

preventative of damage from fires. A few poles were renewed, and others rendered secure by means of totara butts.

The line between Tenui and Castlepoint is now undergoing an overhaul. Some few of the poles standing since the first construction are being either renewed or blocked with totara butts.

The Opotiki line is also under overhaul. This line is, in the main, in first-class order, but attention is demanded to clearing of undergrowth, and cleaning and examination of insulators. Some of the poles carrying the wire across the Ohiwa Harbour waters are perforated for an inch or so by the *teredo navalis*, but will not require renewal, it is anticipated, for probably two years yet. When such renewal becomes necessary, a better location clear of the tidal waters can, it is expected, be selected.

The portion of line between Tauranga and Waterford will, within the next few months, require repairs, over about five miles of its length, at the Tauranga end of the section. The piece of line referred to runs through paddocks at some distance from the road. It is proposed during reconstruction to follow the road. When this is done the section will be in first-class order throughout its length. Another diversion required is at Hairini tidal-ford, near Tauranga, where the line will want erecting along the bridge now in course of construction, thus saving the cost of a second turret.

The remaining lines throughout the district have undergone the usual periodical examinations, with such occasional minor repairs as the linemen have been able to execute.

The Kopua branch wire has been extended along the railway-line a distance of seven miles to Makotuku, the present terminus. The wire is to be worked by telephone, and so soon as the instruments are available offices will be opened at Ormondville and Makotuku. A loop-wire has been carried through the railway-station at Kaikora, where a telegraph office will be opened immediately on completion of the necessary additions to the station building, which at present does not afford sufficient accommodation. An office is also to be opened at Te Aute, when similar accommodation is provided. A telephone wire has been erected to connect the Napier Railway-station with the telegraph station, but the instruments are not yet to hand. Two private telephone wires have been erected between the Spit and Napier, and a third private wire is in course of erection. The telephones supplied give great satisfaction, and the owners are highly satisfied with the telephone service.

The following offices have undergone a complete overhaul and refit, viz.: Spit, Tarawera, Taupo, Ohinemutu, Maketu, Tauranga, and Opotiki. All other offices within the district are in good order in respect to their fittings. A branch wire, to be worked by telephone, is to be extended from Maketu to the new settlement of Te Puke, a distance of twelve miles. The materials are partly on the ground, and the construction only awaits the arrival of the balance of the poles, which are shortly expected. This line extended past Te Puke for a few miles will re-join the main line at Mangatawa, and thus cut out the very troublesome and electrically-weak portion of wire between Maketu and Tauranga—a portion which, being contiguous to the sea, often during north-easterly or easterly weather seriously affects the working of the main circuits north of Napier. A telephone station at Whakatane is to be established on the Opotiki line, worked from Maketu on the Morse circuit. Between Maketu and Opotiki it is proposed to place Whakatane intermediate, and to make such arrangements at Maketu as will always insure attention to Whakatane's call.

#### WELLINGTON TO NEW PLYMOUTH VIA WANGANUI, INCLUDING THE BRANCH LINES TO PALMERSTON NORTH, WOODVILLE, AND ALSO THE TRUNK LINE FROM WELLINGTON TO AUCKLAND AS FAR AS TENUI AND CASTLEPOINT.

The lines in this district are in good condition. The only portion that will require any attention during the next summer will be the portion between Paikakariki and Wanganui. On this section a pole-to-pole examination was made, and where necessary new poles or blocks of totara have been laid ready for erection.

Between Wellington and Pahautanui a telephone wire, some eighteen miles in length, has been erected on the existing line, and a telephone office will be opened shortly. During the erection of this wire the line received a careful overhaul.

Between Featherston and the township of Martinborough, a distance of thirteen miles, a telephone line has been erected, and the office at Martinborough placed under the charge of the Postmaster. As anticipated prior to the opening of this line, the financial results in connection with it have proved highly satisfactory.

Between Carterton and Gladstone it is intended also to construct a telephone line. Contracts for the supply and delivery of the necessary poles have already been effected.

Between Pungarehu and Parihaka a line has been erected, and an office at the last-named place opened under the charge of an officer of the Armed Constabulary Force.

The telephone line between Pungarehu and Cape Egmont lighthouse, erected at the date of the last report, has been opened.

#### COOK STRAIT CABLES.

On the afternoon of the 19th February last, and without any previous warning, the original three-wire cable, laid in 1866, again parted for the third time on all three wires. Copper-resistance tests taken by Dr. Lemon placed the fault at 12.166 nautical miles from Lyall's Bay. The actual length by measurement off picking-up drum on board cables-ship, and copper-resistance tests by Mr. Donovan, the cables-ship's electrician, made the break at 12.021 nautical miles from Lyall's Bay. The recovery of the ends of the broken cable revealed the fact that the rupture of the conductors was not due to the corrosion of the armour-covering, but to some sudden longitudinal strain being thrown on the cable across its line, and thus causing it to part. At first, conclusions were come to that the fracture was due to some floating wreckage having fouled the cable, and thus causing it, after severe strain, to part; but, as the cable was recovered even to the very broken ends on both sides exactly on the line it was originally laid down, the breakage can be attributed to no other cause but that of an earthquake.