PART XI.—TELEPHONES.*

The telephone is in part a Canadian invention, though its inventor, Alexander Graham Bell, a Scotsman by birth, was at the time of its invention a resident of the United States, having immigrated with his father to Brantford, Ontario, in 1870, and subsequently proceeded to Boston. According to his account, the discovery of the telephone, both as to its main principle and as to the first transmission of the human voice, was made at his father's residence at Tutela Heights, Brantford, in 1876, and the first telephone talk over any distance was conducted between Brantford and Paris, a distance of 8 miles, on Aug. 10, 1876.

Telephone development in Canada dates from the year 1880, when the Bell Telephone Co. was incorporated by Act of Parliament. Although at this time all patents and lines were owned by the Canadian Telephone Co., this was dependent on the Bell Co., to which it sold out in 1882. By 1883 the first submarine telephone cable had been laid between Windsor and Detroit, and during the year the Bell Co. operated in Canada 4,400 rental-earning telephones, 44 exchanges and 40 agencies, with 600 miles of long-distance wire. It controlled development in all the provinces except British Columbia, where the greater part of the system has always been in the hands of the British Columbia Telephone Co., Ltd.

With the rapid growth of private companies in the Maritime Provinces, the lines of the Bell Co. were disposed of in 1888 to the Maritime Telegraph and Telephone Co. in Nova Scotia, and to the New Brunswick Telephone Co. in New Brunswick, an interest in these corporations being retained under the terms of sale. A development of a different kind is seen in the three Prairie Provinces, where wellorganized systems were sold to the Governments of Manitoba and Alberta in 1908 and to Saskatchewan in 1909. The lines in Ontario and Quebec are still largely owned by the Bell Telephone Co.

Telephone Systems.—The 2,403 telephone systems existing in 1933 (Table 72) include the three large provincial systems in Manitoba, Saskatchewan and Alberta, and a smaller governmental system in Ontario, together with the system operated by the National Parks of Canada, Department of the Interior. There were also 142 municipal systems, the largest operated by the cities of Edmonton, Fort William and Port Arthur. Out of the 1,503 co-operative telephone companies, no fewer than 1,169 were in Saskatchewan alone and 211 in Nova Scotia. Besides the above, there were 539 stock companies, 95 partnerships and 117 systems privately operated.

A summary of the principal statistics is contained in Table 71. Up to 1930 there had been a steady growth in the use of telephones, the number reaching a peak at 1,402,861, but in 1931, 1932 and 1933 decreases of $2 \cdot 7$ per cent, $7 \cdot 5$ per cent and $5 \cdot 5$ per cent, respectively, were recorded. The number of telephones per capita is, however, second only to that of the United States, the numbers being 13.94 telephones per 100 population in the United States and 11.16 in Canada. By provinces the numbers of telephones were in 1933: Ontario 543,907, Quebec 259,530, British Columbia 116,528, Saskatchewan 74,258, Manitoba 61,874, Alberta 57,429, Nova Scotia 43,556, New Brunswick 29,750, Prince Edward Island 5,348, and Yukon 150. The numbers of instruments per 100 population were as follows: British Columbia 16.4, Ontario 15.4, Quebec 8.7, Manitoba 8.6, Nova Scotia 8.3, Saskatchewan 7.8, Alberta 7.6, New Brunswick 7.1, Prince Edward Island 6.0 and Yukon 3.8.

^{*}Revised by G. S. Wrong, B.Sc., Chief of the Transportation and Public Utilities Branch of the Dominion Bureau of Statistics, which issues an annual report dealing with telephone statistics.