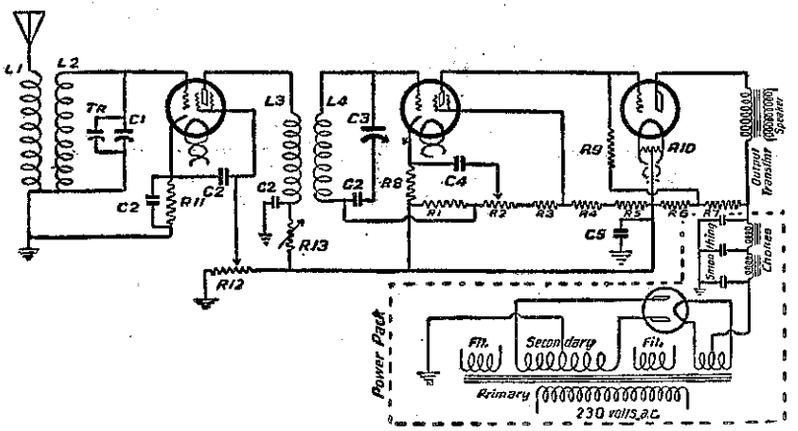
ances, as their accuracy will greatly affect the results. There is no need to worry about first-class articles. Pay a good price and obtain the best. It will bring in good results and be much cheaper in the end. Take care of the shielding. It is simple, though if not adequate will introduce instability and dissatisfaction. It will be noticed that the coils and the under wiring are alone shielded, the system of shielding being different from that before described in these columns. This is strictly in accordance with modern practice and not only is it more simple than the older style of having shield boxes, it is decidedly more satisfactory. But take care that the shielding aluminium is sufficiently heavy. Only recently we learned of the difficulties that an experimenter had had through not using sufficiently heavy aluminium. No matter what he tried the set would not stabilise, and finally he used heavier shields, with the remarkable results that the set became stable and workable. Aluminium not lighter than 18 gauge should be used, and foreseeing the difficulties in coil covers we have made arrangements whereby coils will be available from dealers. Their cost will be very small.

It need not be stressed that the condensers need be of the right working test; for the average constructor knows enough about the game to realise that he is asking for real difficulties if he neglects this precaution. Many a valve has been blown out and not a few power packs burnt out because of the neglect of this simple precaution. It is wise to test them before building up.

Loftin-Three

List of Parts

2 R.f. transformers (specifications in text), L1, L2, L3, L4.
2 Special shields, 3in. x 4½in.
2 UY sockets.
2 224 type valves.
2 .0005 mfd. condensers, C1, C3.
1 Balancing condenser, Tr.
1 Drum dial and connector.
4 .5 mfd. 500 test condensers, C2.
1 100,000 ohm. potentiometer, R12.
1 2000 ohm variable resistance, R.13.
Amplifier as before.



Making the Coils.

WE have now traversed the main points to consider before the receiver is tackled. The moral is obvious and the foregoing remarks are intended not to frighten away the constructor but to impress upon him the very real need to follow the instructions and the specifications to the letter. Odd parts will frequently do in constructing quite good receivers of the ordinary type, but not the Loftin-White. Although we publish the first circuit of our series this week, we do not advise anyone to attempt to make up until the layout description is given week. We will, however, describe the coils for those who wish to make them. They must be carefully matched, as one-dial control is used, though two dials can be employed if preferred. When the three coils are to be used in the "Loftin Four," the greatest of care must be taken in their winding or they will not be matched. Make a winding jig and take a little time and there should be no difficulty.

Here are the specifications:—

First coil: Primary, 60; tap, 30; secondary, 90.

Second coil: Primary, 65; secondary, 90.

Third coil: Primary, 65; secondary, 90

Coil formers, primary 1in. and secondary 1¾in. Wire, primary 34 gauge d.s.c., secondary 26 d.s.c. The tapping on the aerial coil provides for a more selective circuit than would otherwise be the case. It may be necessary to vary the number of turns on the primaries between 65 and 80 to obtain the best results. If the set oscillates on full strength the number of turns on the primary of the radio transformer or transformers must be lessened. A large number of turns on the primaries increases the sensitivity, but makes the set prone to oscillation when pushed.

There is little instruction necessary before one can construct the coils. That is self-evident when the diagram accompanying is studied. Do not attempt to alter any of the specifications given for the coils. A small former is necessary so as to reduce the field created by the current in the coil; furthermore, a large former will not fit in the shield cans. The wire has been selected for many reasons, and constructors will be well advised to use that specified if good results are to be obtained. Both coils must be wound in the same direction.

If the three-valve set is to be used two coils are necessary, but for the larger set three. Further stages require a proportionate number of similar coils.

In next week's article we are presuming that the amplifier is ready-made, but that the constructor has no objection to rebuilding it.

Change in 1YA's Frequency

FOR some time past listeners into 1YA have been inconvenienced by heterodyning caused by an unknown overseas station. To avoid this interference, the P. and T. Department has approved of a minor adjustment to the wavelength, which has now been dropped from 333 metres to 329 (approximately) or 910 kilocycles.

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