

WLW



WSAI

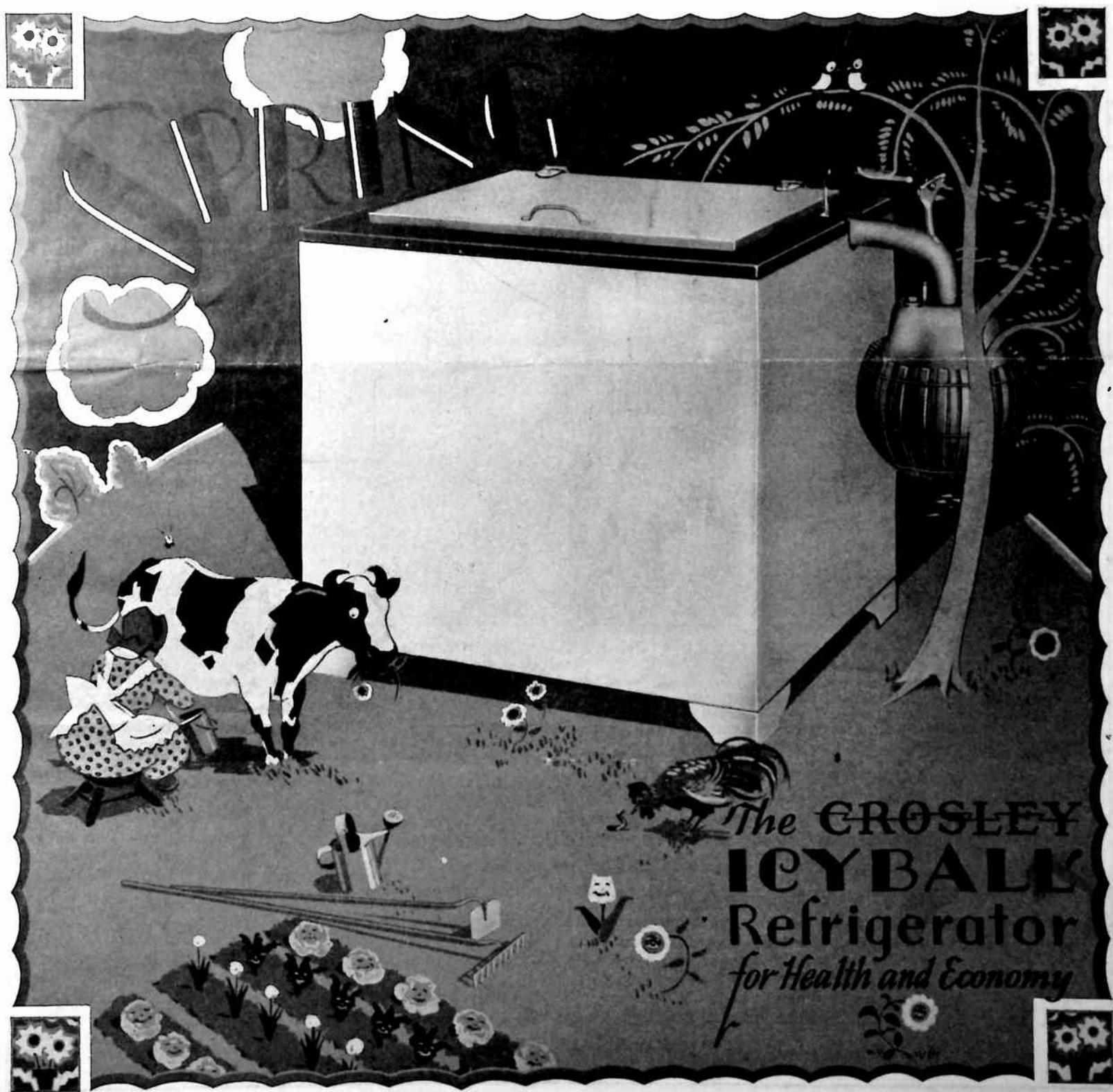
The CROSLEY

Broadcaster

VOL. VIII.

MARCH 15, 1929

NO. 6.



The CROSLEY
ICYBALL
 Refrigerator
for Health and Economy

FINDLAY meets with unprecedented SUCCESS



Findlay Crosley
No. 3/J, Loboy

Height overall—41 inches

Dealers everywhere are showing their approval of the New Findlay Radio Console—Built for true dynamic reception. Designed by artists, following the recommendations of radio engineers, the Findlay Console is not only a thing of beauty but a radio console of sound construction. Fine walnut finish and genuine bronze ornaments add attractiveness to the numerous other exclusive Findlay features. Special baffle construction is easily recognized at a demonstration . . . the very lowest notes that are usually lost, are brought from the depths to charm your ears. This is the latest in radio furniture.

Installation is very simple—place a table model in the set compartment, push forward until dials protrude through front panel. Installation is then completed.

No. 3-J Loboy will sell with Gembox and Dynacone for \$115.00 without tubes.

Other combinations with Showbox and Jewelbox proportionately higher, or give price of each combination.

Send for photographs—ask your Crosley Distributor—don't miss the FINDLAY line designed especially for Crosley Dealers.

Order from your jobber NOW!

THE ROBT. FINDLAY MFG. CO., BROOKLYN, N. Y.

Builders of Fine Radio Furniture for True Dynamic Radio Reception

FINDLAY

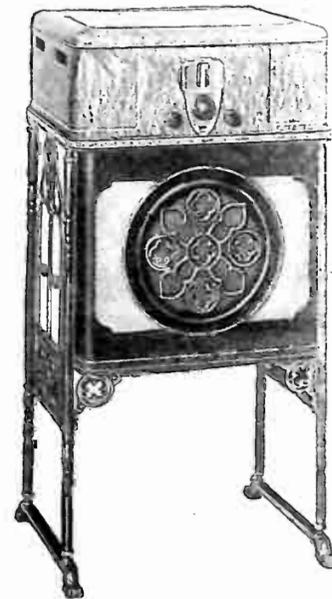
Radio Consoles
and
Console-Grands

Designed Exclusively for
CROSLY
GEMBOX •• JEWELBOX
SHOWBOX

Illustrated below is the new Console-Grand by Findlay for Crosley models in a new white gold finish. Speaker is hidden behind Gothic White Gold and Ebony finished panel. Supplied with Crosley Dynacone.

No. 171-4D with Dynacone for Jewelbox—\$44.00, List

No. 171-6D with Dynacone for Showbox—\$42.50 List



Height overall—36 inches

Findlay's New Loboy Console

The Robert Findlay Mfg. Co. have produced a new metal console called the LOBOY which takes either the Jewelbox, the new Gembox or the Showbox. It comes already outfitted with the Dynacone Power Speaker.

The new Findlay LOBOY is a masterpiece of craftsmanship. The exterior is a marvelous reproduction on metal of walnut burl. It retains the full richness and depth of walnut itself, with the added advantages of metal. Its design is simple and tasteful. The console is a replica of a rare antique cabinet now in the Metropolitan Museum.

The Dynacone grille was copied from the rose window of the Harkness Memorial at Yale College, Hartford. This grille has been beautifully executed in golden bronze by the Findlay Mfg. Company.

Assuring Daylight Reception

We have a letter from a Louisiana dealer, Mr. H. L. Isaminger, of Sellers, La., telling us how he guarantees good reception from WLW during daylight hours: "Our radio reception in southern Louisiana is none too good at any time of the year and distant daylight reception isn't much on the best sets made. On the Showbox, I am able to get WLW loud and clear at 12 o'clock noon by using an ordinary frequency coil hooked in series with my antenna. I use the secondary winding tapped at 10 equal spaces. This is necessary in changing from high to low wave lengths, as too many turns of wire in the lower wave lengths will choke the volume. On every Showbox I have tried it on, it will increase the volume fifty percent; it also pleases my customers very much when I show them how to use it after they have used their set for a few days without it."

Increasing Merola Possibilities

Each improvement in the tone quality of sets means better sales possibilities for the Crosley Merola.

When the Merola was first introduced on the market it immediately won popularity, because it made possible a quality of phonograph reproduction unattainable before, except with the finest of modern phonographs. Simply a phonograph turntable to turn the records, the Merola pick-up, and a radio set made as fine a phonograph combination as could be purchased.

That was several years ago. In the meantime many improvements have been made in radio sets. Audio systems have been redesigned, power tubes almost universally adapted, and, all-around quality of reproduction notably improved. This has opened the possibility of even better phonograph reproduction with the Merola.

In the Crosley line, for instance, the new Model 804 Jewelbox represents the latest developments of radio engineering. By means of a carefully designed audio system quality reproduction has been obtained exceeding that found in sets previously offered to the public. The Merola used in combination with this set makes an ideal phonograph reproducer, giving reproduction superior even to that heretofore obtainable with the Merola unit.

The radio art is steadily advancing and each improvement means the potential possibility of better phonograph reproduction. Let your slogan be: "Better sets mean more Merola sales."

Radio Achieves Stabilization in Brief History

Major Hahn of Amrad Gives Harvard Business School a Picture of Radio Growth

By Major James E. Hahn, President of the Amrad Corporation

The history of the radio industry in the United States was outlined by Major Hahn, president of the Amrad Corporation, Medford Hillside, Mass., in a recent speech delivered before the Harvard Business School of Harvard University.

Major Hahn gave a vivid recital of the emergence of the radio industry from its inception in 1922—when problems and difficulties of all sorts confronted the manufacturer—to its present stable condition.

There were, Major Hahn told his audience, seven hundred manufacturers who entered the radio field in 1922. Some of these were acquainted with the technicalities of radio but ignorant of merchandising methods. Others possessed an intimate knowledge of business tactics but were unenlightened in technical matters. None had past radio experience. Experiments and errors had to be made before clear-cut policies could be formulated.

Major Hahn gave an exposition of each major problem these pioneers faced. There was the problem of patents which many manufacturers neglected, to their eventual loss. There was the problem of retail outlets—the type of stores which should sell this new product. Market consumption could not be even reasonably approximated. Obstacles in production, engineering, design and the like presented seemingly unsurmountable barriers.

"I might compare the industry," Major Hahn said, "or the tendency toward stabilization, with the swinging of a pendulum. Seven or eight years ago the pendulum was swinging very wide from the center. Each year that has narrowed down to the steady swing of today. Today the industry is strong, has had experience, knows what it is doing, knows where it is heading, and has solved what years ago were very perplexing problems. Each year it has become easier to solve problems because the year before we had partial solutions. The result today is an industry functioning with a fairly flat curve compared to years ago."

"We are in production now approximately ten or eleven months of the year instead of four or five months. We are operating at a profit. Several radio receivers have been acceptable to the public and they are buying radio merchandise throughout the year."

Service Bulletin

Adjusting and Neutralizing the Gembox and Gemchest

All circuits involving the neutrodyne method of balancing of tuned radio frequency receivers must take into account the fact that there is a variation in the characteristics of vacuum tubes. In the Crosley Showbox, Jewelbox, and Bandbox models, the method of balancing is by means of small adjustable condensers.

It is generally known that the balancing of the set has much to do with the amplification gain. All Crosley radio sets are balanced in the factory, using tubes carefully selected and frequently checked, having average standard characteristics. Every serviceman knows that it is occasionally necessary to re-balance any set using the neutrodyne circuit in case the particular tubes used in that set are somewhat off of the average standard.

The new Crosley Gembox does not have the small variable neutralizing condensers. It utilizes what is known as the grid-to-grid method of balancing. The balance of this set depends largely upon the critical angle of the radio frequency coils or transformers. They are accurately adjusted in the factory for average standard tubes, just as are the other Crosley models, and as a general rule these sets will function perfectly with the average tubes with which they are equipped in the field.

However, if any set tends to oscillate with the tubes with which it is equipped in the field, or if the set seems to be lacking in sensitivity, the method of adjusting the set is extremely simple to adapt it to the tubes with which it is to be used. Simply remove the lid when the set is in operation; change the coil angle by slightly raising or lowering the top of the radio frequency coils; replace the lid; turn the dial throughout its entire range. If it oscillates at any spot, remove the lid and again change the

coil slightly in the opposite direction.

A sensitivity test may then be made by tuning to a weak signal and adjusting the coil or coils until the loudest signal may be had. With the lid again replaced, again test to see if there is any point on the dial where the set oscillates. In other words, get the maximum volume without oscillation. The movement of the coil is only very slight—probably not a variation of over one-sixteenth to one-eighth of an inch.

The most critical coil in this balancing operation is the first coil in the front of the set. The second coil is far less critical and it is seldom necessary to touch the third coil. This balancing operation is required no more frequently than is required in any condenser balanced neutrodyne circuit. Probably the large majority of sets that you receive from the factory will require no balancing, but for those comparatively rare cases where re-balancing is necessary, the above is the method of doing it.

This method is far more simple than the method of balancing by means of the condensers. It requires no tools—simply a slight bending of the coil angle by means of the fingers.

The same method outlined above can be used in adjusting the coils in the Gemchest except that it is unnecessary to remove and replace the lid.

Of course, it is needless to tell you that this affects only the three radio frequency tubes. Some times the same result can be obtained by shifting the tubes in the set.

Wherever a set is lacking in volume or sensitivity, or if an occasional set is found that oscillates, this simple method of adjusting as outlined above will work wonders. The sensitivity can be increased tremendously and any objectionable oscillations completely eliminated.



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 Manufacturers of Radio Apparatus
 Colerain & Sassafras Streets
 CINCINNATI
 Telephone: Kirby 3200
 Editor: Eugene Deaderick

Crosley manufactures radio sets for radio amateur, experimental, and broadcast reception use, under patents of the Radio Corporation of America and Associated Companies, The Hazeltine Corporation, and the Latour Corporation.

All prices quoted in the Broadcaster are Eastern prices. Western prices are slightly higher.



This is your paper. Help make it interesting by sending in contributions. Material sent in is most welcome. Comments of every description will be appreciated. Let's all pull together.

John Wanamaker's Rules for Failure

An unsuccessful man does not have to look far for the cause of his trouble. It is generally in himself. It may be any one of these dozen little things.

1. He forgets that his worth is manifest by what he produces in management or sales.
2. He finds excuses for not doing instead of finding ways to do what should be done.
3. The world goes ahead in almost every direction, and he keeps on the humdrum turnpike, where somebody will have to pay the tolls.
4. He is not observant, accurate or thoughtful.
5. He is sailing by the broken compass of chance.
6. He flatters himself by comparing himself in his own mirror instead of with others that have passed him in the race.
7. He thinks nobody notices that he has fallen behind.
8. He does not love his work as he used to and therefore his enthusiasms have been lost.
9. He puts off too many things until tomorrow.
10. He is unconscious of being much of his time and lets the days go by lacking results he could have obtained.
11. His lack of thoroughness blocks his leadership.
12. However honorable, he fails to realize that his example affects others.

—From the Lamp Merchant.

Back up your Crosley Icyball sales by educational service to your customers.

Crosley Icyball School

Instructions in Refrigeration Increase Icyball Salesmanship

Since the first of the year the Crosley Radio Corporation has been conducting an Icyball School at Plant No. 3, Cincinnati, where the Icyball refrigerators are manufactured.



Icyball School In Session

This school was put to its first use in instructing all the Crosley salesmen in the operation of the Icyball. The course occupies but two days and is very thorough. Each man taking instruction puts five Icyball outfits through their complete cycles, performing every stage of the operation. In addition, blackboard talks are given by R. T. Smith, who is in charge of the school, and his assistant Geo. R. Bell.

After a man has finished the course he knows the Icyball. He has done the actual work, he has heard all its principles explained, he has been examined and tested to make certain that his knowledge is practical and sound.

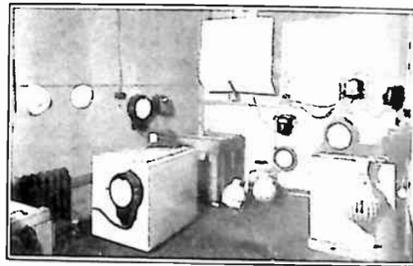
The men who have taken this course have one and all been enthusiastic about it. It peeps them up to have such definite instruction and to learn the practical side of the work. As the school is located in the plant where the Icyball is made, he becomes acquainted at first-hand with every detail of its manufacture.

After the Crosley salesmen had all finished the Icyball course, the school was opened to the

Distributors and their salesmen. A number of the latter are constantly going through the school. Only three men take the course at one time, so that instruction may be individual and complete.

By special arrangement, a few Crosley dealers have gone through the Icyball School. These men are given permission ahead of time and assigned a period when they will receive the instruction. They come to Cincinnati at their own expense and maintain themselves for the two-day period required. Those who have made this effort, emphatically declare it was worth both time and money.

The Icyball School will be continued so long as the need for this work is evident. The more education there is among salesmen and dealers on the Icyball Refrigerator the sounder their salesmanship. A man who knows his product finds it easy to sell.



Test Room Used In School

If a Crosley authorized dealer wishes to go through the Icyball School on the terms outlined above—there is no charge whatever for tuition—and will make application to Mr. Neil Bauer, Crosley Radio Corporation, Cincinnati, arrangements will be completed whereby he may receive this splendid course of instruction.

What Suggestions Have You?

Open Forum for Practical Dealer Suggestions and Contributions

From time to time some very practical hints are sent in to the BROADCASTER on dealer operation. As a rule these come from the Crosley dealers themselves and are the outgrowth of their personal experience. Sometimes the salesmen send us some sound dealer suggestions.

We'd like to keep a steady stream of this matter coming to the BROADCASTER so that all Crosley authorized dealers may benefit. Our field is so vast and experiences of our dealers are so varied, that we feel that information of this character should be made general.

We have here a suggestion from one of our own salesmen, W. L. Sayre. Mr. Sayre advises Crosley dealers to make use of a tag system to keep track of sets out on demonstration.

A system such as Mr. Sayre suggests is very simple. It consists of small tags. Each tag is intended to be filled out with the name of the dealer's salesman who has taken a set out of the shop to be demonstrated, the name and address of the prospect, the kind of set, and additional remarks.

When a set is taken out such a tag would be filled out and hung on a board somewhat along the lines here illustrated. When the set is sold or returned, the tag is removed from the board. At a glance, the dealer or the radio manager can determine where each set is placed, how many are out and for how long, sets most in demand, and the salesmen responsible. Such tags make a history for each set, showing how many times each set has been out, and furnishes a check on salesmen's efforts.

With the Stabilizer you can get 20% better performance from an Icyball unit.

"Top O' the Morning"

WLW's Dawn Program Nets Hundreds of Crosley Icyball Inquiries

Are there Icyball inquiries? They're coming by the hundreds, several hundred each week, in response to the early morning program over WLW, called the "Top o' the Morning" program.

Every morning at 6:30, Eastern Standard Time, WLW starts the day for thousands of interested listeners in all parts of the country. Right off the bat, they get the correct time. Shaving operations can and are scheduled according to the "Top o' the Morning" time announcements. That extra cup of coffee is often made possible by the reassuring news that there are three minutes more to go, before the dash for the suburban train.

Farmers get this program. It isn't early for them. Often they are all through milking before WLW comes on the air with its first cheerful greeting.

Way out on the blue Pacific, sailors standing the "dog watch" get through the sad hours before dawn breaks, with the encouragement from the "Top o' the Morning."

The coverage of the "Top o' the Morning" hour on WLW is enormous.

At that hour there is next to no competition and the air is clear. Result, the Icyball has become a familiar breakfast idea for thousands. Further result, thousands of inquiries about the Icyball.

Answering Icyball Inquiries.

Letters are coming in by the batch. Each letter is individually answered. People writing for information about the Crosley Icyball get a letter telling them that it may be seen at their Crosley authorized dealer, and the name of the nearest dealer is given them.

With each letter is enclosed a copy of Icyball folder No. 920, which illustrates and describes the standard single unit, and also shows a double unit Icyball.

Keep Icyball Unit in Operation!

Be prepared to handle these inquiries. They're live; these people want Icyball information. They want to see how an Icyball works!

If you have an Icyball unit in continuous operation in your store, you are ready to give a demonstration and selling talk any time a prospect comes in to see you.

The merchandising value of the "Top o' the Morning" is tremendous. Interest is kept up,

Fayetteville, Mo.,
 February 10, 1929.

The Crosley Radio Corp.,
 Cincinnati.

Dear Sirs:

Top of the morning and night to you. I have a Crosley radio; it is very good, of course. Best of all, I bought an Icyball last year. Now I can't say enough for it. It is a grand invention, I recommend it through the country and town. It costs but very little to operate and a six-year-old child can do that.

The saving of foods is no less than \$1.50 a day, and the cost about 3 cents a day. These are facts. Wouldn't give up mine for \$500, and I don't mean maybe.

I certainly enjoy your programs, night and morning. Hoping you have a good year with the Icyball,

Joe B. Tallman,
 Fayetteville, Tenn.

the subject of refrigeration is a live issue, and the possibilities of economy, health and increased use of chilled foods daily put before the rural public.

This is Icyball Season.

Now is the time to get going on the Crosley Icyball. Spring is just around the corner. The need for home and farm refrigeration will be urgent almost immediately.

If you haven't a Crosley Icyball ready to hand for demonstration purposes, place an order for at least one with your Distributor at once. The time to do this is now.

If you haven't already felt the influence of the many thousands of Icyball inquiries which have been answered from our office and which are live leads for you, you will very shortly. "Top o' the Morning" programs are going right on, daily. We are pounding the message of Crosley refrigeration into the minds of the very ones interested, every morning when people are fresh, receptive and willing to listen!

What an Icyball Program Is!

In addition to frequent time announcements, and little talks about the Icyball interspersed through the hour, the "Top o' the Morning" program is an hour of genuine value and entertainment.

There are small talks giving the latest weather reports. Farm reports are read. Before each talk a recorded musical number is played. Short but very fine farm talks are read; these are secured through the Department of Agriculture at Washington and are filled with authoritative information for farmers, breeders and dairymen. Special features are introduced from time to time.

Demonstrations Make Sales.

First and foremost, a prospect needs to know how to run the Icyball. The best way to convince a prospect is to explain the Icyball to him while it is in operation. Let him see for himself that it is not only making ice but maintaining a low, even temperature inside the box and keeping milk, vegetables, etc., suitably chilled. When he sees that the Crosley method of refrigeration is easy to operate, is simple to handle, and that it provides reliable refrigeration at low cost, that man is a prospect all ready for closing!

Across the Equator!

Sixteen trips across the equator! That will be the number to the credit of Charles J. Hopkins, manager of the Foreign Department of the Crosley Radio Corporation, when he returns to the United States at the end of his present trip to South America.

Mr. Hopkins sailed from New York on March 9th on the S. S. Southern Cross. He will visit the Crosley distributors in Brazil and Argentina. He will call on Mestre and Blantje in Rio de Janeiro, and Casa Record in Sao Paulo. He will be but six days in Brazil. During a ten-day stay in the Argentine Mr. Hopkins will hold business conferences with the executives of the firm of H. J. Chillibroste and Co., in Buenos Aires, and with Smith and Kirkwood in Rosario. He expects to return to Cincinnati in April, 1929.

TALKS TO THE TRADE

The radio business is going so well that many of our dealers have overlooked the fundamental reason which prompted us to introduce the Crosley Icyball Refrigerator and develop a market for it.

Some years ago radio was a seasonable proposition. During the winter months dealers could not get enough sets but in the early Spring the business dropped off. The dealer's problem was to exist during the Spring, Summer and early Fall. The same condition was true with the manufacturer.

We made a careful study of the radio dealer situation and also of the field nationally, to see what needed product would be seasonable conversely to the radio season. The result of this investigation brought forth the Crosley Icyball Refrigerator.

Our problem during the past two years has been that of holding back the enthusiasm of our jobbers and dealers. First, because we wished to study the market as well as our product, and second, because our facilities were not then adequate for producing the Icyball in quantities.

Prior to January 1st, 1928, we placed about fifteen hundred Icyball Refrigerators in the field. As a result of this study we were able to release the Crosley Icyball for general distribution the first of 1928. Since that time twenty-two thousand have been placed in the homes of customers. They are well pleased with the results gained from use of the Icyball and enthusiastic in their praise of its low cost of operation and efficient refrigeration.

During the last few months our laboratories have perfected the Stabilizer, which greatly improves the efficiency of the Icyball in very hot climates. This Stabilizer will result in a much greater sale in territories where extremely hot weather is the rule because it permits even temperature for a full cycle.

This year we are prepared to do a tremendous business. We have already started our advertising and merchandising helps.

We wish to bring out forcibly the fact that, though your radio business is still going strong, this does not mean not to get actively behind the Crosley Icyball. Remember that it takes a certain amount of business to meet overhead and above this point, every bit of added business means added profit. Therefore if the present demand for radio taxes your facilities, put on additional men to sell the Crosley Icyball Refrigerator. Lay your promotional plans to get a real volume of Icyball business this year.

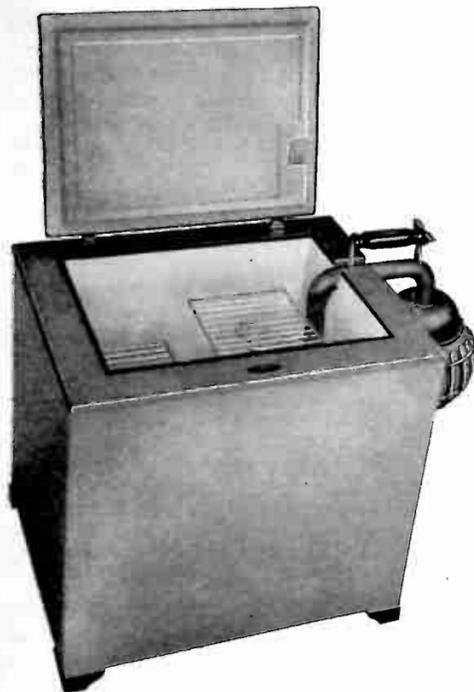
Regardless of how well your radio business is going, returns from the Crosley Icyball will be profits. Since profit is the incentive to all business, it is unnecessary for me to urge you to consider this seriously and act accordingly. Put your sample of the Crosley Icyball on your floor and keep it operating for demonstration purposes.

Paul Crosley Jr.

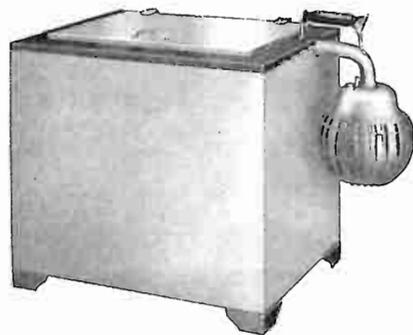
CROSLY ICYBALL READY FOR SPRING

The Spring and Summer Season Finds the Icyball Line Ready for Efficient Refrigeration Service Everywhere

IT'S Spring in the North, in spite of the fact they're thinking of second crops in the far South. The Icyball is ready to give greater refrigeration service than ever! Cool desserts and frosted drinks—soft, of course—become imperative, and the Crosley Icyball makes it possible to have them, no matter how remote from an ice plant! And as fresh vegetables come in and hens cackle furiously over the new-laid eggs they are supplying in such noble quantity, the cool interior of the Icyball is waiting to receive them and keep them in their crisp, fresh condition. Milk and cream and butter, lifted chilled and appetizing from the Icyball, make you say to yourself that country life, plus a Crosley Icyball, is not so bad!



Icyball Model No. 151 is the standard single unit refrigerator, shipped complete with stabilizer.



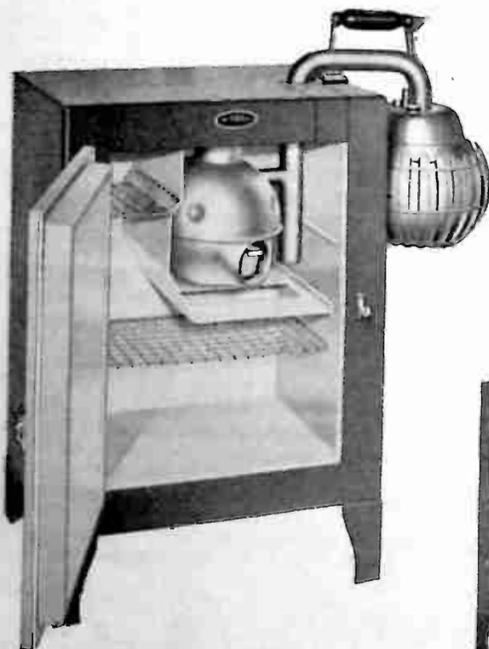
No. 151



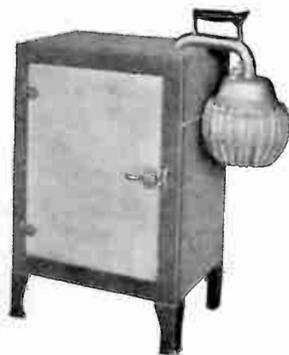
The interior of an Icyball is clean, sanitary, inviting. It makes an ideal receptacle for pure, nourishing food.

Apartment Type Cabinet

Crosley Icyball Model No. 153 is a single-unit, upright cabinet. Unusually attractive piece for kitchen or pantry with its glossy finish of gray enamel and green lacquer trim. No. 153 is designed to supplement Model No. 151, the flat-top single unit Icyball Refrigerator. Its shape and size adapt it for use in small homes.



No. 153. Apartment Type.



The Icyball Stabilizers

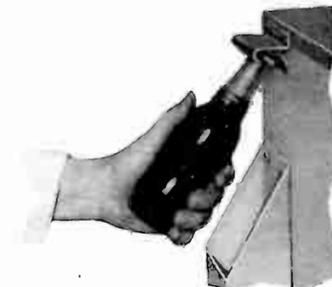
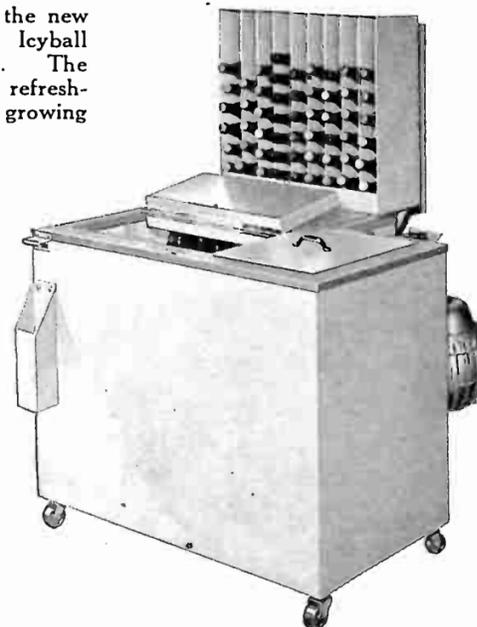
Above is shown a Stabilizer with an Icyball unit resting in its proper position in it. The use of a Stabilizer in the Crosley Icyball Refrigerator increases the refrigerating efficiency of the unit. This simple device maintains a long cycle of even, cold temperature within the cabinet. There are two styles of Stabilizers, No. 154 for Icyball units not equipped at the factory with stabilizers. No. 155 is for the Icyball units as now designed. The only change is a slight modification of structure. The principle is the same. The Stabilizer calls for the use of a liquid content, 11-lbs water and 3-lbs of commercial glycerine or Prestone. Stabilizer No. 154 is sold separately at \$5.00 each.



ICYBALL COOLERS OPEN UP NEW FIELD

Cold Drink Business Opens Out Tremendous Possibilities for Expansion of Crosley Icyball Refrigerator Sales

WITH the introduction of the new cooler models, potential Icyball sales are very greatly increased. The country is dotted with roadside refreshment stands to take care of the growing numbers of tourists. Cold drinks are the favorite call at these stands. And when we say cold, cold is what we mean! So here you have Icyball Model No. 157 which is dignified by the name of "Soft Drink Cooler." They call carbonated drinks "pop" in some parts of the country, "soda" in others, and in New England they call it "tonic." Whatever the name, Model No. 157 chills them all efficiently and—however far from town the refreshment stand may be—makes it possible to dispense cool, grateful drinks to the dusty motorist.

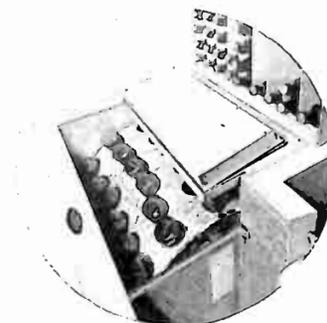


A feature of the Soft Drink Cooler is the device attached to front of cabinet for removing bottle tops. The container catches the top as it falls, allowing quick, clean service to customers.

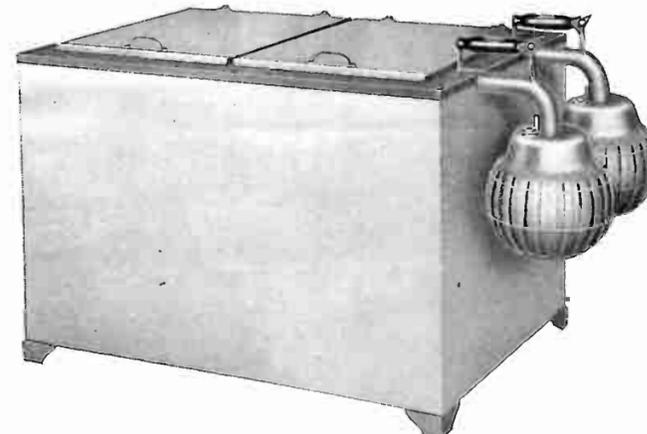
Crosley Icyball List Prices

No. 151 Single Unit
		\$85.00 complete.
No. 152 Double Unit
		\$160.00 complete
No. 153 Apartment Type
		\$85.00 complete.
No. 156 Water Cooler
		\$110.00 complete, without bottle.
No. 157	... Soft Drink Cooler	...
		\$150.00 complete.
All Prices F. O. B. Factories.		

The Soft Drink Cooler—Crosley Icyball No. 157—has a capacity of 72 bottles in the cooler and 72 bottles in the rack. In a single Icyball cycle it will chill between 72 and 84 bottles. The cabinet is an attractive addition to a shop or stand; it is finished in gray and green with polished nickel trim. No. 157 is a thoroughly modern piece of equipment and a highly efficient bottle dispenser, operating quickly at rush periods.



Each bottle section operates as an independent wheel, restoring its position by its own gravity weight. Empties and refills promptly!



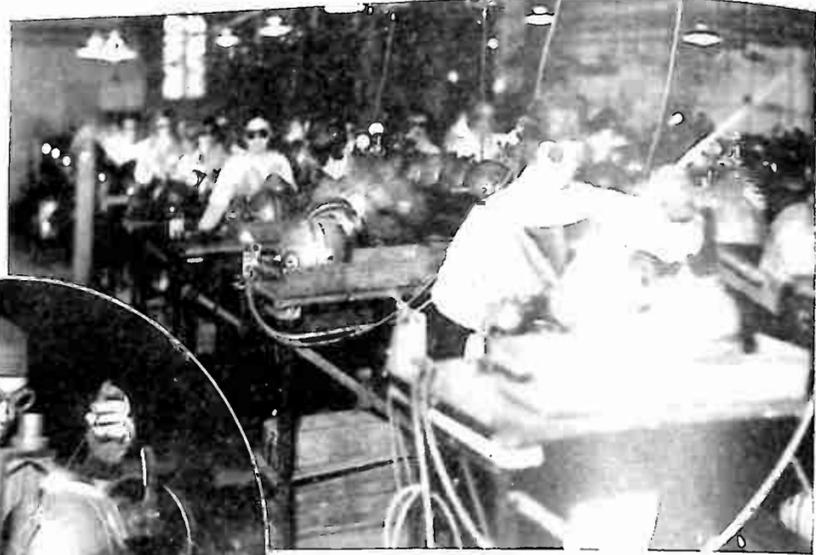
Icyball Model No. 152 carries a double unit, with increased storage capacity. Modern and attractive in appearance in gray enamel with green lacquer trim.

Another feature of the Icyball line is the Water Cooler, Model No. 156. It carries a single Icyball unit, and provides hygienic drinking water in offices, construction companies, and the like, where ice is at a premium. The Icyball Water Cooler stands 44½ inches high and is finished in the attractive green and gray combination.



A Jaunt Around Crosley's No. 3 Plant to See the Icyball Made!

IT seems a far cry from radio to step into Plant No. 3 of the Crosley Radio Corporation and see the Icyball Refrigerator in process of making. Instead of chain conveyors moving receiver assemblies from one floor of the factory to another, the eye is confronted with Icyball units in all stages of manufacture. You've heard the expression, "hive of industry." Plant No. 3 is one of those hives. The place is swarming with Icyballs. Let's take a look around.

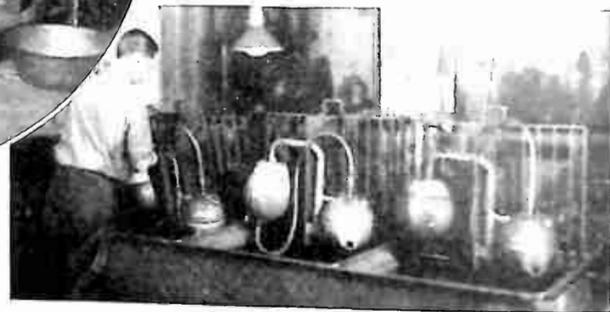


1. A close-up which to us is a prettier picture than any Hollywood close-up ever filmed by Director Griffith, for this one means something. The man in this picture is expertly welding, by acetylene process, the two sections of an Icyball.

2. Whole batteries of acetylene welders keep this department a mazo of glittering fingers of light. With all these welders going at once, it is better than a July Fourth celebration.



3. Hydraulic testing is an important part of the operation. Every Icyball unit undergoes this water pressure test. There's 600-lbs. pressure applied to the inside to guarantee the strength of each unit.



4. Following the hydraulic test comes the air test. In this view you see only one of the racks used for immersing units into specially constructed water tanks. Bubbles reveal the presence of leaks, if any.



5. This is a special operation: A water test for detecting the actual location of leaks.

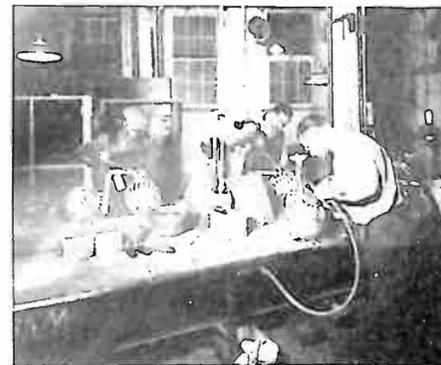
6. A glimpse of the galvanizing room, where muriatic and water baths prepare Icyball units for actual galvanizing. If you see beauty in industrial sights, you'll be as delighted with this contrast of light and shade, the clouds of hissing, rising steam, as you would, perhaps, with Rembrandt's famous "Night Watch."



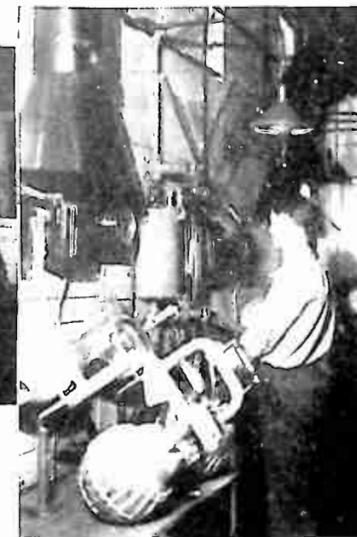
7. Ready to galvanize! The dull metal surface of the Icyball unit is covered with flux before it is plunged into the seething bath of galvanizing metal.



8. Amid clouds of white steam the Icyball rises from its fiery bath, silvery and shining, looking, before crystal formation takes place, like an Egyptian gazing globe.

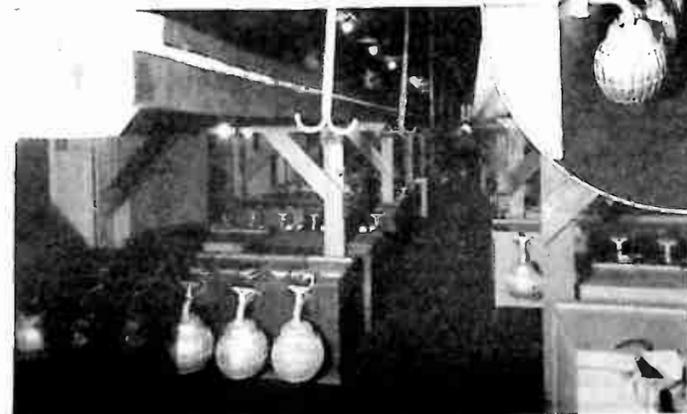


9. Soldering, like soldiering, is a job for patient men. With care and skill, the parts, handle, valve, whistle, etc., are soldered on the Icyball.

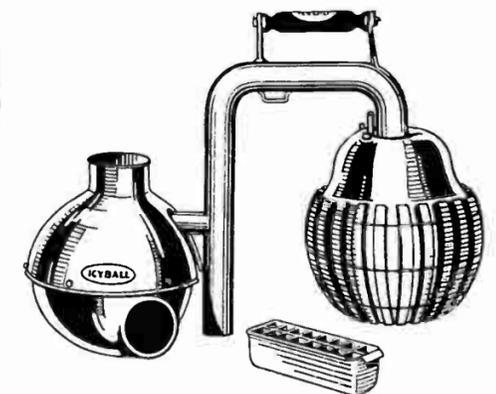


11. The completed unit is heated preliminary to a try-out far more exacting than actual weather conditions provide even in classic Delhi.

10. You have to throw your eye at the center picture to keep the continuity. After this feat is accomplished you'll see the man gauging the amount of ammonia gas to go into each Icyball unit.



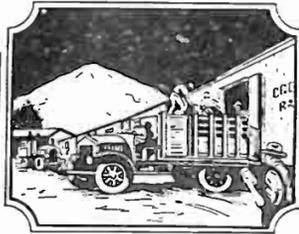
12. Lower eyes gently downward and left and then you perceive a section of the double-decked Temperature Room in which Icyballs make ice where the normal temperature resembles Brazil.



This is a pen portrait of the cause of all this effort, an Icyball unit, as it fits into a cabinet. It is a wonderful invention—providing refrigeration where otherwise refrigeration could not be—a product of Crosley's exceptional manufacturing resources!



CROSLY DISTRIBUTORS

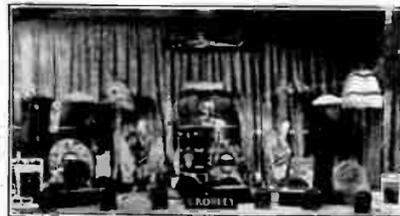


Western Supply Company Keeps Crosley Ball Rolling in Salt Lake

Distributor Cooperates with Stage in Effective Publicity Stunt

Up-to-the-hour publicity methods are in vogue in Salt Lake City, at least where Crosley merchandising is concerned. The Western Supply Company is Crosley distributor in the Utah territory. Their methods are modern and aggressive.

They planned a very effective window display, embracing the entire Crosley line. This window display was repeated, as nearly identical as it could be managed, in all Crosley dealers in Salt Lake City for the period of a week.



Daynes-Beebe Music Company, of Salt Lake City, showing typical Crosley display used by all authorized dealers in Salt Lake City for one week.

This was strictly a merchandise display. We have P. W. Bialkowsky's word for it, that it was one of the finest displays of its kind he had ever seen. It was arranged under the direction of H. W. Eskuche, president and manager of the Western Supply Company.

In the center of each window was a turntable with two Showboxes, back to back. As this table slowly revolved, it was lighted by soft, changing colored lights.

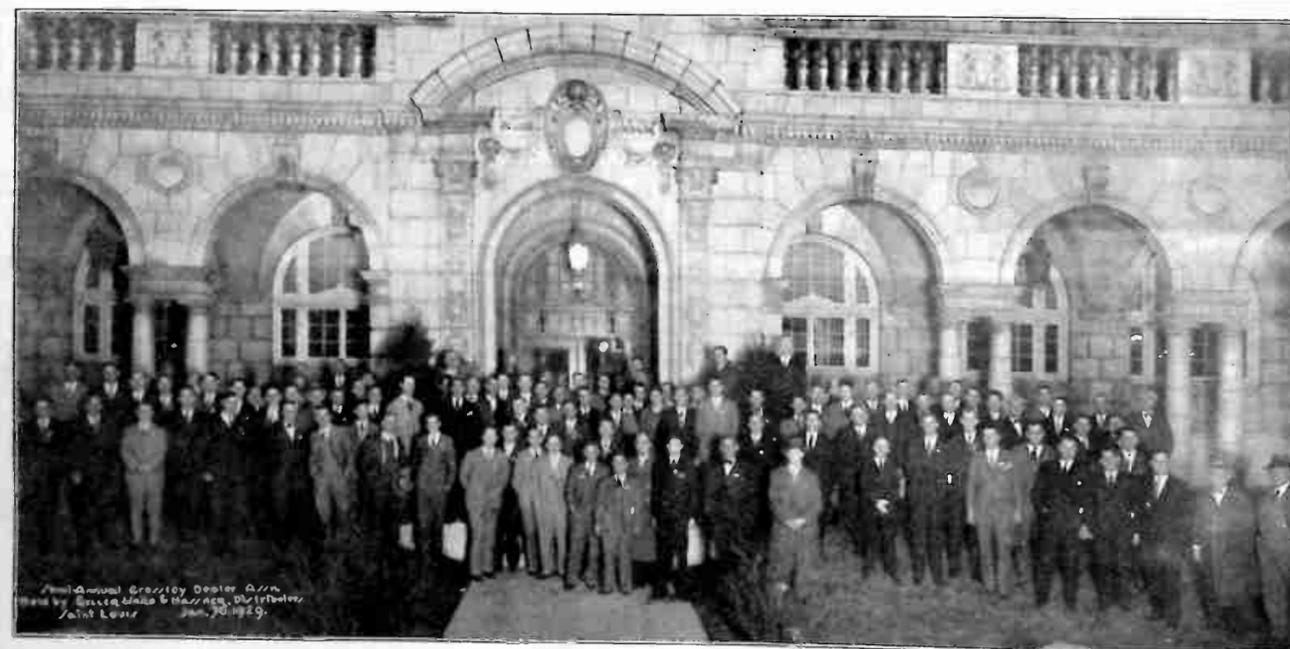
As it happened, the Metropolitan Players, a popular stock company playing in Salt Lake City, were that week presenting a play with a radio scene in it. During the course of the play, the characters in the play were supposed to listen in on championship fight broadcast.

Due to the period in which the play was laid, an old Crosley 5-75 was used in the performances. But a Showbox and Dynacone were on display during that week in the lobby of the theater.

In the action of the play, one of the players turned on the set and the announcement, presumably covering the air, was something like this: "This is station KDYL, broadcasting the Crosley hour." He then turned the dial to pick up the fight.



Gladys George and Ben Erway, leading players of Metropolitan company, Salt Lake, with the Showbox.



7th Annual Crosley Dealer Conv. held by Western Supply & Business Distributors, Salt Lake, Jan. 21-22, 1930.

RECORD GATHERING OF CROSLY DEALERS ATTEND GELLER-WARD-HASNER MEET IN ST. LOUIS.

NOW!

Order at once these quick-selling Crosley-Showers combinations! Great stimulus for early spring radio business. Such remarkable values will move right off your floor! The NEW Crosley Gembox, Showbox or Jewelbox and the New Crosley Dynacone power speaker housed in a beautiful and richly finished Showers cabinet simply makes an irresistible radio unit and a value that cannot be duplicated. The following combinations are listed and detailed below for your convenience. These values will not last long — order at once!

C-4 Combination Showers C-4 Cabinet and Crosley Jewelbox and Dynacone \$175



Exquisitely match walnut veneer with over-laid decorations of blistered maple veneer is the keynote of beauty in this model. Genuine wood carvings are highlighted and beautifully finished. The top opens for access to the radio chassis and the doors are full swinging type with solid brass door pulls. The doors open upon a solid front inside panel, using a three-quarter inch baffle board. Crosley Dynacone speaker, is built in. The veneer is of four-way matched walnut.

With Showbox and Dynacone \$150

C-5 Combination Showers C-5 Cabinet and Crosley Jewelbox and Dynacone \$174.50



This cabinet is of walnut veneer, four-way matched with split turnings overlays. The panel is of walnut veneer, solidly constructed, with a three-quarter inch baffle board behind the speaker compartment. A routed line design on the panel adds a touch of beauty. The famous Showers laminated method of construction is used. The veneer combinations found in Showers cabinets form delightful grain patterns which make fine furniture so attractive.

With Showbox and Dynacone \$149.50

C-6 Combination Showers C-6 Cabinet and Crosley Jewelbox and Dynacone \$184.50



The newest in radio cabinets—the sliding door model. This cabinet is of walnut veneer with overlays of ash burl. Spindle carving overlays on the apron of the cabinet and on the front panel. The doors slide to right and left out of sight and open on the radio control panel and the Crosley Dynacone, which is built in. Contains a baffle board and like the model C-5, is ventilated with open panel in receiver compartment.

With Showbox and Dynacone \$159.50

C-3 Combination Showers Cabinet-Crosley Gembox and Dynacone

\$115

This amazing Shower-Crosley console value is a sure fire sales producer right now! Get it quick! This beautiful walnut veneer console is a real work of art. Beautifully grained veneers form exquisitely matched patterns and genuine wood carvings add a decorative note of real distinction. Gracefully proportioned, the beautifully turned legs and the artistically designed stretcher not only add a greater measure of beauty, but a solidity of construction not found in "cheap" radio cabinets. The wonderful-toned Crosley dynamic speaker, the Dynacone, is built in.



New Crosley Gembox



Crosley Dynacone

A different type of power speaker that takes its field current from the set which operates it. This employment of a new principle of actuation has improved reproduction to a marked degree. Each tone is true.

This amazing receiver contains the latest and best radio refinements—new neutrodyne circuit—3 stages of radio amplification—detector—2 stages of audio—171 power tube in last audio stage—full voltage on plate of output tube—power supply self-contained—illuminated dial.

C-8 Combination Showers C-8 Cabinet Crosley Jewelbox and Dynacone \$162



The exquisite attractiveness of this charming cabinet is embellished through the use of beautiful walnut veneers. The decorative inlay effect gives a restrained but animated touch of the modernistic. The panel is cut out to allow the controls of the receiver to protrude. The DYNACONE is built in.

With Showbox \$137

Crosley Showbox



This remarkable AC electric set unusually selective, contains 3 stages of radio amplification, detector, 3 stages of audio with two 171 power tubes in the last stage, rectifier tube—8 tubes. The set is sharp, sensitive, powerful.

Crosley Jewelbox



A new 8 tube AC Electric receiver employing a tuned antenna circuit, power detector tubes and uses 171 tubes in all circuits except last audio stage and rectifier. New audio system; push-pull amplification; two 171 power tubes in the last stage.

ORDER NOW!

SHOWERS BROTHERS CO.

Dept. 81
BLOOMINGTON, INDIANA



CROSLY DEALERS



Richmond's Biggest Dealer Meeting

Tower-Binford Gathering Draws Crosley Dealers in Record Numbers

Washington's birthday saw the biggest dealers' meeting of its kind ever held in Richmond, Virginia. It was a gathering sponsored by the Tower-Binford Electric & Manufacturing Co., Inc., Crosley distributor in Richmond, and proved an enormous success.

In addition to the record attendance of Crosley authorized dealers, a very large number of telegrams were received from dealers unable to get to Richmond at that date. The weather conditions were particularly bad and traffic of all kinds much impeded. In spite of this, over 200 assembled at the Chamber of Commerce to see the 1929 Crosley line.

The meeting and the dinner which followed were in charge of H. R. Perkinson, sales manager of Tower-Binford.

The Richmond newspapers devoted an extraordinary amount of space to these Crosley sessions. The Richmond Times-Dispatch, a very old and very fine news sheet, devoted an entire section of its Sunday paper for February 24th to the Crosley line, calling this the "Special Crosley Radio Section."

We have previously mentioned the extensive publicity given by the Rochester newspapers to the dealer meeting held recently by the Rochester Electrical Supply Company. If anything, the Richmond Times-Dispatch section was better, and that's saying a great deal.

With a certain amount of co-operation between the distributors and the newspapers in advance of dealer meetings, we feel it is possible



to secure the highest kind of publicity for these gatherings. Mr. Perkinson and his staff achieved notable results in this line.

Crosley dealers came in from Virginia and eastern North Carolina to see the beautiful new

Crosley models displayed by Tower-Binford in the dining-room of the Richmond Chamber of Commerce. Mr. Perkinson presided at the lunch and dinner. He predicted that Tower-Binford would have the biggest Crosley season of its history.

Tower-Binford Servicing.

We are informed by Ed Burns, Crosley representative in the Richmond field, that Tower-Binford has one of the most complete Service Departments to be found anywhere. It is managed by a crew of men who are well known in the South for their radio knowledge and experience. These men are W. R. Selden, J. A. Steere, W. L. Gimmell, L. M. Kirby, R. N. Eubank and L. Patterson.

McAlister, New Mexico.

Gentlemen:

Our Ieyball has proved to be all we could expect and we are well pleased with it.

It fills a long-felt want in the rural home. We don't see how we could do without it.

(Signed)

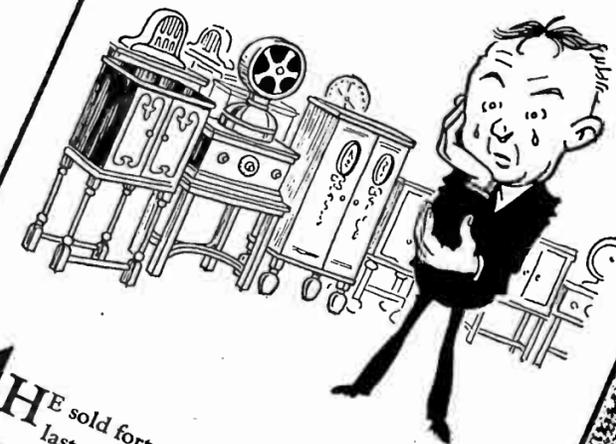
LEE FARRINGTON.

The Crosley Ieyball is the only type of refrigeration available in areas without current.



Richmond, Va., saw the Biggest Jobber Meeting in its History when over 200 Crosley Authorized Dealers Responded to the Tower-Binford Summons!

how about the Dealer-?



HE sold forty of these electric radio sets last month and everything looked lovely—but now it's different. Here are twenty-one of the sets back again—and twenty-one disgusted customers on his neck—all because of bum condensers.



You can end Condenser Troubles Forever

if the sets you handle contain the

MERSHON ELECTRIC CONDENSER!

Let us send you the names of those far-sighted Radio manufacturers who are PROTECTING THE RETAILER by making the Mershon Condenser standard equipment in their lines.

THE AMRAD CORPORATION
MEDFORD HILLSIDE, MASS.

In writing, please address Dept. E-3

J. E. HAHN
President

POWEL CROSLY, Jr.
Chairman of the Board

MATCHES



Attractive new Book Matches featuring the Crosley Showchest on one side with ample space for your own advertisement on reverse. 5 beautiful colors give snap and distinction to this ever-welcome souvenir. Priced for wide distribution at \$3.75 for one thousand, or \$3.50 per thousand on orders of 2 thousand or over. Order today from your Distributor.

At \$3.50 per Thousand, Imprinted

Revolving Floor Lamp

This modernistic floor lamp brings your Crosley display up-to-the-minute. The illuminated shade revolves slowly, affording ample time for display.

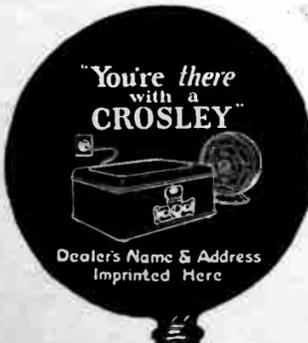


Floor Lamp No. 28-24

\$3.50 each
f. o. b. Cincinnati

Order from your Distributor

CROSLY BALLOONS



Brilliantly colored Balloons go big with children and carry your ad direct to the home! Assorted colors, several styles, some with squawkers. 250 for \$5.00; 500 for \$9.50; 1000 at \$18.00; 2500 at \$16.50 per thousand. Cash with order direct to Mansfield, O.

PERFECTION RUBBER CO. Mansfield, Ohio

Home Demonstration Does It

Larson of Clintonville, Wisconsin, Keeps Sharp Watch for Home Demonstration Opportunities

The practical experience of a Crosley authorized dealer in pushing sales of Crosley sets is of great value to our other dealers. We have a letter from Melvin B. Larson, proprietor of the Larson Radio and Music Shop of Clintonville, Wisconsin. In it he speaks of his success in handling the Crosley line.

"I want to say it has been a real pleasure to me," Mr. Larson writes, "to merchandise a product like Crosley.

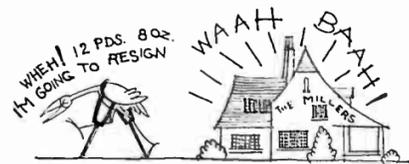
"I started in the season with advertising in the local papers, broadcasting sports events on the street in front of the store and changing window displays often.

"My sales were not made over the counter, but by being willing to demonstrate in the various homes. In most cases it was a show-down, in competition with as many as three or four other makes of radios.

"Competition has been very keen all season, but in spite of it wherever a competitive radio was installed I made it my business immediately to get in touch with that particular prospect, asking for a chance to demonstrate the Crosley. In most cases I would out-demonstrate them on volume and selectivity!

"One must be willing to devote a lot of night work in the selling of radios. It was every night with me during the rush season although I am not sorry now and feel that my efforts were well paid for!"

Crosley Salesman Arrives on Planet



Waverly Norman Miller, Jr., has arrived! Expected to pile up record for Crosley sales in the season of 1955. At present he is under weight to do any active road work. Young Miller weighs 12-lbs 8-oz. When last seen he was red in the face trying to compete with WLW. Our congratulations go to Waverly Miller, Crosley salesman in the California territory!

Crosley Station Picked up in South America, 7,000 miles Away

A cable has come in from Rosario, a city in the Argentine, S. A., 7,000 miles from Cincinnati, as follows:

WLW LISTENIN CINCINNATI CONGRATULATIONS EFFICIENCY WLW COMES IN FAIRLY STRONG ABOUT MIDNIGHT LOCAL CONDITIONS PERMITTING POST PARTICULARS HOURS PROGRAMS WILL AROUSE GREAT ENTHUSIASM THIS SEASON FOR CROSLY SALUDOS.

Last season the Icyball Refrigerator was sold in every state and in foreign countries.

MEROLA

Phonograph Pick-up

\$15.

List



Switch from radio to phonograph and back again to radio at pleasure!

Crosley A. C. electric receivers are equipped with MEROLA posts, thus making a MEROLA installation the work of a few minutes.

Order from your Distributor

TAYLOR ELECTRIC CO. MADISON, WIS.

Exclusively Radio Wholesale Only

CROSLY DISTRIBUTOR

SCHUSTER ELECTRIC COMPANY WHOLESALE CROSLY DISTRIBUTOR

2169 Spring Grove Avenue 412 Elm Street, Cincinnati, Ohio West 144- PHONES—Main 820

TUNE IN!

We broadcast daily at 11:00 a. m. and 1:30 p. m.

Financial News
Market Reports
Government Bond Quotations
Call Money Rates
Foreign Exchange
Grain and Live Stock Quotations

THE FIFTH THIRD UNION COMPANY

14 West Fourth Street Cincinnati, Ohio

CROSLY DEALER'S RADIO COURSE

10 Simplified Lessons Especially Prepared for Crosley Dealers

LESSON IX.

Correction: In Lesson 5, at the bottom of column 2, the expression given for the total resistance of a group of resistances in parallel should be: $1/R = 1/r_1 + 1/r_2 + 1/r_3 + 1/r_4 + 1/r_5$, etc.

Broadcasting.

In the previous eight lessons we have taken up the underlying fundamentals of electricity and of electrical circuits. In this lesson we will consider the general picture of what happens in radio broadcasting and reception, and in the final lesson we shall apply the principles already outlined to the analysis of a typical radio set.

The Microphone.

The above diagram illustrates in a rough way the different steps involved in broadcasting and in broadcast reception. At the extreme left of the diagram is a microphone, of the type used in most broadcasting studios.

The microphone is the instrument which picks up sound waves from the air at the studios and converts them into electrical fluctuations. It is essentially similar to an ordinary telephone transmitter, such as you use in the telephone at your home or store, except that it is much more sensitive.

Inside its case is a diaphragm, against which the sound waves strike. The sound waves cause this diaphragm to vibrate back and forth, just as water waves lapping against the side of a boat will cause it to bob up and down. As the diaphragm vibrates it exerts varying amounts of pressure against a mass of carbon granules.

The microphone is connected in a direct-current electrical circuit in such a way that the current passes through the carbon granules. As the diaphragm varies its pressure on these granules, it causes their resistance to fluctuate, thus controlling the current flowing through the microphone in direct accordance with the sound waves striking the diaphragm.

Oscillator.

Next to the microphone in the figure is a unit marked "oscillator." This consists of one or more tubes arranged in a circuit which will enable them to generate a sustained, high-frequency alternating current (see previous lesson). These tubes convert high-voltage direct current, supplied to their plate circuits, into high-voltage, radio-frequency, alternating currents.

Modulator.

The sustained oscillations generated by the oscillator tubes must be controlled, or modulated, in accordance with the fluctuations of microphone current. In other words, the sustained oscillations coming from the oscillator are simply the "carrier" current. This carrier current must have impressed on it fluctuations in strength corresponding to the sound waves striking the microphone. To do this, the microphone current is amplified by one or more tubes and then impressed, through a modulation transformer, on the carrier current.

Amplifier.

The modulated carrier current needs to be made stronger before it is sent into the antenna and ground system. This is the purpose of the amplifier unit. It may consist of one or more tubes.

Before reaching the modulator, the current in the circuits consists simply of radio-frequency alternations. After leaving the modulator the current in the circuits consists of radio-frequency alternations fluctuating in strength in accordance with the impressed microphone current. This new current—radio frequency alternations modulated at audio frequencies—is built up from a radio-frequency carrier current and an audio-frequency modulator current. It is said, therefore, to have two components—a "radio-frequency component" and an audio-frequency component."

Aerial and Ground.

From the amplifier unit, the modulated radio-frequency currents are transferred to the aerial and ground system through a suitable radio-frequency transformer. The rapid radio-frequency currents in the aerial and ground system set up radio waves, which travel out in all directions. Thus, that part of the energy fed to the aerial and ground system which is not used up in heating the conductors leaves the system in the form of radio waves, travelling thence through space.

Radio Waves.

From the broadcasting station, radio waves travel out through space in all directions. Whenever they encounter a conductor, they set up in this conductor a high-frequency electrical current, some of the energy of the waves being absorbed by the conductor. If the waves happen to encounter a steel building, for example, their energy will largely be dissipated in setting up currents in the frame of the building.

This explains why reception is much less satisfactory in the hearts of big cities than in their outlying residential sections. It also explains why natural metallic deposits, such as the deposits of copper ore in certain regions around Lake Superior may practically ruin reception throughout large localities.

The Receiving Aerial and Ground.

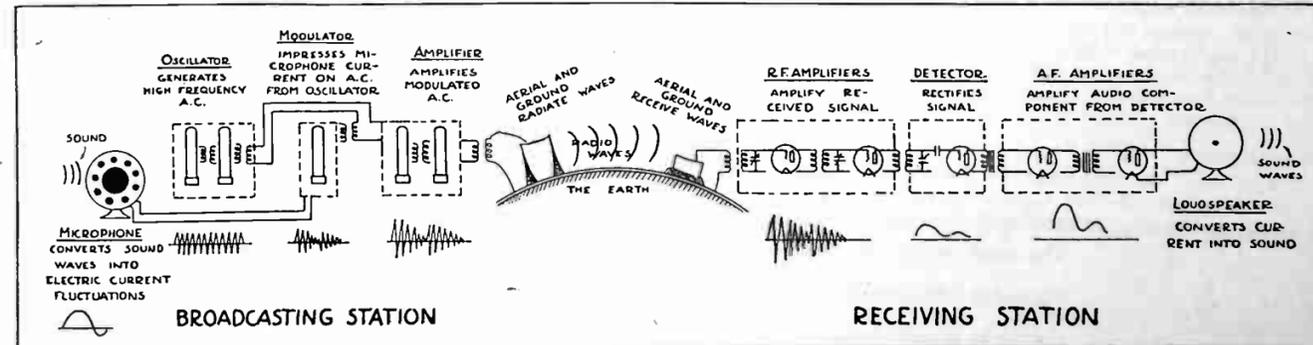
A small part of the radiant energy which left the broadcasting station meets the receiving aerial and ground system. You can judge what a small fraction of this energy reaches the receiving system by considering the fact that the energy radiated at the broadcasting station spreads out in all directions, and that there are usually a number of absorbing obstacles to dissipate part of the energy between the broadcasting station and the receiving system.

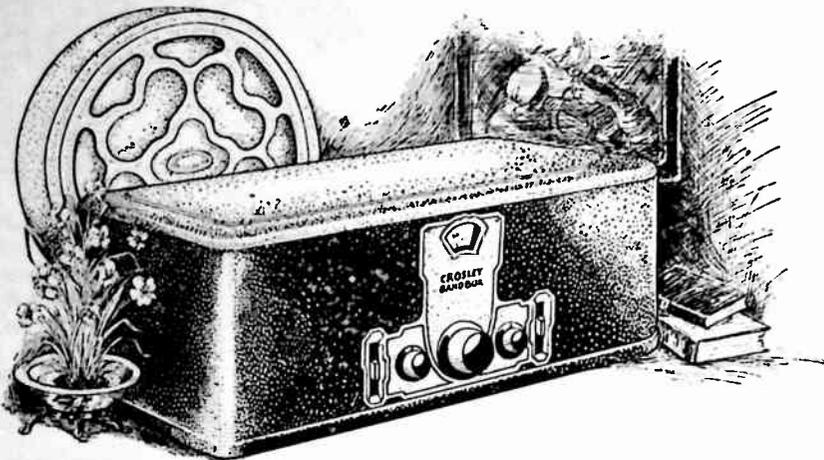
The radio energy which finally reaches the receiving aerial and ground system sets up in it a feeble, modulated, radio-frequency current exactly similar to that in the aerial and ground system at the broadcasting station.

Radio-Frequency Amplifiers and Tuners.

Radio waves from many stations reach the receiving antenna system simultaneously. In the ordinary, untuned antenna circuit these will all set up feeble, radio-frequency, alternating currents. Some means must be provided for selecting the desired signal and amplifying it, while excluding the others. Both of these functions are accomplished by the radio-frequency circuits.

The amplifying action of tubes has been explained in the preceding lesson. The radio frequency amplifiers usually consist of from one to four stages connected in cascade by radio-frequency transformers. The grid circuit of each of these tubes usually contains a variable con-





6 tubes :: Storage Battery :: Genuine Neutrodyne

THIS letter is a vivid demonstration of performance by a Crosley BANDBOX receiver. The Crosley BANDBOX is a storage battery type set, 6 tubes, shielded, with acuminators, illuminated dial and other modern radio features. Chassis mounted in metal case with gold high-lighted ripple finish. Display a BANDBOX and keep a supply on hand.

\$55
without tubes

BANDBOX

Battery Operated Set

Demonstrates

Its Proficiency!

V. T. SMITH
Battery and Tire Shop
Crosley Radios

Northboro, Iowa.

Gentlemen:

Just to show what a Crosley Bandbox will do, I had occasion to tune in a new Bandbox set for a demonstration and picked up JJD, Mooseheart, Illinois, at 7:55 P. M.

The Victorian Orchestra had just gone on the air and their first piece was "Love, Come Back to Me." It came in very plainly on the loud speaker.

Just what the distance is I don't know, but we are located 20 miles from the southwest corner of Iowa, so I think that was some demonstration on a battery-operated receiving set!

Yours,

(Signed) V. T. SMITH.

denser, shunted across the transformer secondary in that circuit. By adjusting the variable condenser, the constants of the circuit may be changed, so that it may be made to resonate at any desired frequency. The resonant period of the r. f. circuits is adjusted to the frequency of the signal desired (this process being called "tuning") and by that means the desired signal is selected and others eliminated.

Detector.

The current fed into the detector consists of a radio-frequency carrier current, modulated at audio frequencies. It is practically identical in form with the received signal except that it has been much amplified in strength by the radio frequency amplifiers.

It is the modulations of this current that correspond to the sound fluctuations at the broadcasting studio, and which must be reproduced by the loudspeaker. If the current as delivered from the radio-frequency tubes is sent into a loudspeaker, nothing happens. This is because the rapid, radio-frequency carrier oscillations are too rapid for any loudspeaker to follow. Something must be done to rid the current of its radio-frequency component and to retain only the audio-frequency component, like the microphone current at the transmitter. The detector performs this function. It blots out half of the carrier alternations. By means of chokes and condensers in the plate circuit only the audio-frequency modulation swells are retained.

Audio-Frequency Amplifier.

In order to obtain still stronger current for loudspeaker operation, the output of the detector tube is passed through one or more stages of cascade, audio-frequency amplification. These stages are ordinarily connected by audio-frequency transformers. The final stage is usually a power output tube.

The Loudspeaker.

The output of the final audio-tube feeds into the loudspeaker. The

current fed into the speaker is essentially the same as the microphone current at the broadcasting studios.

The loudspeaker consists of an electromagnet armature moving in the field of a permanent magnet or electro-magnet, and operating a cone, diaphragm, or plunger. The output current passes through the armature coils. Every fluctuation in output current changes the magnetization of the armature and causes it to move, sending out a sound wave from the cone. As the current fluctuations are like those set up in the microphone by sound waves impinging on it—they will cause the speaker to send out sound waves like those in the broadcasting studios.

Importance of Good Design.

From this outline you can see the many transformations which the sound at the studio must undergo before it is finally reproduced as sound by the loudspeaker. In every one of these steps there is a chance for distortion to creep in.

It is no wonder that the design of radio equipment so as to give faithful reproduction of all sounds at the broadcasting studios is a difficult task. It is a problem that only the best of engineering talent has been able to solve.

QUESTIONS

Answer the following questions carefully. If you have any questions about them or concerning portions of the lesson text, write to the Editor, "Crosley Radio Broadcaster."

1. How does daytime transmission of radio waves compare with nighttime transmission?
2. Must the circuits of the broadcast transmitter be tuned?
3. Are the audio circuits of the receiving set tuned?
4. What is the purpose of the aerial and ground system?
5. Explain the action of loudspeakers.

The most convincing argument you can use in selling a Crosley Icyball Refrigerator is to show it in operation. Keep a demonstration outfit in your store always in actual work. The Crosley Icyball is its own best salesman!