

The Canadian Engineer

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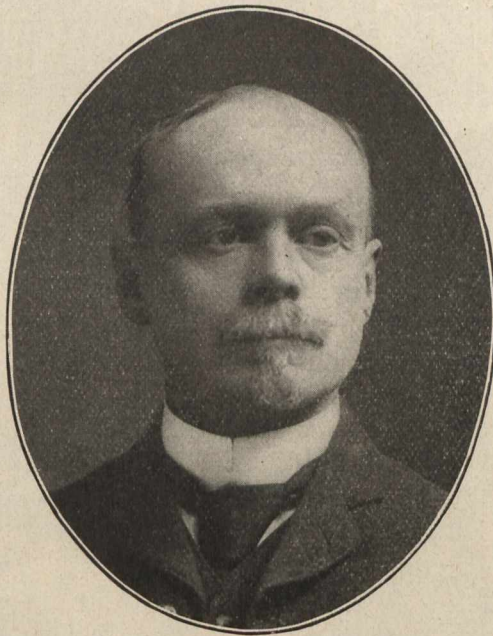
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"We judge ourselves by what we feel capable of doing; but the world judges us by what we have already done."

Longfellow.



R. F. TATE.

Member Can. Soc., C.E., Ex-President of Engineers' Club,
Toronto; Resident Engineer, Mackenzie, Mann &
Company, Limited, Toronto.

Among the gifts of civilization, not the least is the modern luxury of travel. No agency has done more for the material comfort and social happiness of mankind than the Railroad. The solid highways laid down in Britain 55 B.C., by the Romans, were a noble contribution to progress—they form the foundations of the Royal Mail roads in Great Britain unto this day;—but this notable work was as water is to wine, compared to the blessings which have followed the inauguration of the system of steam railways begun by George Stephenson in England, 1825, and since spread like a network, over the face of the earth; bringing hostile nations and peoples into commercial intercourse; carrying the glad tidings of peace and goodwill among men, and making the very deserts "to blossom as the rose." The world owes a lasting debt of gratitude to the Civil Engineer; for the wonderful railway systems which we behold everywhere as we look out of ourselves over the globe, are the result of his creative genius and the work of his hands. The splendid system of railways laid down in Canada has won for the Dominion international renown, but the men whose inventive power and mechanical skill have made these mighty works possible are often among the *unrecognized*. It is the aim of THE CANADIAN ENGINEER to see to it that the Engineers who have been making genuine contributions to the material progress of our country—making our industrial history, are placed on the muster roll of honor. Such an one is the sterling Engineer, whose worthy life story we are about to tell.

Robert Frederick Tate was born in Belleville, Ontario, May 7th, 1854—his father's headquarters during the construction of the Grand Trunk Railway of Canada; who was in charge between Kingston and Toronto. In 1861 the family removed to Peterboro' by rail via the Cobourg, Peterboro' & Marmora Railway across Rice Lake, over the three-mile pile bridge; then a very unstable structure, so much so that the impression of that bridge journey by the seven-year old embryo Engineer is as vivid to-day as then; for he distinctly recollects the slow speed, lateral tremor, and undulating depression of the old structure over the deepest portion of the lake.

Mr. Tate may be said to be a born Engineer, having inherited mechanical instinct from his father, who was a trained Civil Engineer. His academic education was acquired in public school and Collegiate Institute, while his primary technical knowledge was gleaned under the wise practical tuition of his father and elder brother; supplemented by his own private study and research. College courses in Civil Engineering in Canada were very limited at the period when he began "doing things." Mr. Tate started his career in Railway Civil Engineering, and his

thirty-six years of active professional life have been spent almost exclusively in that branch—assisting in the Railway development of his native country.

At the age of 16, he commenced business with a contractor in the construction of bridges on the Toronto & Nipissing Railway; who bought a great deal of the timber for the structure from Uxbridge northerly, cut from standing trees on lands adjoining the railway, and he remembers well, seeing them hewed on the spot to their dimensions and placed in work. A year later, (1871), he entered the employ of the Midland Railway of Canada (now part of the Grand Trunk Railway), as a chainman on surveys, and five years later was appointed Chief Engineer, although only 22, and held that position for five years, when he retired to seek a wider field for experience. During his connection with this Railway, he completed the construction of the line to Midland, together with the extensive lumber and railway yards and docks; and in 1876, changed the gauge of the Railway from 5' 6" to standard. Subsequent to this, he had charge of the Construction Offices of the following C.P.R. lines:—

At Montreal, Vaudreuil to Smith's Falls . . . 105 miles.

At Sherbrooke, Farnham to Mattawamkeag . . . 292 miles.

At Macleod, Lethbridge to Kootenay Landing . . . 287 miles.

He also did considerable reconnaissance, preliminary and location railway survey work in all parts of Canada for all the leading railways. In 1893, he located the line of the British Columbia Southern Railway from the summit of Crow's Nest Pass to Tobacco Plains, in East Kootenay, at the International Boundary. He was also Engineer in charge of a portion of the double track of the Grand Trunk Railway, and their Sarnia Tunnel connection from Blackwell to the east end of the Tunnel Yard.

In 1899, Mr. Tate was appointed Resident Engineer for Mackenzie, Mann & Company, Limited; with headquarters at Toronto; in charge of all the engineering projects in connection with that firm's various steam railway lines—which position he still holds. All the steel bridges purchased by that firm since his appointment, have been in his charge. In addition to the duties pertaining to this office, he has made personal examination and prepared reports on several important railway projects, in which this firm was interested,—and completed the construction of the Schomberg & Aurora Railway. He has under special supervision at the present time, a portion of the James Bay Railway, extending from Toronto to Richmond Hill.

Mr. Tate is a charter member of the Canadian Society of Civil Engineers; and has been a member of the Engineers' Club since its inception, and was President of that Society during 1905.