

venience resulted in the discarding of the older system. An electric system 7 miles in length was opened at St. Catharines in 1887, using the double overhead trolley. This was followed by the completion of the Ottawa Electric railway in 1891, and the electrification of the Montreal and Toronto systems in 1892. The street railways of other eastern cities were generally electrified during the 1890's, while in the newer western cities electricity was used from the commencement. In the cities of the East electric street railways are generally operated by private companies under franchises from the city, while in a considerable number of cities of Ontario and the West the street railways are owned and operated by the city, a fact which is indicated in Table 26. In 1921, on the expiry of the 30-year franchise of the Toronto Street Railway Co., the railway in this second largest city of Canada was taken over by the city and is now being operated by a transportation commission.

Where possible, water-power with turbine engines is used for generating purposes. Where this is not available steam power is necessary, and although this is a more expensive method, modern devices have greatly reduced the cost per h.p. Many difficulties are met in operating the cars during the winter season, owing to snow, ice and sleet. These, however, have been overcome by the use of sweepers, scrapers and ploughs. The single overhead trolley system has been found the most suitable and is in general use.

In addition to the street railways there is quite a large mileage of electric suburban or inter-urban lines, especially in the Toronto, Niagara and lake Erie district, where considerable freight traffic is carried, and on the Pacific coast, where the British Columbia Electric Railway operates several hundred freight cars.

Development of Electric Railway Traffic.—Figures for the year 1893 show that 30 companies, with a paid-up capital of about \$9,000,000, operated 256 miles of railway. By 1897, 35 companies made returns showing 583 miles of track, 1,156 cars, 26,431,017 miles run, 83,811,306 passengers carried and capital of \$18,727,355. In 1904, 46 companies showed 766 miles of track, 2,384 cars, 42,066,124 miles run, 181,689,998 passengers and capital of \$30,314,730. The statistics for 1926 show that during that year 63 companies had 2,529 miles computed as single track, 5,665 cars, locomotives, etc., 122,935,055 miles run, and 748,710,836 fare passengers, with a capital of \$215,808,520. The number of employees in the service of electric railways on December 31, 1926, was 16,961, as compared with 16,933 in 1925. Total salaries and wages for the year 1926 were \$24,686,549, as against \$24,543,856 in 1925.

Statistics of Electric Railways.—Summary statistics of the operation of electric railways in Canada from 1901 to 1926 inclusive are given by years in Table 23. It may be noted in this table that the carriage of freight reached its maximum in 1926, with 3,493,457 tons, while the number of fare passengers carried in 1926 showed a decrease of over 52,000,000 as compared with the maximum attained in 1920. This situation may be more or less directly traced to the growth in the number and use of private motor cars and motor buses, particularly in urban municipalities. In Table 24 statistics of mileage and equipment are given for the last four calendar years, and annual statistics of the capital liability of electric railways are furnished from 1908 in Table 25. Detailed figures of the miles operated, the capital liability, the earnings, operating expenses, employees and salaries and wages, are given for 1926 in Table 26, while Table 27 shows by years from 1894 to 1926 the number of passengers, employees and others killed and injured on electric railways in Canada.