

POLES AND WIRE.

During the year 48 miles of pole-line and 520 miles of wire were erected for telegraph and telephone (toll) purposes, while 122 miles of pole-line and 338 miles of wire were dismantled, or, in localities where no longer required by the Department, sold to settlers for use as private telephone-lines.

The lengths of pole-line and wire in use for telegraph and telephone toll purposes on the 31st March, 1929 and 1930, respectively, were as follows:—

Pole-line and Wire.							Year ended 31st March, 1929.	Year ended 31st March, 1930.
Miles of pole-line	..	..	..	..	..	..	12,720*	12,646
Miles of wire	..	..	..	..	..	..	62,996*	63,178

* Revised figures.

The telegraph and telephone wire in use on the 31st March, 1930—viz., 63,178 miles—is classified as under:—

	Miles.
Used exclusively for telephone toll traffic	4,906
Used exclusively for telegraph traffic	9,403
Used simultaneously and (or) conjointly for telegraph and telephone toll traffic	48,869

The total length of wire that may be used for telephone toll traffic is 53,774 miles; the total length that may be used for the transmission of telegrams, 58,271 miles; and the length of telephone toll-lines over which telegrams may be transmitted by telephone, 23,176 miles. The total length of Morse circuit derived from the superimposing of telephone circuits is 11,809 miles, and the total length of additional telephone toll circuit improvised from the existing wire circuits by the use of subsidiary apparatus associated therewith (so-called phantom working) is 6,838 miles. In addition, 1,751 channel miles of telephone toll circuit have been obtained from the application of the carrier-current telephone system to telephone trunk lines.

NEW ZEALAND SUBMARINE CABLES.

COOK STRAIT CABLES.

Breaks occurred in two of the Cook Strait single-core telegraph-cables in July, 1929, those affected being Nos. 1 and 2 Oteronga Bay - White Bay cables. The break in No. 1 cable was located at a point five and a half nautical miles from the Oteronga Bay cable-hut, while that in No. 2 cable was found to be eleven and a quarter nautical miles from the same spot. All other cables have remained in good working-condition during the year, and, as these, with the improved facilities now available, have proved adequate for the expeditious handling of the traffic, the repair of the broken cables has been deferred until such time as a third cable becomes interrupted.

An additional telephone circuit across Cook Strait was brought into service in December last by the operation of a four-wire single-channel carrier-current telephone system over the four-core continuously-loaded telephone-cable.

Investigations were commenced during the year with a view to determining whether the Cook Strait single-core unloaded cables would lend themselves to the application of carrier-current methods of telegraph working, and whether one or more of them could be utilized for the purpose of providing additional telephone outlets, which will be required in the near future between Wellington and Blenheim. These investigations have not yet been completed, but from the test data collected there is good reason to believe that it will be practicable to apply both the carrier-telegraph and carrier-telephone methods of operation to these cables.

MISCELLANEOUS.

A fault in the Tory Channel single-core telephone-cable between Te Pangu and Te Uria-karapa was reported and repaired in October, 1929.

A four-pair multiple twin telephone-cable was laid across Onahau Bay in the vicinity of Te Mahia, Queen Charlotte Sound, in February, 1930.

A 26-pair telephone-cable (1,200 yards) was laid across Auckland Harbour in June, 1929, for the purpose of diverting and extending the existing 26-pair cable between Ponsonby and Northcote. This work was found to be necessary consequent upon the erection by the Harbour Board of a sea-wall to effect improvements to the harbour.

Approximately two miles and a half of 20-pair multiple twin telephone-cable (in two lengths) were laid across Auckland Harbour during the year for the purpose of providing additional toll facilities between Auckland and stations situated on the North Auckland peninsula. The trunk lines serving stations on the North Auckland peninsula were cut into these cables on the 4th March, 1930.