

of Canada. I make this claim for the engineers of Canada: that they are the equals of American, of British, of French or German engineers.

There is something more which I claim for the engineers of Canada. I claim for the engineers of Canada not only ability but character, and by character I understand honesty and honor. I was for fifteen years the prime minister of this country, and in connection with public works under the charge of the government over which I presided, I had a great deal to do with Canadian engineers, and it is my proud testimony to say that I always found that the Canadian engineer could be depended upon for honor and honesty.

Honor and honesty were characteristics of those engineers whose names I selected from a great number and whose names I have just given to you. Their honor and honesty were such that, when I had the responsibility of office, if I saw the signature of Mr. Collingwood Schreiber or any other Canadian engineer upon a report or plan, I knew that it meant that there was the truth and that the work might be proceeded with. Honor and honesty are required in every branch, in every part, of our life but honor and honesty are perhaps more required in the engineering profession than in any other calling.

It is characteristic of the work of your profession that the work of the engineer cannot be intelligently criticized or approved by the layman who commands the work. The plans, the calculations of the engineer, when they are brought before the unpracticed eye of the layman who has to do with the work—I speak at all events for myself as a humble layman—present nothing to him but what he regards as a jumble of lines and figures. He can look but he cannot pronounce upon them; he cannot undertake to say that the lines are too long or too short, that the angles are too sharp or too obtuse or that the calculations are right or wrong. It is not so in many other lines or in many other arts and sciences.

Take the case of architecture. If I employ an architect to put up a building for me, he brings me his plans, I look at them and I can see whether or not they please me. I can sit down and discuss and argue with him. I can say to him, "I do not like this curve." And he can answer me and say, "You are wrong; you do not know the accepted canons in that respect; if I were to do the work as you suggest, I would make a bad job of it." Even if I could not convince him, I could at all events give him my views. But, if I employ an engineer to prepare for me a plan of a conduit or a canal, and he brings to me his designs, his lines and profiles, I will be a very presumptuous man if I undertake to say that his calculations and lines are wrong. We have to depend upon the ability and character of the engineer to do this work for us, and whenever I had to depend upon a plan put before me by a Canadian engineer, I proceeded on that plan which was put before me and which represented the sum total of engineering science backed by a firm and rugged honesty. I asked no more and never was deceived. Ability and character are, not only to my knowledge, but in my experience, the double attributes of Canadian engineering. Canadian engineers have always lived up to that double standard according to my observation and experience. They have always held these characteristics up as the standards by which they desired to be judged, not only for themselves but also, may I say, for the fair name and fame of Canada, our country whose name and fame must always remain dear to all the sons of Canada.

Now, Mr. Chairman, you have been kind enough in your introductory remarks to speak of my age. I shall

not refer to that; but you have been kind enough also to mention the name of my wife, and for that I cannot be sufficiently grateful to you. You all know—I suppose most of you do—the blessing of a good wife. I have had that blessing during a very long life. Now, I have to cut my remarks short because, pleasant as this occasion has been and thankful as I am for the opportunity of being with you, I am going to something even better than a banquet with the engineers—I am going to a wedding.

(See page 439 for report of Ottawa Branch meeting.)

ST. LAWRENCE RIVER IMPROVEMENTS.

An interesting anonymous letter signed "Engineer" appeared last week in the Daily Mail of Montreal, discussing the proposed improvements to the lower St. Lawrence River. While anonymous letters are entirely wrong in principle and should be treated with suspicion, there is information in this particular letter which makes it of interest to Canadian engineers and contractors. The text of the letter is as follows:—

"In 1913, the Federal Government, urged by the shipping men of Montreal, appointed a commission composed of Messrs. E. E. Haskell, of Cornell University, W. S. Stewart, chief hydrographer, and V. F. W. Forneret, engineer in charge of the ship channel, to investigate the water levels of the St. Lawrence River below Montreal. Early in 1915, these gentlemen reported that the general level of the river had subsided with a consequent loss of depth in the ship channel. To restore the level they recommended the construction of one partial dam at Repentigny, one partial dam at the foot of Lake St. Peter and the blocking of five of the channels between the Sorel Islands.

"In the fall of the same year Mr. Arthur Surveyer, consulting engineer of Montreal, when called upon to appreciate the commissioners' recommendations, declared that the remedial works suggested would not solve the problem and that the loss of level in the river had been too great to be successfully restored and maintained by partial dams. He advised that the best solution would be the building of dams and locks, concentrating the falls at the locks and creating slackwater navigation above the point of damming.

"Later, Mr. Walter Francis, consulting engineer of Montreal, and also Professor C. H. McLeod, of McGill University, were asked to pass judgment on the remedial works recommended by Messrs. Haskell, Stewart and Forneret. Early in 1916, these two gentlemen submitted separate reports in which they thoroughly condemned the commissioners' project and declared that locking and damming was the only logical solution of the problem.

"The shipping interests have always viewed with apprehension the proposition to partially block the St. Lawrence River and are inclined to favor the blocking of the river from shore to shore with the construction of the necessary locks. The government is in a quandary; they have the unanimous report of Messrs. Haskell, Stewart and Forneret recommending the construction of this partial damming of the river and they have also three independent reports, prepared by engineers of standing, condemning the project in no uncertain terms and recommending that locking and damming be adopted. The shipping men are naturally anxious to have the question settled and they feel that the appointment of another commission of engineers is the only way out of the dilemma."