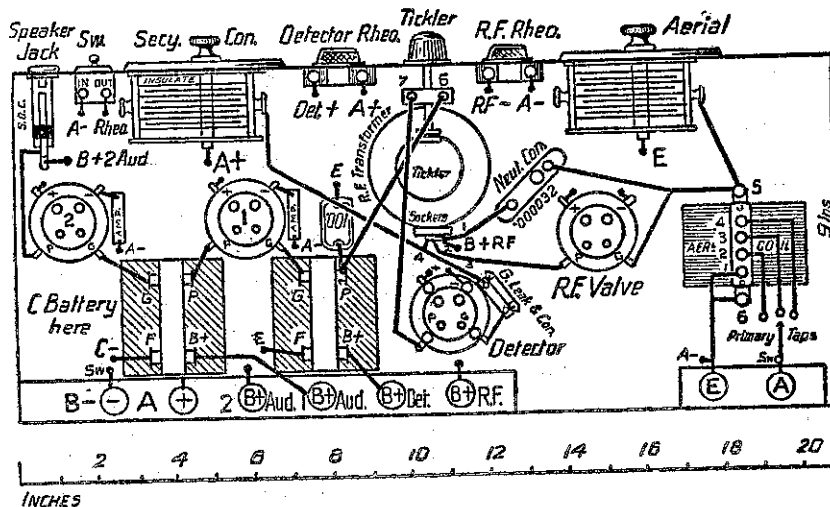
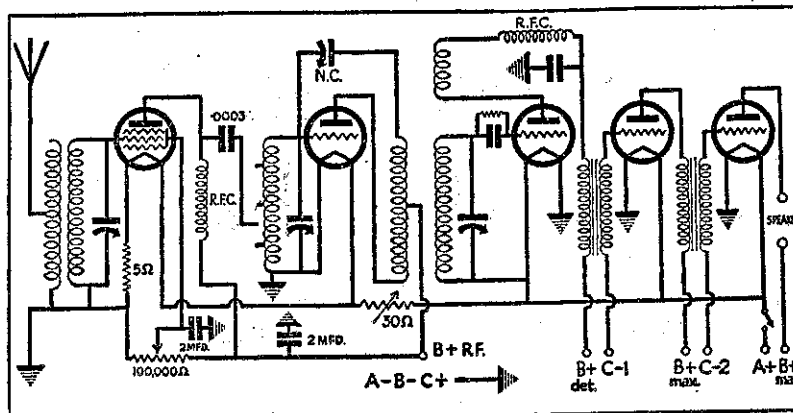


will have the parts that are on the original panel, plus a dial and knob. It is suggested that the three dials be now evenly spaced and the knob be put on a level with the r.f. rheostat. Just be careful, if you rearrange the condensers for the remaining part of the set, that you do not get them so that they will not fit in with the wires that have been removed from them. Rather than cause any complications, merely line up the condenser for the screen-grid stage and volume control and do not attempt to alter the spacing. Slip the panel back before going any farther.

Extend the baseboard to take up the 6in. of space now left at one end. Take your shield and fasten it by means of wood screws to the baseboard. You now have a metal shield separating the screen-grid stage from the rest, and this shield extends along the base of the new compartment and up the panel and back.

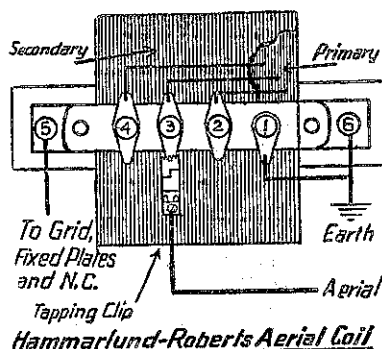
Laying Out the Extra Stage.

UNSOLDER the connections going to the grid of the first r.f. valve and the aerial condenser from the existing aerial coil. Do not take these wires off the valve and condenser. Disconnect the wire which goes from the



Above—The theoretical sketch of the H.R. with a stage of s.g.
Below—The layout of the original H.R. Four.

tuning condenser. The other end goes to earth. Notice that the top of the valve—that is, the anode in the case of the English and Continental valves—passes through the shield without touching it, to the .0003 condenser. Also that a connection from the volume control goes through the shield and down



underneath the baseboard to "B+" r.f. This point is clearly shown on the diagram of the original H.R. Four, also reproduced.

For the sake of clearness we have shown wires in the original set, which

are not interfered with, by a broken line, while new wires, which go under the baseboard, are shown with a different type of broken line. The full line indicates the new wires. Screw heads indicate that that wire is connected with the metal base.

You may, if you wish, use the American type of screen-grid valve, either the 222 or 230. If you use either of these two valves, remember that the connections to the screen-grid valve are slightly different. The grid is on the top in the case of American valves, and the wires now going to the grid terminal of the valve socket must go to the top of the valves. The vacant grid terminal must take the wire now going to "P" of the valve socket, while "P" takes the connection which goes through the screen to the .0003 condenser.

It is possible that some constructors will wish to try the differential reaction condenser in a Hammarlund Roberts set. Of course, if they do this, the set is no longer a Hammarlund Roberts. It is not suggested that this will be any better. The constructor may have some considerable difficulty in getting the set to oscillate without redesigning the regenerative.

The "Super Six"

OUR next set, the "Super Six," is the most powerful set that we have yet described in the "Radio Record" columns. It is a set which, though small and economical, will surpass in distance-getting ability and selectivity any other set to date. Comprising only six

valves, the set is really very small, and occupies no more space than does the average four-valve Browning Drake. It is not difficult to make nor is it expensive either to make or to operate. It is modern—essentially so—using two screen grid valves and a pentode.

A super-heterodyne circuit is employed enabling the use of a loop, but for those who want to go after dx, a special coupling coil has been designed which will enable them to use an aerial. However, in our test, we found that the loop was all that was required. On this it would bring in anything that atmospheric conditions would allow. Wellingtonians will know the situa-

D.X. NOTEPAPER.

Makes sending for verifications easy.

Per two dozen lots, 1/6 posted.

Per 6 dozen lots, 4/- posted.

Special paper for members of the D.X. Club. State your station number when ordering. Non members can still get the ordinary notepaper paper from office only. Write to Box 1032, Wellington.

tion of the Dominion Building, in which are the "Radio Record" offices. They know that not more than fifty yards from it is 2ZW, while 2YA is less than a mile away. The building has a steel frame, yet with a loop antenna and with both 2YA and 2ZW operating, we were able to raise Christchurch without a whisper of interference.

The set taken from the office to a suburban home, proved itself capable of bringing in Australians and Japanese without an outdoor aerial. When this latter was coupled to the set the Americans were brought in at good strength, and not only were all these stations quite cleanly separated from the locals, but the locals themselves were restricted to a very small portion of the dial. Both 2YA and 2ZW could be tuned out in a degree, a truly remarkable standard of selectivity.

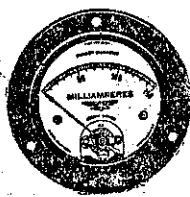
This rather remarkable set will be fully described in the "Radio Record" in the very near future.

JOHNSON'S WIRELESS AND RADIO SCHOOL

There is remunerative employment for qualified radio men on shore and ship. The up-to-date methods of instruction and modern equipment provided at the school enable the student to obtain a most thorough and practical course. All papers connected with the Correspondence Course are promptly corrected in New Zealand.

Day and night classes for Professional Certificates. Correspondence Classes for Professional Certificates. Correspondence Classes for Amateurs and others. Write for Particulars to Department A.

JOHNSON'S WIRELESS & RADIO SCHOOL,
St. George Buildings,
8-10 Brandon Street,
Wellington.



There is a **JEWELL** Measuring Instrument for every type of Radio and Electrical Requirement. If unable to obtain, write direct to—



Factory Representatives for New Zealand:
ABEL, SMEETON, LTD., Customs Street East, Auckland.