

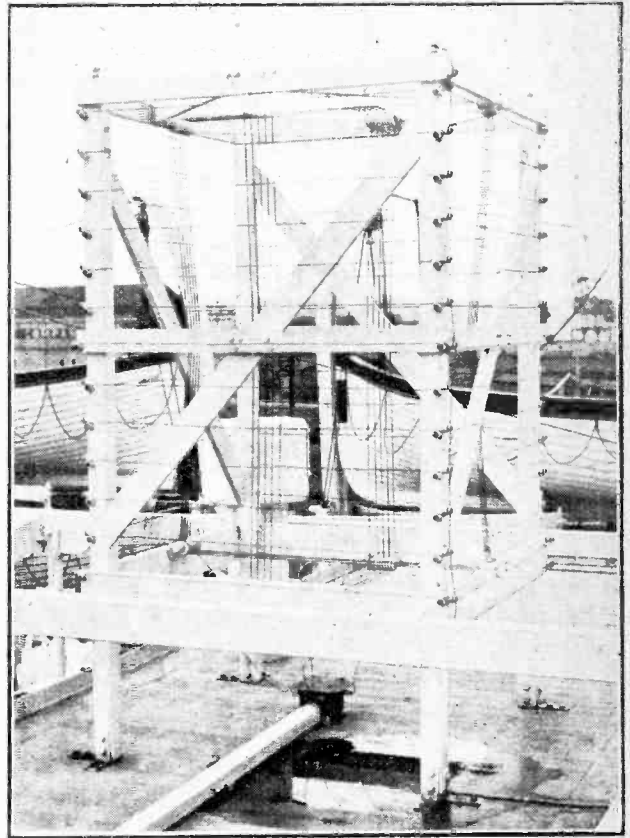
A Year's Progress in Commercial Wireless.—

degrees. During darkness results were far more erratic, but, fortunately for ships' navigation, these variable errors were not encountered up to a range of about one hundred miles when the transmission was entirely over sea. These results of the Radio Research Board's experiments are confirmed by observations made in various countries throughout the world.

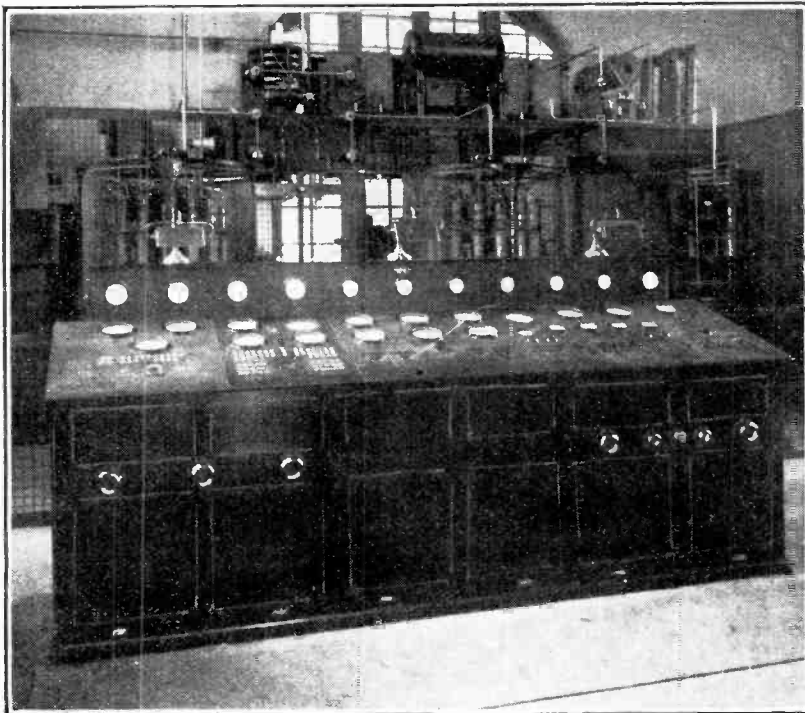
In addition to the work carried out at the coast stations there is a large volume of telegraph traffic conducted with passenger ships at long ranges through a Post Office medium-power station. A new, up-to-date transmitting station for this purpose was opened during the year at Portishead to replace the one at Devizes which had been in use since the war. The receiving and operating station remains as before at Burnham-on-Sea, but the whole service has been extended, and a long-range, short-wave service is now available in addition to the improved long-wave service. Nearly one and a half million words were dealt with at this station during the year.

Short Waves for Ships.

Technical difficulties have arisen in adapting short-wave installations to ship conditions, and so far only a few ships have been fitted. Great ranges are often obtained; for instance, Portishead is frequently in good communication with ships in the South Atlantic and the Indian Ocean, but the communication cannot yet be considered as reliable. However, the work carried out during the year may be taken as proving that a great future is in store for short-wave communication with ships. When at last this comes to its own, no ship need ever be out of direct touch with any country, but



Ship's direction-finding aerial.



Control panel of transatlantic telephony equipment at Rugby.

we have some way to go yet before that is a practical proposition.

During the year, wireless telephony has been fitted in a few fishing fleets, and, as an experiment, in a few large passenger ships. In some of the fishing fleets it has proved useful, but otherwise it has made little advance in maritime signalling. A set for working with ships has been installed in the coast station at the Humber.

Marine Telephony.

The obstacles in the way of wide adoption are that telephony causes more interference than telegraphy, for equal power the range obtainable is less, the difficulties of technical maintenance are about the same for the two systems, and telephony presents language difficulties which are not present in telegraphy. But, on the other hand, the supreme advantage of conversation between individuals on ship and shore, as compared with telegraphic communication, must eventually overcome the difficulties which at present loom so large.