

IN BRIEF.

A. E. ELLISON, Reefton.—We are afraid the data for which you ask will involve a great deal more searching than would repay such an effort.

A Small DX Set.

WOULD you be so kind as to publish a circuit, using 1 valve, that would be good for DX work?

ANSWER: Such a set, when bringing in anything past the local stations, would give very distorted reception, that would not hardly be worth while. One valve sets are seldom very efficient, and are not generally adapted to work from any distance. However, as one correspondent to the DX Club has had good results, we will describe and publish a one-valve set.

Tinned Copper Wire.

F. L., Greymouth, writes:—"I have been unable to obtain tinned copper wire, such as is specified for Megohm's Screen Grid Browning-Drake. Would enamel wire do?"

ANSWER: Yes. Tinned copper wire is really more suitable, because of the greater conductivity of the coating given the wire, but enamelled copper wire is almost as good, and can be readily obtained from all dealers.

A Burnt-out Valve.

I AM in trouble with my crystal and amplifier set," writes J.M., Wellington. "I have been using a low fila-

ment consumption valve, but the B battery runs down very quickly. I tried connecting up the C battery with the positive terminal on to the A negative, which connected with the valve, C negative, and the F (GB) terminal of the transformer. The F positive I connected to be negative. I found that the C ran down in about two hours, and when I switched on the valve again I found it would not work."

ANSWER: This is what happens when people try experiments about which they are not very certain. From the sketch, the correspondent said he was connecting the voltage of his C battery across the filament of his valve. Taking it that the C negative was 4½ volts, the total voltage on the filament would be 9, which would account for the valve not lighting when it was tried later on.

The fact that the C battery ran down regularly goes to prove this. The amount of current used by the filament (filament consumption) is very high. That is the reason why large A battery cells are used. The C battery, if used in its correct position, that is, to make the grid negative, runs down very slowly, in fact, a C battery lasts anything from six months to twelve

months. The cells in the C are much smaller than those in the A, or even in a B, for the amount of current required from the B battery is greater than that required from the C, so it can be quite readily understood that, when a sudden heavy draw is placed upon the battery, it would run down very quickly, as the correspondent describes.

The correct connections were shown in last week's "Radio Record" in the Crystal Corner, when a one-valve amplifier (double grid) was described. It will be seen that the C battery is connected between the "G.B." or "F." terminals of the transformer to the A negative, not as the correspondent has shown. In this way, the only element of the valve affected by this battery is the grid.

When dull emitter valves are used, one must be prepared to replace his B batteries more often than he would if using bright emitter valves, for there is a heavier current drain with this former type.

The Filter Choke.

IN the issue of the "Radio Record" just to hand, you published a filter choke specifying a sheet of 28 gauge tin-plate 28in. by 20in., out of which 80 laminations 3½in. by 2½in. were to be cut. As this would run into a little more tin is it meant that there should only be 40 laminations should be made and cut in half, thus making 80 pieces? Also, could the windows be cut out after the pieces have been halved, as it would be much easier?

ANSWER: It is evident that there is some slight slip in the specifications, which should read: 1½ sheets of tin plate 28in. by 20in. The windows should be cut after the plates have been cut in two pieces, otherwise great difficulty would be experienced.

Potentiometers for Carborundum Units.

CAN you tell me how many ohms there are in potentiometers that are used in carborundum stabilising units?—"QUESTION-MARK" (Wellington).

ANSWER: Potentiometers with a resistance of 400 ohms are required.

"Could a 400 ohm potentiometer be used in series with the detector

H.T. supply to raise the voltage from, say, 60 volts, until the distortion caused by too much voltage ceases, say, at 20 volts?"

ANSWER: This would depend on the filament consumption of the valve. If this were 1, then the 400 ohm potentiometer would be quite suitable; but if the consumption were .06 amps. at least 700 ohms would be required, while if .25 amps. only 200 ohms would be needed.

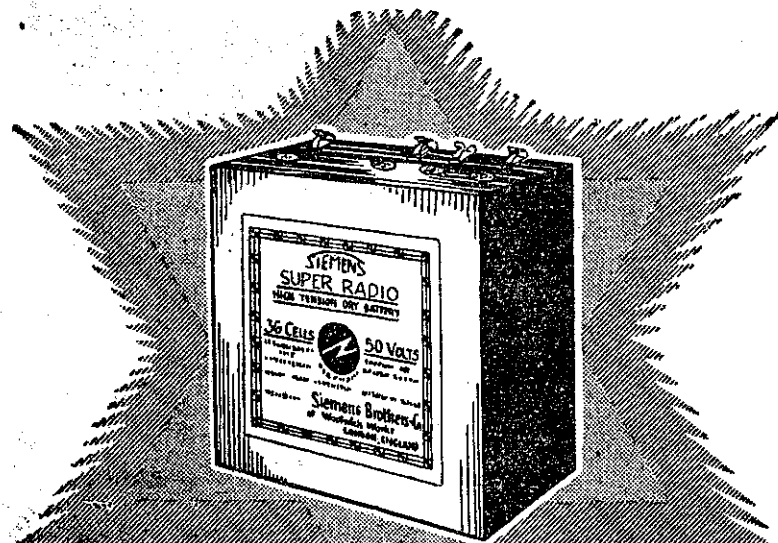
Set Unselective.

"A.C." (Wellington) writes:—"I have a six-valve factory set and for some time have been subjected to interference by 2YA whilst listening in to 1YA and 3YA, unless I make certain adjustments with my "sensitivity" control, which has the effect of greatly reducing volume. My aerial consists of two 30ft. steel masts 139ft. apart, with insulator inserted to reduce the length of aerial to about 100ft., and in addition the lead-in accounts for about 40ft. of wire. I have been advised to shorten the aerial and also to increase the height of the masts about 15ft., but before going to this trouble (and expense) would like your opinion as to the advisability of doing this. When 2YA is silent I get remarkable results. For instance, I received Dunedin (4YA) at good loud-speaker strength about a month ago at 12.30 p.m., and last evening I logged 2BL and 4GB at 9 p.m. In passing, I might mention that the "earth" is connected to a water-pipe which is in very sandy soil until it enters the bank where it connects with water main. I am greatly interested in "Notes and Comments."

ANSWER: The factory-built receiver (specified, but withheld from publication for obvious reasons) is quite selective, so that the trouble probably lies outside the set. Quite likely the aerial is pointing towards 2YA, so that it increases the strength out of proportion to that of the other stations. "A.C." would not be advised to shorten his aerial, but to raise it would be a good plan. A wave-trap such as described by "Pentode" in our issue of November 9 would probably greatly sharpen tuning, though the other stations would be only slightly weakened.

B Battery from the Mains.

I HAVE a factory-made one-valve set, and if it is possible I would like to get the B battery supply from the 230-volt mains by means of the electrolytic rectifier.—P.H.



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