

comes under notice. Complaints against operators for breaches of signalling regulations are dealt with by the Post Office, cases concerning foreign operators being referred for action to their administrations. Last year some 1,500 cases were dealt with—about 600 British and 900 foreign.

### Ship Inspection

Inspection of apparatus on board ships is also carried out by the Post Office in order to ensure that the requirements of the Merchant Shipping (Wireless Telegraphy) Act of 1919 are complied with, inspectors being stationed for this purpose at the principal ports.

### Watchers

These inspectors conduct also the examinations of candidates for Certificates of Proficiency as wireless watchers. The grade of Watcher was introduced by the Merchant Shipping Act of 1919, and the only qualifications required are recognition of the distress and safety signals through interference and knowledge of how to test whether the receiving apparatus is functioning.

### Ships' Licences

Every ship's installation, like all other installations with the exception of those used by the Government, must be licensed by the Postmaster-General. In this country every ship of 1,600 tons gross and upwards, and every passenger-ship, must be fitted, so that the number licensed is about 3,500, the type of apparatus, call signal, waves, etc., being noted on the licence.

### Aircraft Licences

Aircraft installations are also licensed and inspected by the Department, permits for operators being issued at present on the recommendation of the Air Ministry.

### Point-to-Point Stations

The Post Office transmitting stations for point-to-point communications are situated at Leaffield (near Oxford), Abu Zabal (near Cairo), Northolt (near London), Stonehaven (near Aberdeen), and Caister (near Great Yarmouth).

Leaffield is a high-power station, fitted with 250 kw. arc transmitters, and carries out a service with a similar Post Office station at Abu Zabal in Egypt. It also transmits telegrams to distant ships, Press messages to Halifax, India, and certain ships, and broadcasts Government *communiqués*. Messages from Leaffield are received by ship and shore stations, under favourable conditions, all over the globe.

In the Leaffield-Abu Zabal service, the telegrams from the latter station are received at a Post Office station at Banbury, from which station also the transmitting apparatus at Leaffield can be operated by distant control over land lines. Leaffield can also be operated by distant control from the G.P.O. in London. At the

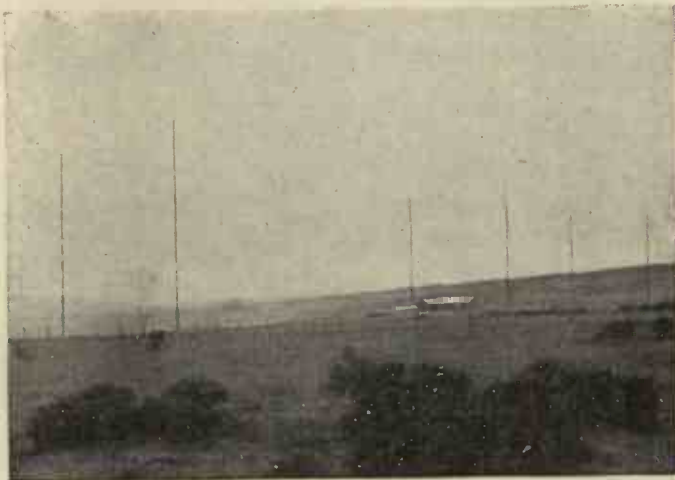


Fig. 3. "GKU," the station at Devizes.

Leaffield station, therefore, there is only an engineering staff, the operation being carried out from Banbury or London by high-speed automatic apparatus, or by hand, according to circumstances. This arrangement allows of simultaneous transmission and reception, and is now in general use at all important commercial point-to-point stations.

Northolt and Stonehaven are medium-power transmitting stations, fitted with both arc and valve sets, and Caister is a low-power valve station. These stations are used for continental communications, services being conducted at present with Berlin, Rome, Amsterdam, and Buda Pest; the operation, including reception, being carried out normally at the G.P.O. The Army station at Aldershot, which works with Cologne, is also operated from the G.P.O.

For these services automatic transmission and reception is used when practicable. Creed and Wheatstone systems are normally employed,