

*Maintenance.*

On the Napier-Gisborne line five miles of line were erected across the isthmus near the Mahia Peninsula to take the place of a line by another route, which was dismantled.

When erecting three new copper wires between Masterton and Waipukurau the line throughout the distance was strengthened, and is now in good repair. The completion of these wires has allowed of the dismantling of the line on the old route *via* the East Coast, consisting of twenty-four miles of line and 454 miles of wire between Te Nui and Aohanga.

A rearrangement of the circuits serving the existing offices on the East Coast was also made; the offices at Castlepoint, Whakataki, Te Nui, Carswell's, Taueru, and Masterton being fitted with high-resistance bridging telephones, and placed on one circuit. The Te Nui office was also converted from a Morse to a telephone office. The services of the lineman at Te Nui being no longer required he was transferred to another station.

Two miles of wire between Otaki and Paikakariki were dismantled.

To meet the growing requirements of the Wairarapa district an iron wire was erected between Masterton and Featherston, with intermediate connections at Greytown and Carterton. This circuit, which carries the local traffic, serves to relieve the main circuit to Wellington.

The Opunake-New Plymouth line has been overhauled for about thirteen miles north of Opunake, No. 11½ copper wire replacing the iron wire, which had become much corroded. Further improvement of this line will be made during 1900.

The constant-current combined Morse and telephone connection between Masterton and Eketahuna has been replaced by a bridging-telephone circuit, serving Masterton, Masterton Railway, Opaki, Dreyerton, Mauriceville Railway, Mauriceville, Mangamahoe, and Eketahuna. The electrical resistance of the telephones on this line, as also those on telephone circuits throughout the New Plymouth District, has been specially increased to 2,000 ohms, thus enabling more stations to be connected with the circuit without impairing the efficiency of the instruments.

To relieve the increased pressure on the line between New Plymouth and Wanganui another copper wire is to be erected, which will be extended to Auckland *via* Mokau. There will thus be a two-wire alternate route available from the Wellington to the Auckland Province by way of New Plymouth, serving to relieve the wires on the East Coast route.

During the year the quadruplex system, which has been working very satisfactorily between Wellington and Auckland, has been applied to other circuits. There are now four quadruplex sets at Wellington, three at Christchurch, two at Dunedin, and one each at Wanganui, Napier, Grey-mouth, and Invercargill.

The quadruplex is now worked with advantage daily on two wires between Wellington and Christchurch, and less frequently between Wellington and Dunedin. It is contemplated to still further introduce the system on other circuits on which traffic is becoming somewhat congested.

*Offices.*

The total number of offices in the district is 250.

*Cables.*

The No. 4 Lyall Bay cable became faulty about the end of September, and continued to work indifferently until December, when it became useless. The break was located at 12.5 knots from Lyall Bay.

The No. 1 cable (Oterangi Bay) suddenly parted on the 2nd March at about 2 knots from Oterangi Bay. The s.s. "Tutanekai" left with a repairing staff on the 18th March. The repair of the No. 1 cable was effected on the 20th March, 800 fathoms of shore-end 7-ton cable being used.

The repair of the No. 4 cable was begun on the 3rd April. Owing to bad weather operations were not completed until the 12th April. 1 knot 731 fathoms of cable was used in this work. This cable and the other two from Oterangi Bay are working satisfactorily.

*Telephone Exchanges.*

The branching multiple switchboard at Wellington, which has been in operation for over two years, continues to give every satisfaction. The number of subscribers is now 1,417—an increase of 138 for the year.

New exchanges have been opened at Eltham, Inglewood, Manaia, Marton, Waitara, with under ten subscribers each, and at Feilding, Hawera, and Stratford, with 78, 91, and 57 subscribers respectively. The total number of exchanges in the district is 16—an increase of 8 during the year. A trunk telephone copper wire was erected from Stratford to New Plymouth (30 miles), also from Hawera to Manaia (10 miles), Stratford to Eltham (6 miles), and Stratford to Ngaire (3 miles). These wires are so arranged that telephone conversation can be carried on between all offices in the New Plymouth District from Hawera to Awakino.

At Wanganui the number of subscribers is 250. A number of small poles in the main street being insufficiently high and overloaded with wires have been replaced by larger poles.

All exchanges in the district are in good working-order.

The total number of telephones in use in the district is 2,993, the mileage of poles being 147½ and of wire 2,149½. The number of subscribers to all exchanges in the district is 2,884.

New exchanges are being established at Pahiatua and Woodville. A trunk telephone-wire to serve the former place with Palmerston North is also being constructed.