investigation. The Department, as Board of Control, has also to certify to the accuracy of all electrical meters issued by the New Zealand Electrical Syndicate. The classes of work referred to are found to be generally on the increase.

TELEPHONE EXCHANGES.

The telephone exchanges are growing rapidly. 1,373 new subscribers were added last year, equal to an increase of nearly 15 per cent. Of these, 616 were at the four large centres. To keep pace with this growth, which may be expected to show even a greater percentage, the Department must contemplate a large capital expenditure, as well as a larger cost for maintenance in the future. Almost immediately it will be necessary to more than double the size of the Wellington Exchange building, by providing a new switchboard of the latest type for at least 5,000 subscribers. The old switchboard, of a capacity of 2,400, can be cut up and used at some of the smaller exchanges. The Auckland building will also require enlargement in a year or two. Dunedin and Christchurch have sufficient accommodation for some time.

The growth of the larger exchanges and the introduction of the electric tramways bring more prominently under the notice of the users of the telephone the induction from neighbouring wires and the currents from trolley circuits. While these disturbances do not destroy the usefulness of the service, they render conversation at times difficult and disagreeable. The Department has had under consideration for some time the installation of metallic circuits, and the necessary cables and materials for Auckland are expected immediately. Similar arrangements will be made at Wellington, Christchurch, and Dunedin.

Telephone Circuits on Telephone Wires.

A change of some importance has been made in some circuits where telephonic communication between important centres has been so seriously affected by induction from neighbouring telegraph and telephone wires as to necessitate metallic circuits for the telephone, by so connecting a telegraph-wire and the affected telephone-wire that while the telegraph circuit remains unimpaired the telephone circuit, by being made metallic, is rendered practically free from inductive noises. Such superimposed circuits have been brought into operation between Wellington and Hutt, Dunedin and Balclutha with Milton intermediate, Dunedin and Palmerston with Waikouaiti intermediate, Christchurch and Akaroa with Little River intermediate, and Christchurch and Rangiora. Ashburton has been connected with Christchurch by telephone without an extra wire being used, it having proved practicable to give an efficient telephone service between those two places by using two telegraph-wires for the metallic circuit, the service of the wires for telegraph purposes being in no way affected.

A similar circuit has been installed between Greymouth and Hokitika, and another is on trial between Greymouth and Reefton. It is intended, where practicable, to introduce more of these superimposed circuits to improve existing telephonic services which are at present subject to induction. It is, however, only under certain conditions of telegraph-work that telegraph-wires can be so utilised, and the employment of these superimposed circuits is therefore somewhat limited.

General.

There were on the 31st March last 26 central and 44 sub-exchanges.

The following is a comparative return of the telephone-exchange connections for the years 1901–2 and 1902–3 :—

Exchange.	Number of Subscribers or Connections: March 31, 1902.	March 31, 1903.
Ashburton	107	111
Auckland	1,371	1,554
Devonport	—	28
Blenheim	98	112
Christchurch	1,164	1,297
Akaroa	33	34
Doyleston	—	6
Leeston	—	10
Little River	—	7
Rangiora	13	14
Dannevirke	—	53
Dunedin	1,291	1,420
Balclutha	20	20
Kaitangata	5	5
Milton	20	20
Palmerston South	18	20
Port Chalmers	20	21
Waikouaiti	8	9
Feilding	99	110
Gisborne	215	237
Greymouth	128	161
Hawera	117	126
Eltham	13	26
Manaia	18	19
Otakeho	1	1
Patea	24	30