

MEMOIR OF
THOMAS COLTRIN KEEFER, ESQ.,
CIVIL ENGINEER.

In the year 1739 a child was born of German parents near Strasbourg in France. That child, George Keefer, grew to manhood, and in 1765 emigrated to America. He became a resident in the British Colony of New Jersey, at Paulinskill, County of Sussex. A brother who accompanied him went to Harrisburg in Pennsylvania. His descendants about Lancaster in that state retains the original spelling of the name. The name of Keefer is a common one in and around Strasbourg. One who bore the name Daniel Keefer was the first translator of the Bible into the Turkish language; was Premier Secretary to the King of France, and interpreter of oriental languages at the Court.—He was born in 1705 and died at Paris in 1813, aged 108.

George Keefer of New Jersey, on the revolt of the British North American Colonies against the Royal government took side, as did most other German families with the Loyalists. He volunteered into the Rangers and served under Sir William Howe in New York; and there died of army fever and was buried on Staten Island. His property consisted of two farms, a distillery and a female slave, and was confiscated by Congress. A home having been offered in Canada to all adherents of the British government, the son George Keefer, then aged eighteen, who was the first to spell the name according to pronunciation, made a journey to this country to select a place of settlement. In 1792 he returned to Pennsylvania for his mother and brought her on horseback by an Indian trail through unbroken forests from the Susquehanna to Lake Erie. The site of the city of Buffalo was then occupied by two fishermen's huts. Mr. Keefer had selected Thorold in Canada as his home, and there he lived for nearly seventy years. He was the first President of the Welland Canal Company and the earnest supporter and scientific adviser of the projector of the canal, the late Hon. William Hamilton Mersitt. By industry, integrity, temperance he acquired a considerable estate and brought up a large family. In the Canadian Illustrated News of 20th August, No. 16, Vol. II., it was our melancholy duty to record the death and publish a memoir and portrait of the tenth and youngest son, Alexander Keefer, barrister at law who died at Beechworth, near Melbourne, Australia. It is to-day our pleasing task to publish this memoir and a portrait of Thomas Coltrin Keefer, Civil Engineer, one of the most distinguished men of Canada, the eighth son of Mr. Keefer of Thorold and of his second wife whose maiden name was McBride. The McBride family were children of one of the Irish Volunteers who came to Canada from Trillick in Ireland, with General Carleton, in 1776.

Mr. Thomas Coltrin Keefer was born at Thorold, a small town on the Welland canal, peninsula of Niagara, on the 4th of November, 1821. He was educated at Upper Canada College, where between the years 1822 and 1838 he passed from the third form under the late Dr. Phillips, to the seventh, under Dr. Harris. Before leaving college he decided that his profession should be that of civil engineer. With what intuitive genius he made the choice, his works achieved, and publicly acknowledged, bear testimony.

But there is one great work, the conception of his creative mind, for which he has not received the honor which he may justly claim; that is the conception and the practical execution of the surveys which led to the building of the Victoria Bridge. had no equal, has had superior on earth.—Robert Stephenson could not only afford to, but in the generosity which is inherent in true genius did pay honor to Thomas C. Keefer by acknowledging that on his plans and surveys of the Victoria Bridge was that magnificent structure reared. Stating, also, during his last illness, that the credit of the original conception of the Bridge, belonged to Mr. Keefer.

In 1838 he commenced the profession of civil engineer, at Lockport, state of New

York, on the Erie Canal, where extensive works were then in progress. In 1840 he returned to Canada, and was employed by the Welland Canal Company, under the late J. S. Macaulay, engineer in chief, a Colonel of the Royal Engineers. In the following year the Canadas were united, and this canal becoming a provincial work, its enlargement was commenced. Mr. Keefer, then only in his twentieth year, was charged with the enlargement of the feeder, and continued the only engineer in charge until the appointment of Mr. Power as engineer in chief in 1842, and the commencement of the new locks. He remained a division engineer of all south of the Welland river, until 1845, when he was appointed to the charge of the Ottawa works, and thus in his twenty-fourth year ceased to be an assistant engineer. At the end of 1848 he was dismissed from the government service with a flattering letter, ostensibly on the score of retrenchment, but in reality because he had as engineer in charge successfully opposed propositions for expenditure in which some members of Parliament were interested, who had influence with the Administration.

In 1849 Mr. Keefer wrote the 'Philosophy of Railroads,' a pamphlet which was reprinted by several railroad companies, and republished in many newspapers. It contributed more than any other to give vigor to the railway agitation which secured the completion of the Great Western, the Toronto Northern (now Northern of Canada), Port Hope, Prescott and Ottawa, and the Grand Trunk, all of them arteries of industrial vitality. It was also a text book for the press of Nova Scotia and New Brunswick, in advocating their railway policy.

In the same year, his Excellency the Earl of Elgin, Governor-General, offered a premium for the best 'Essay on the influence of the Canals of Canada upon her Agriculture.' For this Mr. Keefer was the successful competitor, and the announcement, in 1850, immediately after the success of his 'Philosophy of Railroads' at once gave him the position of an authority on railway and commercial subjects. In his prize essay he foreshadowed that political differences might divert the trade of the north-west from the Mississippi to the St. Lawrence. He opposed agricultural protection as unnecessary, and general protection as unwise, but advocated incidental protection to certain manufactures suited to the country, and asserted that reciprocity would be granted. He predicted that the St. Lawrence by its adaptation for steam power would yet distance its rivals, and was the first to call attention to the importance of the route through the straits of Belleisle, as saving several hundred miles in the European voyage. He showed that with steamers, lights, buoys and beacons, the Gulf of St. Lawrence would be safer than the Gulf of Mexico, the English or Irish channels. He advocated the free navigation of the St. Lawrence and shewed the relief it would afford to the lake craft in winter and in seasons of depression, which view has since proved correct by the fact that twenty thousand tons of lake shipping went out on the ocean in 1858 and 1859. He also pointed out that New England would for the future be a better market for Canadian bread-stuffs than old England. Since this essay was published other prize essays have been written on Canada, and extensively distributed in connection with the Paris Exhibition of 1855, and many valuable publications have likewise drawn attention to this province, in late years, all of which had the 'Canals of Canada' of Mr. Keefer before their writers, while he wrote under every disadvantage, except that of treading new ground. His essay has, however, been described by the leading press of Canada, as a masterly one, exhausting the subjects on which it treats. The government policy with reference to the St. Lawrence in the last ten years has been in accordance with the principles laid down in it, and his views with respect to a manufacturing policy have been adopted.

In 1850 he was again called into the government service by Hon. W. H. Merritt, who was then chief commissioner of public works, and was sent to survey the rapids of the St. Lawrence with a view to their improvement, and also to explore the country between the head waters of the river St. John in New Brunswick and the St. Lawrence, opposite the Saguenay, for the purpose of opening up an intercolonial communication by canal or railway. In 1851 he resigned permanently his connection with the government service, and was appointed chief engineer of the Toronto and Kingston section of the Grand Trunk railway, which, as laid down by Mr. Keefer in his 'Philosophy of Railways,' was restricted to a line from Montreal uniting

with the Great Western at Hamilton. In the same year he was appointed to the survey of the Montreal and Kingston section of the Grand Trunk railway, and also of the bridge over the St. Lawrence at Montreal, thus having the whole line and bridge in his hands. In 1852 the English contractors assumed the position of the Canadian companies, and appointed their own engineer to the charge of the railway and bridge, and Mr. Keefer, unwilling to take a subordinate post under the contractor's engineer, went into general practice. In connection with the Trunk railway it may be mentioned that he advocated the gauge of New York and New England for the Canadian line, so that cars laden in Canada could go without transshipment, in bond or otherwise, in New York and Boston, the only produce markets in the United States within our reach, and return in like manner with imports, to their place of destination. Portland had however foreseen that, without a peculiar gauge, traffic would branch off at the Connecticut river and other points to Boston, and had bound the Sherbrooke road to her conditions. These in turn were imposed upon the whole province, as the provincial gauge, by the Sherbrooke road. Mr. Keefer has, since its commencement in 1853, disapproved of the policy of the Grand Trunk Company, in the location, construction and management of the railway, although, as one of the early promoters, he has always been favorable to the enterprise itself.

In reference to the bill then before the Legislature, Mr. Keefer, in 1852, recorded his protest in one of the leading provincial journals in the following prophetic language:—

It is the control of the road during construction and after completion, by a company of non-resident speculators that should be resisted. There are a thousand questions of local importance to every town, village and township on the line, which must arise during its construction, which such persons cannot appreciate and will not accede to; and when completed, upon the liberal and enlightened management of its commencement will depend its future success, and that of the interests along the route. This cannot and will not be appreciated by parties in temporary possession, whose policy it will be to make their possession so irksome that the country will be compelled to purchase them out. Thus after paying the highest price for a road constructed in defiance of local wishes it will be thrown back on our hands, having been managed by reference to the board at home, damaged in reputation, and not improbably, worn out in track and gear, by the cupidity or indifference of temporary non-resident tenants.

Mr. Jackson merely asks power from the Canadian legislature to puff the stock of our main line to double the amount necessary for the construction of the road, and when he shall have disposed of £10,000 per mile in stock, by quoting the confirmation of this 'chisel' by the Canadian legislature and government, (who in England, will be supposed to be the best judges of what the road will cost and what it will pay), he will disappear from the scene and leave the widows and clergymen, the Sidney Smiths, and all the small shareholders in Britain to divide the dividends between themselves and the government guarantee mortgage. The position which Canada will then occupy in the public opinion of Great Britain will be similar to that of the repudiating state of Pennsylvania, whose drab-coated citizens Sidney Smith has immortalized!

Referring to the Toronto and Guelph road, Mr. Keefer foreshadowed the result, as follows:—

But where will all this end? Public notoriety brings the rumor of another gigantic 'chisel.' It is well known that the directors of the Toronto and Guelph road have received over one hundred bids for their line, but have as yet accepted none, and the reason assigned is that they are angling with 'Jackson, Hincks & Co.' to be tacked on the Trunk line. The Great Western will then be thrown overboard as a Ymke concern, and the Canadian main trunk will be pushed through Guelph and Sarnia, and the government guarantee be extended over the whole line.

If the doctrine be true that every man has his price, we confess that with such a railway-facilities bill of fare there is scarcely anything which reckless and unprincipled plotting cannot do. We tremble for the name and fame of Canada when we reflect with what hot haste this Jackson business has been spurred on!

After describing the political position of the question, Mr. Keefer thus concludes:—
'Lastly, Mr. Hincks is committed to himself. The power and patronage arising out of the expenditure of such a vast sum of money is worth all the political trump cards which ever have been or can be started wielding that power through a project which extends throughout the entire length and breadth of the land, he can defy the whole army of politicians—who can only oppose

principle to interest, agitation to a consideration.

The public character of Canada is to be prostituted in the London stock market, and used as an engine to extract their means from distant and confiding men and women. Messrs. Jackson & Co., are allowed, first, to make a contract with themselves, by which they will make the future shareholders pay double the value of the road; secondly, they are enabled to purchase the support necessary to secure the bill by being allowed to assign sub-contracts without competition, &c.'

In addition to his professional engagements during the busy period which marked the commencement of the railway era in Canada, he was on the part of Canada prominently concerned, from 1849 until its passage in 1854, with the reciprocity treaty, and spent some time in Boston and New York with the United States consul-general, the Canadian department of whose report bears evidence of Mr. Keefer's labors. Although many names have figured prominently in the final stages of this measure, some are those of men who were at first skeptical of its practicability, who ridiculed the proposition, but who like other fortunates have reaped where they have not sown. There exists the best authority for stating that Mr. Keefer contributed at least as much as any other person acting on the part of Canada towards the successful issue of this important measure.

During the period which has elapsed since 1852, Mr. Keefer has filled the positions of engineer of the Montreal Water Works, Montreal Harbor, Stanstead, Shefford and Chambly Railway, Hamilton Water Works, Port Dover Railway, besides having been as consulting engineer, or arbitrator, connected at some time with most of the railways and public works in the country. Nor has his practice been confined to Canada. Twice he has been called into the adjoining province of New Brunswick; and he has declined an offer from Major-General Fremont to go to California, with a munificent salary, on a professional engagement in connection with the Mariposa mines. Besides his professional reports, some of his lectures have been published; in one of which (that upon 'the Ottawa') the only detailed description yet given of the mode of conducting the lumber trade is to be found.

The best testimony to Mr. Keefer's position is that of contemporary engineers. The following is an extract from 'a brief history' of the Victoria Bridge, by F. N. Boxer, Esq., C. E. (pp. 27-28).

To Mr. Keefer was Mr. Stevenson indebted for all the valuable data collected and mentioned in Mr. Keefer's Report, and this Engineer is justly entitled to the full credit of having designed the first plan of a bridge over the St. Lawrence which could have been successfully carried into effect, as has been subsequently proved by the construction of the Victoria Bridge on nearly the same site.

OPINIONS OF AMERICAN ENGINEERS

From the Railway Times, Boston.

The original design of this bridge is due to a Canadian Engineer, Thomas C. Keefer, Esq., whose published Report in 1852 fixes the site and determines the general arrangement of the structure, which has been but little modified in execution. Also he in a long and elaborate argument, demonstrates as far as such a thing could be done on paper, that a bridge could be built to resist the ice, and that its effect would be to diminish instead of increasing the winter floods.

Such was the state of the enterprise in 1852, but the bridge would probably not have been built had it not been undertaken by the Grand Trunk Railway and adopted as part of their vast scheme.

The late Mr. Stephenson came to Canada and after examining the proposed location and plan with great care, gave Mr. Keefer's views the sanction of his great name, and assumed the responsibility of constructing the bridge. Had he given an adverse opinion, it is not too much to say that the capital would never have been raised in England. As his whole professional reputation was at stake, he gave the closest attention to the details of construction. All the working drawings were made in his office at Westminster, and bear the signature of his principal assistant, G. A. Stephenson, and no alterations were permitted without his sanction. Some of the friends of Mr. Stephenson's resident engineer in Canada, Mr. A. M. Ross, have claimed for him the credit of the design. Mr. Stephenson's friends deny this point blank. Mr. Ross himself has said nothing. The bridge bears a tablet on which is engraved, in lasting characters, the name Robert Stephenson and A. M. Ross, engineers. In the absence of further evidence, we must declare that the honor of designing this huge structure lies with Keefer, Stephenson and Ross; how much belonging to each, perhaps it would be unpropitious to enquire.