Transmitting "Pirates"

THE American broadcasting authorities are at present making a close inspection of radio activities west of the Mississippi, in an endeayour to track down three "pirate" broadcasting stations operating without license.

It is reported that illegal stations such as these are situated in nearly every State of America. They usually employ very low power and composite transmitting apparatus, thus avoiding the instant detection that would come if they used power higher than 100 watts or so. Their call letters are faked in a way that escapes the attention of the average listener, although radio inspectors, of course, pick them out instantly.

2. On which turn will it be necessary to get the tapping for L3?
A.: Halfway.

3. Where could I get a suitable circuit for a power pack for this set?
A.: The 1931 "Guide," which is now in preparation.

"BUNG" (Waikato): I have been using bare copper wire on my aerial, and after a few weeks I noticed that I did not get the same results as before, so I replaced it with enamelled copper wire, which has made a vast improvement. Would corrosion make this difference?

In all probability, yes. A.: In all probability, yes.
2. How would I connect a condens
in series with my aerial to improve short wave reception?

A.: Connect the aerial to one side of the condenser and the lead to the set

on the other.

3. Could I improve the volume by increasing the B voltage?

A.: Yes, With such a valve as B405 in the last stage you would need 135 volts B with 12½ volts bias for best re-

sults.
4. I notice on certain nights flashes can be seen on the poles of the high-tension wires that run past my

place. How can my reception, which is suffering as a result, be improved?

A.: This is a definite case where you should consult the district radio officer, who will probably be able to do something for you.

5. Is the enclosed sample of insulated wire suitable for a lead-in?—Yes.

"TONE" (Nelson): Where should I connect the tone control in my set? A.: Between the output terminals and the loudspeaker, providing, of course, you have an output transformer or choke and condenser output.

2. What is the value of the condensers in the enclosed circuit?

A.: Approximately .001 mfds.
3. Which is the best system of tone

control? A.: A 10,000 ohms variable resistance in series with a .5 mfd. condenser across the secondary of the last audio transformer.

4. Is a power detector satisfactory for the Browning-Drake? If so, can you the Browning-Drake? give me the circuit?

A.: It is quite satisfactory, and the circuit was given in last week's "Radio

(Continued on page 30.)

Experimenter

In response to several requests, we are opening a section devoted to the interests of the experimenting amateur. Tested ideas received from enthusiasts will be published and acknowledged. Experiences of listeners relating to points raised in our Questions and Answers column will be welcomed. We, however, cannot undertake responsibility for any of the ideas published.

Protecting Valves

HAVE two suggestions for constructors which might be useful:-

(1) In screen-grid sets using the tuned anode method of H.F. coupling there is considerable danger of blowing the valves by shorting the H.F. H.T. leads to the metal screen. Consider the circuit in the 1930 "Guide."

The danger lies in the fact that the constructor thinks himself safe to fiddle round when the switch S is off, as all the batteries are connected thereto. But this is not the case as, when the switch is off and, say, the tuning condenser marked 2 shorted across, the H.T. current can still find a path to

al thicknesses of thick soft paper (I found blotting-paper to be the most suitable). The paper may be secured by means of twine.

The wire (cotton or silk covered) may be anchored for a start by means of a small pin dug into the paper, or it may be held under the twine.

The winding is then proceeded with until the required number of turns is put on, the end being anchored. The wire is given a good coating of celluloid cement, care being taken to see that it is evenly spread and worked well into the cotton or silk covering.

When this is dry the twine is removed and the cocoa tin extracted. The

by means of a strip of thin three-ply or thick celluloid and the free ends of the wire passed through holes in same,-"Union" (Kilbirnie).

Electrolytic Condensers

IN the United States the electrolytic condenser appears to have made a good deal of headway and several different types of this condenser are on the market and regularly advertised. Apart from the outstanding advantage of high capacity and small volume, it is claimed that the condensers are self-healing, so that in the event of a breakdown the condenser resumes its normal condition when the overload voltage is removed. They are incorporated in many sets now used in New Zealand.

For Small Soldering Jobs

IN wireless constructional and repair work one often wants a soldering iron with a small bit for attending to small, awkward jobs. Such irons are difficult to work with, however, for owing to the small volume of copper

they cool so rapidly.

A very handy tool may be made from an old worn-out soldering iron. The point is cut off with a hacksaw and the end trimmed up more or less square. In the end of the old bit is drilled a hole, and a piece of 4-inch copper rod, about 14 inches in length, is forced in, If necessary, it may be made perfectly secure by making deep indentations with a centre punch round junction with the bit .- H.C.B. (Lyall Bay).

A Tone Control

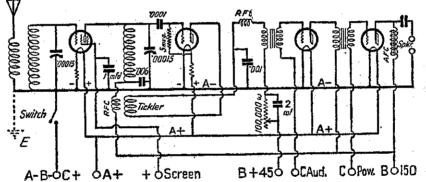
SOME types of loudspeaker have a tendency to over-accentuate notes of the upper register. A tone control utilising a .01 mfd. fixed condenser and a 500,000 ohm resistance may be used to obtain better reproduction. The condenser and resistance are connected in series across the speaker terminals.

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S-O-S

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- through the filaments of the valves

and through the A battery.

I have found it an improvement to connect B— permanently to the screen—the switch S to operate on the A battery only. Under these circumstances, if the H.T. leads should come in contact with the screen the current will find a direct path back to B-, and by virtue of the higher resistance offered by the valve filaments will leave the valves practically unhurt.

I have found that this is the case in my set and have actually shorted the leads concerned without any apparent damage to the valves.

(2) The following method of making coils I have not seen mentioned in your paper yet, and I have found it to be easy and satisfactory. A permanent former is dispensed with, yet the coil, when finished, is perfectly rigid, and losses are reduced to a minimum.

A cylindrical object such as a cocoa whose diameter is considerably smaller than that required for the finished coil must be procured. required diameter is made up of sever-

paper is then taken out very carefully by rolling it between the two first fingers. Some of the paper is bound to stick to the inside of the coil, and this should be gently scraped off with a pocket-knife. A coating of celluloid cement should then be given to the coil and the whole set aside to

The result is a sturdy job which can be dropped on the floor without fear of damage. The coil may be mounted

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