King's Speech Recorded

Remarkable Feat

SEVEN hours after making his recent broadcast speech at the opening of the Round Table Conference on India, the King heard a gramophone record of it at Buckingham Palace. Later the same record was broadcast as a surprise item by the British Broadcasting Corporation.

These two events were made possible as the result of a remarkable scientific feat at the Gramophone Company's factory at Hayes, Middlesex. In a small courtyard at the House of Lords the company placed its mobile recording machinery, from which cables led to six microphones in the Royal Gallery. A man stood in the van of a recording instrument on which a wax disc was revolving. At the moment that he heard the King's voice through a loud speaker in the van the man placed the recording needle on the wax.

When the speech was finished the disc was wrapped in blankets and hurried to the factory at Hayes. Here a record was made from it in 3½ hours. Hitherto the making of a record from the wax has taken 60 hours.

London's Police Patrol

Latest Radio Equipment

SCOTLAND Yard has refitted the Flying Squad with such up-to-date wireless transmitters and receivers that the officers in the cars can talk to "the Yard" even when travelling at 80 miles an hour.

The short-wave system was abandoned because of "fading" when the cars drove past metal-framework buildings, and when medium-wave, low-power transmitters were fitted it was found that telephony was possible instead of sending messages in Morse code.

The low power employed is to avoid eavesdropping. This cannot be avoided entirely, but only listeners within a small radius can pick up messages from a Flying Squad car. At the Yard special receivers have been fitted in silence cabinets so that the very weak signals from the moving cars can be magnified and work a loudspeaker.

Effective Insulation

THE question whether additional insulators on a receiving aerial will improve matters depends entirely upon whether the insulation is already as near as may be perfect. If it is, then additional insulators will have no effect. If it is not, then additional insulators will certainly improve the efficiency of the aerial. Clearly any signal energy, induced in the aerial by the incoming electric waves, which runs to earth owing to faulty insulation, cannot be going into the receiver, and to that extent the efficiency of the aerial is below normal.

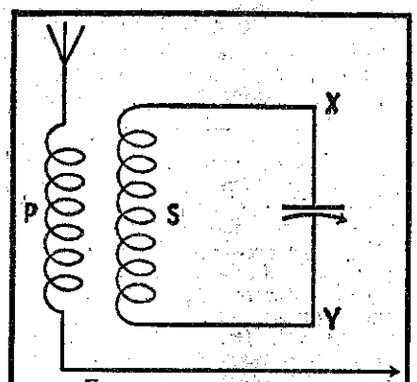

FIG.1. *To Aerial Terminal of Set*

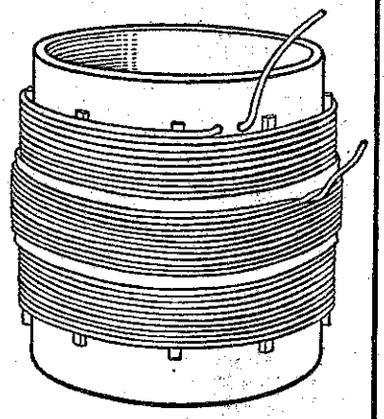

FIG.2.

Plan of the wavetrap and its coil described by A.A.H.

An Ejector for Any Receiving Circuit

A Wavetrap of Unusual Qualities

By "A.A.H."

I HAVE studied and experimented on various ejecting circuits and eventually devised one that was satisfactory in many ways and working efficiently. It will completely dissolve broadcasting signals at a surprisingly short distance from their transmitter, smooth out rough signals, reduce static considerably, tighten up tuning to almost a point, and also form an adjunct to a highly efficient crystal receiving set. It is best to be constructed as a wave-trap alone and hooked up permanently to the receiver, for it does not diminish the volume and often improves it. Station 1YA "faded out" within a quarter of a mile away and when signals were strongest, and Australian stations brought in.

On a good cardboard former, which may be from 2½ to 2¾ inches in diameter, and about 3 inches long, fix with glue match sticks minus their heads from ¾ to 7-8 inches apart and wind on closely and tightly about 40 feet of No. 22 D.C.C. copper wire, leaving some six inches slack at each end, after anchoring, for connections to aerial and receiver respectively (see Figure 2). This is the primary (P) coil.

Over the centre of this coil fix a band of tissue paper, one layer, about an inch broad, and over this, wind on ten turns of No. 18 D.C.C. copper wire as before, and same direction, anchoring each end, leaving about 6 inches of slack. These turns can be kept in place by threading over and above at two or three places. This is the secondary (S) coil, each end being connected to the respective terminals of the condenser, which should be fastened on to the formico panelling, the coils being placed in an oblique position to it when connected. Efficient soldering must be adopted wherever possible, even to the set terminal A, if the ejector has to be permanent.

In tuning, use both dials until signals are at the loudest. The interfering signal can be then trapped out; or again, trap out the interfering signals and tune in those desired with the dial on the set. A little practice may be necessary as this apparatus, if well made, is somewhat critical in using. By running X through a crystal detector, thence through phones and on to connection Y, or, better still, connecting X and Y to a double point switch and wiring them as just said, reception can be had by either valve or crystal receiver at will. In this case the arrow point goes to earth. The trap will also smooth out rough signals, reduce static, and it also has improved both tonal and tuning qualities often enough. It does not diminish volume and the writer knows quite well it will solve many of the complaints from listeners that appear from time to time. This circuit does not assist short-wave reception.

For crystal work connect arrow point to earth.