

rumble of them can be heard. The guide comes forward with the caution to look out for the overhead wire, and explains that we are almost directly under the big sailing ship we saw in the harbor loading coal. Between us and the vessel's keel is 600 feet of rock and 30 feet of water. The engine comes into sight around a curve, and whirls rapidly past with a long train of loaded cars for the shaft. When the track is cleared the guide returns to his bag of shavings and the deafening rattle of the empty cars is resumed."

ELECTRIC TRAMWAYS IN THE LAKE ST. JOHN REGION.

In a report submitted to the Department of Woods and Forests of the Province of Quebec, Mr. J. C. Langelier points out the immense possibilities of the Lake St. John region for the manufacture of pulp and paper. The development of this industry will, he thinks, result in the construction of electric tramways, concerning the outlook for which he says:

"There is probably no other place where electric railways could be built under such exceptionally advantageous conditions. In addition to the fact that the ground is level and building timber right on the spot, there would be all along the line, at comparatively short intervals, water powers capable of giving an unlimited supply of electricity. Starting from the west there are the Mistassini falls, and a mile further those of the Mistassibi; nine or ten miles further to the east the White Falls on the Little Peribonca; nine or ten miles still further east, the falls of the Great Peribonca. From these falls to those of the Little Discharge, there is a distance of less than twenty miles. At the same distance from the Little Discharge are the falls of the au Sable river, 249 feet high. Six miles further and a dozen miles from St. Alphonse is the Chicoutimi river, which could also supply power for producing electricity.

It would be equally easy to establish an electric line between Mistassini and Roberval, the western terminus of the Quebec and Lake St. John Railway. From Mistassini to the Chamonouchan, there is barely more than sixteen miles, and about midway the Tecouapee river could supply water-powers capable of providing an abundance of electric power.

On the Chamonouchan the Bear falls could be utilized for the same purpose. From the Bear falls to Roberval, a distance of about 30 miles, the Salmon, Iroquois and Oulatchouaniche rivers, nearly at equal distance from one another, also have water-

powers capable of supplying the electric power required for a tramway.

The construction of an electric tramway between Montreal and Roberval, a distance of about 250 miles could be effected under the most favorable conditions. The summit to be got over or the difference of level between the two places is about 725 feet instead of 1,300, and even more on the Quebec and Lake St. John Railway. There would only be two bridges at all costly, those of the rivers des Prairies and St. Maurice.

From Bou de l'île to the river Mastigouche, a distance of about fifty miles, there would be only the water power obtained by damming the river L'Assomption for producing electricity by hydraulic power; but from Mastigouche, whose rapids and cascades could develop considerable motive-power, there are the falls of the river à la Chienne, one 200 feet, the other 75 feet high, the rapids of the Pabelogang and of the Vermilion, whose course is nothing but a series of cascades and falls; beyond the St. Maurice are the falls of the river Trenche, six miles from its mouth; those of the river Croche, those of the river Oulatchouaniche, which falls into Lake St. John at Roberval village. Finally, from the Mastigouche, a distance of a couple of hundred miles, water-powers capable of supplying an electric railway are not at greater distance from one another than 25 miles, so that there is no place where the current would have to be transmitted more than 25 miles.

The traffic supplied by the paper mills would suffice to assure the success of such a railway, but there will also be many other sources, as it would serve to supply the great lumbering establishments on the Upper St. Maurice. It would likewise develop the settlements in the valley of the Mattawan, especially in the rich and fertile territory between the rivers Trenche and Croche, where there are nearly a million acres of the best farming lands, with a climate more favorable for farming operations than that of the neighborhood of Three Rivers."

MCGILL UNIVERSITY NOTES.

The sessional lectures at McGill University have been finished, and examinations are now being held.

A considerable quantity of apparatus for the new equipment of the Department of Electrical Engineering of McGill University has been received during the past month.

The installation of a new electric elevator in the Engineering Building of McGill University is being considered. The building will also be entirely re-wired during the summer.

Professor R. B. Owens lectured before the Natural History Society of Montreal on the evening of March 30th, on the subject of "Water Power Development." Professor Owens leaves for England about the end of the present month, and will return before the commencement of lectures in the fall.

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