

FACTORIES IN BRITAIN MANUFACTURING TELEPHONES AND SWITCHBOARD.

Principal amongst various factories for the manufacture of electrical appliances that were visited were the Western Electric Company's factory at Woolwich, and the General Electric Company's works at Birmingham and Manchester.

Western Electric Company commands Best Patents.—The General Electric Company are now making telephones, switchboards, and accessories, and trying to get a share of that kind of business, but as they have only recently paid particular attention to these branches, they are not yet quite in a position to successfully compete with the Western Electric Company, which has generally the command of the best patents.

EXPERIMENTAL DEPARTMENTS.

The Postal Telegraphs has a special experimental department and staff in London employed trying and testing different instruments and circuits. From the results of these tests particular classes of instruments are selected and different arrangements of circuits introduced.

The National Telephone Company has also an experimental department testing telephones, transmitters, receivers, cables with different sizes of wires, and measuring telephone-currents, &c.

PRACTICAL RESULTS FROM EXPERIMENTS.

Very Heavy Wires do not increase Talking-efficiency.—One practical outcome of these experiments led to the saving in one year to the National Telephone Company of £80,000 by the adoption of a 9 lb. copper conductor instead of a 16 lb. conductor, and it was also determined that, in the case of overhead telephone-wires, very little increased efficiency was experienced by using a wire, say, 600 lb. to the mile, instead of a wire 400 lb. to the mile. Heavier wires than about 400 lb. to the mile have been used in England and elsewhere for trunk telephone circuits, but not in America.

Advantages of these Experiments to New Zealand.—The results of these experiments are very important, and will have a practical bearing for New Zealand in our specifications of lead-covered cable, as for many of our requirements it will be practicable to use conductors of only 12 lb. of copper to the mile instead of 16 lb. All of our requirements will not be met by this size of copper conductor, but where they can be, a not inconsiderable saving, varying with the price of copper, will be effected.

PADDINGTON EXCHANGE, LONDON.—“ELECTROPHONE SECTION.”

Subscribers connected to Theatres, &c.—An interesting feature of the new Paddington Exchange, London, is a special section called the “Electrophone section,” devoted to connecting subscribers to theatres or music-halls through junction wires which are idle at night to the Gerard Exchange, that exchange being the most central for the purpose. The wires from it run to the different theatres, so that any subscriber who wishes to hear a play, an opera, or music can be connected to the particular place of amusement he asks for. Sensitive transmitters are fixed on the stages in the most suitable position to pick up in the usual way the talking, singing, or music, and this is transmitted as far as the wires extend to the telephone receiver.

THE POST OFFICE WILL CONTROL TELEPHONE SYSTEM THROUGHOUT BRITAIN AFTER 1911.

Post Office provides Underground Wires for Company, charging Rental.—The British Post Office takes over all the telephones in Britain in 1911. In the meantime, however, the Post Office and the National Telephone Company may be considered as one administration as far as technical matters are concerned. The electrical engineers of both meet and adopt standards of instruments, which are mutually agreed upon, and the Post Office provides many underground wires for the National Company, charging an annual rental until the whole business is taken over by the Post Office.

Solid-back Transmitter Standard.—As an example of a standard, both Post Office and National Telegraph Company supply mainly a fixed solid-back transmitter.

Complaints and Delays.—Notwithstanding the efforts to attain high efficiency, complaints continue to be made about the telephone service, and the delays in getting the use of trunk wires.

BRITISH POST OFFICE EXCHANGE RATES.

The telephone-exchange rates of the British Post Office as as follow:—

Rates of Subscription at Small Towns.

I. Message-rate service: Charges for connection with an exchange within a radius of half a mile from the subscriber's premises—Annual subscription, £3, payable in advance, and, in addition, message fees of 1d. for each local call originated by the subscriber; the annual payment in respect of local messages to be at least £1 10s., also payable in advance. The minimum payment under this arrangement is thus £4 10s., for which a subscriber can make 360 calls in the year, paying 1d. for each additional call beyond 360. The subscriber is not charged for answering calls made by other subscribers.

II. Unlimited service: Annual subscription for connection with an exchange within half-a-mile radius of the subscriber's premises, together with an unlimited number of local calls, £7 10s., payable in advance.

III. Where the premises of any subscriber at the message rate or at the unlimited-service rate are beyond the prescribed radius from the exchange, the annual subscription is increased by £1 5s. for every additional quarter of a mile or fraction thereof. Where new work of an exceptionally expensive character is involved, a higher charge may be necessary.