

pumps, bathroom, machine shop, etc. The laboratory, superintendent's office, chemical controllers and part of the solution tanks are on the first floor, while the second floor is devoted to storage of chemicals and their preparation for addition to the raw water.

No function of a water purification plant is more important than that of properly adding the chemical solution to the raw water. The rate of consumption of water in the city of Fargo varies from about 500,000 gals. to probably about 4,000,000 gals. per 24 hours. The raw water has to be treated to meet this varying rate, and the usual method is to pass the chemical solution through an orifice having a known discharge. This orifice needs the attention of the operator in order to meet the varying rate of raw water discharge. It is at once apparent that the operator cannot do this, however faithful he may be, for he does not, at all times, know what conditions he has to meet. The whole problem is satisfactorily solved by the installation of the Earl chemical feed controller. This device automatically meets, at every instant, the varying rate at which the raw water may be passing into the mixing chamber and the proper chemical is at all times fed to the raw water at a rate proportionate to the consumption. By the use of this device over-dosing and its ill effects are eliminated, as is also under treatment of the water. The operator can rest assured that the water is at all times being properly treated.

The plant is constructed throughout of reinforced concrete, except the buildings, which are faced with Twin City terra cotta tile and lined with common brick. The roofs are trussed with steel, sheathed with fir and finished with green glazed tile.

### NATIONAL STEEL CAR COMPANY.

The National Steel Car Company has been incorporated for the purpose of building and operating a plant for the manufacture of wood and steel freight cars. The location of the plant will be at Hamilton, Ont., and the head office at Montreal. The authorized capital is three million dollars seven per cent. cumulative preference stock, and three million dollars common stock, of which \$1,500,000 par value preference and \$2,000,000 par value common will be issued. The amount issued is considered adequate for the building, equipping and operating of a thirty-car plant, while sufficient stock is retained for future growth. The principal Canadian railroads experience considerable difficulty in placing orders with existing firms for a quick delivery, and this the National Steel Car Company begins business with an existing demand for its products. The estimated average earnings working at sixty per cent. of its capacity is given as \$400,000, which is sufficient to pay the 7 per cent. dividend on the preferred stock, and leaving \$295,000 available for common stock dividend.

The management of the company will be in the hands of Mr. Basil Magor, president of the Magor Car Company, Passaic, N.J., who is resigning that position which he made a success, believing in the possibilities offered in Canada. Mr. A. Butze, for many years purchasing agent of the Grand Trunk Railway, will act as the company's purchasing agent.

The cost of construction of the plant has been estimated by Messrs. Barclay, Parsons and Klapp, consulting engineers, as \$649,730. The house of issue is Messrs. Brouse, Mitchell, members Toronto Stock Exchange, Colborne Street, Toronto. Sir John Gibson, Sir Henry Pellatt, C.V.O., Toronto; Messrs. W. K. Price, New York; C. H. Cahan, Montreal; M. H. Coggeshall, New York; M. Davis, Montreal; Basal Magor, Montreal; W. Barclay Parsons, New York; W. G. Ross, Esq., Montreal; J. J. Scott, and W. Southam, Hamilton, have consented to act as directors.

### TO USE LOCAL WOODS IN BRITISH COLUMBIA

An idea with regard to wood creosoting was laid before the forestry branch, province of British Columbia, by Mr. Skinner, who has charge of the construction of the C.P.R. docks in Vancouver.

These docks are being built of eucalyptus wood brought from Australia. This wood is preferred because its gummy quality enables it to resist the teredo longer than will any of the native woods of British Columbia. The Douglas fir, however, if properly creosoted, will last longer than the eucalyptus. Moreover the Crow's Nest coal, it is said again, on Mr. Skinner's authority, is the best in America for creosoting purposes. These two factors combined seem to him to offer opportunity for a new industry. The idea is especially interesting to the forestry branch because if creosoted blocks can be introduced as paving material, there will be a chance to utilize much of that part of the tree which is now left in the bush and wasted.

### MUNICIPAL POWER PLANT FOR GRAND MERE, QUE.

The corporation of Grand Mere, Quebec, has awarded to Allis-Chalmers-Bullock, Limited, Montreal, the contract for the complete hydro-electric power plant for municipal lighting and power purposes. The plant will include a single horizontal turbine 500 h.p. 600 r.p.m. under 100 feet head and an alternating current generator 300 k.v.a., 3-phase, 60-cycle, 2,200-volt, 600 r.p.m. with direct connected exciter 125-volt, 600 r.p.m. The turbine will be in cast iron spiral case with quarter turn and single discharge. The runner will be of bronze cast in one piece, the guide vanes of steel and the inside parts bronze lined. The unit will be compact, easily operated and thoroughly up-to-date and will have an over-all efficiency of 80 per cent. The contract also includes an oil pressure governor, step-up transformers from 2,200 to 11,000 volts, step-down transformers from 10,000 to 2,200 volts. Service transformers 2,200 to 110 volts. Switchboards and other auxiliary apparatus. Messrs. Surveyer and Frigon were the consulting engineers.

### PERSONAL.

MR. R. B. LAMB has resigned his position as consulting engineer with the Crown Chartered Mine.

MR. RALPH STOKES has been appointed as assistant to Consulting Engineer Mein, of the Canadian Mining and Exploration Company.

MR. L. S. COCKBURN, a graduate of the University of Toronto in engineering, and MR. E. L. WENGER, B.Sc., have become partners under the firm name of Wenger & Cockburn, consulting engineers, with headquarters in Regina, Sask.

MR. R. D. BROWN, city engineer of St. Catharines, Ont., has resigned from his position in order that he may be free to accept a position offered him in the services of the government, under Mr. Weller, superintendent of the new Welland Canal.

MR. E. S. JENISON, formerly with the Henion & Hubbell Company, of Chicago, Ill., has been appointed manager of the pulp department of the Canadian Fairbanks-Morse Co., Limited, who are now the exclusive sales agents in Canada for the triplex and power pumps, as well as the other lines manufactured by the Goulds Manufacturing Co., of Seneca Falls, N.Y.

MR. A. H. BERGER, until recently the secretary-treasurer of the American Spiral Pipe Works, has organized the Standard Spiral Pipe Works of Chicago. The latter