly, Ray Sutcliffe of Radio Retailing, V. E. Moynahan of Radio-Music Merchant, S. R. Cowan of Radio Engineering, and M. E. Lerner of Radio Television Retailer & Jobber. H. H. Cory of RADIO-ELECTRICAL RECORD also was invited to participate, but business prevented his attendance. A large number of RMA members also were present at the drawing, together with Arthur Moss of New York, RMA director, Bond Geddes, Executive Vice President of the Association, and M. F. Flanagan of Chicago, Executive Secretary.

were able to demonstrate to them. As a direct result of the demonstration of the scout car's radio equipment, we sold two of the new Multi-Wave Receivers, Model 16 AW—one to the Chief of Police of Covington and the other to the Sheriff of Alleghany County."

BUY THE ADVERTISED LINES.

Norge Shows Sales Gain 15 Consecutive Months

For the 15th consecutive month sales of Rollator Refrigeration showed a gain over the same month of the preceding year, according to a statement issued by Howard E. Blood, president and general manager of Norge Corporation, Detroit, division of Borg-Warner. "Our sales for the first quarter ending March 31, 1932, were 241 per cent of the corresponding quarter last year, while sales for March, 1932, were 151 per cent of those of March, 1931," said Mr. Blood.

"This showing," continued Mr. Blood, "not only indicates a very definite response to our enlarged sales promotion and advertising campaigns this year over last, but also reflects the general increased buying activities reported in other lines.

"During February and the first half of March our sales staff, under the direction of John H. Knapp, vice-president in charge of Norge sales, conducted distributor-dealer meetings in all sections of the United States. These field contacts demonstrated an unusual degree of interest in electric refrigeration on the part of dealers and their customers, while the immediate results were reflected in increased orders for our 1932 models. We have found it necessary to operate our rollator plant in Detroit and cabinet factory in Muskegon with full forces in order to meet the demands of the approaching peak months in refrigeration sales."

Mr. Blood was recently elected first vice-president of Borg-Warner Corporation, leading manufacturers of precision parts and automotive equipment. The appointment was made in recognition of his success in 1931 during which Norge sales showed the greatest increase in the electric refrigeration industry, both in units sold and dollar volume.

Attention!

At last you can successfully solder *aluminum*. Also white metal cast iron and most any other known metal.

Do your own repairing on cracked cylinder heads, crank cases, etc., aluminum pots, pans and kettles.

Every household, repair shop, plumber, foundry and electric shop needs *Alumaweld*.

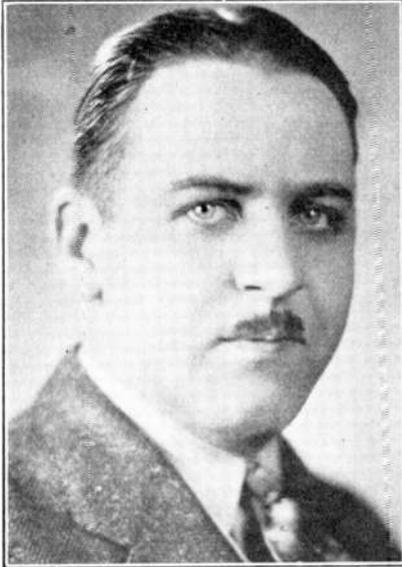
Send 75c for Trial
Package Postpaid.

**Alumaweld Sales
and Service**

112 S. 12th St. Minneapolis
Bridgeport 1602

Ellison Appointed Advertising Head for Sylvania Corp.

The Sylvania division of Hygrade Sylvania corporation, manufacturers of Sylvania radio tubes, announces the appointment of Paul S. Ellison as advertising manager.



Paul S. Ellison

Mr. Ellison, who recently resigned as general advertising manager of the Brunswick Radio corporation is one of the most widely known advertising executives in the industry. His connections with the Brunswick organization extends over a period of four years, as he joined the Brunswick Balke Collender Company in 1926 as general advertising manager.

Previous to his Brunswick connection Mr. Ellison was a member of the advertising staff of the Vacuum Oil company, joining that organization after a period of newspaper and publicity work.

In 1930 Mr. Ellison was appointed chairman of the first advertising committee of the R. M. A., continuing in that capacity until his recent resignation. He has also been prominent in the work of the Association of National Advertisers, having been a member of both the newspaper and the radio committees.

Novel Contest Conducted By Honolulu Dealer

The advertising department of the Grigsby-Grunow Company has recently received a report on an unusual contest conducted by the Johnson Radio and Music Company, of Honolulu, Hawaii, dealers in Majestic products. Newspaper announcements were made offering prizes, including a Majestic Radio and totaling \$200.00 in value, to the persons who arranged and presented in the most forceful manner a jumbled group of words. The group of words is as follows:

TO HEALTH MAJESTIC BOOST
HAPPINESS AND IS PRODUCTS
BOOST TO

The words, when properly rearranged in sentence form read as follows:

"TO BOOST MAJESTIC PRODUCTS IS TO BOOST HEALTH AND HAPPINESS."

WCCO Starts Excavation for New \$200,000 Station

Excavation was started recently on the \$200,000 new building program at the WCCO radio transmitting plant at Anoka. The excavation will be for the basement of the fireproof transmitting building included in the building plans.

Ten acres of additional land have been acquired by the station for erecting new and higher aerials. Bids for the transmitting building already have been let. Plans include installation of a new transmitter of 50,000-watt capacity. The equipment will be delivered here May 15 and installed, ready for use, by the latter part of August.

The new aerials will be 600 feet long with 300-foot masts compared to the old 400-foot aerials 200 feet high. This old equipment either will be sold or left standing as auxiliary equipment. Installation of the new transmitter was planned to give wider coverage and better transmission, officials said.

Beckwith Co. Merges with George A. Clark & Son

The Geo. C. Beckwith Co. and Geo. A. Clark & Son announce a merger of the two distributing firms under the name of Geo. A. Clark & Son, 901 North Third Street, Minneapolis.

Geo. A. Clark & Son, founded in 1879, and the Geo. C. Beckwith Co., founded in 1915, are both well known throughout the Northwest. The combined facilities of these two companies offer dealers a most complete and efficient service.

Under this merged arrangement, Copeland Refrigeration Products, Haag Washing Machines, and Radio Products (to be announced later) will be distributed under the direction of Mr. R. C. Colman, supported by other members of the Geo. C. Beckwith Co., together with the present personnel of Geo. A. Clark & Son. All orders, correspondence and remittances should be addressed to Geo. A. Clark & Son, 901 North Third Street, Minneapolis.

The products of the Philadelphia Storage Battery Co. will be distributed in the future by the Roycraft Co., 1625 Hennepin Ave., Minneapolis.

N. W. Inventors Form Assn. in Minneapolis

The Northwestern Inventors association with headquarters at 405 Tribune Annex, Minneapolis, Minn., is doing fine work among inventors. The association was formed by inventors from the Northwest and is incorporated under the laws of Minnesota.

The association acts as a clearinghouse for ideas, models, patterns etc., and makes conscious effort to connect its members with responsible manufacturers, distributors, and financial aid. No commissions or brokerage fees are charged.

Members have permanent exhibit rooms where models and drawings are kept on display at all times. Club rooms and the fellowship and experience of hundreds of other inventors are some of the attractions of the association.

Inventors have long been working against a handicap. Lack of knowledge as to the proper procedure, lack of means to make reliable contacts and lack of organization have all been drawbacks to the bringing out of hundreds of good ideas.

It is help from reliable and legal sources that the Northwestern Inventors association offers its members.

French Tariff Restrictions Raised

In response to many appeals from R. M. A. members and also American radio jobbers in Paris against the recent French tariff decree placing a severe quota on American radio imports, the French government, according to late reports, has modified the tariff decree and increased the American import quota about 30 per cent. This followed the R. M. A. protest to the United States State Department and representations to the French government by American Ambassador Edge in Paris, together with similar protests from American jobbers and the American Chamber of Commerce in Paris.

Jobbers and Dealers—Draw from Our RADIO REPLACEMENT STOCK

ELECTRAD PRODUCTS

Graphite and wire wound volume controls \$1.00 list. A complete stock for all sets. Truvolt sliding tap resistors, etc.

DUBILIER CONDENSERS

Filter, By Pass, Uncased, Tubular, Dry Electrolytic, and Moulded Mica. New Low Prices.

AEROVOX CONDENSERS

POLYMET CONDENSERS

ACME WIRE

EBY SOCKETS

CLAROSTAT PRODUCTS

Wire wound volume controls—Line Bal-lasts, automatic line voltage controls, panel and portable tone controls.

HOOKUP WIRE

FRANKLIN POWER TRANSFORMERS

Same day service on power transformers for any set

OHIO CARBON COMPANY

Pigtail Resistors.

I R C RESISTORS AND MANUALS

DAYRAD & JEWELL TEST APPARATUS

RIDER'S PERPETUAL SERVICE MANUALS

1932 Edition—also supplements

Rider's Servicing Super-Heterodyne

EVEREADY TUBES

IRC TUBES

A real tube—3-volt tubes for Spartons carried in stock. Ask about new mercury rectifier 280.

Complete Stock of Aerial Equipment at Lowest Prices in Northwest.

THE LEW BONN CO.

Complete Stock of Aerial Equipment at Prices That Are Right.

REX L. MUNGER, Sales Engineer

Write Us for Special Jobbers Offer

2504 UNIVERSITY AVE.

MIDWAY 1961

ST. PAUL, MINN.

WRITE US FOR CATALOG

BUY THE ADVERTISED LINES

Plan Service to Stop Radio Noises

Trained Men to Chase Down "Man-Made Static"

The eyes of the radio listener, radio manufacturer, dealer and jobber are centered on the work of the Tobe Deutschmann Corporation of Canton, Mass., who have been pioneering in this new business of the elimination of man-made static. Little does the public know of the vast amount of research and development work which has been going on in that Canton plant so that Mr. Radio Listener would be able to better enjoy the radio programs. At a time when no one thought of the problem of radio interference as amounting to anything at all, Tobe Deutschmann, head of the Tobe Deutschmann Corporation, quietly and systematically was gathering about him engineers to wage this battle. The work has commanded the respect of the entire nation.

"Static, the enemy of good reception, is not necessarily the result of thunder-storms, but may be coming from your next door," says Mr. Deutschmann.

"In fact, most of us are harboring potential manufacturers of static right in our own homes. A modern electrical radio receiver now gets its current from the power lines. This same power line, in turn, acts as an antenna and produces the noise—far and wide. This would be discouraging enough if nothing could be done about it, but it is an established fact that electrical equipment which creates radio interference can be quickly and inexpensively filterized so as to stop the static right where it is born and peace and quiet will come once more to your radio.

"The Radio Manufacturers' Association, together with the National Electrical Manufacturers' Association have started to go after this problem with vigor. Plan is now under way to engage the services of many thousand service stations, men who will be trained by the Tobe Deutschmann Corporation school.

"These men will be appointed in districts in proportion to one man for every 10,000 inhabitants. These men will receive a course of training from Tobe Deutschmann Corporation, and radio interference complaints as received by such companies as Philco, RCA Victor, Atwater Kent, Stromberg Carlson, Zenith and other radio manufacturers will be sent to them.

"These service stations will call on radio listeners and correct each case of interference if it is in his power to do so. In many cases these men will find that the interference complaint can be traced down to faulty appliances, connections, defective tubes or loose wiring."

TELEVISION USED

William Hoyt Peck, inventor of the new big image television receiver being demonstrated at the Hotel St. Moritz, has shown how his apparatus can be used for transmitting permanent records of photographs and documents. To do this, the screen is replaced with a piece of photograph film, which is given the correct exposure, and is then developed and printed in the regular way.

RCA Victor Three Profits Campaign

"Radisco has just launched the Three Profits Campaign which was developed to direct the attention of the public and our dealers, specifically to RCA Victor Radio Phonograph Combinations, because we believe that RCA Victor Combinations can easily be sold if they are properly advertised and demonstrated. There is certainly no argument about the advantages of selling higher-priced merchandise, and we feel certain that this Three Profits Campaign will provide a healthy stimulus to Victor dealers."

Mr. Max H. Krich, president of the Radio Distributing Corporation, further remarked that, "The Public and the dealers, today, are demanding something new. We believe that RCA Victor Long Playing Phonographs, particularly those with Home Recording, offer this novelty. Therefore, if the public is told about them, it can be sold.

The public does not appreciate and seems to have little knowledge of the really great advances that have been made in the art of

electrical recording and reproduction of phonograph records. Most people seem to think of a phonograph as one of the old hand-wind mechanical type victrolas. It has been observed again and again that when they are given an actual demonstration of the great improvements that have taken place in the last few years, they are absolutely astounded, and many are very easily persuaded to pay the additional sum required for a combination as versus a straight radio. Further, Home Recording appeals to every one in a way that is almost irresistible.

With these thoughts in mind, we have developed the Three Profits Campaign which is now being presented to our dealer by our representatives, and which is being acclaimed by those dealers who have already been presented this campaign, as the most constructive step made by any manufacturer in increasing the higher price sale and the resultant larger profit ensuing from the sale of combinations paved with Victor's 30 years reputation as the standard of quality."

Radio Legislation Pending

A record-breaking volume of legislation affecting radio is reported from Washington. Never before in the history of radio has so much legislation been proposed on matters affecting manufacturers as well as broadcasters and other radio interests. In addition to the proposed special sales tax on radio, there have been many bills and resolutions introduced. In February hearings were begun by House Committees on general patent law revision and also on copyright revision. Important interests of radio manufacturers in these and many other proposals in Congress are being guarded by the R. M. A. Legislative Committee, of which Mr. H. B. Richmond of Cambridge, Mass., is chairman. On the ground in Washington is Frank D. Scott, legislative counsel of the association.

Legislatures of eight states also are now in session but with little radio legislation so far proposed. The State Legislative Committee of the R. M. A. is being reorganized by Chairman Richmond to follow and conserve the interests of R. M. A. members in state and municipal legislative matters. Influence of the R. M. A. also is being exerted on broadcasting problems which affect the interests of manufacturers, jobbers and dealers.

Movements and legislation to permit resale price fixing and modification of the anti-trust laws prohibiting control of production are being followed closely, in cooperation by the R. M. A. with other trade associations.

MR. INVENTOR—

- Have you an idea?
- Are you up a tree with it?
- Do you lack financial aid?
- Are you at a loss just how to proceed?
- Do you need distribution help?

YOUR ASSOCIATION CAN AND WILL HELP YOU

Northwestern Inventors Assn., Inc.,
405-6-7 Tribune Annex,
Minneapolis, Minn.

I apply for an annual membership in your association and enclose my check to cover.

Inventor Member \$3.00

Name.....

Address.....

City.....

Remarks.....

Let us solve your problems at no cost to you other than your annual dues, \$3.00.

No Commissions.
No Brokerage Fees.

Northwestern Inventors Association, Inc.
405-6-7 Tribune Annex
MINNEAPOLIS, MINNESOTA

BUY THE ADVERTISED LINES

WHERE

ZENITH

RADIO SETS
Distributed by
STERLING ELECTRIC CO.
MINNEAPOLIS
Distributors for RCA Tubes
Burgess Batteries, etc.

ATWATER KENT RADIO

Northwest Distributors

Reinhard Brothers Co.
Minneapolis, Minn.

Dealers: Write for Exclusive Territory

Announcing a Distinctive
24-Hour Service on

Transformer Rewinding

Call or Write for Prices
or better yet. Send one in and
let us show what we can do.

**Burrows Radio Service
Company**
2948 Seventeenth Ave. So.
Dupont 3418 Minneapolis

PHILCO RADIO

Leading Lines of Accessories

Distributed by
GEORGE C. BECKWITH CO.
Minneapolis, Minn. Milwaukee, Wis.
 Fargo, N. D. Butte, Mont.

TO BUY

CLARION RADIO

Distributed by
The Williams Hardware Co.
Distributors Minneapolis

PATENTS and TRADEMARKS

Protect your inventive ideas. Prompt,
Expert Personal Service. Write for
full information.

LESTER L. SARGENT

Registered Patent Attorney
1115 K St. N. W. WASHINGTON, D. C.

Paley Group Buys All Columbia System Stock

Complete ownership of the Columbia Broadcasting System passed into the hands of interests headed by William S. Paley, president of the chain, with the announcement last month of the repurchase of 50 per cent of the stock held by the Paramount Public corporation.

Announcement of the completion of the deal, which had been rumored in Wall street for a week or more, stated "this step brings the ownership of the broadcasting system completely into the hands of Mr. Paley and his management with no other interests represented external to the company."

The amount involved was not made public, but Wall street understood it was close to \$5,500,000, part represented by cash and part by an unpaid sum due this year on the original stock purchase.

The statement, however, pointed out that "the participations are for private investment with no public offering contemplated."

Appeals Court Decision

The Radio Corporation of America issued recently the following statement:

The United States Circuit Court of Appeals of the Third Circuit today handed down a decision in the case of Dubilier v. Radio Corporation of America, which related to patents on radio sets employing A.C. current. The patents were Lowell and Dunmore 1455141, which related to the use of hum reducing means in A.C. sets, and Dunmore 1635117, which related to the use of rectified A.C. current for procuring negative grid bias.

The Dubilier Company contended that all sets operating on A.C. current and not licensed under these patents were infringements. Suits have been pending for several years against the Radio Corporation of America alleging infringement of these patents. All patent claims in suit held invalid by the United States Circuit Court of Appeals, which ordered the suits dismissed, reversing the decision of the lower court.

St. Louis R. T. A. Elects New Officers, Directors

The annual election of officers of the St. Louis Radio Trades Association was held March 23.

The new board of directors met for the first time and selected as their leaders for the coming year the following men, all of whom are directors, Julian E. Sampson, President, Otto E. Heilmann, First Vice President, Daniel F. Hyland, Second Vice President, Otto A. Buder, Third Vice President and Robert L. Morton, Jr., Secretary-Treasurer.

The retiring directors were presented with testimonial tokens in the form of beautifully engraved solid brass humidors. The men receiving these tokens were George F. Gaertner, John C. Schmitt and O. C. McCann. A special presentation of a humidor was made to the Retiring President, Fred A. Wiebe. A special presentation of a golf bag and a complete set of clubs was made to Walter A. "Hap" Ward, who had served as a Director of the Association during the past seven years, having been one of the founding members and first directors in 1925.

R. M. A. Engineering Division Plans Extreme Projects for 1932

A comprehensive program of work for the R. M. A. Engineering Division, expanding activities, aiding manufacturers in standardization, automotive radio and other projects, has been adopted. A conference of engineering sub-committee chairmen was held by Dr. C. E. Brigham, of Newark, N. J., chief of the association's engineering division, at the Hotel New Yorker in New York. Many useful recommendations, recommended practices and engineering information for R. M. A. members were planned and will be effected before the association's annual membership meeting in Chicago next month.

Cooperation with the Canadian R. M. A. has been developed by Director Brigham.

Mr. H. E. Mott, director of the engineering division of the Canadian association, attended the meeting in New York and efforts to coordinate work on various problems between the American and Canadian organization are being effected. Organization and working rules of the standard section, of which Mr. Virgil M. Graham of Rochester, New York, is chairman, have been developed and approved by the engineering division and R. M. A. board of directors. These will facilitate many engineering enterprises.

In the development of motorcar radio, the R. M. A. engineering division is planning to cooperate with the Society of Automotive Engineers. The growing popularity of

motorcar radio and engineering problems in its development make coordinated action between automotive and radio engineers desirable.

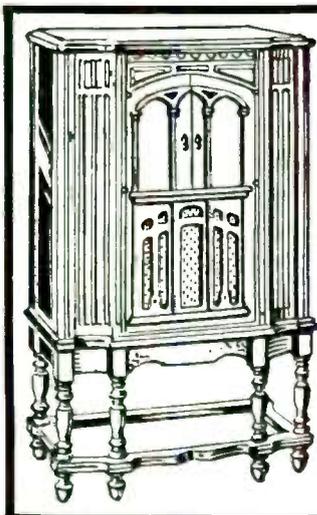
Several meetings of the engineering sub-committees have been held and are projected. There was a joint meeting in New York of the tube and receiving set standards committees. Roger M. Wise of Emporium, Pa., is chairman of the tube committee, and Mr. A. Crossley of South Haven, Mich., chairman of the committee on receivers. Standardization and reduction in number of standard tubes and special problems regarding tubes for motorcar radio were discussed.

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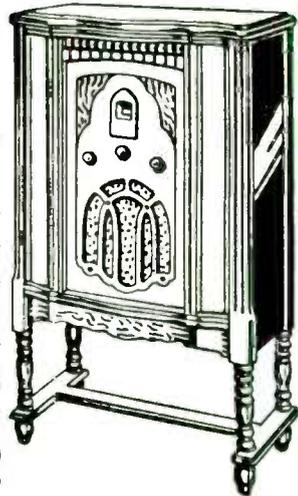
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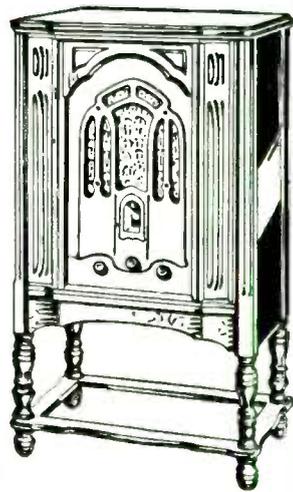
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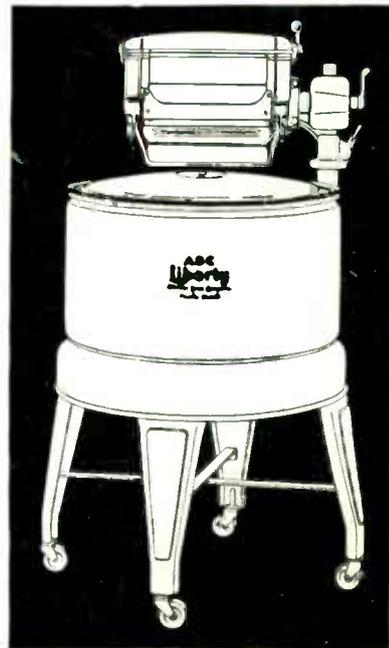
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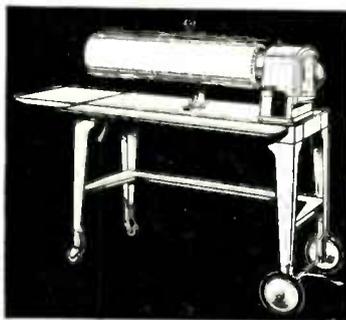
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