ake the tapped portion of each pin. The holes will be 2in. apart.

Reference to the diagram will show how each coil is mounted by clamping two pieces of ebonite, one on either side of the wire, and tightening up by the same way and then turn to the base. A strip of 3-16in. ebonite measuring 6¾in. by ¾in., has to be drilled with six holes.

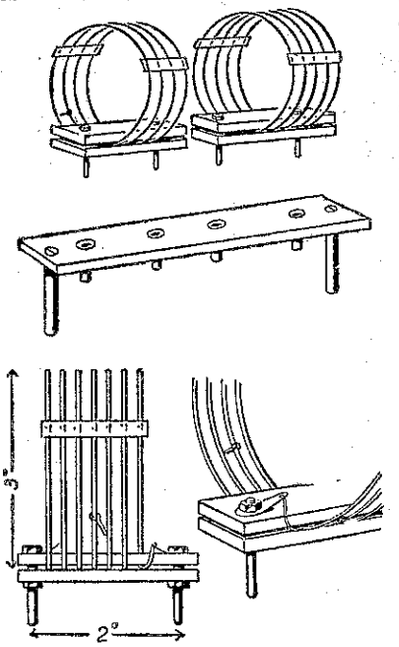
Two, half an inch from each end, are used to fix the base to the wooden baseboard. The two in the centre are ¾in. apart with the remaining two, 2in. on either side. In the four inside holes screw the valve sockets, with soldering lugs to provide contact. This completes the coils and mounting and is the most difficult part finished.

Components for "Round-the-World" Two

1 Variable condenser (low loss .0002 m.f.d.).
1 Variable condenser, .00035 m.f.d.
2 Fixed condensers, .0002 with leak, 7 meg. and .0003 m.f.d.
2 Anti-microphonic valve sockets.
1 15-30 ohm Rheostat.
1 Audio transformer (1-5 ratio).
2 Verner dials.
1 Midget neutralising condenser.
Panel and baseboard.
1 doz. Terminals.
18 guage enamelled or tinned copper wire.
1 Amperite.
44 Valve pins and sockets.
Ebonite strips, etc.

The Lay-Out.

THE lay-out diagram gives the general arrangement and the relative positions of the various components.



One word on the RF choke. This has to be one designed for short-wave work and if the constructor wishes to make one himself the following will be helpful. A glass test tube, known to chemists as a "boiling tube," can be used. A tight fitting cork can be inverted and screwed to the baseboard, so that when the boiling tube is wound it can be placed over the cork. Wind with 100 turns of No. 32 DCC wire and space with cotton or fine string. After taking off the spacing give a coat of thin celluloid solution. Fasten each end of the wire with cotton until the solution has dried out.

It will be seen that a switch has been mounted at the rear of the baseboard. If a cabinet is to be used, this switch could be fastened to the front panel with no alteration to the existing wiring beyond an extension of the connections to the switch. If antimicrophonic valve sockets are not used on both valves, the detector is the most sensitive and one on this position is advised.

The six terminals are mounted on two strips, one containing two and the other four terminals.

Wiring Up.

IN wiring up run all grid and plate wires direct to their destination, disregarding all thoughts of the finished appearance. Right angle bends have been indicated for the sake of clearness. The small condenser behind the soil is a series aerial condenser, and can be in the form of one of the many neutralising condensers on the market. The length of flexible wire to one side of this condenser is used for a variable aerial tapping on the grid coil, and a small projecting tag will have to be soldered to the centre turn of each coil. This is indicated in the diagram.

No difficulties should arise in wiring up, and by referring to the theoretical and lay-out diagram the beginner will get an idea of the meaning of these theoretical diagrams.