

THE Montreal Street Railway Co. has erected two miniature Eiffel towers of angle steel a hundred and sixty-five feet high. They are nineteen feet square at the base, and fifteen inches square at the top. They rest on a foundation of concrete twelve feet deep. These towers will support a cable across the Lachine Canal into Point St. Charles, to supply power to the company's line.

FIVE companies tendered for the construction of the Chatham, Ont., civic electric lighting plant. They were the Stephenson Company, of London; John Abell, Toronto; the Thompson Electric Company, Hamilton; the Royal Electric Company, Montreal, and the Harris Electric Company, Detroit, U.S.A. A number of them tender only for the electrical apparatus, wiring, etc., while others make their tender cover everything required.

AT a recent special meeting of the town council of Niagara Falls, Ont., a by-law was introduced giving the electric-car company holding the present charter for the horse-car line a 20-year charter, with the privilege of running over the same route, with a few extensions, providing the company put in motive power other than horses or steam. The company must act within thirty days of the passing of the by-law and complete the line within sixty days.

NEARLY 400 people registered their attendance at the convention of the National Electric Light Association at Niagara Falls, N. Y. June 8th-10th. Details in next issue. Among whom were noted the following: F. C. Armstrong, Toronto; T. A. Badger, jr., Quebec; E. B. Biggar (CANADIAN ENGINEER); F. A. Bowman, New Glasgow, N.S.; John Carroll, Montreal; Prof. C. A. Carus-Wilson, Montreal; E. E. Cary, St. Catharines; E. T. Freeman, Halifax, N.S.; W. A. Johnson, Toronto; J. A. Kammerer, Toronto; R. S. Kelsch, Montreal; John Langton, Toronto; Frank LeBlond, Niagara Falls, Ont.; E. D. McCormack, Toronto; Charles Morton, Montreal; John Murphy, Ottawa; Frederic Nicholls, Geo. A. Powell, St. Catharines, Ont.; J. F. Rothsay, Niagara Falls, Ont.; A. E. Smail, Montreal; W. McLea Walbank, Montreal; Geo. W. Watts, Toronto.

THE West Kootenay Power and Light Company, Limited, which was recently organized for the purpose of developing the magnificent water power available at the Falls of the Kootenay, ten miles from Nelson, B. C., has just closed a contract for the hydraulic and electrical machinery, to develop 2,000 horse-power, immediately, the ultimate scope of the undertaking being the utilization of the full power of the river at this point, estimated at from 8,000 to 10,000 horse-power. At the head of the company is Sir Charles Ross, Bart., who is largely interested in mining properties, and with him are associated C. R. Hosmer, Frank Paul, and other influential and well-known capitalists. The services of Robert Jamieson, formerly engineer in charge of the Lillooet, Fraser River and Cariboo Gold Fields Co., Limited, have been secured to supervise the entire undertaking, and his wide experience in mining engineering work of all kinds, will insure the most efficient working out of all the detail appliances necessary to apply the electric power in the most satisfactory manner for mining work. Some interesting details as to the electrical features of the scheme have been made known. The apparatus will be of the three-phase type manufactured by the General Electric Company, Limited, and the generators of the revolving field type, similar to those now being installed in the large power plant of the Lachine Rapids Hydraulic and Land Company at Montreal. The initial generating plant will consist of two machines, having a capacity of 1,000 horse-power each, from which the current will pass through step-up transformers, raising it to 20,000 volts, the highest pressure as yet used on any electrical transmission line. At this high pressure, the energy will be carried to a sub-station at Rossland, a distance of thirty miles, where it will be reduced to a pressure of 2,000 volts for transmission to the motors used in connection with the different mining enterprises. The electric power will be used for operating tramways, hoists, pumps, ventilators, stamp mills, drills, etc., and will be sold at a price which, in comparison with the present high cost of power generated from coal, means a greatly reduced expenditure in this direction by the different mining companies. The machinery is now in course of construction, and the plant is to be in full operation early in the Fall.

A SAFETY VALVE PROBLEM.

Editor CANADIAN ENGINEER.

SIR,—Kindly answer this safety-valve question in the July issue of your valuable paper: What is the weight required on the end of the lever, not considering the weight of the valve stem or lever, when the length of the lever is 36 inches, the diameter of valve is 3 inches, the fulcrum is 3 inches, and the steam pressure 125 pounds?

THREE ENGINEERS.

Under the conditions stated, viz., lever, 36 ins.; diameter of valve, 3 inches; fulcrum, 3 inches; pressure, 125 lbs., the weight required on the lever is 76.542 lbs.—[EDITOR.]

AT a public meeting held recently in Rat Portage, Ont., it was resolved that water works were at once necessary for the health of the town. T. R. Deacon is town engineer.

Railway Matters.

RICHARD WOOD has been appointed receiver of the St. Catharines and Niagara Central Railway.

THE C.P.R. has arranged for the construction of 1,000 new freight cars at their various shops.

PEMBROKE, ONT., has passed a by-law to grant a bonus of \$20,000 to the Pembroke Southern Railway.

QUITE a number of Canadian Pacific workmen have been sent from Toronto Junction to Perth, Ont., to assist in the construction of 200 new freight cars.

THE C.P.R. have received a number of new refrigerator cars from their Perth workshops. Five of them have been sent to Weehawken, N.J., to load butter for Australia.

THE Richelieu & Ontario Navigation Co. has issued a very neat pamphlet showing to its friends the beauties and attractions of the Ontario waterways. Some interesting chapters are devoted to the lovely spots between Montreal, Toronto and Hamilton.

It is reported that General Manager C. M. Hays, of the Grand Trunk Railway, has issued an order to the effect that section foremen must dispense with the services of relatives working under them, and that relatives must not in future be employed by them.

A. FACKNEY has contracted for the erection of car-houses, etc., for the Quebec District Railway Company on St. John, d'Aiguillon, Racine and Richelieu streets, Quebec, the building to be 176 by 116 feet, two stories, in brick and stone with mansard roof, at a cost of \$25,000.

ON June 1st the Dominion Government officials stopped the running of trains on the Baie des Chaleurs Railway, which has been operated as a branch of the Intercolonial since January last, and the road was handed over to the representatives of the Atlantic & Lake Superior Railway Company.

THE Railway Y.M.C.A., which was opened a short time ago in roomy quarters, Front street and Spadina avenue, Toronto, by General Manager C. M. Hays and a number of distinguished men and philanthropists, is doing a splendid work. There is quite a good library in the association rooms.

D. F. BURK, Port Arthur, Ont., has secured an injunction restraining the provisional directorate of the Ontario Rainy River Railway receiving a first payment of \$7,000 in the sale of the Ontario Rainy River Railway. The purchasers are Wm. Mackenzie, president of the Toronto Street Railway Company, and his brother, R. Mackenzie.

THE C.P.R. has let the contract for the construction of the Slocan valley branch of the Columbia and Kootenay system. McVey & Poupore will do the grading from Slocan Crossing to within sixteen miles of Slocan. The rest of the work will be done by McLean Brothers, of Nelson. About 1,000 men will be employed this summer establishing the necessary grade, constructing bridges and putting down the rails.

W. J. HANLY, Toronto, will have charge of construction on the Crow's Nest Pass Railway when it is begun. Mr. Hanly has done a good deal of work for the Canadian Pacific, and was, in fact, the first superintendent of the Canadian Pacific before the formation of the present company, and built the Pembroke branch, and also the Kingston and Pembroke. On the main line, Mr. Hanly built the section between Rat Portage and Selkirk, Man., a distance of 150 miles, and likewise from Port Moody to Griffin Lake, 350 miles.

JOSEPH HOBSON, chief engineer of the Grand Trunk Railway System, having been assigned the entire charge of the construction of the new Victoria bridge, it has been decided that, to enable him to devote his personal attention to this and other important new works of the company, taking effect July 1st, the immediate supervision of the maintenance of track, buildings, water stations and wooden bridges will be placed under the jurisdiction of the superintendents of the respective divisions, who will report to and receive their instructions from the general superintendent, F. H. McGuigan. The chief engineer will continue in charge of the St. Clair tunnel, all iron bridges, masonry and signals and interlocking. He will also have the direction and supervision of all contract work, the preparation of plans, specifications and estimates for new work, and the custody of original maps and profiles of the roads comprising the system.