

### REINSTATEMENT OF REWARDS TO POLICE OFFICERS FOR SECURING CONVICTIONS AGAINST PERSONS BREAKING TELEGRAPH INSULATORS.

In November the system previously in force under which police officers were rewarded for securing convictions against persons breaking telegraph insulators was reinstated.

### MACHINE-PRINTING TELEGRAPHS.

During the year the telegraph offices at the following places, which hitherto were wholly Morse-working offices, were equipped with teleprinter apparatus for the despatch of telegraph traffic: Blenheim, Greymouth, Hamilton, Invercargill, Masterton, Nelson, Oamaru, Rotorua, Timaru, Westport, and Whangarei. During the same period teleprinter apparatus was also installed at Auckland, Christchurch, and Dunedin, and additional teleprinter apparatus at Wellington. The installation of this machine-printing equipment has resulted in the establishment of new teleprinter channels as follows: Auckland-Whangarei, Auckland-Hamilton, Auckland-Rotorua, Wellington-Masterton, Wellington-Blenheim, Wellington-Nelson, Christchurch-Westport, Christchurch-Greymouth, Christchurch-Timaru, Christchurch-Oamaru, Christchurch-Invercargill, and Dunedin-Invercargill.

Some additional multiplex equipment also was installed at Auckland, Wellington, and Christchurch to meet special demands during exceptionally busy periods. Another improvement was the replacement of the Morkrum machine-printing apparatus at Palmerston North by the latest type of teleprinter equipment.

The installation of teleprinter apparatus at a number of additional offices will be proceeded with next year.

### INSTALLATION OF DUPLEX RELAY REPEATER APPARATUS AT NAPIER.

On the 9th March, 1936, a duplex relay repeater arrangement was brought into operation at Napier with a view to obtaining more stability of working on the main Auckland-Wellington multiplex circuit. In effect, this arrangement divides the long aerial line circuit between Wellington and Auckland, and thus permits a greater margin of operation of the equipment. The innovation has proved so successful in its object that the question of extending the relay repeater arrangement to other centres is being considered.

### TELEGRAPH BATTERIES AND POWER-SUPPLY.

Since last year's report was prepared the universal telegraph battery system has been installed at Masterton, Wanganui, Blenheim, and Timaru. These new installations have enabled the Department to dispense with a large number of primary batteries at those offices, and this will result in considerable economy in maintenance charges. A further advantage arising from the use of central or universal batteries is the facility afforded for the conversion of intermittent current sets to constant current working whereby it becomes practicable to dispense also with the individual line batteries which have in the past been maintained at each of the smaller out-stations.

Emergency power-supply equipment has been installed at Auckland, Wellington, and Christchurch to ensure continuity of service over the main telegraph systems in the event of temporary failures in the commercial power-supply.

### EXTENSION OF TELEGRAPH AND TOLL SYSTEMS.

All major additions to the long distance toll network in the shape of new outlets between the more important centres are now provided by the installation of carrier-current telephone systems. In the case of minor circuits over short distances, and in certain cases where medium distances are involved, it is more economical to erect new wire or to rearrange existing wires to set up the additional facilities required. In another section of this report reference is made to the offices between which new carrier outlets have been provided.

The offices between which improved facilities have been provided by the erection of new lines and/or the rearrangement of existing lines are set out hereunder:—

Whangarei-Kaikohe, Te Kopuru - Tangaihi, Whangarei-Turiapua, Waiuku-Manukau Heads, Waiwera-Warkworth, Papakura-Clevedon, Taupo-Waitahanui, Te Kauwhata-Matahuru, Waimana-Kutarere, Te Puke-Matata, Te Awamutu-Pirongia, Matata-Whakatane, Hoe-o-Tainui-Tahuna, Hamilton-Ohaupo, Hamilton-Te Awamutu, Hamilton-Otorohanga, Otorohanga-Te Kuiti, Napier-Taradale, Hastings-Pakipaki, Hastings-Dannevirke, Hastings-Waipawa, Stratford-Tututawa, Taihape-Ohakune, Palmerston North-Taihape, Palmerston North-Wellington, Motueka-Thorpe, Picton-Whitamango, Blenheim-White's Bay, Rangiora-Sefton, Duvauchelle-Pigeon Bay, Pigeon Bay-Port Levy, Palmerston-Ranfurly, Tarras-Lindis Pass.

In addition to the foregoing, 271 miles of toll and telegraph pole-line were reconstructed during the year. This work involved the replacement of 622 miles of wire.

Other improvements to the plant and equipment used in connection with the telegraph and toll services include the following:—

The provision of concentration facilities and an increase in the number of operating positions on the Auckland toll board.

The conversion of a number of smaller telegraph-offices to constant current working, thus obviating the necessity of retaining line batteries at these places.

The provision of improved facilities for the handling of toll calls at the public counters at Hamilton and Christchurch.