PROMINENT CANADIANS.—XIV.

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Like a good many other distinguished Canadians, Sandford Fleming is a Scotchman. As he lived in Scotland for only the first eighteen years of his life and has since given forty three years of fruitful work to Canada, leaving his impress on the whole Dominion, and identifying himself with its best interests in every possible way, he—just as truly as Sir John A. Macdonald or Alexander Mackenzie—may be called a Canadian. By birth he belongs to Fifeshire, the fair county which proudly calls itself "the kingdom." His native place was "the lang toon of Kirkcaldy," best known to the world by having had Edward Irving and Thomas Carlyle as schoolmasters. At the time, doubtless, any one of the bailies thought himself more important than both, or than all the dominies in Scotland put together. Sweet are the bonds that unite us to the dear natal soil; and therefore when in 1882 Mr. Fleming was presented with the freedom of the Kirkcaldy Burghs, doubtless in the traditional gold snuff box, and about the same time had the honour of LLD. conferred on him by St. Andrew's University hard by, depend upon it his pulses quickened much more than when the Duke of Newcastle appointed him the representative of the Imperial Government on the survey for the Intercolonial, or when he learned that the Queen had bestowed on him the honour of a C.M.G., in recognition of his services.

Having studied mathematics, surveying, and engineering, in his native town, he came to Canada at the age of eighteen, believing that there would be more room in a new than in an old country. He found that there were no openings for young men like himself in Canada. Fond parents assure us that every avenue for boys is now crowded, and that it is impossible to make the fortunes that formerly were made. They are mistaken in both points. In those days there was no avenue but the farm, and if farming means a hard life now it was much harder then. Fleming showed the stuff of which he was made by doing whatever his hands found to do, and doing it with his might. Of course he was disappointed, for the country was not what it had been painted. Only his strong dogged will kept him. him from returning to Scotland, where he was informed that he could secure an appointment without any difficulty. He had faith in himself and in the country, and having no extravagant habits he could live on little. Without grumbling or looking to the Government, he worked on and waited. Even when young he did not think himself a genius, but he knew that he could work, and the quantity to be done never appalled him. It was worse when there was no work, but then he looked for it and took what offered. He had always a great capacity for silence, is to this day a better listener than talker, and when he does talk, it is never about himself or his doings. When he took up his quarters in Toronto he at once joined the Mechanics' Institute, and taught night classes in pure and applied mathematics free of charge to all who came to them. Eager for the general good and for the advancement of the bounds of science, he with a few others originated the Canadian Institute. I have been told by one of the friends of this excellent and now vigorous Institute that it owes its existence to Fleming. When we reflect that he was then young, a stranger, without money, without a stake in the country, without a salary, we have a striking illustration of the value of brains and moral qualities. Truly, as Darwin says, "it's dogged as does it." dogged as does it." During these years of waiting he was educating himself, the only education, let it be well understood, that is worth anything. Without this, constant cramming and examinations are worthless. So far as these repress the desire or capacity for self education they are a curse. The educational system that does not encourage study, after school days are over, is a bad system; and because of its failure to lead to this, a achool system characterized by rigid uniformity and increasing centralization does not commend itself to thoughtful men who have given thought to the subject. In 1852, the tide in affairs that comes to every man who is ready to see and take it came to Fleming. He was appointed third engineer on the staff of the Northern Railway. That was his opportunity. When on the staff of the Northern Railway. That was his opportunity. When the railway was constructed the Directors appointed him Chief Engineer, and before long he was pushed to the front of the profession. time his history is part of the history of Canada.

With two great public undertakings, important in a political as well as engineering sense, his name will always be connected. Fortunately he has written enough to enable us to form some opinion of the difficulties he had to encounter as an engineer and a public servant. We can see, too, how his character came out, and how he impressed himself on the works that link the Provinces of the Dominion together by steel rails. Some writers have recently made the discovery that Canada consists of four or five geographical sections, each of which nature intended to belong to a corresponding section in the United States; and they enlarge unweariedly on the folly of having built a railway between the Maritime Provinces and Old Canada, or between the Upper Ottawa and the Pacific. Well, it need only be said that the main features of our geography were understood fifty years ago as well as they are now, and that none the less the people went forward. They were determined to build up a nation on this northern half of the Continent, with the country and the materials that they had. Almost from the day that the first passenger railway was opened in Englands land, the idea took possession of the minds of men in all the Provinces, that an Intercolonial Road was a necessity. Again and again the Legislatures of Nova Scotia, New Brunswick and Canada passed resolutions to that effect, offered money with extraordinary liberality, and entered into negotiations with each other and with the Mother Country to bring it about. Fleming had written an able pamphlet on the importance of con-necting the Red River Settlement with Canada by a Colonization Road, although at the time Red River was as completely out of the ordinary

horizon as the Mackenzie or the Yukon; and the inhabitants of the faraway Lone Land had requested him to plead their cause with the Imperial Government. His interviews, with the Duke of Newcastle as their envoy, led to his appointment subsequently as sole engineer to survey a line for the Intercolonial. Statesmen are on the look out for competent and reliable men, and when one turns up they feel that something of the difficulty connected with every proposed work is over. With Confederation, the long talked of Intercolonial got into the region of practical politics. It was undertaken as a Government work, and put into the hands of Fleming and four Commissioners—men of great local and railway knowledge and greater political influence.

One bit must be given from the published history of the Intercolonial

as illustrating his character, as it came out in a controversy with the Commissioners. It may teach a lesson of public duty, and may suggest to those who can read between the lines the cost to oneself at which such duty must be done. The Commissioners had resolved to make the bridges on the road of wood instead of iron and stone as recommended by the Chief Engineer. No argument that he could advance had the least weight with them. Instead of acquiescing, as most men in the circumstances would have done, he appealed to the Premier. They answered his letter in the ordinary back-stairs way. Of course the decision of the Commissioners was sustained, but a sop was thrown to the engineer. Five of the bridges should be built as he wished. The unreasonable man was not satisfied. He said nothing, but the following year he prepared a statement for submission to Parliament, in which he proved that the cost for iron would be little more than the cost for wood. Two of the Commissioners gave way, but the majority stood firm. The matter was again brought before the Government, and an Order-in-Council passed affirming their decision. The Engineer again wrote to the Premier, and in the following month to the Commissioners, asking a delay of ten days for some work in progress, so that the matter could be reconsidered. Mr. C. J. Brydges, the leader of the Commissioners, then addressed a communication to the Privy Council, in which, among other rash statements, he declared that in his experience of eighteen years as a railway manager, he had known no instance of a wooden bridge having been injuriously affected by fire. The Engineer, in his reply, cited two instances of bridges on the Grand Trunk, under the management of Mr. Brydges, having been destroyed by fire a few weeks before the date of the statement! This was the last straw. The Commissioners agreed that all bridges over sixty feet span should be built of iron. Would he not let them have that much, were it only as a small rag with which to cover their nakedness? No. He quietly demonstrated that any exceptions would be bad. At last, nearly two years and a half after his first appeal to the Premier, an Order-in-Council was passed giving authority to have them constructed as he had proposed. He had gained that for which in the public interest he had contended. But such a man will never be popular with commissioners or contractors, people or politicians. He will not be made M.P. or Senator, and he need not expect to be retained in the public service one day after he can be dispensed with. So much the worse for the public.

In 1876, thirteen years after his appointment at the commencement of the survey, the Intercolonial was opened for traffic. At that date the capital account showed a total expenditure of twenty-one and a half millions on all services, including branch lines and rolling stock, or little more than a million in excess of the original estimates; and the work was pronounced by all authorities to be, in the essentials of a railway, second

to none on the continent.

Meanwhile the Government had undertaken to build a railway from ocean to ocean, about as lightly—to use Lord Dufferin's phrase—as if it had been "to throw it across a hay-field." Fleming was called upon to survey a route and begin the work. Everything was against him. Intercolonial was on his hand, and it was a heavy handful. Canada had at that time no corps of trained engineers and contractors such as it now has. No one knew anything of the region back of Lake Superior any more than if it had been Central Africa, except that all existing maps had on them, written in very large letters, "Impracticable for a Railway." Captain Palliser, who had been in charge of the only engineering party that had explored the passes of the Rocky Mountains, had reported :-"The knowledge of the country on the whole would never lead me to advise a line of communication from Canada across the continent to the Pacific, exclusively through British territory. The time has forever gone by for effecting such an object." But the chief engineer put a stout heart to the stae brae. Overcoming innumerable difficulties he succeeded in getting a line surveyed by the Yellowhead Pass, with grades and curves actually no heavier than those on the Intercolonial, a feat of engineering which every one will appreciate who knows anything of all the other transcontinental lines. It should be noted here that the Yellowhead had a special advantage then over other lines, which it ceased to have when Burrard Inlet was chosen as the Pacific Terminus. It was a common point, equally suited for any of the proposed termini, and these extended all the way north to Fort Simpson, if not further. The chief engineer devoted his whole time and strength to the work till his health gave way. He then asked for and received a year's leave of absence, but in the course of the year had to be recalled again and again for consultation. His annual progress reports constitute a mine into which every one must dig who would form a correct idea of the task which had been imposed on him. He served under the Premiership of Sir John A. Macdonald, then under Mr. Mackenzie, and again under Sir John. Neither party, when it came into power, was able—much to the disgust of the baser elements in it to make political capital against its opponents through him or anything connected with his department. Such a public man is making enemies all the time, and as he works for neither party, neither will count him as a