

CARRIER - CURRENT TELEPHONE SYSTEMS.

During the year a three-channel carrier-telephone system was installed between Seddon and Christchurch. The provision of this system necessitated the erection of a fireproof building at Kaikoura to house the power-plant and carrier-amplifying apparatus required for the establishment of a toll-repeater station at that point. In future, repeaters or amplifiers will be installed at Kaikoura for association with all through circuits whether they be of the voice-frequency or the high-frequency carrier type. Special equipment was made up locally and installed for operation over No. 4 Lyall Bay - White's Bay single-core telegraph cable, thus providing an extra telephone outlet across Cook Strait. The setting-up of this additional telephone channel, together with the installation of the Seddon-Christchurch three-channel carrier system, has enabled the Department to rearrange its inter-Island toll facilities to better advantage, and there are now four direct circuits between Wellington and Christchurch and two between Wellington and Blenheim. This represents the best arrangement practicable until the laying of the new Cook Strait telephone cable has been completed.

The installation of the three-channel carrier system between Seddon and Christchurch released from service one single-channel system, which was reinstalled immediately between Nelson and Greymouth, thus providing a much-needed high-grade direct circuit between Nelson and the West Coast of the South Island.

One of the single-channel carrier telephone systems previously in use between Wellington and Palmerston North was transferred for use between Auckland and Whangarei. The object of this transfer was to facilitate a general rearrangement of toll facilities on the Auckland-Wellsford-Whangarei section in order that suitable outlets might be provided for the newly established departmental exchanges at Paparoa and Kaiwaka and the enlarged exchange at Maungaturoto.

MAINTENANCE OF TELEGRAPH AND TELEPHONE COMMUNICATION SERVICES.

The storms experienced during the year were not so serious as those which caused such a large amount of damage to the Department's plant during the previous twelve months. There is no doubt that the high standard of construction employed by the Department is responsible in no small degree for the almost unbroken continuity of service enjoyed by the users of the telegraph and telephone systems.

A gale which commenced on the night of the 1st May and which in some districts was accompanied by an electrical disturbance and in other districts by a heavy snowfall was the most severe storm during the year from the point of view of interruption to services. In the South Island the damage was confined to the West Coast and Mid-Canterbury districts; but in the North Island the effects of the visitation were more general, total disconnections of the main circuits occurring in the Marton, New Plymouth, Taupo, and North Auckland localities. The weather in the South Island moderated during the early hours of the morning, thus enabling communication to be restored before midday. The North Island, however, was not so fortunate, as the gale continued during the following day, hampering the restoration work. Traffic between Auckland and Wellington was subjected to a delay of several hours, but by evening the position was satisfactory.

On the 8th and 9th October the Canterbury and West Coast - Nelson districts experienced an electrical disturbance, together with heavy rain and a northerly gale. Fuses blown by discharges of lightning and fallen trees and slips from hillsides caused disconnection of circuits on the Christchurch-West Coast and Nelson - West Coast routes. Telegraphic traffic was disposed of by means of the emergency radio-stations, but toll traffic was delayed until the circuits were repaired. Temporary repairs were effected on all routes by the 10th October.

On the 11th December the Te Teko district and on the 10th February the Hinds district were visited by severe electrical storms. On each occasion the telephone exchange serving the locality was rendered almost inoperative for a short period. Lightning arresters, however, prevented serious damage to the equipment and to private property, and blown fuses were the only source of trouble.

During the Christmas - New Year period heavy rainfall, combined with high temperatures, was experienced at Auckland, and the combination of dampness and heat caused excessive atmospheric humidity. As a consequence, telephone equipment became damp, and the resultant low insulation was responsible for impaired telephone service. As each case was reported the damp equipment was replaced with a minimum of delay.

EXTENSIONS OF TELEGRAPH AND TOLL SYSTEMS.

The removal of National Broadcasting Station 2YA to the new site at Titahi Bay necessitated the provision of two high-grade metallic circuits between the studio in Wellington and the new transmitting-station. In addition, departmental requirements made imperative the provision of more circuits over the same section of the main north route. As the Department's pole-line over the main highway between Wellington and Porirua was already loaded to its full capacity, and the reconstruction of this section to provide for the new circuits required would have been extremely difficult and also uneconomic, a new pole-line carrying eight pairs of wires was erected over an alternative route between Melling and Pahautanui. This enabled certain of the traffic circuits on the main route to be diverted to the new pole-line and brought into Wellington via Lower Hutt, thus making available on the main route the circuits required by the National Broadcasting Service and at the same time providing much-needed relief for departmental services over that route. The new pole-line will also provide a valuable alternative outlet from Wellington in the event of disruption of the main pole-line.

Consequent on the electrification of the railway over the new route between Wellington and Paekakariki, it was necessary to divert this Department's pole-line in certain places between Porirua and Paekakariki in order to avoid inductive interference caused by the paralleling of the toll and telegraph circuits and the new railway power circuits.