

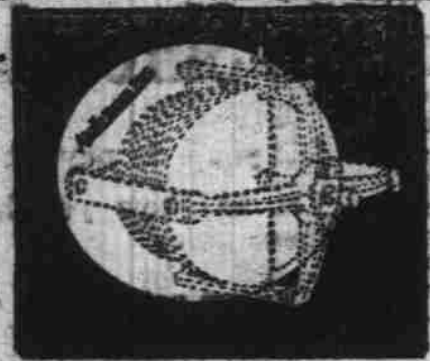
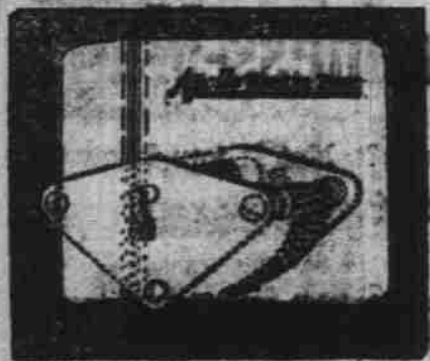


Auto News of the Day



RADIO — BICYCLE — MOTORCYCLE

WHY NOT USE SHIELDING?



By HARRY J. MARX
It seems strange that the average radio fan appears to hesitate in making use of metal shielding when building sets. Examine the more popular and most efficient manufactured receiving sets and it will be found that proper shielding is incorporated in the majority of them. Surely if the manufacturers with their expert engineering staff find it essential, it behooves the fan who constructs his own set to seriously consider its advantages.

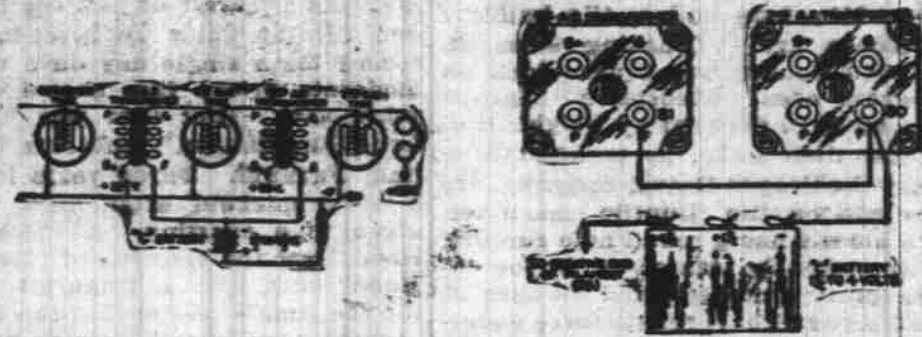
Possibly the real reason for its lack of general use, is in the difficulty of purchasing sheet metal in

small pieces. It is only the large hardware supply houses that carry a stock of sheet metal and these firms are limited to the large cities. Radio stores except in rare cases are not handling shielding material. Fortunately this demand is now being taken care of and standard size sheets in envelopes like panel stock are now available.

Aluminum, copper and tin foil have been placed on the market for shielding. Unfortunately thin foil stock does not readily adapt itself for fastening to panel stock. Sheet metal, having some degree of stiffness is more convenient.

Everyday Radio

BY KIMBALL HOUTON STARR



USING A "C" BATTERY WITH YOUR RADIO RECEIVER

In connection with radio receiver and audio frequency amplifier circuits it is possible, although not absolutely necessary, to use a so-called "C" battery. This is true in particular if 4:1 or higher ratio audio frequency transformers are used and if not more than 90 volts are used on the plates of the amplifier tubes.

The use of such a "C" battery, usually having a voltage of from 1.2 to 4, will materially reduce the "B" battery current consumption and may possibly increase the clarity and volume of received signals.

The two diagrams illustrate the picture and schematic connection of a "C" battery into the audio frequency amplifying circuit of a radio receiver using standard FADA audio frequency transformers. With some types of receiver and amplifier circuits having audio frequency transformers with winding ratio (or the ratio of the number of primary turns to the number of secondary turns) other than 4:1, there may be considerable signal distortion after the signal has passed through two stages of audio frequency amplification and in case no "C" battery is used. Connecting fixed condensers of from .0001 to .0006 microfarads capacity across the

windings of the audio frequency transformer, may eliminate or reduce the transmission of the higher noises which are so unpleasant, especially when reproduced by a "tinny" loud speaker.

Higher ratio audio frequency transformers can sometimes be improved in their clarity of speech and music reproduction by connecting across their secondary windings a variable grid leak resistance of the order of 1 megohm.

Some of the standard radio receiving sets on the market have binding posts for the connection of the "C" battery, and in some cases, these binding posts are shorted either by a metal strip or by the connecting leads. In other types of receivers, the connection between these "C" battery binding posts is left open and the circuit must be closed before the receiver can be operated successfully. This can be done either by a short wire or metal strip, or if one desires to use the "C" battery, it should be connected between the two binding posts, making sure that the positive lead from the battery connects to the positive "C" battery binding post, and that the negative lead from the "C" battery connects to the negative "C" battery binding post.

This can be held in place behind the apparatus as shown in the illustrations.

The question arises, which metal should be used. Copper is decidedly expensive and corrosion makes it turn green after a time, especially where soldering is done. Aluminum has a habit of collecting an oxide coat which destroys the good electrical contact. Furthermore aluminum does not lend itself to soldering within the limits of the fans equipment. Magnetic metals such as iron cannot be used.

Shielding Suggestions
For the average use behind a variable condenser the circular shield as shown on the right serves the purpose. In cases where some protection between stages is desirable the shield with a flap, as shown on the left in the illustration, is recommended.

Where shielding of this sort is used, it should be electrically connected to the rotor plates and on the ground sides of the circuit.

A little more general use of shielding will do much toward solving the body capacity problem which is characteristic of home constructed sets. Some manufacturers are going to the extent of completely lining the inside of the cabinets in order to entirely eliminate any possible external interference. Where a cabinet is lined in this manner the shielding is as a rule directly connected to the ground terminal.

The RADIO PHAN Talks

By F. S. BARTON

The announcement by French people that they will install a mammoth broadcasting station that can be easily heard in the United States, followed by a similar movement in Great Britain and the many applications to our own government for 40 and 50 kilowatt stations, to say nothing of the numerous five kilowatt stations, starts one guessing as to the outcome. It might be predicted that in a few years there will be a number of large stations and no little ones at all.

The recent drop in price of radiophones to \$3.00 brings them into the home folks class, where one may enjoy a delightful companionship with them and learn to know their accomplishments.

Maybe you have heard some stations announce, "We give stamps" and have wondered whether the announcer was "lit up" or was just harking back to the days when he was connected with Katchum & Skinum's emporium. No, they are not trading stamps, but radio's latest rap—the collection of radio stamps.

In the up to date radio shop you may purchase the new radio stamp album with a supply of "Proof of Reception Cards." These cards are filled out and mailed to the stations heard, who in turn send you their stamps. These may be put in the printed spaces awaiting them. There is also a call book and log included. To say the idea is sweeping the country is putting it mildly, to say the least!

Dust is an enemy of the radio set. Put your set in a cabinet if you can. But if you cannot, cover it up when not in use. Clean the dust from between the blades of your condensers, using a soft cloth or brush.

Every bridge of points of dust is like a leak in the bucket. For this same reason punched out condenser plates should have their edges rounded off smooth.

In Radio Digest of February 7 the Bankers Life Insurance station WHO at Des Moines, Ia., is delightfully described by Vera Brady Shipman. The station is a commercial one in addition to the broadcast features. The idea was originated and completed by Billy Heinz of that organization. Grand Opera producers have been shy at broadcast stations just like the old mare used to shy at an automobile. Recently 13 radio station owners in Boston had such confidence in this belief that broadcasting opera would help farther than harm the box receipts—that they actually underwrote the expenses of a Chicago operatic company during the season in Boston and guaranteed them

against any loss due to broadcasting. Several operas were broadcast and we await with unusual interest the results.

Millions of U. S. Dollars Sent Back From Germany

BERLIN, Feb. 7—American currency went back to the mother country at a record rate in 1924. During the inflation period American banknotes and silver certificates and all sorts of other American paper money were hoarded. Friends and relatives remitted money to Germany in the form of bills and it was tucked away for

a rainy day. While the German paper money was fluctuating so wildly nobody wanted to hold it. Consequently all sorts of foreign stable money was in great demand and American money was the first choice as it fluctuated less even than English pounds.

Now that the rentenmark has been fairly firm for nearly a year and Germans have general confidence in it, they are letting go of their foreign money at a rapid rate. Germans who hoarded foreign gold or silver are out of luck, as the exchange rate on it is extremely bad. Nobody wants hard money and the quotations on foreign gold coins in small sums

is often 20 percent below the official rate for paper money. Foreign silver is an absolute drag on the money market. Small moneychangers who will accept it often shave it 40 per cent.

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