GRID SIGNALLING ATTACHMENT FOR TYPE 36. (CONTINUED).

Trials of the Experimental Unit in H.M.Signal School and on H.M.S."YARMOUTH".

The grid signalling unit, and the experimental work which led up to its development, have been described in Quarterly Appendix No.6 for March 1923.

Before installing on H.M.S."YARMOUTH", further trials, consisting of a number of transmissions for automatic reception at Nutbourne, were carried out in Signal School. During these trials, satisfactory transmissions at speeds of 100-120 words per minutes were obtained.

In addition to the morse transmissions, the grid signalling unit was used for "Teletype" communication between Signal School and Nutbourne. The circuit arrangement is shown in Diagram Fig.1. The signalling key easily reproduced the 5-dot teletype code at the fastest speeds obtainable with the teletype apparatus.

An oscillographic record of the anode current in a T23 valve for a "dot" at 100 words per minute is given in Fig.2. This is of interest in that it illustrates the rapidity with which the anode current, and consequently the aerial current, builds up and shuts down as the signalling potential is applied to the valve.

The unit was installed in H.M.S."YARMOUTH", and trials with the Type 36 Set were carried out, as soon as this set was had been fitted.

The power supply necessary for producing the negative signalling potential was obtained from the Type 102 filament alternator. It was found just possible to arrange a suitable negative potential for shutting down, but for a standard attachment it would be necessary to change the ratio of the transformer used.

For automatic transmissions, a Gell transmitter with Gell perforator for the tape was used, these being obtained from Horsea.

Arrangements were made for reception of all transmissions to be made at Nutbourne, and for the hand speed transmissions to be made at Horsea and Signal School.

Transmissions.

All transmissions made with the Type 36 Set during the experimental cruise of H.M.S."YARMOUTH" in May, 1923, were carried out using the grid signalling key. During the first two days of the trip considerable trouble was experienced with the Gell Transmitter, and morse signals were very unsatisfactory. At other times the perforator failed to punch the tape clearly with the result that it ran badly.