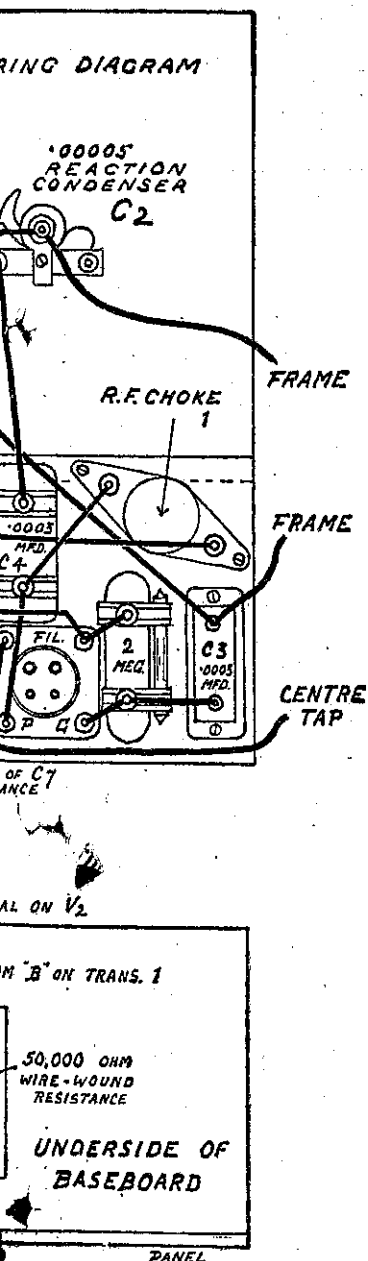


"Country" Portable

home or holiday use

mode"

whole of the weight it is advisable to overtail the corners. If this operation beyond the constructor, equivalent strength may be secured by reinforcing the corners with thin sheet aluminium or brass well screwed to the wood; or strips of the same metals may be taken right round the case, leaving the ends separated an inch or so so as not to impair the efficiency of the frame aerial by coupling to it.



The front of the case is occupied by the control panel and by the fretted timber which carries the speaker chassis. The speaker chassis should be of a fairly small and light type so that it will do no harm to use three-ply to support it. Every little bit of weight that can be saved will help in making the set convenient to carry. If doors are used to cover the panel and speaker fret as in the illustration of Fig. 2, these should be as lightly constructed as possible too.

The back of the cabinet may also be made of three-ply, and is detachable as a whole. The frame aerial is carried on it, being wound on four strips of ebonite mounted diagonally at the corners. Each strip must have fourteen sloping sawcuts, spaced one-eighth of an inch, made across it part way through, the aerial wire being wound in these cuts. As may be guessed, the frame winding consists of fourteen turns, 26 s.w.g. wire with a double silk covering being suitable. The winding is tapped at the seventh turn; the tapping and the two ends are taken to a miniature terminal strip mounted alongside the winding, the tapping to the centre terminal and the two ends of the winding to the two outer terminals. Flex leads are then taken from these terminals to the proper points in the receiver, the leads being left long enough to permit of the back being opened to provide access to the receiver and batteries.

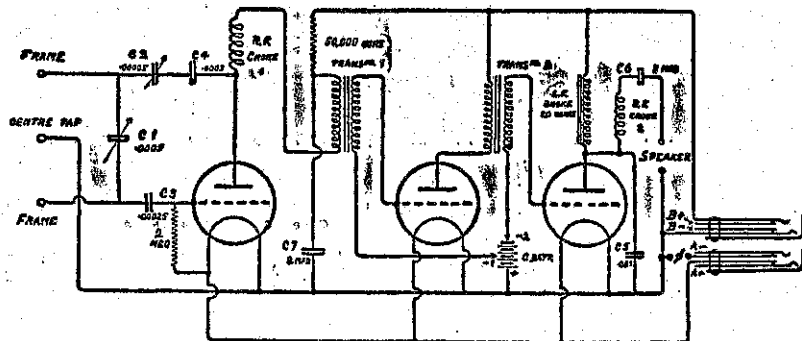
The strips on which the baseboard rests should be a little over seven inches down from the top of the cabinet. The precise method of constructing the cabinet is a matter in which every individual constructor will wish to be governed to some extent by his own ideas, but the general layout indicated in Fig. 2 should not be departed from too completely.

The General Layout.

THE construction of the receiver itself is very simple indeed; moreover, we have been careful to draw very complete diagrams so as to eliminate any possibility of a mistake. The fact that some of the components are mounted underneath the baseboard has made it necessary to include an extra drawing of the underside of the board, but there should be no difficulty at all in following this. The two jacks for plugging in the "B" eliminator and "A" charger were in the original model screwed direct to the baseboard. Some types of jack do not permit of this being done, and where this is the case the width of the panel must be increased so that it will project below the baseboard sufficiently to mount the jacks. Where this is not done, the panel which carries the speaker chassis must be drilled to permit the insertion of plugs into the jacks which otherwise, of course, are inaccessible. The jacks are shown mounted sideways in Fig. 4, but this is only for the sake of clearness in showing the connections to them; actually they are mounted vertically.

The Components.

THE choice of components is a matter for serious consideration in



any portable set, as it is necessary to strike a nice balance between small dimensions and efficiency. For instance, many variable condensers of very high efficiency and mechanical excellence are also on the heavy side. Fortunately, it is not difficult to find

formers are exactly similar. The use of low ratio transformers is recommended, as these usually result in improved tone quality, while the sensitivity of the receiver is such that the loss of a little amplification is not serious.

It will be noticed that certain of the components are fairly closely spaced. It is just possible that if different components to those used in the original are employed, some slight readjustment may be necessary. However, an effort has been made to provide room for most alternative components, so that it is very unlikely that anything of this kind will be called for, especially if very bulky apparatus is avoided.

For the same reason as in the case of the transformers, it is advisable to use two different makes of radio frequency chokes. If home-made chokes are employed, use two which have a widely differing number of turns rather than two of identical construction. There is not very much space available for the second r.f. choke, so that this must necessarily be of a compact type.

In next week's article the remaining components will be discussed, and general hints given on construction and operation.

components which, while being light, are also well made and efficient.

Many transformers of small dimensions, but having excellent characteristics, are now available. If possible, it is advisable to use two transformers of different makes, as stability is apt to be affected where the two trans-

UNLIKE howls due to too much reaction, etc., the audio frequency howl is distinguished by the fact that it does not vary with the tuning or reaction adjustments.

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