

## A Simple Reinartz Tuner.

THE article on the Reinartz tuner, which appeared in the May 13th, 1922, issue, fired the writer's ambition to make up one of these tuners. This has turned out

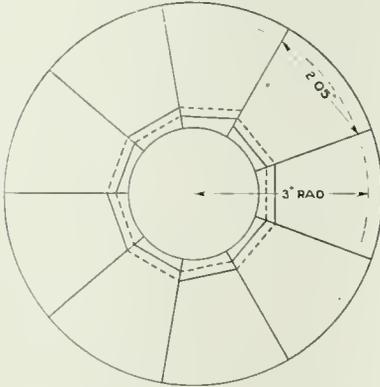


Fig. 1. Dimensions of card former.

so well that probably other readers may like to benefit by the experience gained.

First a coil was wound on a card, after the

produce nine equal divisions (other sizes in proportion).

The card actually used was of  $3\frac{1}{4}$  ins. radius, and the slots were deep enough to start winding at  $\frac{3}{4}$  ins. radius. The following procedure was gone through and reference should be made to Fig. 1:—

Beginning, labelled "30"; wind 10 turns, tap and label "20"; wind 10 turns, tap and label "10"; next, 10 more turns, and then cut off and label "0" leaving enough wire to run to terminal "R.C. 1." Start afresh, labelling beginning "9"; 1 turn, label "8," and so on to "0" and leave enough wire to run to terminal "E and - T.C." Do *not* break the wire but wind on 24 more turns, label "24"; 6 more and label "30" and so on to 36, 42, 49 and 56.

The switch centre for the "24" to "56" tapings is connected to a terminal labelled "G.C."

The switch arm of the "0" to "9" tapings is connected to the terminal labelled "R.C.2" and that of the "0" to "30" tapings to a terminal labelled "P."

For telephony on 400 metres the tuner is

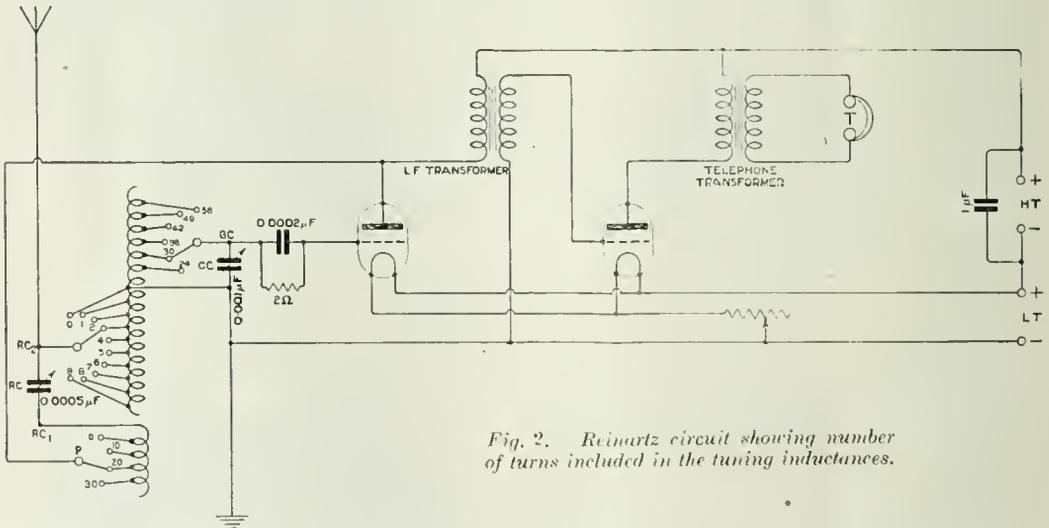


Fig. 2. Reinartz circuit showing number of turns included in the tuning inductances.

fashion described in "Experimental Station Design II," June 10th issue. A  $\frac{1}{4}$  lb. of No. 26 D.C.C. was more than enough.

Lest anyone repeat an early error of the writer's, it should be remembered that the card must have an *odd* number of slots. Round a circle of 3 ins. radius, steps of 2.05 ins.

ideal with two valves. When connected to an aerial of the usual amateur dimensions, and the three switches set at 56, 3 and 30; R.C. at about 0.0005 mfds., and C.C. at about 0.0001 mfds., the following come in very clearly at Shoeburyness, Essex:—2 MT, 2 LO, 2 IF, 2 ON and others.

If speech is not clear, less reaction should be used.

A slight improvement has been made by adding a card (wound with 44 turns of No. 26 D.C.C. from  $\frac{3}{4}$  in. to  $1\frac{1}{2}$  ins. radius) below the main card and connected in circuit at R.C. 1. Probably it would have been better to start the main card at 2 ins. radius, and wind the "0" to "56" turns on a second card, starting again at 2 ins. radius. This should make the addition of 44 turns to the "0 to 30" coil unnecessary.

The second valve is simply connected as shown in the diagram, Fig. 2.

Using the ordinary slab inductances it was found that the same circuit worked well up to 8,000 metres. No trial was made on higher wavelengths. Attention should be drawn to the fact that this circuit is liable to cause interference by radiation, though with a suitable adjustment of coupling of the plate circuit inductance and reaction condenser, the tendency to oscillate can be critically controlled.

The writer feels sure that he is not alone in being grateful for his introduction to the Reinartz tuner.

B. H. E.

## The Ideal Home Exhibition

**I**N the last issue of *The Wireless World and Radio Review*, an announcement was made regarding the Ideal Home Exhibition.

This Exhibition, which is being organised by the *Daily Mail*, will be open from March 1st to 24th inclusive. It should be of special interest to those associated with wireless, since arrangements have been made for a section of the Exhibition to be devoted entirely to wireless exhibits, and every effort will be made to present wireless telephony to the public visiting the Exhibition in an attractive manner.

The organisers of the Exhibition have assigned to the National Association of Wireless Manufacturers the entire arrangements for the wireless section of the Ideal Home Exhibition, and the principal manufacturers of apparatus will be exhibiting. The interest of the wireless section will naturally centre around broadcasting, and for the special use of the wireless manufacturers there has been set apart a concert hall in the Exhibition with seating accommodation for 1,000, and here manufacturers will organise continuous free demonstrations of wireless telephony reception. Every opportunity will be given to the public to appreciate the value of wireless telephony in the home, and one feels confident that every visitor to the Exhibition will leave it with the impression that no home can be ideal unless the benefits to be derived from wireless telephony are taken advantage of.

The following is a list of some of the principal firms who will exhibit:—

Siemens Brothers & Co., Ltd.  
Rogers, Foster & Howell, Ltd.  
Igranic Electric Co., Ltd.  
Radiophones, Ltd.  
Marconi Scientific Inst., Co., Ltd.

Automatic Telephone Mfg., Co., Ltd.,  
jointly with

Ashley Wireless Telephone Co., Ltd.

Dubilier Condenser Co. (1921), Ltd.

General Electric Co., Ltd.

Metropolitan-Vickers Electrical Co., Ltd.

Radio Instruments, Ltd.

Telephone Mfg. Co., Ltd.

Western Electric Co., Ltd.

S. G. Brown, Ltd.

The Wireless Press, Ltd.

Radio Press, Ltd.

Fellows Magneto Co., Ltd.

British Thomson-Houston Co., Ltd.

L. McMichael, Ltd.

Electric Appliances Co., Ltd.

Tingey Wireless, Ltd.

Burndept, Ltd.

C. F. Elwell, Ltd.

Marconi's Wireless Telegraph Co., Ltd.

Radio Communication Co., Ltd.

Sterling Telephone & Electric Co., Ltd.

A. W. Gamage, Ltd.

H. Stanley Prince, Ltd.

General Radio Co.

Alfred Graham & Co.

L. A. Coomes & Co.

Tomlinson (London), Ltd.

It will therefore be seen that the Exhibition is strongly supported by wireless manufacturers, and there will undoubtedly be displayed the finest selection of wireless receiving apparatus in the world.

This will be the seventh Exhibition under the name of "The Ideal Home Exhibition," to be organised by the *Daily Mail*, and it is a matter of interest that so important a part should be played in the coming Exhibition by wireless telephony.

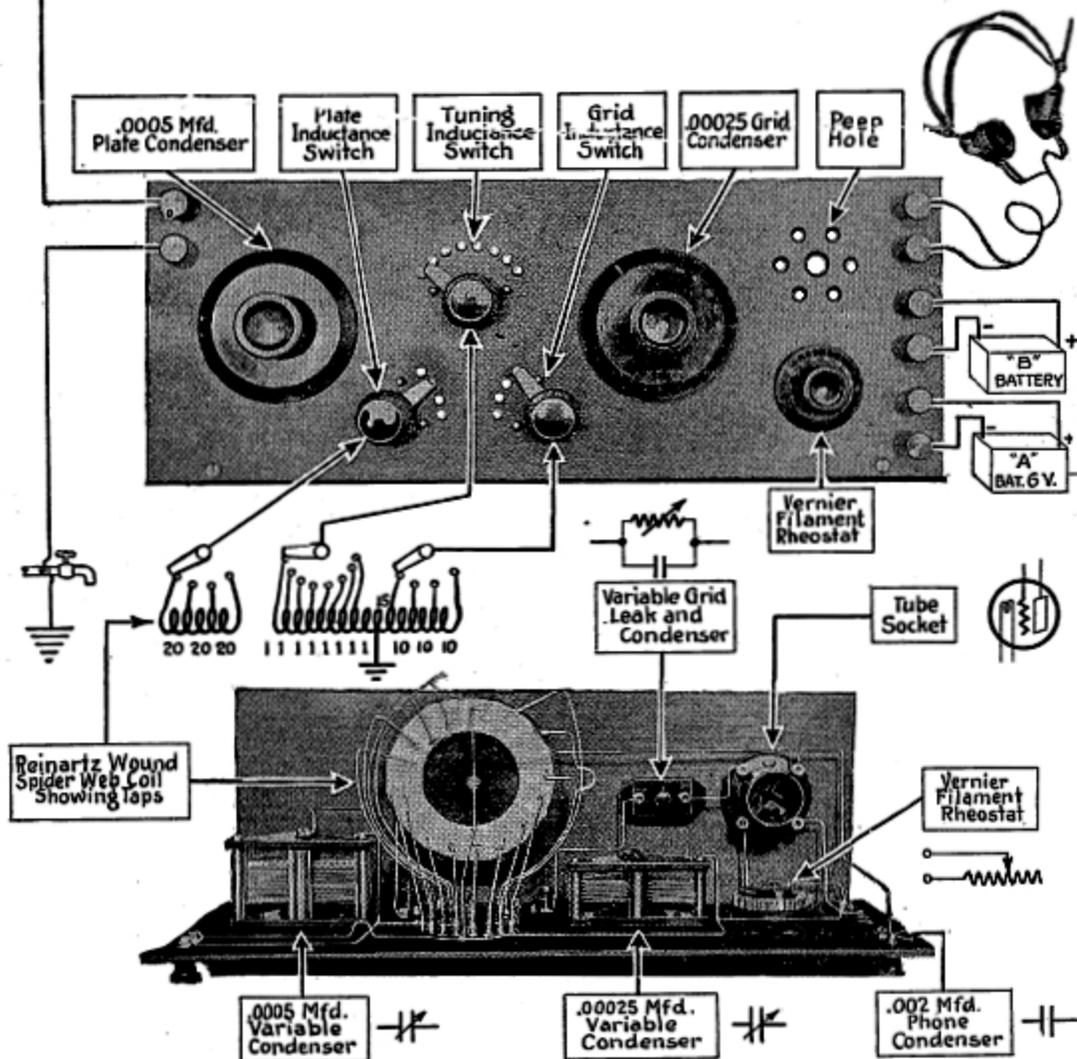


# The Reinartz Set

## Its Construction and Operation

The photo diagram illustrates a Reinartz regenerative receiver designed and built by Benjamin E. Freund in the Radio laboratory of the Chicago Salvage Stock Store, Radio dealers located in Chicago. The efficiency of this simple regenerative set is

surprising to many Radiophans. Undoubtedly it is one of the most satisfactory receivers. On page thirteen, Harry J. Marx explains how to make and use the set illustrated here. Turn to Mr. Marx' page and you'll want to make a Reinartz receiver.





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