

Railway Rolling Stock Notes.

000 and a station building at a cost of \$1,500,000. The agreement made with the Vancouver City Council, which evidently was under consideration when the matter was before the Government, provides that the C.N.R. agrees within five years to procure and at all times maintain deep water wharfage facilities within the city adequate to the needs of a transcontinental railway and trans-Pacific steamship lines. The company also agrees that it will, within eight years from the date of the agreement, establish and thereafter at all times maintain a trans Pacific steamship line, both for passengers and freight, having its freight and passenger terminals and its home office for all time as effective in Vancouver as the C.P.R., or any company which may operate or control the trans Pacific steamers operated in connection with the C.P.R. from time to time makes Vancouver the passenger and freight terminals and the home port of such trans Pacific steamers for freight and passenger traffic. It is also covenanted by the C.N.R. that supplies shall be purchased for and supplied to the vessels in Vancouver in so far as they can be obtained on as favorable conditions there as elsewhere. The steamship company will make Vancouver its head office on the Canadian Pacific coast and the place in Canada for signing on the crews of any such steamers and the point at which, in so far as possible, such crews shall be discharged and paid off. The railway company will also make its western headquarters both for passenger and freight and its western terminals at Vancouver. The bylaw was passed by the Vancouver City Council, Feb. 5, and will be submitted for ratification to the taxpayers March 15.

A special message from the Lieutenant-Governor to the B. C. Legislature, Feb. 13, asked for the guarantee of \$10,000,000 of bonds, for the construction of the Lulu Island Branch, and the laying out of terminals at Vancouver, Port Mann, and Victoria.

Vancouver Island Line.—The company's line on Vancouver Island is under construction from near Victoria to Alberni, 132 miles, the contractors on the three sections being:—Grant, Smith and Co., Vancouver; Moore and Pethick, Victoria, B.C.; and Northern Construction Co., Vancouver. A. K. Warren and G. S. Mallory are reported to have been appointed to the company's engineering staff in Victoria. Press reports state that 36 miles of grading at the Victoria end are ready for the tracklaying.

Surveys are in progress for an extension of the line from Alberni to the Quinsam River, 74 miles, and from the Quinsam River to Nootka Sound, Duncan Bay and Buttler Lake, about 71 miles.

Press reports state that plans have been prepared and that tenders will shortly be asked for the construction of wharves and terminals at Union Bay. D. O. Lewis is engineer in charge of the work.

The British Columbia Minister of Railways has approved of route maps for a line starting from mileage 4.7 on the main line to Union Bay, on Saanich Inlet, at the head of Saanich Peninsula, and a map showing the general location of the line from Victoria to mileage 4.7.

Tenders are under consideration for the building of a line from the Songhees Reserve, Victoria, to near Deadman's River, about five miles; and from near Regina Ave., on the above line to Union Bay, Saanich Peninsula, 15.25 miles. The work to be done includes clearing, grubbing, grading, bridges, trestles, culverts, masonry and fencing. The first line is to give the company an entrance into the Songhees Reserve, which is to be laid out in terminal yards, in conjunction with the C.P.R., and an entrance into a union station which is to be built. (Jan., pg. 33.)

The Mineral Range Rd. is in the market for 100 steel rock cars.

P. Welch, railway contractor, Vancouver, B.C., is enquiring prices on one locomotive.

The St. Lawrence Bridge Co., which has the contract for the superstructure of the Quebec Bridge, has ordered a locomotive from the American Locomotive Co.

J. P. Jones, heretofore Manager, Empire Elevator Co., Fort William, Ont., is reported to have been appointed a member of the Dominion Grain Commission, vice F. E. Gibbs, resigned.

The Dominion Parliament is being asked to vote \$1,000,000 for new rolling stock, \$7,150 for improvement of triple valves on overbrakes, and \$24,000 for safety appliances for equipment, for the Intercolonial Ry.

Foley Bros. and Northern Construction Co. has ordered three Rodger double plough distributing cars from the Hart-Otis Car Co. Following are the chief dimensions:—
Capacity 30 tons.
Length over end sills 32 ft.
Width over side sills 8 ft. 9 ins.
Height from rail to floor 4 ft. 4½ ins.
Truck centres 23 ft. 8 ins.
Wheel base of truck 5 ft. 2 ins.

The C.P.R., between Jan. 13 and Feb. 12, ordered the following rolling stock:—21 stock cars, 1 second class car, 1 baggage and express car, 1 box baggage car, 7 freight refrigerator cars, and 11 vans, at its Angus shops; 6 pit cars from the Canadian Car and Foundry Co.; 7 steam shovels from Mussels, Ltd.; 2 steam shovels, 8 Jordan spreaders, 5 Rodger spreaders, and 4 ballast ploughs from F. H. Hopkins and Co.; and 13 Lidgerwood unloaders from Allis-Chalmers-Bullock, Ltd.

The C.P.R., between Jan. 13 and Feb. 12, received the following additions to rolling stock:—17 flat cars, 10 sleeping cars, 11 first class cars, 3 smoking cars, and 9 D.4 locomotives, from its Angus shops; 621 steel frame box cars from the Canadian Car and Foundry Co.; 6 steel frame box cars from the National Steel Car Co.; 108 steel frame box cars from the Standard Car Co.; 425 steel frame box cars from the American Car and Foundry Co.; and 385 steel frame box cars from the Barney and Smith Car Co.

The G.T.R., between Jan. 14 and Feb. 12, received the following additions to rolling stock:—16 Pacific type locomotives, nos. 169 to 184, 69 in. wheels, from the Montreal Locomotive Works; 3 switching locomotives, nos. 1729 to 1731, 20 by 26 in. cylinders, from the Canadian Locomotive Co.; 8 mikado locomotives, nos. 500 to 507, 27 by 30 in. cylinders, from the American Locomotive Co.; 8 refrigerator cars, from the Nova Scotia Car Works; 298 box cars, from the Canadian Car and Foundry Co.; 746 box cars, from the Pressed Steel Car Co.; and 9 tank cars, from the Mather Stock Car Co.

The Canadian Car and Foundry Co. has received orders from the C.P.R. for 6 steel underframe pit cars, 75 tons capacity; from Montreal Tramways Co., for 50 car bodies and 100 pairs of trucks; from the Hart-Otis Car Co. for 1 plough car; from the Dominion Bridge Co., for 1 pair of 75 ton trucks; from Allis-Chalmers-Bullock, Ltd., for 1 all wood Lidgerwood car; from St. Lawrence Bridge Co., for 4 steel underframe flat cars, 40 tons capacity, and 4 fifty ton trucks; and from Windsor, Essex and Lake Shore Ry., for 2 steel frame single sheath box cars, 40 tons capacity, and 4 steel underframe flat cars, 40 tons capacity.

The Reid Newfoundland Co., during 1912, built at its shops at St. John's, Nfld., 40

box cars, 40,000 lbs. capacity; 2 baggage cars, 2 first class cars and 2 ten wheel passenger locomotives. There are at present under construction there 5 ten wheel passenger locomotives, one of which was expected to be completed in January, and the remainder to be completed at intervals of about 6 weeks; 25 box cars; 6 passenger cars; 40 box cars, 40,000 lbs. capacity, and two consolidation freight locomotives, all of which will be completed and placed in service this year. It is also intended to make considerable additions to the machinery of the shops to facilitate the work under way. These additions will consist of lathes, boring mills and shapers.

Following are the chief dimensions of the 300 Hart convertible ballast and construction cars, which the Canadian Northern Ry. recently ordered from the Hart-Otis Car Co., and which are being built by the Canadian Car and Foundry Co.; and for 100 similar cars ordered by J. D. McArthur Co., and 50 similar cars ordered by the Toronto, Hamilton and Buffalo Ry., all of which have been noted in previous issues:—

Length over end sills	36 ft. 8 ins.
Width over side sills	8 ft. 10 ins.
Length inside as hoppers	20 ft. 10 ins.
Length inside as gondolas	34 ft. 8 ins.
Width inside	8 ft. 8 ins.
Width over all	10 ft. 2½ ins.
Width at top	9 ft. 10 ins.
Height from rail to floor	4 ft. 4½ ins.
Height from rail to top of car	8 ft. 1¾ ins.
Height inside	3 ft. 9½ ins.
Truck centres	26 ft. 8 ins.
Wheel base of truck	5 ft. 4 ins.
Length of hopper door opening	16 ft. 8½ ins.
Width of hopper door opening	2 ft.

The Western Coal and Coke Co. has ordered one 10 wheel freight locomotive from the Montreal Locomotive Works. Following are the chief particulars:—

Cylinders, diam. and stroke	18 by 24 ins.
Tractive power	21,150 lbs.
Factor of adhesion	3.97
Wheel base, driving	10 ft. 6 ins.
Wheel base, total	20 ft. 8 ins.
Wheel base, engine and tender	51 ft. 6 ins.
Weight in working order	109,000 lbs.
Weight on drivers	84,000 lbs.
Weight on engine truck	25,000 lbs.
Weight, engine and tender	134,000 lbs.
Boiler, type	Extended wagon top
Boiler, outside diam. first ring	54 ins.
Boiler, pressure	160 lbs.
Firebox	90 3-16 by 33¼ ins.
Crown staying	Radial
Tubes, no. and diam.	198—2 ins.
Tubes, length	12 ft. 3 ins.
Heating surface, tubes	1,261 sq. ft.
Heating surface, total	1,376 sq. ft.
Heating surface, firebox	115 sq. ft.
Grate area	21 sq. ft.
Driving wheels, diam.	59 ins.
Axles	7½ by 9 ins.
Brake	Westinghouse American
Tank capacity, water	5,000 imp. gals.
Tank capacity, coal	8 tons

Reinforced Concrete Telegraph Pole Tests.

—Tests of a reinforced concrete telegraph pole were recently conducted in England. The pole tested was 44½ ft. long and of a hollow section, 17 ins. square at the base, 8 ins. square at the top and of a uniform thickness of 4 ins. The reinforcement consisted of 248 high tension 3-16 in. steel wires with an ultimate strength of 80,000 lb. per sq. in. Groups of 56 wires each were assembled at each corner and were tied together with 11-16 by 1-16 in. mild steel bands spaced 2 ft. on centres. The pole was anchored 5½ ft. deep in a mass of concrete. The loading was applied at a point about 38½ ft. from the base, and the deflection and permanent set of the pole under different loadings were measured. A load of about 1,000 lbs. produced a deflection of 66 ins. and a permanent set of 21 ins. The first signs of failure were observed on the compression side at a deflection of 73 ins. and failure resulted under a deflection of 78 ins.