CRANK (Picton): I wish to purchase a set of new valves for my 5-valve battery set. Can you suggest a better combination than 201A.

A.: Yes. Use 221 throughout with the exception of the last stage, and here use one of the B605 class. If you do not have a 6-volt eliminator and have to rely on dry battery you can use the 230 class of valve, with 231 in the last stage.

COUNTERPOISE (Feilding): What is the most suitable valve for the Sparrow Hawk One?

A.: One of the special detector class, that is, the A415, P.M. 4DX class.

2. In using the Sparrow Hawk One as an all-wave set, what is the most suitable length for the combined aerial and earth?—100 feet.

3. Could a switch on the panel be used in place of the metal shorting bar for switching the small condenser in series with the aerial for shortwave work?—Yes.

G. B. BOY (Dunedin): We regret we do not know anything about the set in question. It has a good name in the States, but has not been brought to New Zealand commercially. If you brought such a receiver over on your own account you may have some difficulty with the servicing, although probably the circuit is very little different from any other super-heterodyne. If you purchase one of the better-known makes of super het. the service agencies connected with the distributing firms would always be ready to help you. The set certainly carries a good guarantee, but what use would that be to anyone in this part of the world?

RADIO (Wellington): Which is the best set for receiving distant stations, super-heterodyne or the ordinary receiving set?

A.: The super-heterodyne receiver is the more sensitive, although, being more sensitive, it picks up more noise than does the ordinary set.

THE attention of correspondents is drawn to the fact that a coupon taken from the "Radio Record" must accompany every inquiry. The non-appearance of the coupon in any one week's issue cannot be taken as a reason for its not being sent. Those who wish not to destroy their paper can, however, transcribe the essential points. Furthermore, we must remind correspondents that queries (limited to three) cannot be answered by post unless accompanied by 1/- fee; also no more than three queries can be answered in the "Record" without 1/- fee.

As the volume of queries is tending to increase, we ask correspondents to be as brief as possible. At the present time we have a long waiting list, and are anxious to get this up to date, but there is only a limited space for this department.

2. Is 7/20 enamelled wire better as an aerial than 7/22?

A.: Theoretically, yes, although there would be very little difference in efficiency; rather too small to be noticeable. If you have an aerial with 7/22, do not pull it down to construct one of 7/20.

3. Which would be the best for a lead-in tube, a porcelain or strong glass tube?

A.: There is no appreciable difference.

C. G. (Auckland): Can you account for the fact that when the third pin connection in my set with the mains is disconnected, as well as my ordinary earth, I can receive KFI, Los Angeles?

A.: Your set is still earthing through the mains. Actually, the third pin on the wall does not connect with the set proper, only with the shielding. The transformer is connected only with the two live pins, of which one is earth, so you are still getting the earth return.

TROUBLED (Auckland): When turning the condenser dial 1YA comes in at 35; a little higher, the station will come in again. The set does this on any strong station.

A.: Some of the earlier type of a.c. super-heterodynes have this fault It is not serious, although very annoying. It has been overcome in the new sets by the employment of a slightly different circuit which use multi-mu valves.

2. Every time a deep note is sounded there is a terrible rattle in the speaker.

A.: This is due to a resonant peak in your speaker. If it was evident from the onset it is unlikely that it can be cleared up easily. Your best plan would be to consult the agent who sold you the set. As you are not using a well-known make it is impossible for us to tell you whether this has occurred to other receivers of the same make.

3. Does it harm an a.c. set to run it without an earth.

A.: No, it is quite in order to do this, as many electric sets obtain their earth return through the mains.

I.U.D. (Auckland): Can I add more valves to my 8-valve set?

A.: We do not advise you to try, for your set has been designed by a very capable engineer and you would not gain by adding to it.

2. Would I improve my set by using another type of valve?

A.: No; your set has been designed for the valves that are in it. Do not alter them.

YOUNG EAGLE (Gore): I wish to build a shortwave adapter for my 7-valve super-heterodyne receiver. Could you supply the details?

A.: A super-heterodyne a.c. adapter was described in the 1931 "Guide." It should be attached to the first intermediate frequency stage.

P. P. (Nelson): What is the size of aluminium and lead plates for a 1000 m.f.d. electrolitic condenser?

A.: We regret we cannot supply this information. If we did we should be falling foul of the Fire Underwriters' Association, as we are not permitted to give instructions for making apparatus of this description.

KAINGA O TIA (New Plymouth): My set squeals very easily and goes into oscillation rather too readily. I am using an eliminator and have tried altering the detector tapping, but without good results. Speech and music are mushy.

A.: Try the effect of a 2 mfd. condenser between the B+ and earth. Further, you should not use PM2 throughout, as it is a medium power valve and should be used only in the last stage. Such valves are sometimes good detectors. If the use of different valves and the 2 mfd. by-pass condenser is not effective you will have to locate the tickler coil and take a few turns off it. You certainly have a good list of stations, and it appears that your set is well up to standard. Your aerial system is quite good. We have seen very many inferior.

NIGHTHAWK (Temuka): Although I had wonderful results with "Sparrow Hawk One" I am disappointed with the

CORRESPONDENTS must attach this coupon to all queries sent to the Technical Editor (Box 1032, Wellington. Limit three questions, unless letter is accompanied by 1/- fee.

Name of set .....

Number of valves .....

Name .....

Address .....

.....

.....

Nom de plume .....

To be kept in subsequent inquiries.

Date .....

Please Note:—

(1) Be specific and brief, tabulating, if possible.
(2) Write legibly and on one side of the paper.
(3) We do not design circuits, but accept suggestions for feature articles

Solving trouble, as different from advice, is difficult by correspondence and while letters are given every consideration, answers are not necessarily correct—they are only our opinion based on the matter supplied, which may be quite inadequate. Intricate and involved specifications cannot be supplied without a specialist's fee.