

Association for the Advancement of Science. Suitable conditions have been imposed as to the use and control of the station, which is to be used only for the reception and not for the transmission of signals. Its use is to be confined to members of the scientific teaching staff of the College and their assistants, and no telegraphic message received is to be communicated to any person other than an officer of the Department. The Department has reserved the right to inspect the station and plant at any time, and to suspend its working during any period. The permission given is revocable at any time by His Excellency the Governor. This is the first occasion on which an Order in Council has been made authorizing the installation of a private wireless telegraph-station.

TELEPHONE EXCHANGES.

Twenty-five new exchanges were opened during the year, the number of subscribers increased by 5,233 and the number of connections by 6,481.

The total number of exchanges now is 238, made up of 61 central and 177 sub exchanges.

The total number of connections is 49,415, compared with 42,934 in 1913. They may be classified as follows: Paying direct, 37,486; extensions, 7,433; bureaux, 4,009; service, 487.

New connections numbered 7,621, and those given up 2,015. The increase in connections is 6,481, equal to 15·09 per cent.

In addition there are 395 telephone bureaux not connected with exchanges.

There are 2,514 miles of telephone-exchange lines and 79,154 miles of wire. 52,292 miles of wire are in use, and 26,862 miles available for new connections. This is an increase of 537 miles of line and 32,149 miles of wire over last year.

The percentage of the total telephone-stations (meaning exchange connections and bureaux) to the population of the Dominion on 31st March, 1914, is 4·36. The percentages in each of the four principal-cities are: Wellington, 8·14; Dunedin, 6·34; Auckland, 6·15; and Christchurch, 5·72.

New exchanges were opened in the Auckland District at Awanui, Hikurangi, Howick, Kaitaia, Matamata, Maungaturoto, Ohaupo, Ohura, Ongarue, Papakura, Taneatua, Taupo, Tuakau, and Waipu; in the Wellington District at Okato, Porirua, Taradale, Te Araroa, Tokomaru Bay, Tolaga Bay, and Ward; in the Nelson District at Denniston and Murchison; and in the Canterbury District at Pleasant Point and Springfield.

There are 1,472 party-line circuits, with a total of 4,642 subscribers.

A fire (caused by a tramway trolley-pole striking a pair of aerial telephone-leads which fouled the high-power trolley-wires) occurred in the distributing-frame at the Telephone Exchange, Wellington, on the 7th January, 1914, about 1,500 connections being affected. Communication was restored by the following morning.

AUTOMATIC EXCHANGES.

The Strowger automatic system is in operation at Auckland with a capacity of 1,300 lines and at Wellington with a capacity of 1,000. About 600 lines at Auckland and 400 at Wellington are in use, with satisfactory results. Trouble is occasionally experienced due to excess of dampness following on injury to the overhead lead cable resulting in lowered insulation; but this trouble, of course, equally affects any other central-battery system. It is the intention to replace these cables more generally by lead-covered cables laid underground. The work of laying the ducts is proceeding at Auckland and Wellington, and the drawing-in of the cables will soon be undertaken. When this is completed and the telephones throughout the area are connected with the automatic system the advantages of the change will be more fully realized.

The Strowger equipment at the two exchanges named was introduced to provide additional switchboard accommodation for new subscribers, pending the fulfilment of the contract let last year for an automatic installation. The Western Electric Company is now manufacturing the material required under the contract.

A new building to accommodate the exchange at Hamilton will be erected very shortly. The telephone-lines in the town will be renewed to provide metallic circuits.

At Blenheim a portion of the site of the post-office is available for an exchange building, which will be erected shortly. The telephone-lines are being improved.

At Masterton a new building is being erected on a portion of the post-office site, and the work of converting the lines to metallic circuit is also in hand.

At Oamaru there is ample room in the post-office building for the switchboard. Necessary alterations will soon be completed. The telephone-lines have already been converted to metallic circuit.

In Auckland there will be several sub-exchanges. Those at Remuera, Ponsonby, and Mount Eden will be the first to be equipped, and the necessary buildings are now being considered. There is sufficient land upon which to erect a building on the Mount Eden Post-office site. These installations should be in full operation in a year's time. The manufacture of equipment for additional installations at Wellesley Street and at Devonport and Orhunga is in hand. Accommodation and submarine telephone cable to serve the Devonport side of the harbour will be provided for early.

Wellington will likewise have several sub-exchanges. A building to accommodate 4,000 connections is in course of erection at Courtenay Place, and alterations and additions are being made at the Wellington South Post-office to provide accommodation. These two sub-exchanges should be in operation in about nine months. A building for a small exchange is about to be erected at Khandallah. Sub-exchanges at Kelburne and Karori should also be in hand about the end of the year. The main Wellington exchange, which is to be located in a new building on a site near the present one, will be undertaken about the same time. The manufacture of equipment will be carried on during the year, so that there should be no delay in getting the plant in working-order when the buildings are ready for occupation.

COUNTRY TELEPHONE-LINES.

Preliminary steps to the erection of lines under the Country Telephone-lines Act, 1912, are being taken by a few local bodies. The small amount of activity in this direction may probably be explained by the Department's generous party-line system, which has popularized the telephone in outlying districts previously precluded by high rates from participating in the benefits of the telephone.