22.

THE DEVELOPMENT OF STREET RAILWAYS IN CANADA.

Railway + Shipping World
1901

ing to the hilly nature of the country, costs re than the average profit obtainable upon commodities the settlers are in a posi- n to ship. The Ontario Legislature, when Oliver Mowat was Premier, took in the uation and granted a subsidy of $7,500 wards the construction of a railway across e portage, and later, at the instance of emier Ross, finding this subsidy insuffi- ent, has supplemented it by an additional ,500. Application is now being made by e Magnetawan River Ry. Co. to the Dom- ion Government for an additional subsidy of 5,000, under an arrangement by which the lonists will only be taxed $1 a car for their oduce across the portage. At a conference cently with the Dominion Government, the opriety of giving the required aid was care- lly considered, and it is hoped that the Min- ter of Railways, who is thoroughly conver- nt with the territory, will recommend the ibsidy applied for. If this is done, more an a dozen townships will be benefited by nmediate access to markets, as the railway ill be completed and in operation before July next. (Nov., 1900, pg. 334.)

Development of Street Railways in Canada.

By W. G. Ross, Comptroller Montreal Street Railway.

In view of considerable climatic difficulties, he development of electric street railways in Canada has points of special interest, among which are :—1. The early start and rapid pro- gress. 2. Invincibility to weather. 3. Liberal fares and universal free transfer. 4. Remark- able popular and financial success.

Canadian street railways were among the first roads on the American continent to change from horse to electric traction, and the progressive development of the electric street railways in Canada has been nowhere surpassed in the world ; this notwithstanding the exceptional conditions offered in most cities by the severe and prolonged winter. The enterprise and courage required to face the first experiment of a trolley system in Can- ada were no ordinary qualities. There was a theory, so Canadians have heard tell, in vogue once among some of our neighbors south of line 45, that Canadians were slow. If the theory exists and has reason, the intro- duction and spread of electric street railways presents an exception to the rule. The Cana-

ing the antiquated street railway systems deserve all honor and credit for the successful manner in which they have developed the new systems and made them what they are; such men are Jas. Ross, W. Mackenzie, Hon. L. J. Forget, T. Ahearn, W. Y. Soper and H. A. Everett, whose names will go down to history as marking a period of the complete and perfect development of electric street railways in the Dominion.

The construction and equipment of the Canadian roads were the best at the time, and have been kept up with all modern improvements, Montreal being the first road on the American continent to lay rails in concrete without ties, a fact that was an education to many U.S. roads, and favorably commented on at the annual convention of the American Street Railway Association held in that city in 1894. All the roads are equipped with open and closed cars, rendered absolutely necessary by the severe changes in temperature, and carry a full complement of sweepers and other mechanical devices for the handling of snow.

The roads are thoroughly equipped in the way of car sheds, power houses and modern machinery. Almost all generate their electricity by steam, though water-power is used. Ottawa, Quebec and Hamilton, and Montreal will shortly get their electrical energy from that source.

In the matter of street railway accounting, Canada has led the way, the strandard system of accounts recently adopted by the Street Railway Accountants' Association of America showing surprisingly little change from the system in practice in the principal Canadian companies since 1893.

Steam railway service meets no such problem in snow in winter as street railway service does. In a city street there is more than the natural fall of snow on that area. From the roof tops and the sidewalks, the snow [illegible] on the street, a double accumulation,

dian grasp of the electric idea was early, quick and strong, despite uncertainties and difficulties which are not easily appreciated save to those who know the winter conditions in a majority of cities on the northern side of the line.

What the first electric railway promoters in Canada had to face was a problem, popularly considered insolvable, of moving the winter snowfall bodily from the streets as fast as it came. The public laughed at the idea. Investors shied at it. Consider what snow is in most Canadian cities. The average annual fall in many is 10 ft. on the level or for the streets probably twice or three times that depth, as each street receives finally the snowfall of a large adjoining area. In March, 1900, alone, there fell over 4 ft. on the level in Montreal. To this add severe grades and streets sometimes not any too wide – what a prospect for capital!

Notwithstanding this outlook, Canada as already said was in the electric race from almost the first. The first electric railway in America was started, I think, in Richmond, Va., late in 1888. Ottawa, the capital of the Dominion, ran the first electric car in Canada in June, 1891. The following year saw a general change from horse to electric traction. Hamilton began in June, 1892; Toronto on Aug. 17, 1892; Montreal on Sept. 21, 1892, and Winnipeg in the same month. St. John, N.B., started April 6, 1893; Halifax, Feb. 13, 1896, and the ancient city of Quebec on July 3, 1897, running a close race with the comparatively new and progressive coast city of Vancouver.

Perhaps the very climatic difficulties had much to do with the great financial success and the rapid spread of the electric systems, as nowhere (with the exception of Toronto, where climatic conditions are not so severe as in most cities in the Dominion) did the street railways under the old horse traction afford the travelling public as poor accommodation as in Canada. Use of the cars, sleighs or busses was then confined to the unfortunates who traveled on them only in cases of neces-

supply of first-class street car service has brought out a patronage which is unquestionably remarkable.

While it is difficult to give actual statistics of the development of the street railway systems of Canada, so far as the statistics previous to the introduction of electricity go, the following interesting comparison will tend to show the great development that has taken place between the years 1892 and 1899, the statistics being for eight of the principal roads :—

	1892.	1899.	P. c. increase.
Gross earnings.....	$1,702,685.00	$3,797,086.00	123
Operating expenses..	$1,299,650.00	$2,088,355.00	61
Net earnings.....	$403,028.00	$1,708,729.00	424
Passengers, number..	37,323,810	90,362,168	142
Track mileage.....	156	335	115
Miles run.....	9,662,393	23,224,592	140
Population served....	592,000	809,000	37
Gross earnings per capita.....	$2.88	$4.69	
Capitalization per mile of track.....	$18,395.00	$59,985.00	
Expenses, per cent of gross earnings	76	55	

During this period the gross and net earnings of the larger roads have increased as follows, the figures being the per cent of increase :—

Montreal—Gross 195 ; net, 665. Ottawa —Gross, 268 ; net, 222.

Toronto—Gross; 63 ; net, 198. London Gross, 196 ; net, 526.

Toronto leads all roads in Canada in earnings per capita of population, $6.37, and is lowest in operating per cent of earnings, 48.76 ; but Montreal has increased her gross earnings per capita of population more than any other road, from $2.56 in 1892 to $5.53 in 1899, closely followed by Ottawa, $1.75 in 1892 to $4.62 in 1899 ; while Ottawa leads in increased miles run, 557 %.

The total number of passengers carried in the Dominion for 1899 approximated 105,000,000, or about 20 rides per capita of the whole population of the Dominion.—Street Railway Review.

Niagara, St. Catharines and Toronto Ry.

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Steam railway service meets no such problem in snow in winter as street railway service does. In a city street there is more than the natural fall of snow on that area. From the roof tops and the sidewalks, the snow comes on the street, a double accumulation, and as the snow lodges, it is beaten solid by traffic. The street railway cannot shove the snow aside; practically there is no room. The snow must be moved bodily, and not merely the snow from the car tracks, but from the whole street, for otherwise the car tracks would soon be obliterated.

Canadian street car companies take no chances with winter storms. The companies keep a keen weather eye both on "probs" and on the local weather manifestations, and the moment trouble is sniffed, the enemy is tackled. Any symptom of a heavy snowfall, let alone a storm or a blizzard, calls out the electric sweepers, and promptly if necessary the snow sleighs. As a result it is probably correct to say that winter street car service in Canadian cities has fewer interruptions than in the northern cities in the neighboring states; for the simple reason that not so often subjected to attack, and fearing danger less, the U S. companies are less effectively equipped.

Fighting the climatic conditions in some Canadian cities is a matter of money of course, as well as brains. Apart from the equipment necessary in the shape of sweeper cars and their crews, the mere cost of removal of snow is a large item. As an instance of what this may cost, the Ottawa St. Ry. Co. paid out for merely the removal of snow about 1½% on its capital, while in Montreal last winter the total cost of handling snow was equal to 3% on the capital of the Co.; so it is apparent that Canadian companies, or most of them, are pretty heavily taxed by the snow fighting. Yet in face of this great special expense, the operating expenses per cent of earnings will compare favorably with that of roads south of line 45.

A powerful factor in the popularity of street car service in Canada is the universal system of free transfer. Everywhere one fare carries to any point in a city. This privilege to the passenger has been facilitated by sev-

eral things—above all by the fact that there is but one company in each city. Yet despite the complete transfer privilege, fares are low. Five cents is the highest fare, but always 6 tickets are given for 25c., making the regular fare practically 4 1-6c. But there are special tickets, all roads issuing workmen's tickets limited to certain hours morning and evening at 8 for 25c., or 3 1-8c. a fare. Tickets for children are issued at 2½c. by most roads, and some roads give Sunday tickets good all day at 8 for 25c. About 20% of the passengers use workmen's tickets, and 5% the children's. Thirty-five per cent. of the passengers on Canadian lines—over one-third—used transfers during the past year.

Excellent service, handsome open cars in summer, thoroughly heated ones in winter, liberal concessions in fares and transfers, testify to the conviction of the companies that it pays to be in advance of the requirements of the public. Little is left undone to meet the wishes and comforts of passengers. It is fitting that most of the companies should enjoy, as they unquestionably do, not only great financial success, but popularity.

That demand creates supply is a popular axiom. That supply creates demand is proved by electric car service if by nothing else, and proved particularly in the Dominion. The supply of first-class street car service has brought out a patronage which is unquestionably remarkable.

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The advent of the electric cars was a transformation indeed. The slow dirty busses or sleighs, disease-breeding vehicles, confined to the condensed portion of the towns, running at intervals anywhere from fifteen minutes to half an hour, were replaced by something infinitely better. People jumped to patronize the improvement which in turn responded to the patronage, and now are seen magnificently appointed cars following closely one after another to all parts of cities and their suburbs at a speed no one just before the change thought possible. The enterprising men who have been chiefly instrumental in revolutioniz-