(December 9th, 1912.)

Railway Development in Canada.

By Mr. A. S. Goodeve.*

AT a regular luncheon of the Club on the 9th December, Mr. A. S. Goodeve said:

Mr. President and Gentlemen,—The subject which I have chosen for my remarks this afternoon is "Railway Development in Canada,"—a subject in all countries intimately connected with their progress, but peculiarly so in the Dominion of Canada, because without it we could never have gathered together those scattered provinces, stretching from the Atlantic to the Pacific, into one harmonious whole.

A factor which has an important bearing in deciding what amount of the progress of Canada is attributable to this railway development is the waterways of Canada. I suppose I am safe in saying that no country in the world is more blest with waterways capable of being developed for transportation than this northern portion of the North American Continent which we call Canada.

Perhaps I could better illustrate that to you by taking you in imagination on a trip across Canada. Starting at the mouth of the St. Lawrence we should pass up the Great Lakes, Ontario, Erie, Huron and Superior, to Port Arthur, a distance of 2,400 miles. There we would pass into the Kaministiquia River and up it for 150 miles. After that a short portage would bring us to Rainy River, up which we would proceed for 300 miles to Lake Winnipeg; across Lake Winnipeg 300 miles to the Saskatchewan; up the Saskatchewan we should go 1,500 miles, thence across the Rocky Mountains, and down the Thompson and Fraser Rivers 1,400 miles to the Pacific Ocean, whence in a few months' time, no doubt, we shall be able to take sail back through the Panama Canal to the point of starting.

But we should not have exhausted our possibilities of water trips with that journey. Did time permit, we could take a side trip up the Ottawa for 600 miles; or over the Athabaska and the Mackenzie, the latter of which is navigable for some 2,400 miles. Or should we desire to view some of the grandest mountain scenery to be found anywhere in the world, we might travel from Kootenay Landing, on the Crow's Nest Pass line, to Revelstoke, on the main line of the C.P.R., by way of the Kootenay Lake and the Columbia River and Arrow Lakes, a distance of 286 miles. Even now, we are not through, because every Province of this great Dominion has its lesser rivers and wondrous scenic lakes, such as your own beautiful lakes of Muskoka.

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Now these waterways have had an important bearing on the construction of railways, because the first idea of the railway builders was that of supplementing these great waterways. The first railway charter granted in Canada was in 1832, in the reign of William IV, for a line from the St. Lawrence to Lake Champlain. The Champlain and St. Lawrence Railway charter was for 46 miles. The first 16 miles of that railway was not constructed till 1836, and it was only a road of wooden rails and horse traction. But after one winter they found the necessity of changing their methods, so they introduced iron rails and steam power. The road was completed in 1851, and so we had the first connection between New York and Montreal, thus connecting with the various lake ports throughout the district.

There was very little active railway construction from that time till 1850, but between 1850 and 1860 there was considerable. The Grand Trunk undertook to construct a railway from Riviere du Loup in the East to Sarnia in the west, a distance of 873 miles. The construction on the first section of that line, viz., from Montreal to Toronto or Hamilton, 373 miles, meant the uniting and giving a continuous through railway for 964 miles, because another line extended south from the lakes, and still another was being built from Portland to Montreal.

Some idea of what the building of this road meant may be gathered from the fact that while the construction of it was entrusted to one of the most celebrated English firms, which had had experience in England and on the Continent of Europe, yet those contractors lost $5,000,000, and a million dollars loomed larger in the eyes of men then, than in these days of mergers and trusts. It cost $13,320,000 to connect Montreal with the City of Toronto, and for years the construction of that railway was looked upon as the eighth wonder of the world.

Even at this time we were dependent largely upon water transportation, and it was made possible by the building of locks on the St. Lawrence, completed in 1848, and the Welland Canal, completed in 1829, so connecting with all the lake ports to the west and south.

In the Maritime Provinces they had recognized as early as 1832 the importance of railway connection with the rest of Canada. And in 1836-7 they undertook to survey a railway, towards the cost of which the Imperial Government gave £10,000. A portion of the road surveyed ran through territory under dispute with the United States, so that work was allowed to drag, no actual construction taking place. In 1842 by the Maine Boundary Award, the dispute was settled in favor of the United States, so that a new survey had to be undertaken.

However, there was a growing feeling that if the several Provinces of Canada were ever to succeed they must enter into a union. That feeling culminated in the Confederation Act. They drew up a resolution, which was adopted and afterwards crystallized into what is known as the British North America Act of 1867. The Maritime Provinces made it a condition of their entering the Confederation, in fact a *sine qua non*, that Canada should build a railway from the Maritime Provinces to Montreal. Thus began the Intercolonial Railway. This railway was completed in 1876, thus forming the second period in Canadian Railway construction. Ex-Senator Albert J. Beveridge gives in the "Review of Reviews" for November, an interesting synopis of that railway, and among other nice things he says with regard to it is that while it is longer than from New York to Kansas City, or than from New York to New Orleans, and while constructed for colonization purposes through a sparsely settled territory, whose products are chiefly agricultural and lumber, yet notwithstanding that fact, and all the criticisms against it, "it has not been a failure." He points out that the total cost, from the first survey, was $92,000,000. That, he says, is less than the average cost of the average American railway. Further, he says that the roadbed, and the general conditions are superior to those of the average American railway. And he points out that the average freight rates, based on the usual method of dividing actual net proceeds by exact ton-mileage, are lower than those of other roads in the Dominion of Canada or of American roads. All of which, I think, is very interesting, coming from an independent critic. (Applause.)

We cannot deal with all the details and the branch lines constructed from time to time. But this brings us to the next epoch in railway development in Canada. The first attempt to collect and arrange railway statistics in Canada was made in 1860. At that time there were 16 companies operating in the country, with a total mileage of 1,880, or, if we include the mileage of the connecting lines on the American side under Canadian control, 2,107 miles. Statistics gathered in 1875-6 show that the number of railways in operation had increased from 16 to 37, and the total mileage from 2,107 to 5,157.

After the British North America Act was passed in 1867, in the year 1869 we find that the Dominion of Canada undertook to purchase that great unknown land around Hudson Bay, which is sometimes called Rupert's Land, because given by Charles II to his cousin Prince Rupert. By an amendment to the B.N.A. Act in 1871, the Dominion was enabled to carve out a province there, which entered the Union in 1870 as Manitoba. British Columbia was then asked to come into the Confederation in 1871, but the people of the colony, like those of the Maritime Provinces, lying separated from the other provinces by those barren, inhospitable shores of Lake Superior, by the great wilderness of prairie land, and by two great ranges of mountains, said there was little use of their coming into the Confederation unless united to the rest of Canada, so they too made the condition that a railway should be built to connect them with the rest of Canada. The history of that road is familiar to every Canadian, to every Canadian school boy. A fight was waged around that road which was sufficient to wreck ministries and destroy the reputations of many eminent politicians, yet you and I, as members of the Canadian Club, can have the feeling of gratitude for that undertaking, which has, in a very short time, as we count time, grown to be one of the greatest, if not the greatest carrying road in the world to-day.

I find by reference to statistics in my office, that the Canadian Pacific Railway has 75,000 officers and employees on its pay roll, of whom 70,000 reside in Canada. Its pay roll is $3,700,000 per month. It has a fleet of 72 vessels, with a registered tonnage of 213,198, and a carrying capacity of 28,986 passengers and 139,410 tons of cargo. And the gross earnings for the year ending June 30th, 1912, amounted to $123,319,541,—on a road that it was said would not pay axle grease!

These, then, are some of the interesting and vital statistics in connection with the railway development in Canada; but

that is not all. Less than twenty-five years after that tremendous struggle,—and that is considered a brief period in the history of a nation—we find placed on the statute books of Canada this remarkable statement. I read in the Statutes of Canada, 3 Edward VIII, 1903, the following: "An Act respecting the construction of a National Transcontinental Railway." The preamble reads: "Whereas by reason of the growth in population, and the rapid development in the productiveness and trade of Canada, and especially the Western portion thereof, and with a view to opening up new territory," etc. "Whereas by reason of the growth and rapid development of the Dominion of Canada," then the Parliament of Canada assembled found it necessary to undertake the building of a second transcontinental railway! That work was undertaken, gentlemen, and I find on looking up statistics in my office that 2,350 miles are in actual operation on the new Transcontinental west of Winnipeg, and we have the assurance of the Minister of Railway and Canals that within a year it will be completed from Winnipeg to Moncton. Thus we shall by that time have two transcontinental railways, the Canadian Pacific, already built, and this new line, built by the Government through a Commission from Moncton to Winnipeg, and from Winnipeg west to Prince Rupert by the Grand Trunk Pacific Railway Company, a line of splendid construction and low grade. And the Grand Trunk Railway already has 8,000 miles of road between the Great Lakes and the Atlantic coast, with 840½ miles of double track from Montreal to Chicago, this being the longest continuous stretch of double track under one management in the world.

But, gentlemen, it would be unfair if one were to undertake to give the complete railway development of Canada without a reference at least to two eminent Canadian railway builders. Early in the history of railway growth in this country, we had two men in the Dominion who were laying plans, taking up here and there railways, or portions of railways that already existed, or were being constructed, and now we have well on the way a third transcontinental railway as a result—I refer to Sir William Mackenzie and Sir Donald Mann, of the Canadian Northern Railway Company.

So the people of Canada are in the position to-day of realizing within a very short time, no less than three transcontinental railways, spanning this country from ocean to ocean. And yet, notwithstanding all this railway construction that has taken place, we are told that there is territory five times as large as the United Kingdom in Canada in which no railway has been constructed, north of the 55th parallel!

These are some of the vital statistics. The Government is undertaking, as you know, to build a railway from The Pas to Hudson Bay. That is, like others that have been and will be constructed, the work of men of broad grasp of mind, of those men who are blest with depth of vision, who are the nation builders of the world. These are men who will take certain fair, judicious risks, in order to develop a country rich in natural resources such as the Dominion of Canada.

There are two or three interesting facts in connection with railway development which I have thus rapidly and briefly sketched. In the first place, the first railway built was on the south side of the River St. Lawrence, while the City of Montreal is on the north side. Even at that time Montreal was a very pretentious and very aggressive city, for the men of that time felt it necessary to construct a bridge across the St. Lawrence in order to get the benefit of the new railway. To Alexander M. Ross, an eminent English engineer, must be given the credit for designing the plans for the construction of that bridge. The bridge was opened by the late King Edward, then the Prince of Wales, on December 17th, 1859, and is known as the Victoria Bridge. And suffice it to say with regard to that great engineering undertaking, that when it was found necessary, owing to increasing traffic, to build a larger structure to make room for increasing vehicular and also pedestrian traffic, the contractor said that the most difficult part of his contract was the tearing down of the old structure. I think no stronger testimony could be given of the splendid work of the engineers of those days.

Another fact showing the steadily increasing trade between the country to the south and the Dominion of Canada, was the building of the Suspension Bridge across the Niagara River. It also had to be later replaced by a large structure, and now there is a single steel span of 559 feet, which is 226 feet above the water with an upper deck 30 ft. wide, carrying two tracks, and a lower deck 57 ft. wide, with a central carriage way, and a broad pavement on each side, providing for traffic both vehicular and pedestrian. The new bridge was opened in 1897.

You remember another very great undertaking was the building of the Sarnia Tunnel. Probably none of our railway constructions is more interesting to us, or more familiar, than the Sarnia Tunnel, because it has been brought up to the most modern standards in use, and has kept increasing in traffic, and because of its electrification, so that now powerful engines of 2,000 horsepower are used hauling heavy trains at a speed of from 10 to 25 miles per hour.

Now the question that arises in the mind of everybody is, what has been the result of this construction? Well, let us briefly for a moment look at Canada as we found it and the Canada of to-day. Fancy, if you can, the picture that will be presented when all these magnificent waterways to which I have alluded, have been harnessed in electrical energy, and the hum of machinery in the factories reaching from the Atlantic to the Pacific will drown even the roar of Niagara! Already we have commenced that work. To-day we are grinding pulp, and sawing lumber grown in the rich valleys and on the mountain sides washed by these wondrous streams, by the energy they themselves supply. And yet in Canada we are only at the beginning of things.!

Those inhospitable shores of Lake Superior, where Colonel, afterwards Lord Wolseley, in circumstances when the greatest dispatch was required, took two months to go 450 miles, are no longer the obstacle they were; to-day we are bridging the continent, and shortening the distance between Winnipeg and Liverpool. Those black lands have been opened to the plow, and in Saskatchewan alone we have the largest single area devoted to wheat on the North American continent, producing 97,000,000 bushels of that golden grain. We have in the Prairie Provinces no less than 11,000,000 acres, and in the Dominion of Canada we have 33,000,000 acres under crop. We are turning out the golden grain for these roads and through these wondrous waterways until we have become the market gardeners and bread producers of the whole Empire.

In 1853, at the City of Toronto, the first locomotive engine built in Canada was constructed by James Good,—it was called "The Toronto." To-day we have locomotive works in the Dominion capable of turning out from 900 to 1,000 engines per year, and car shops turning out from 80,000 to 90,000 cars yearly.

The total mileage of railways in Canada to-day is 26,500 exclusive of sidings and terminals; we have 8,000 miles of terminals and yards to carry on the mighty traffic of this young giant Dominion of Canada; and no less than 9,000 miles of railway under construction at the present time. Our railways employ 141,244 people, and their pay roll amounts to $74,613,738 per annum.

We have more than 19,000 factories in Canada, with an invested capital of over one and a quarter billion dollars. They employ half a million people, and their wage bill is over a quarter billion dollars per annum. All of which is due to the energy, the industry, and the perseverance of this young Canadian people.

These railroads have brought the cold waters of the Atlantic into close touch with the warm waters of the Pacific. We here, in this great commercial city of Toronto, with its grand buildings and marts of trade, are but the pulse beats of the mighty throbs of those waves striking upon the shores of those two oceans. We owe to the railway builders much of our prosperity and progress in Canada to-day.

Sometimes, in thinking of the glorious West, and all we owe to it, we are disposed to forget how much we owe to the East. Because, after all, it is the industry of the East that has made it possible to gather the wealth together, making possible the carrying on of all these great highways.

Now, gentlemen, I have tried very briefly within the few minutes allowed me, to bring together statistics of the growth and development of the railways of this country. As I said, we are but at the beginning. We have in this country probably one of the richest countries in the world to-day. There is every possibility in our natural resources. Those wondrous storehouses which, in the early days were said to be but a sea of mountains, are, after all, great storehouses containing wealth and riches of precious metals and minerals, and those great black diamonds that for centuries to come will be the basis of our industry, from the Atlantic to the Pacific, with the iron ores at Sydney and in British Columbia. For given iron and coal, is there any man in this room who would predict what the outcome will be in this country less than a quarter of a century hence? Is there a man of depth and breadth of imagination sufficient to undertake to limit the possibilities and boundaries of this great country, along all the pathways I have endeavored very briefly to describe? (Applause.)