

# Canadian Railway and Marine World

March, 1919

## Design and Construction of Reinforced Concrete Viaducts on North Toronto Subdivision, Canadian Pacific Railway.

By B. O. Eriksen and H. S. Deuberbeiss.

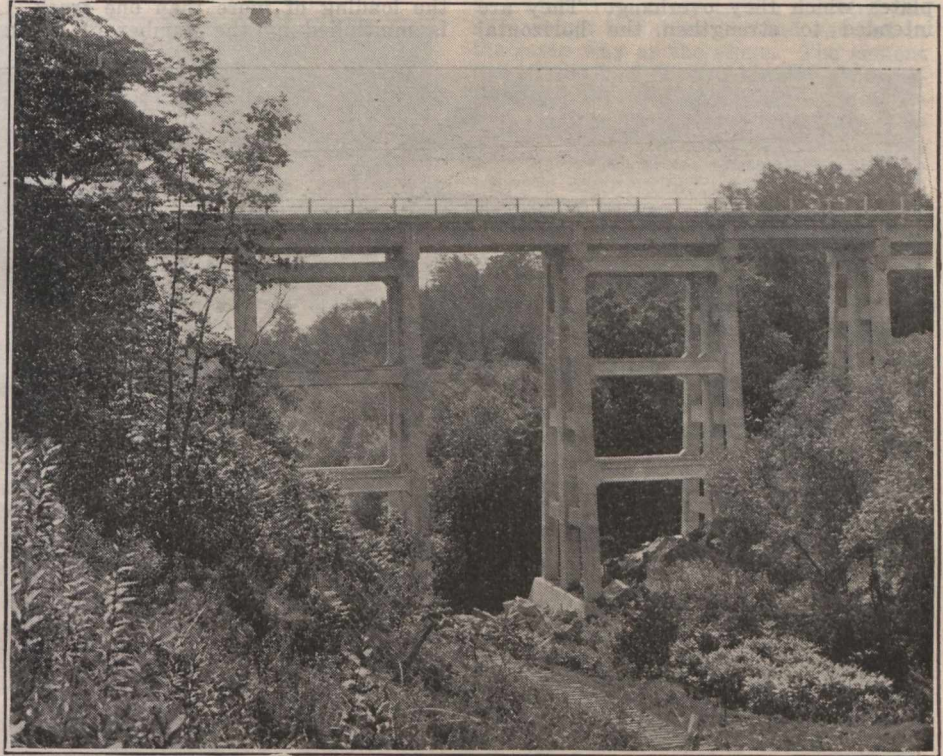
**General Description and Design.**—The greatly increasing freight traffic and a still greater prospective increase in passenger traffic, due to the agreement between the C.P.R. and the Canadian Northern Ry., whereby the latter acquired running rights over the C.P.R. from Leaside Jct. to North Toronto station, necessitated the double tracking of the line between these two stations. While this line is only about two miles long, several reinforced concrete culverts required extensions, and two important bridges, one at mileage 0.9 from Leaside Jct. and the other at mileage 1.8 therefrom, had to be rebuilt. The existing single track steel viaducts at these two points not being adequate for the present heavy rolling stock, and still less for future requirements, had to be rebuilt, so that these bridges would not limit the use of heavier motive power on this important link. Bridge 1.8, being located at the limit of the North Toronto yard, required an extra track for switching, so as not to interfere too much with the main line traffic.

Estimates for both bridges were made for building them in either steel or reinforced concrete. The higher cost of steel viaducts, and the uncertainty of the delivery of structural steel, were the deciding factors in the choice of reinforced concrete trestles as built and here described.

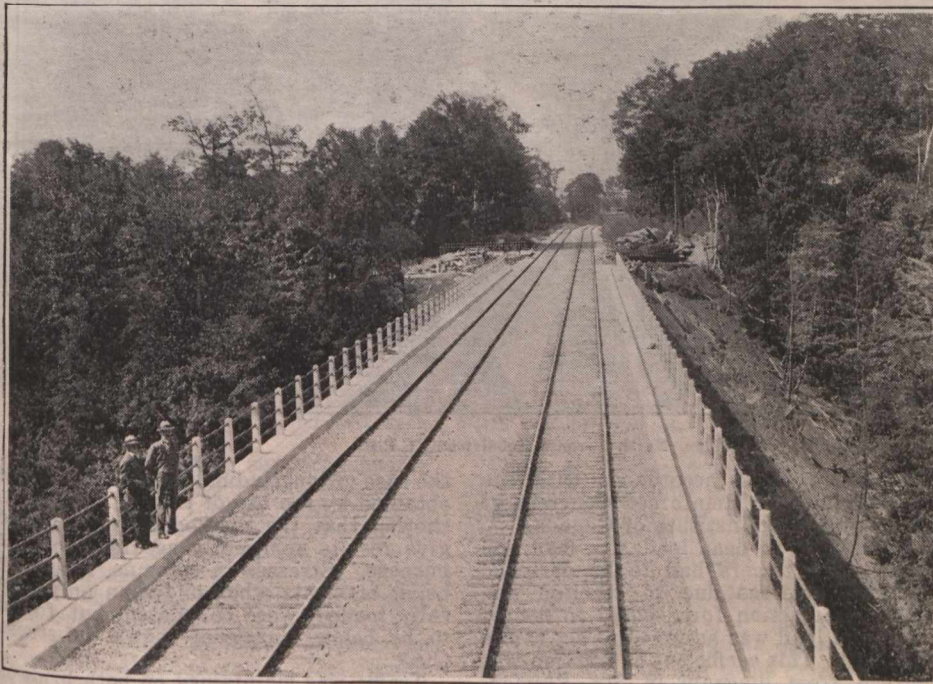
While no designs were prepared for concrete arches at these points, the possibility of building them was considered. The limited right of way at the bridge sites, however, and the necessity of

problem. The designs adopted, where all slabs were pre-moulded, and the bulk of the concrete could be cast in forms on the

without difficulty. These considerations justified the dropping of further studies of reinforced concrete arches, and the



Bridge over Toronto Belt Line Ry. Ravine, North Toronto Subdivision, C.P.R.



Bridge over Toronto Belt Line Ry. Ravine, North Toronto Subdivision, C.P.R.

building temporary trestles within these limits, made the maintenance of traffic in building arch structures a most difficult

ground, promised a much speedier and safer construction, and permitted the carrying of traffic within our right of way

adoption of designs of which the principal dimensions are shown in fig. 1.

Continuous piers have been used instead of individual pedestals, as is customary for steel viaducts. These, together with the very stiff caps, made each bent as one unit. The columns are thoroughly bonded to the piers, by the recesses and the rods in tops of same, which correspond to the reinforcing rods in the columns.

In designing the columns, rectangular and octagonal sections were considered. The rectangular section was adopted, as the most suitable to resist the great bending moment that the columns would be subject to. The columns are reinforced with longitudinal rods anchored into the concrete by  $\frac{3}{8}$  in. diameter bands. On account of the unusual size of these columns, these bands were made in sections, so that intermediate bars would be thoroughly anchored into the body of the columns. These bands were not considered to act as hooping, owing to their rectangular shape. The tower bracing consists of struts, reinforced to resist the bending moments due to their own weight, and the various horizontal forces acting on the tower. In order to improve the appearance, and reduce the weight, the vertical forces of the longitudinal struts were given a 3 in. recess. The longitudinal and transverse struts are arranged alternately. At all intermediate



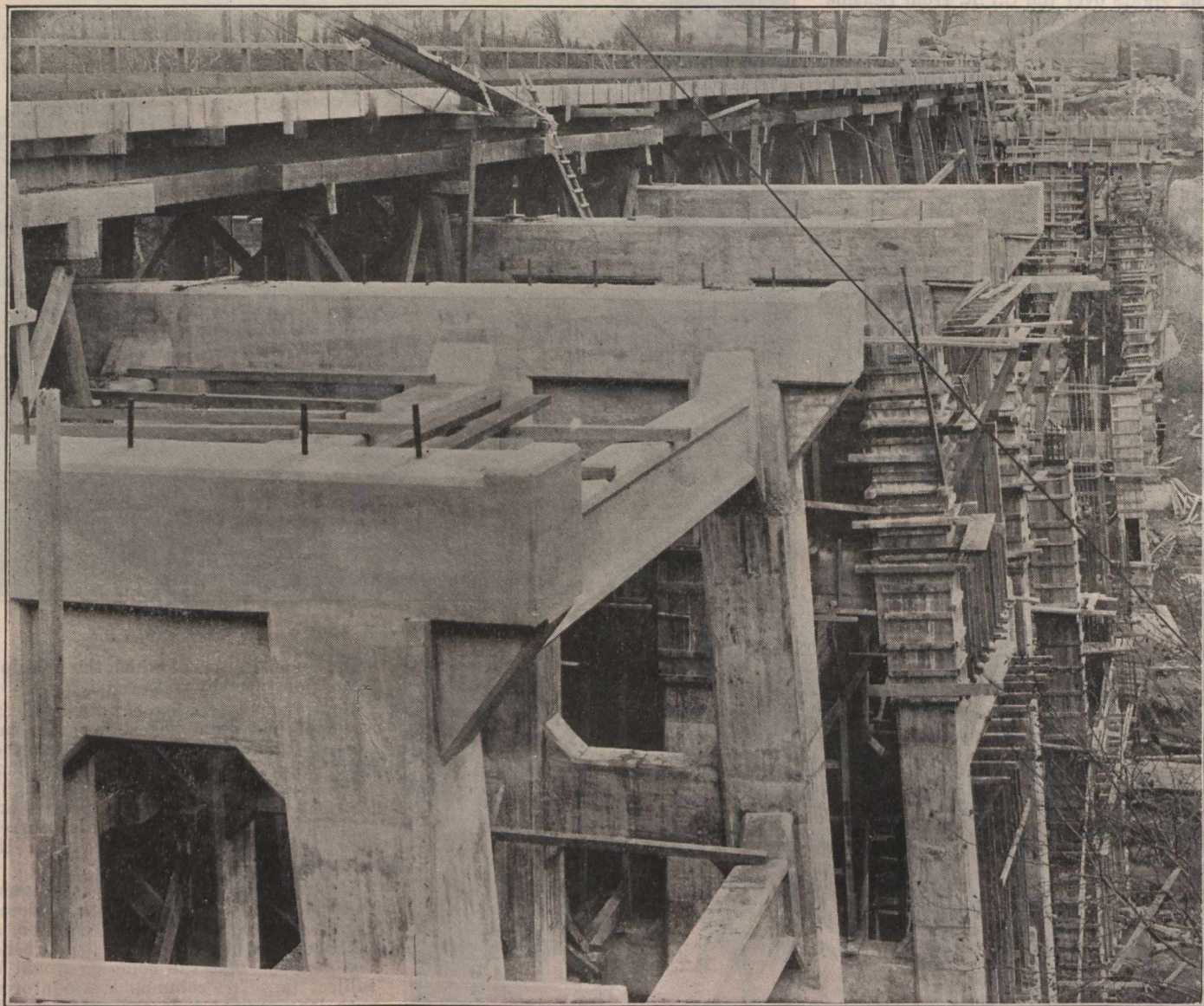
points, bending moments, due to transverse forces, will then be practically zero, where the moments caused by the longitudinal forces are maximum. Sliding surfaces for the main slabs are provided by  $\frac{1}{2}$  in. steel bearing plates on caps of the bents; the plates are held in position by  $1\frac{1}{2}$  in. dowels. As these plates are continuous over the caps of the bents, they strengthen the caps against stresses produced by longitudinal forces on the bridge.

Each track is supported by two pre-moulded simple T beams. The end brackets on these slabs do not bear on the caps, but are kept clear by the steel bearing plates which they overhang. They are intended to strengthen the horizontal

The sidewalks are composed of pre-moulded T shaped slabs, supported on brackets projecting out from the main slabs. The flanges of the sidewalk slabs fit into a horizontal groove in the coping blocks, which are heavy enough to counteract any tendency of the T beams to overturn. One-inch dowels hold these slabs in position on the brackets. The hand-railing consists of pre-moulded concrete posts, and three rows of 2 in. pipe.

The bridges are designed to carry Cooper's E-50 loading, with an impact allowance of .90 — 300/300 L.L., where L.L. = live load and L. = loaded distance in feet. Where stresses are produced by the loading of more than one track, L. is multiplied by the number of tracks.

Bending moments in columns, due to dead load of struts, were included in calculations. While this is usually neglected in steel structures, it became necessary here, owing to the great weight of the struts. These latter moments, and also the moments due to traction, were calculated by the elastic theory—the equations being solved by the area moment method. Fig. 2 indicates how these equations were developed. The application of this theory, however, for the calculation of moments, due to transverse forces, became extremely involved, owing to the shape of the bents. For this reason, points of inflection were assumed as shown in fig. 1. Comparison between results obtained by similar assumptions, in



Construction of Reservoir Ravine Bridge, North Toronto Subdivision, C.P.R.

flanges and improve the appearance of the structure. The top surfaces of the slabs have a smooth finish, and are sloped towards drain pipes, placed along coping blocks and between the tracks.

The ballast is held in position by the coping blocks, which were pre-moulded in sections and anchored to the slabs by 1 in. dowels. After the erection of the slabs and coping blocks, the surfaces in contact with the ballast were waterproofed with a membrane type of waterproofing. This was laid continuously from abutment to abutment, the gaps between slabs being reinforced by additional layers of felt and mastic.

The design is in accordance with the Specification for Reinforced Concrete of the Engineering Institute of Canada.

In addition to dead load, live load and impact, the towers had to be designed to resist stresses due to traction and wind. A traction force equal to 9% of the wheel load was assumed to act at the rail level. This coefficient of traction was derived from diagram in Mr. Blumenthal's paper on Traction Stresses (Can. Soc.C.E. Transactions, Vol. 24, Part 2). A wind load of 30 lb. a sq. ft. on exposed surfaces of train and slabs, and a similar load on  $1\frac{1}{2}$  times the vertical projection of towers was assumed.

the case of longitudinal forces, with those obtained by the use of the elastic theory, showed that the method adopted would give results sufficiently accurate for the purpose. Stresses in columns, including bending moments when one span only was fully loaded, were calculated, but found to be below maximum shown on stress sheet.

Traffic was maintained on both bridges on temporary wooden trestles, erected on the north side of the old main line track. This was contemplated from the very first for bridge 1.8, as the spans of the existing bridge were so arranged, that to build a concrete trestle and keep clear of existing



steelwork would be impracticable. At bridge 0.9, however, it was found that if the new bridge was laid out with 34 ft. tower and 36 ft. intermediate spans, there would be no interference with existing steelwork, and traffic could be maintained on the old bridge. This arrangement of spans was, therefore, adopted for both bridges. However, when excavation was started, it was found that the condition of existing masonry would not permit excavation for new piers to be carried down to the required depth, without endangering the safety of traffic. It was, therefore, considered advisable to build a temporary wooden trestle for this bridge also,

load was piled separately; there being a space of at least one foot all around each pile. The various materials were wheeled in barrows to the mixers. Stone and sand were measured by barrow loads. One bag of packed cement was considered 1 cu. ft. Water barrels were filled from the city line, through 2 in. pipes, and the water was measured with pails. At each end of the bridge, a 75 ft. hoisting tower was erected, from which concrete was conveyed to the various piers and towers by spouting. At the slab yard, the concrete was wheeled in buggies along a trestle, built on a level with the tops of forms, and dumped directly into the forms.

and derrick. The crushed stone dropped through the floor of the platform to an inclined screen, which screened out all particles 1/4 in. and less. The stone was then delivered from the crusher to an elevated stone bin, with an inclined bottom, located directly above the hopper of the mixer, which was set up on a foundation about 4 ft. above the ground. The flow of the stone, from stone-bin to hopper, was regulated by a steel plate gate, and the hopper was graduated to receive the correct quantities of stone. The screenings from the crusher were used mixed with the sand. The sand was stored on plank platforms as at bridge 1.8, and delivered from there to the elevated bin adjacent to the stone bin and handled in the same way as the stone. The cement was stored in a shed of similar construction to those at bridge 1.8 and was delivered to the mixer by the derrick. No hoisting tower was used at this bridge, for conveying the concrete. It was wheeled in dump cars, running on a narrow gauge track, on a trestle constructed at the track level along the bridge. The concrete was dumped into hoppers at various points along the deck of the trestle and delivered from there to piers



Bridge over Reservoir Park Ravine, North Toronto Subdivision, C.P.R.

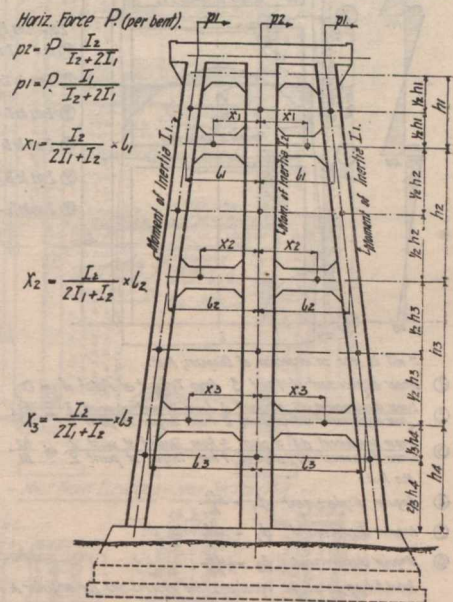


Fig. 1. Bridges on North Toronto Subdivision, C.P.R. Dimensions of towers.

and towers by metal chutes connected to the hoppers.

**Materials.**—The stone used was partly trap rock and partly hard limestone, ranging in size from 1 in. down to 1/4 in.

The sand was a natural bank sand and of a granitic composition, well graded from 1/4 in. down.

Two brands of cement were used, Pyramid brand, manufactured by the St. Marys Cement Co., and Canada brand, manufactured by the Canada Cement Co. They were fairly slow setting cements; averaging about 3 hours for initial set, and about 5 1/2 hours for final set. While the cement was being unloaded from the cars, one bag in every 50 was opened and a small sample taken from it. These small samples were mixed into one composite sample for each car. (One car contained an average of 760 bags.) These samples were then forwarded to the testing laboratory in Montreal; shipped in air tight lever top tins, which ensured that cement did not air slack in transit. Each carload of cement was stored separately in sheds, given a number corresponding to number of sample and held until the inspector was notified that the test had

rather than attempt to support masonry pedestals on these steep side hills.

**Plant at Bridge 1.8.**—A plant for storage and mixing was installed at each end of the bridge, and one at the slab yard, about a quarter of a mile east of the bridge. The stone and sand were piled in the open about 25 ft. from the mixer. They were stored on plank bottoms, to prevent admixture of earth. The cement was stored in three sheds, having capacities of five carloads each. They were built of dressed lumber, and dressed with ready roofing paper. The floors were kept about 8 in. clear of the ground, in order to make the sheds damp-proof. Each car-

**Plant at Bridge 0.9.**—At this bridge only two storage and mixing plants were installed; one at the west end of the bridge and one at the slab yard, half a mile east of the bridge. At the slab yard, materials were stored and handled in the same manner as at bridge 1.8. The plant at the bridge site, however, was entirely different; the stone received here was too large and had to be crushed and screened to 1 in. size. Between the storage pile and the mixer, a gyratory crusher—belt connected to a gasoline engine—was mounted on a platform about 10 ft. high. This crusher was fed from the storage pile, by a 1-yard grab bucket



proved satisfactory. All cement used was in conformity with the C.P.R. Cement Specification, 1912.

The forms were treated with one application of petrolatum and neutral oil, mixed in the proportion of one of petrolatum to two of neutral oil, or until a creamy consistency existed. After the forms were fabricated, all holes and large cracks were filled with putty, all knots and putty fillings were then shellaced. The above mixture was then applied on inside of forms, with a whitewash brush; the neutral oil penetrated about 1/4 in. into the wood, leaving a thin waxy film of petrolatum on the surface. The forms, thus treated, did not warp, as wind and moisture did not cause the grain of the wood to rise. A number of the forms were used as often as eight times, and all

6 in. clear of the surface of concrete, a layer of straw was then packed around the centre form, and the whole covered with tarpaulins. The sidewalk slabs and coping blocks were protected in a similar manner to the main slabs. The hand-rail posts were cast in a shed heated by a stove.

Bents were housed in from top to bottom with 7/8 in. tongued and grooved boards. This housing was built about 3 ft. away from the forms and steam pipes were run into this space. As an auxiliary to the steam heat, a battery of 4 coke burning salamanders were placed on the ground. With these precautions, concrete was poured at a temperature as low as 10° F., and the space around the forms could be kept at a temperature of about 50° F. Heat was maintained for

tons a sq. ft.

Piers.—Concrete in the piers was poured in 3 consecutive runs as follows: The footing course was poured in the open excavation. Before this had a chance to set, large boulders and stones from the old pedestals, broken up to one man size, were imbedded in the top surface in 3 rows and about 3 ft. apart; thus a good bond was obtained with the next course. After the footing course had taken its final set and forms were erected for the pier proper, the surface was thoroughly scraped and slushed with water, until all signs of laitance had been removed. The concrete was now poured for the vertical portion of pier. After the top surface of same had been treated in the same way as the footing course, concrete was finally poured for the batter course of the pier.

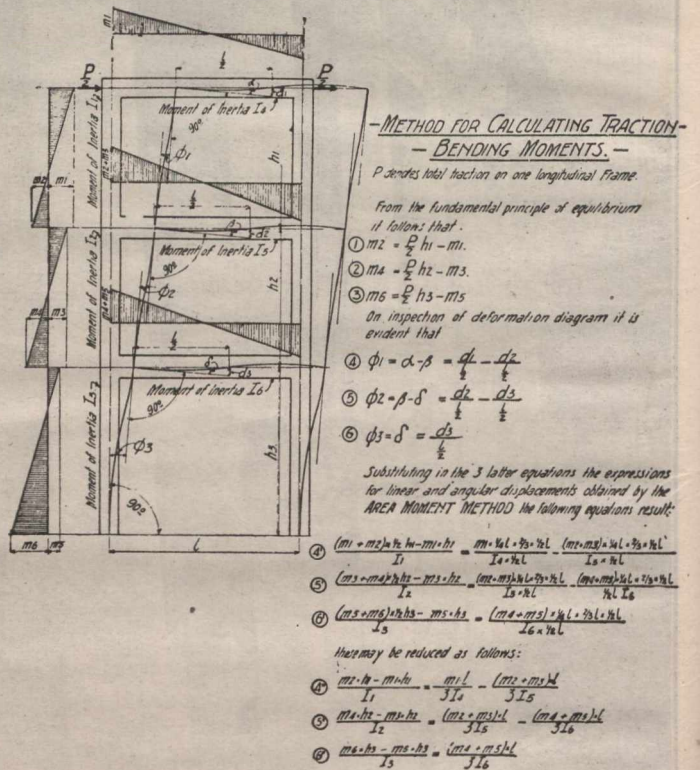
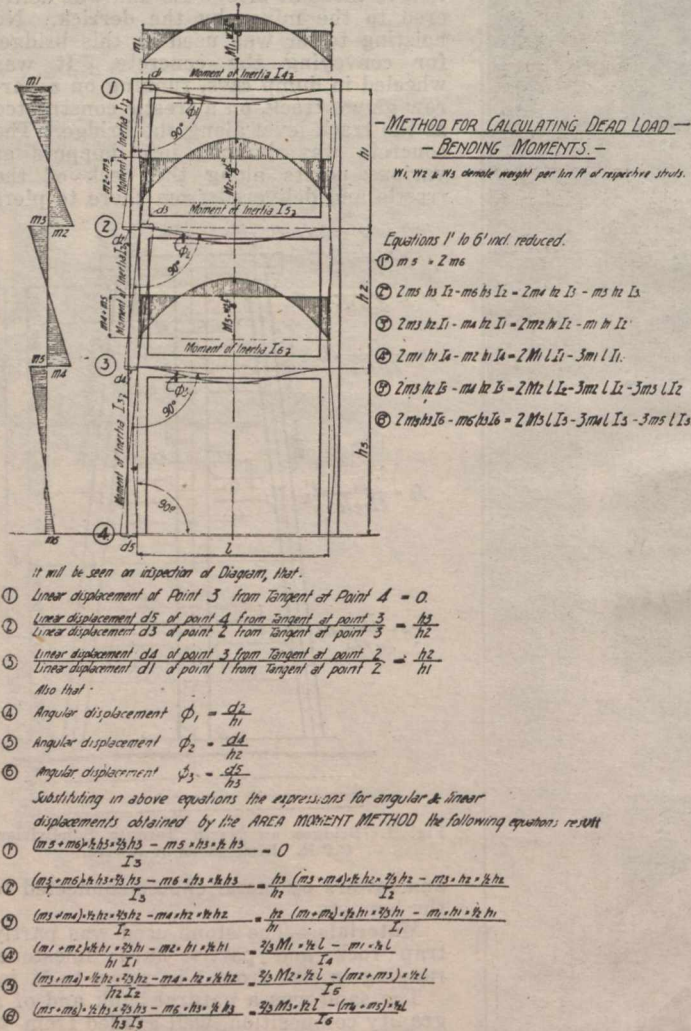


Fig. 2. Bridges on North Toronto Subdivision, C.P.R. Method of calculating moments in towers.

CANADIAN PACIFIC RAILWAY  
 BRIDGES 09 & 18 NORTH TORONTO SUBDIV.  
 AT NORTH TORONTO.  
 METHOD OF CALCULATING MOMENTS IN TOWERS.

that was necessary, after each stripping, was to dust or sweep them off with an old rag or broom.

Heating.—In November, when the temperature dropped to 40° F., heating of the materials was commenced. A live steam jet was introduced into each water barrel, which kept the water nearly to the boiling point while the mixer was running. Sand and stone were heated by perforated steam pipes, placed under sand and stone piles. For the very cold weather, the steam was kept on night and day. The temperature of the concrete as it left the mixer was about 55° to 60° during the very coldest weather. For the main track slabs, concrete was poured in as low a temperature as 25° F. After pouring of concrete, the tops of slabs were covered with tar paper, kept about

at least three days after pouring was completed.

The longitudinal struts were also housed in, and a steam line run along each side near the bottom of the housing. The bottoms of the housings for struts were packed with straw; the tops were covered with tar paper clear of concrete, on this was placed a packing of straw and the whole covered with tarpaulins.

Excavation was started during the middle of Aug., 1917. The soil encountered was generally a hard blue clay; in some cases coarse sand. Before any concrete was placed, each foundation was subjected to a loading test at both ends. An ordinary table having four 3 x 3 in. legs was used for this purpose; the table was loaded with cement bags filled with sand, the total load corresponding to 4

For recesses of columns, templates in the shape of a box, with proper number of holes spaced to receive the anchor rods, were placed and fastened in position to the forms of the batter course. After the last batch of concrete was poured, the anchor rods were inserted in the holes, and driven to the right depth in the wet concrete. The forms of the piers were stripped after two days and the exposed surfaces rubbed with carborundum stones.

Details of towers are shown in fig. 3, and illustrations show clearly the details of forms. In erecting the forms, great care was taken not to have any parts braced to, nor allow any to come in contact with, the trestle carrying traffic, so as to avoid disturbance of concrete while it was setting. The concrete was poured from strut to strut, the brackets at the end of



each strut forming hoppers to receive concrete. At every construction joint, trap doors had been arranged in the column forms, in order to permit removal of all laitance and thoroughly to clean the surface before any new concrete was poured. The concrete in the column forms was spaded by long handled spades, and the outsides of the forms were beaten with wooden mallets, to free any air. A good smooth surface, with very few air pockets, resulted therefrom. The column forms were stripped after 4 or 5 days in warm weather, and after a week or 10 days in cold weather. The strut sides were stripped after 7 days in warm weather and after 2 weeks in cold weather. The bottoms of the struts were not stripped until absolutely necessary, and never before 3 weeks in warm weather and 4 week in freezing weather. All surfaces of towers were rubbed down with carborundum stones.

Details of slabs are shown in fig. 4 and details of forms in fig. 5. Forms were made collapsible. A new bottom, however, was made for each slab. After assembling of forms, one end was left open until all reinforcing bars were properly placed and wired together. Bars were supported on premoulded dovetailed concrete blocks 1 1/2 in. thick, which made suspending wires unnecessary, thus avoiding obstructions to levelling off top surface of slabs. On slabs, only the exposed surfaces of outer slabs were rubbed down with carborundum stones.

Erection of main slabs of bridge 0.9 was started on Feb. 22 and completed on April 10, 1918. On bridge 1.8 erection started April 11 and the last slab was placed on June 1, 1918. The longest slab weighs 56 tons.

As the 100-ton wrecking crane did not have the reach required for placing these heavy slabs, a special scheme of erection had to be devised. This is shown in fig. 6 and illustrations. At the slab yard, one end of the slab was lifted on to a freight car truck, the other end suspended from the crane. The slab was thus pushed ahead by the crane on to the bridge. Two timber trusses, specially constructed for the purpose, were placed far enough apart to permit the slab to be lowered down to the bents. The end of slab resting on the track was then hitched to a trolley, which was running on rails on top chord of trusses. The derrick was then moved ahead, until the slab had reached the position for lowering down to rollers on caps. After the slab was on rollers, it was moved sideways on them to its final position. When all slabs of one span were erected, the erection trusses were moved forward by the crane to the next span and same operation repeated.

The actual cost per cubic yard of concrete in the various parts of the structure at bridge 1.8, North Toronto, was as follows, per cu. yd.:

	Per cu. yd.
<b>Piers.</b>	
Forms, including labor, overhead and contractor's commission	\$1.35
Concrete—Materials	3.94
Freight for sand, stone and cement	0.87
Labor	1.61
Incidentals, overhead and commission	0.98
Steel	1.07
	\$9.82
<b>Abutments.</b>	
Forms, including labor, overhead and commission	\$4.38
Concrete—Materials	3.70
Freight on sand, stone and cement	0.76
Labor	3.38
Heating	1.28
Drainage and waterproofing	0.16

Incidentals, overhead and commission	1.59
Steel	2.54
	\$17.79
<b>Towers.</b>	
Forms, material, labor, overhead and commission	\$13.32
Concrete—Materials	4.53
Freight on sand, stone and cement	1.00
Labor	5.75
Heating	4.19
Incidentals, overhead expense and commission	2.65
Steel	14.12
	\$45.56
<b>Slabs.</b>	
Forms, material, labor, preparing of slab yard, incidentals, overhead and commission	\$9.15
Concrete—Materials	5.67
Freight on sand, stone and cement	0.97

Wages.	
Carpenters	\$0.51 an hour.
Carpenter's helpers	.40 an hour.
Laborers	.37 1/2 an hour.
Engineers on mixers	.55 an hour.
Concrete finishers	.41 an hour.

The work was carried out under the direction of J. M. R. Fairbairn, Chief Engineer; P. B. Motley being Engineer of Bridges. J. H. Barber was engineer in charge of construction, with A. H. Munson as assistant; while the necessary investigations, calculations and details were worked out by the writers. The contractors for bridge 1.8 were Wells & Grey, Ltd., and for bridge 0.9 the Dominion Construction Co., both of Toronto.

The foregoing paper was read before the Engineering Institute of Canada recently.

Regarding the item, heating of towers,

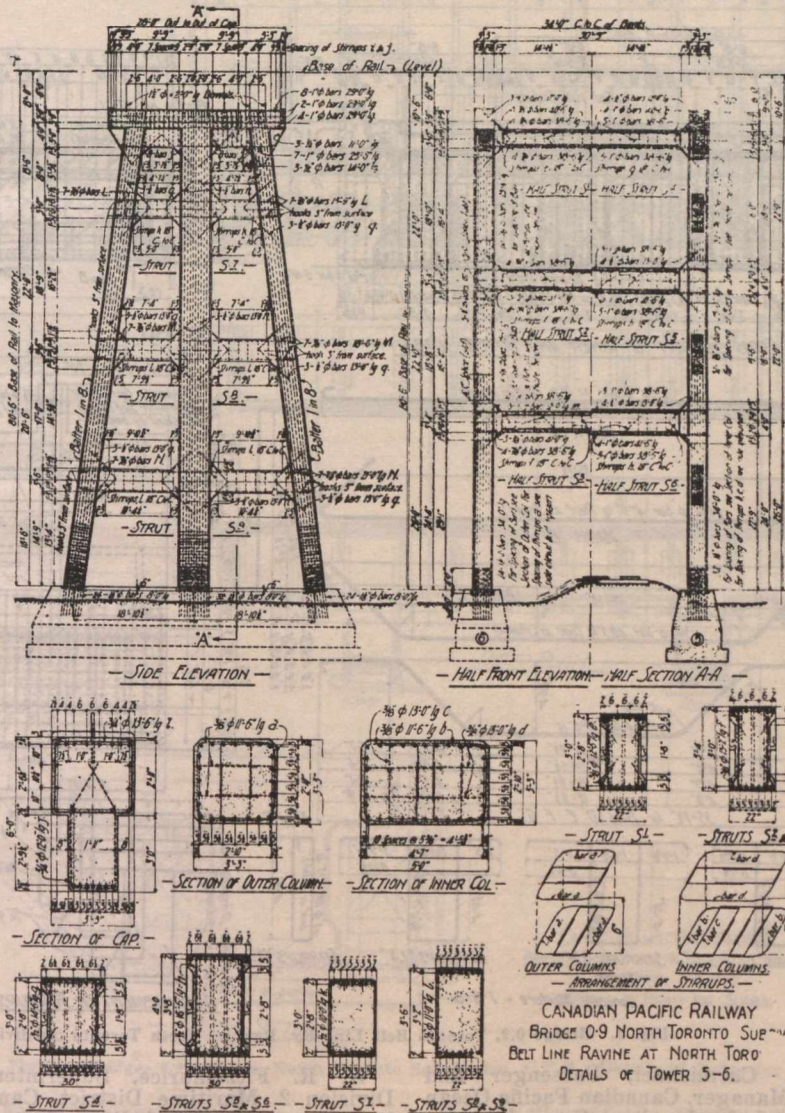


Fig. 3. Bridge 0.9, Toronto Belt Line Ry. Ravine, North Toronto Subdivision, C.P.R. Details of tower 5-6

Heating	0.20
Labor	3.11
Incidentals, overhead and commission	1.55
Steel	13.45
	\$34.10
Cost of erection of slabs, per cu. yd.	7.18
	\$41.28

The average cost of materials used and the average rates of wages were as follows:

Materials.	
Lumber	\$38.50 per M.
Stone	\$0.993 per ton.
Sand	\$0.295 per ton.
Cement (including bags)	\$2.00 per bbl.

the average cost of \$4.19 is shown. As, however, only about three-fifths of the towers required heating, the actual cost per cu. yd. was approximately \$7.

Additional illustrations will be found on pages 114, 115 and 116.

Montreal Central Terminal Co.—A meeting of shareholders has been called to be held in Montreal, Mar. 4, to elect directors, to authorize the construction of the projected tunnel and terminals in Montreal, and to authorize the issue of mortgage bonds.



# Birthdays of Transportation Men in March.

Many happy returns of the day to:—  
 W. G. Annable, General Passenger Agent, Canadian Pacific Ocean Services, Lt., Montreal, born at Ottawa, Mar. 3, 1875.  
 John Archibald, Locomotive Foreman, C.P.R., Coquitlam, B.C., born at Edinburgh, Scotland, Mar. 13, 1872.  
 Jas. Balkwill, Division Superintendent, Canadian Division, Michigan Central Rd., St. Thomas, Ont., born in Southwold Tp., Ont., Mar. 8, 1870.  
 Sir George Bury, ex Vice President, C.P.R., Montreal, born there, Mar. 6, 1866.  
 Allan Cameron, Superintendent, Land Branch, Department of Natural Resources, C.P.R., Calgary, Alta., born near Owen Sound, Ont., Mar. 14, 1864.

Creek, Mich., Mar. 27, 1883.  
 C. T. Delamere, acting Engineer of Construction, Eastern Lines, C. P. R., Montreal, born at Brainerd, Minn., Mar. 18, 1881.  
 H. G. Dring, General Passenger Agent, C.P.R., London, Eng., born at Easton, Northamptonshire, Eng., Mar. 8, 1881.  
 Patrick Dube, Secretary-Treasurer, Montreal Tramways Co., Montreal, born there, Mar. 4, 1876.  
 Frederick Elliott, President Victoria Navigation Co., Ltd., Thurso, Que., born at Montreal, Mar. 8, 1858.  
 M. P. Fennell, Jr., Secretary-Treasurer and Comptroller, Montreal Harbor Commissioners, Montreal, born there, Mar. 13, 1885.

Way, Canadian National Rys., Toronto, born at Truro, N.S., Mar. 14, 1870.  
 J. I. Hobson, Treasurer, Canada Steamship Lines, Ltd., Montreal, born at Guelph, Ont., Mar. 30, 1872.  
 N. J. Holden, President, The Holden Co., Ltd., Montreal, born at Nobleton, Ont., Mar. 22, 1866.  
 A. R. Holtby, Master of Bridges and Buildings, Mountain Division, Grand Trunk Pacific Ry., Prince Rupert, B.C., born at Rawdon, Que., Mar. 23, 1859.  
 Frank Lee, Engineer, Maintenance of Way, Eastern Lines, C.P.R., Montreal, born at Chicago, Ill., Mar. 7, 1873.  
 J. M. McKay, Superintendent, Saskatoon Division, Saskatchewan District, C.P.R., Saskatoon, born at Tiverton, Ont.,

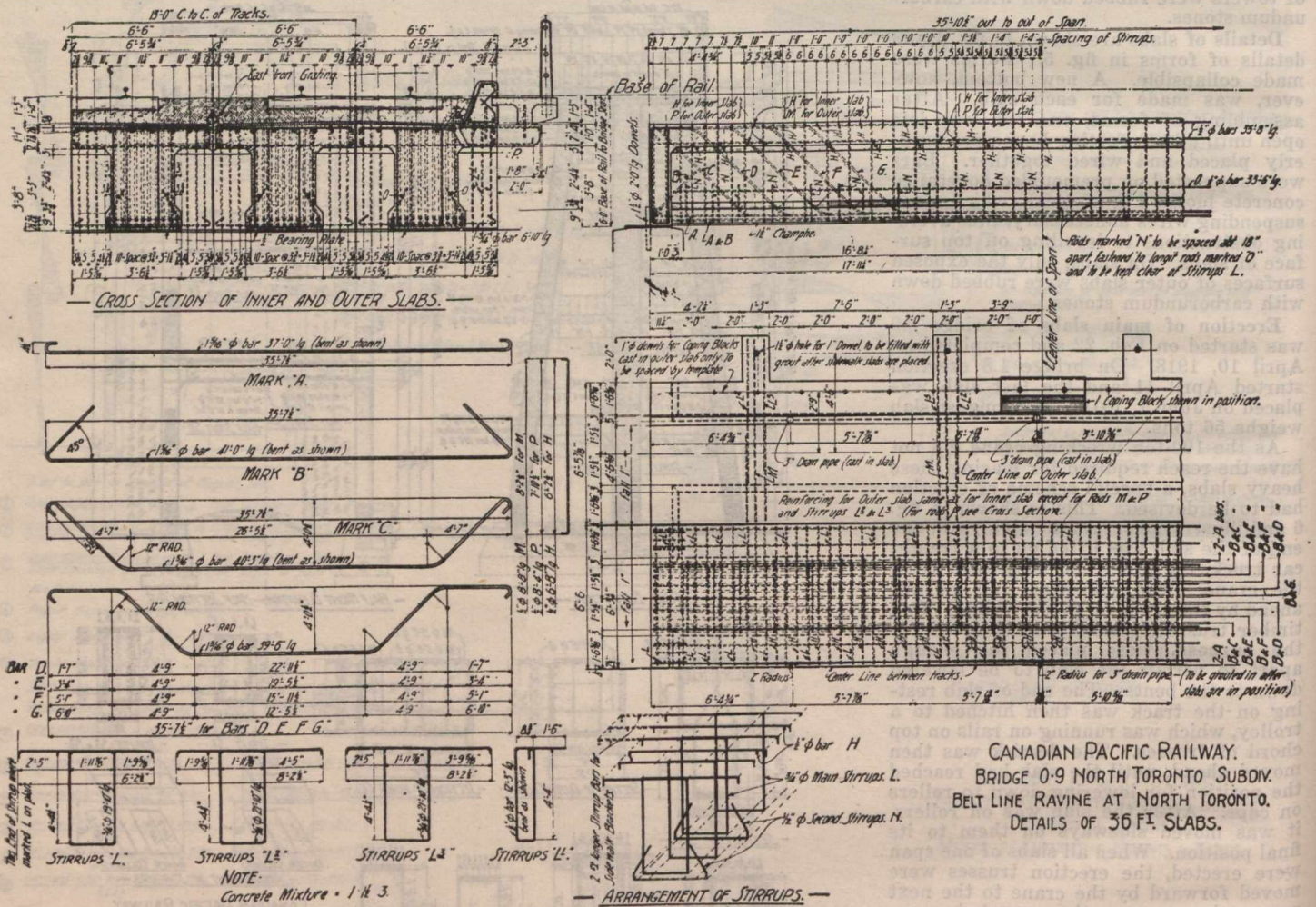


Fig. 4. Bridge 0.9, Toronto Belt Line Ry. Ravine, North Toronto Subdivision, C.P.R. Details of 36 ft. slabs.

H. S. Carmichael, Passenger and Freight Manager, Canadian Pacific Ocean Services, Ltd., London, Eng., born at Glasgow, Scotland, Mar. 7, 1874.  
 F. G. J. Comeau, District Freight Agent, C.P.R., Halifax, N.S., born at Meteghan River, N.S., Mar. 10, 1859.  
 W. A. Cooper, Manager, Sleeping, Dining and Parlor Cars and News Service, C.P.R., and member of Government Food Consumption Control Committee, Montreal, born there, Mar. 22, 1871.  
 A. E. Cox, General Storekeeper, Canadian National Rys., Winnipeg, born at Huddersfield, Eng., Mar. 12, 1863.  
 Senator N. Curry, Chairman, Canadian Car & Foundry Co., Montreal, born in King's County, N.S., Mar. 26, 1851.  
 C. C. Curtis, Manager, Cape Breton Electric Co., Sydney, N.S., born at Battle

Mar. 13, 1868.  
 Brigadier-General H. H. McLean, K.C., M.P., ex-President, St. John Ry., St. John, N.B., born at Fredericton, N.B., Mar. 22, 1855.  
 M. Magiff, Superintendent of Car Service and Telegraphs, Central Vermont Ry., St. Albans, Vt., born at Planks Point, N.Y., Mar. 24, 1852.  
 Sir Donald D. Mann, ex Vice President, Canadian Northern Ry., Toronto, born at Acton, Ont., Mar. 23, 1853.  
 H. H. Melanson, Passenger Traffic Manager, Canadian National Rys., Toronto, born at Scadouc, N.B., Mar. 9, 1872.  
 J. V. Murphy, General Agent, C.P.R., Portland, Ore., born at Bowmanville, Ont., Mar. 5, 1885.  
 Peter Paton, ex Purchasing Agent, Canada Steamship Lines, Ltd., Montreal, now

W. R. Fitzmaurice, Superintendent, Division 2, Maritime District, Canadian National Rys., Campbellton, N.B., born at Bedford, N.S., Mar. 19, 1870.  
 C. Forester, Superintendent, London Division, Ontario Lines, G.T.R., London, born at Wanstead, Ont., Mar. 5, 1876.  
 R. A. Gamble, General Yardmaster, Winnipeg Terminals, C.P.R., born at Dublin, Ireland, Mar. 1, 1876.  
 J. Halstead, Division Freight Agent, C.P.R., Calgary, Alta., born at Bracebridge, Ont., Mar. 2, 1877.  
 R. M. Hannaford, Assistant Chief Engineer, Montreal Tramways Co., Montreal, born there, Mar. 22, 1865.  
 C. A. Hayes, Vice President, Traffic, Canadian National Rys., Toronto, born at West Springfield, Mass., Mar. 10, 1865.  
 H. T. Hazen, Engineer, Maintenance of



President, Mackenzie, Milne & Co., Ltd., Sarnia, Ont., born at New Lovell, Ont., Mar. 13, 1868.

F. W. Peters, General Superintendent, British Columbia District, C.P.R., Vancouver, born at St. John, N.B., Mar. 25, 1860.

J. W. Pugsley, Secretary, Department of Railways and Canals, Ottawa, Ont., born at Amherst, N.S., Mar. 12, 1861.

C. J. Smith, Manager and Secretary, Montreal Warehousing Co., Montreal, born at Hamilton, Ont., Mar. 10, 1862.

W. Y. Soper, Vice President, Ottawa Electric Ry. Co., Ottawa, Ont., born at Oldtown, Me., Mar. 9, 1854.

E. F. L. Sturdee, General Agent, Passenger Department, C.P.R., Boston, Mass., born at St. John, N.B., Mar. 29, 1876.

G. W. Vaux, ex-General Agent, Passenger Department, Union Pacific Rd., Chicago, now General Manager, Zeigler Coal Co., Zeigler, Ill., born at Montreal, Mar. 21, 1866.

A. D. Watt, District Master Mechanic, Grand Trunk Pacific Ry., Prince George, B.C., born at St. Louis, Que., Mar. 5, 1874.

A. T. Weldon, Assistant Freight Traffic Manager, Canadian National Rys., Moncton, N.B., born at Dorchester, N.B., Mar. 6, 1876.

D. O. Wood, Assistant Export and Import Agent, C.P.R., Toronto, born at Kleinburg, Ont., Mar. 16, 1864.

H. K. York, Car Foreman, C.P.R., Alyth, Alta., born at Victoria Corner, Carleton Co., N.B., Mar. 20, 1881.

Rosslare, Wexford County, Ireland, and Fishguard, Wales; while there are even some bolder engineering spirits than the rest, who propose to reconstruct the traditional St. Patrick's Causeway between center Wales and Ireland.

Finally, within the borders of England itself attention is being directed to the building of light railways to open up remote areas, or connect with the regular lines small towns lying off the main routes. A number of light railways were built in England and Ireland as long ago as the middle seventies, but none of them were ever really successful and most of them were finally, after a period of bankruptcy, absorbed by the trunk lines with which they connected. Subsequently an association for the promotion of the construction of light railways was formed,

### Government Control of Railways in Great Britain.

Lord Claude Hamilton, presiding at a meeting of the East London Ry. Co. in London, Eng., Feb. 2, is reported to have said that a deputation of the chairmen of the eleven great railway companies of England had waited upon Right. Hon. Andrew Bonar Law, the government spokesman, to elicit, if possible, the government's intention regarding railways at the close of the war. The delegation learned, according to Lord Claude, that the government considered itself absolutely pledged that government control of railways would continue for two full years after the declaration of peace. Mr. Law also informed the deputation that

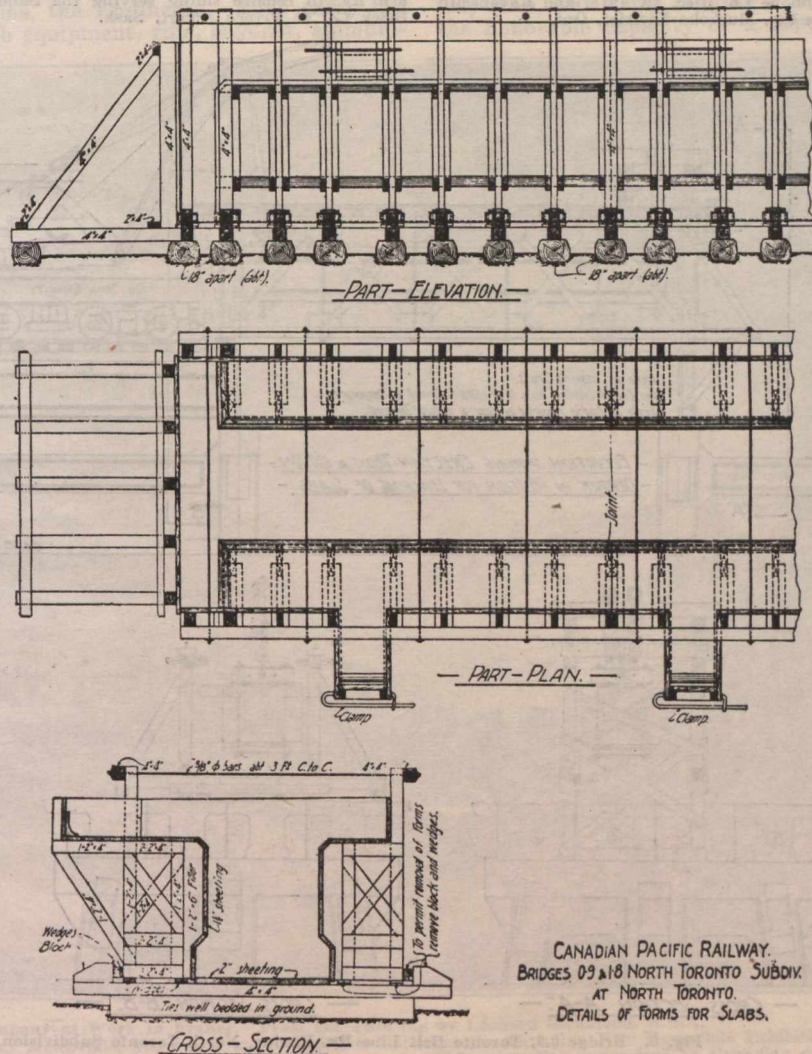


Fig. 5. Bridges 0.9 and 1.8, North Toronto Subdivision, C.P.R. Details of forms for slabs.

### European Railway Development and Plans.

The experiences of the war have revived interest in Great Britain, as well as in other parts of Europe, in a number of transportation projects which have been prominently before the public at different times during the last half century. The operation of a train ferry service between Richborough and Southampton, on the English side of the English Channel, and Calais, Dunkirk and Dieppe, on the French side, showed the advantage of having a means by which freight and passenger cars could be transferred between the two countries, but it also emphasized the discomforts of the cross-channel passage. The experience directed attention to the projected tunnel from Dover to Calais, so warmly advocated by the late Sir Edward Watkin, formerly chairman Southeastern Ry. of England, and also a director of the Grand Trunk Ry., the preliminary construction operations on which were stopped many years ago by the British Government. Present-day advocates of the tunnel claim that its construction would be a further link in the chain binding the British and French peoples together. This project is linked up with a plan which it is reported is being perfected in Paris, for the operation of a through passenger train service from Paris to Athens, a route which, it is stated, will ultimately be developed into one to Bagdad, on the Euphrates River. With the channel tunnel completed, the route would be from England to Bagdad.

Another continental suggestion is the boring of a tunnel underneath the Strait of Gibraltar. A railway from the African portal would link up the French and Spanish colonies there with the Cape to Cairo projection, and so give through rail connection to South Africa.

Within the borders of the British Isles there is another project revived, viz., that of a tunnel between Ireland and Scotland: others who advocate a tunnel between

which had for several years as its head the late Sir Charles Rivers Wilson, at one time President Grand Trunk Ry. The work now proposed to be done is to be under the charge of the Minister of Reconstruction, the capital cost of the railways being met partly by the British Government and partly by the county authorities. The first line being built under the new plans is in Yorkshire.

Employees of the various express companies operating in Canada, are organizing themselves for a better service campaign, with the object of inducing better care in checking and handling of material, and of securing greater co-operation with other shipping agencies and the public.

the question of the future management of the railways was receiving the closest attention of the government, but that no final decision on the subject had been reached.

Sir George McLaren Brown, European General Manager, C.P.R., is reported to have said in an interview in Montreal recently that he thought there would be government regulation of railways in Great Britain conformable to the authority of the Board of Trade, but not incompatible with private ownership. The railways had done splendidly during the war. Not only had they aided France with rails and rolling stock, but they had done more business in spite of that depletion during the war, than in years prior to it.



# Orders by Board of Railway Commissioners for Canada.

Beginning with June, 1904, Canadian Railway and Marine World has published in each issue summaries of orders passed by the Board of Railway Commissioners, so that subscribers who have filed the paper have a continuous record of the Board's proceedings. No other paper has done this.

27996. Jan. 8.—Authorizing C.P.R. to operate over street crossings in Peterborough, Ont., subject to conditions as to speed, ringing of locomotive bells, etc.

27997. Jan. 7.—Authorizing Dominion Foundries & Steel, Ltd., to build private crossing over Toronto, Hamilton & Buffalo Ry. Graselli spur.

27998. Jan. 7.—Relieving C.P.R. from providing further protection at crossing near milepost 81, Macleod Subdivision, Alta.

27999. Jan. 9.—Approving plan of changes in additional protection at west connection of interlocking plant at crossing of G.T.R. spur by Campbellford, Lake Ontario & Western Ry. (C.P.R.), Cobourg, Ont.

28000. Jan. 8.—Approving agreement between Bell Telephone Co., Dec. 19, 1918, and Ravenscliff Telephone Co., Muskoka District, Ont.

28011. Jan. 14.—Authorizing Canadian Northern Saskatchewan Ry. to cross highway between n.w. ¼ Sec. 35, Tp. 25, and s.w. ¼ Sec. 2, Tp. 26, west 3rd meridian.

28012. Jan. 9.—Ordering G.T.R. forthwith to appoint night and day watchmen at crossing of Kipling Ave., New Toronto, Ont., to attend exclusively to that crossing.

28013. Jan. 14.—Authorizing C.P.R. to build spur for Kaslo Concentrating Co., Kaslo Subdivision, B.C.

28014. Jan. 14.—Authorizing Canadian Northern Ontario Ry. to build spur for Nepean Sandstone Quarries, Ltd., at Rock Farm, Nepean Tp., Ont.

28015. Jan. 14.—Authorizing C.P.R. to build spur for C. Cunningham, Kaslo Subdivision, B.C.

28016. Jan. 14.—Approving revised location of Grand Trunk Pacific Branch Lines Co.'s station at Lydden, Sask.

28017. Jan. 10.—Authorizing Canadian Northern Ry. to remove siding serving the Sandstone Brick Co. at Prince Albert, Sask.

Highways Department to build highway crossing over C.P.R. north of Sec. 17, Tp. 9, Range 11, west 3rd meridian.

28038. Jan. 15.—Authorizing Canadian Northern Ry. to cross highway between n.w. ¼ of Sec. 2 and s.w. ¼ of Sec. 11, Tp. 28, Range 29, near Alask, Sask.

28039. Jan. 16.—Authorizing C.P.R. to build second track to connect station tracks with locomotive house tracks across Laliberte and Bridge Sts., Quebec, Que.

28040. Jan. 15.—Authorizing Canadian Northern Ry. to build spur for Jack Pine Fuel Co. in n.e. ¼ of Sec. 30, Tp. 28, Range 19, west 4th meridian, Alta.

28041. Jan. 13.—Ordering G.T.R. to build new station at St. Agapit, Que.

28042. Jan. 17.—Relieving C.P.R. from providing further protection at crossing near Welsh, Ont.

28043. Jan. 16.—Ordering that maintenance of transfer track between the Canadian Northern Ry. and C.P.R. at Baintree, Sask., be paid, half by each company.

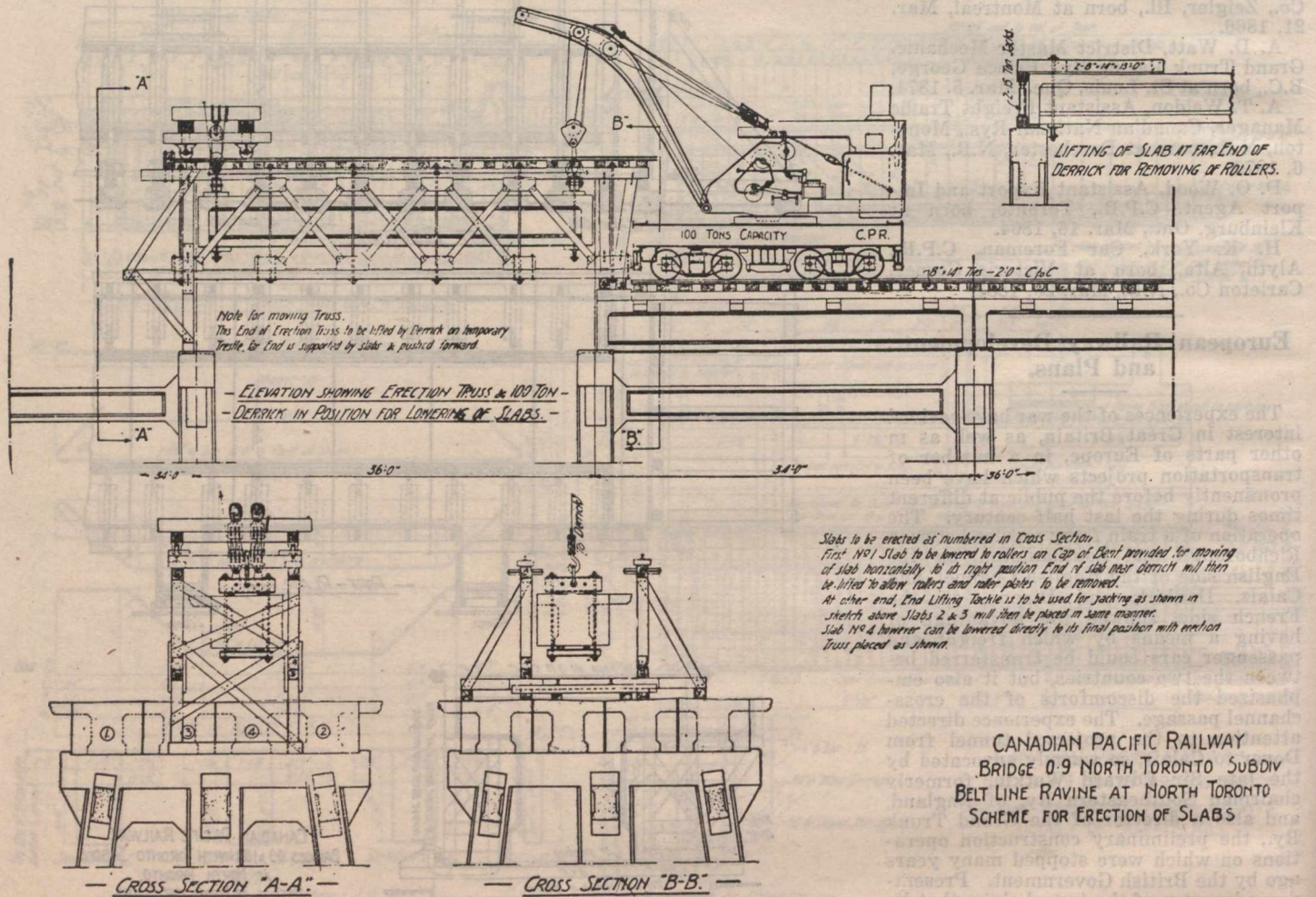


Fig. 6. Bridge 0.9, Toronto Belt Line Ry. Ravine, North Toronto Subdivision, C.P.R. Scheme for erection of slabs.

CANADIAN PACIFIC RAILWAY  
BRIDGE 0.9 NORTH TORONTO SUBDIV  
BELT LINE RAVINE AT NORTH TORONTO  
SCHEME FOR ERECTION OF SLABS

28001. Jan. 8.—Authorizing Canadian Northern Ry. to cross highway between Secs. 9 and 10, Tp. 54, Range 23, west 4th Meridian, Alta.

28002. Jan. 9.—Authorizing Canadian Northern Ontario Ry. to build spur for Bate, McMahon & Co. near Todmorden, Gloucester Tp., Ont.

28003. Jan. 9.—Authorizing C.P.R. to build spur for Melchers Gin & Spirits Distilling Co., Berthier Parish, Que.

28004. Jan. 7.—Approving Michigan Central Rd. plan showing additional appliances at crossing by G.T.R. at Canfield, Ont., necessitated by building of westbound passing track and crossover track.

28005. Jan. 14.—Approving C.P.R. plan of reconstruction of interlocking plant at crossing with G.T.R., Komoka, Ont.

28006 to 28009. Jan. 14.—Approving Bell Telephone agreements with Fordwich Rural Telephone Co., Dec. 27, 1918, Huron and Perth Counties, Ont.; Oro Telephone Co., Dec. 23, 1918, Simcoe County, Ont.; Korah Base Line Telephone Co., Dec. 31, 1918, Algoma District, Ont.; Springbank Telephone Co., Dec. 27, 1918, Huron and Wellington Counties, Ont.

28010. Jan. 13.—Approving location and plans of Esquimalt & Nanaimo Ry. station at Cassidys, Vancouver Island, B.C.

28018. Jan. 15.—Authorizing Saskatchewan Highways Department to build highway crossing over C.P.R. and surveyed road in south half of Sec. 35, Tp. 31, Range 22, west 2nd meridian.

28019, 28020. Jan. 15.—Authorizing Canadian Northern Saskatchewan Ry. to cross highways between Secs. 26 and 23, and Secs. 14 and 15, Tp. 24, Range 8, west 3rd meridian.

28021. Jan. 15.—Authorizing Saskatchewan Highways Department to carry highway across C.P.R. on surveyed road north of Sec. 2, Tp. 33, Range 22, west 2nd meridian.

28022, 28023. Jan. 16.—Authorizing G.T.R. to rebuild bridges carrying its tracks across small stream at two points, Markham Tp., Ont.

28024. Jan. 17.—Authorizing City of Edmonton, Alta., to build highway across the Edmonton, Yukon & Pacific Ry., carrying Connors Road across track to connect with Strathcona Road.

28025. Jan. 17.—Authorizing Crownstet Southern Ry. to remove spur serving Adolph Lumber Co., near Mott, B.C.

28026 to 28036. Jan. 15.—Authorizing Canadian Northern Saskatchewan Ry. to cross 11 highways at points in Saskatchewan.

28037. Jan. 15.—Authorizing Saskatchewan

28044. Jan. 22.—Approving British Columbia Electric Ry. standard freight mileage tariff C.R.C. 132, effective Feb. 1.

28045. Jan. 21.—Dismissing complaint of Universal Importing Co., Montreal, against refusal of C.P.R. to divert carload of beans ex s.s. Chicago Maru from Victoria Wharf, to New York.

28046. Jan. 21.—Dismissing complaint of John Barrett, Montreal, that C.P.R. refuses to sell monthly commutation books containing less than 55 tickets between Montreal and Hudson Heights, Que.

28047. Jan. 22.—Authorizing Toronto, Hamilton & Buffalo Ry. to build spur for Monarch Metal Co., Hamilton, Ont.

28048. Jan. 17.—Ordering Canadian Northern Ry. to establish mixed train service with baggage and express to run daily, except Sunday, between Yarker and Napanee, Ont.

28049. Jan. 21.—Ordering C.P.R. to improve facilities for loading grain at elevators at Ready, Sask.

28050. Jan. 22.—Authorizing Canadian Northern Ry. to remove its station agent at Nutana, Sask., and to close agency there.

28051. Jan. 22.—Authorizing G.T.R. to remove spur serving A. H. Waite, Oro Tp., Ont.



# The Canadian Railway Troops' Work on the Western Front.

By Corporal Herbert Forder.

One of the most remarkable features of this war is the record of the Canadian Railway Troops. You can imagine the Frankenstein of war not unlike a monstrous human being. The brain is General Head Quarters, the heart is G.H.Q. Railway Troops; the arteries and veins are the endless lines of track supplemented by the roads department and the mechanical transport which take the place of capillaries, or smaller veins on the surface of the war god; the stomach, liver and kidneys are the Army Service Corps producing and distributing nourishment; the battlers are the blood corpuscles fighting along the veins and arteries; the lungs are the Red Cross, the Army Medical Corps, the hospitals, convalescent

eral J. W. Stewart, C.M.G. The first battalion to carry on this work was the Canadian Overseas Railway Company, all skilled railway men with high rates of pay, recruited from Canadian railways. This company put in some splendid work at Dickebusch in April and May, 1916. The units and details were recruited in Canada and shipped to the Canadian Railway Depot in England, where they were drilled and trained till a battalion was formed, or they were sent as drafts to augment the strength of battalions already in France.

These troops were armed and equipped in the same manner as their military cousins, the Engineers. They carry the Webb equipment, rifle, bayonet, ammuni-

witness to the stamina and spirit of these peerless soldiers.

As far as possible the officers were selected from men with railroading careers behind them. Advancement by merit was often rapid. In the 5th, for instance, was a young officer, Lieutenant L——, a Canadian, whose home is in Puyallap, on Puget Sound. He came from Canada with the rank of corporal and reverted to the ranks according to the rule on arrival in France. He was made full corporal two weeks later, a sergeant in six weeks, and in three months was sent up for his commission. Another lieutenant, an experienced railway man, was found digging a latrine in the honorable capacity of a sapper. A



A Canadian Railway Construction Company at Work in France. From the Painting by Leonard Richmond, R.B.A.

This decorative painting, done for the Canadian War Memorials, and which is now being exhibited at the Canadian War Memorials Exhibition, at the Royal Academy, London, Eng., deals with railway construction in France, under Canadian management. Chinese coolies, supervised by Canadian officers, are shown at work in the deepest railway cut in France, with a billowing landscape extending into the blue distance.

homes and rest camps, cleansing and renewing the blood; the nerves are the engineers with their wires, telephones and wireless, overhead, along the tracks and underground. The morale of the army is its soul or spirit, dependent upon its general condition of health. Keep that in mind and you will see the importance of the work of the Railway Troops. When the body is attacking or being attacked the outcome hangs in no small degree upon the unbroken transportation of nourishment to every part and more particularly to the part in danger.

The Imperial War Office gave the building and maintenance of these arteries and veins to the Canadian Railway Troops, now numbering 14 battalions, under the headquarters command of Brigadier-Gen-

eral and gas mask. Their own mechanical and mule transport are responsible for their tools. A square red patch with a square hole planted square between the shoulders of the tunic is their distinctive badge; the same being the cause of many a witty remark and much profane comment on the part of these strenuous troops. At the beginning they were composed of specially recruited officers and men with railway experience. Later the ranks were filled up with Canadian casualties. Quite a number of these recruits wore the blue shoulder straps indicating that they were men of the first contingent. Sometimes they wore two, three and even four gold stripes, speaking worlds of praise for our modern surgery and hospital system, while bearing mute

general, walking over the job, recognized him, came over, shook hands, and sent him up for his commission on the spot. There were more promotions from the ranks in the Canadian Railway Troops than in any other branch of the service. This was one of the secrets of their wonderful efficiency, for they fulfilled the Napoleonic maxim and "make them out of mud."

At time of writing (shortly before the armistice was signed) they had laid something over 2,000 miles of track, almost equally divided between standard and narrow gauge. The standard gauge branched everywhere from the main French lines, alleviating congestion which had become chronic, releasing the central arteries of traffic for the business which



is keeping France the least injured of the allies outside her frightful battle grounds, maintaining the farms, the mines, the credit and the industry of La Belle France. From these tracks, immediately behind the lines, stretched out a veritable cobweb of narrow gauge, feeding the guns, the troops, the trenches, and carrying the wherewithal to every sector of this complicated war machine. The power on the narrow gauge was mostly petrol motor, aided by a number of dinky locomotives of about 15 tons. The cars on the light track were nearly all open, while the ammunition trucks were of special build with a sunken hold in the center.

When the Canadian Railway Troops were at work on standard gauge lines they were similar to any civilian gang at

advancing army, I shall tell of the events under the German guns at the first battle of Cambrai. The astonishing victory of General Byng on Nov. 20, 1917, gave the army under his command a vast amount of shattered terrain, from Bullecourt to Villars, 26 miles across. Over this ground the cobweb of steel was immediately spun. The night we started work was bitterly cold and frosty. The hoar frost hung like a mantle of crisp wool over every living and inanimate object. The Fifth C.R.T. had the job and D. Co., in advance on 20 little cars, dropped off at midnight about a mile from the slag heap at Hermes. The chug-chugging of the petrol motors ceased, only the bellow of the big guns near at hand made the night hideous.

first survey of their new location. Just above them on the ridge was a cemetery buried in foliage. A large brown cross and the eternal figure of "The Man of Sorrows" dominated the view. Behind them were rolling ridges of red soil, ploughed, harrowed and hacked by shell fire. On the far horizon to the right was Bourlon Wood, a sepia blanket laid over the loins of a white horse. To the centre was Fontaine Noyelles, with its red roofs and one tapering grey spire, then L'Escaut straggling between its rows of poplars. Their speculations were broken by the ascending scream of a high velocity shell.

"Krupp" came the report—a geyser of earth rose and fell 200 yards away. Fritz was seeking that big gun battery beyond the last ridge. Again, and once more came the scream and the thud of shells. The Hun was distributing his punches like a drunken man in a bar-room.

"Brraap!" and up went a section of the mule transport.

"Brraap!" A hut held by an Imperial Labor Battalion was demolished and scattered like chaff on the storm wind. "Stretcher bearers on the double!" came the cry.

So D. Co. gobbled its last morsel of bacon, tipped up the final drain of tea, and silently and sadly proceeded to move camp. Once more the circus act was repeated. A thousand pieces of material were hauled across the ridges and along the hollows on the stalwart shoulders of grunting and cussing sappers. Three times that day they moved to escape destruction. By nightfall they had made a fairly safe pitch near a disused trench line and several old German dugouts. In the meantime, of course, nothing had been done in the matter of tracklaying. But the following morning reveille sounded at 6.30, and at 7, with dawn breaking clear, they were off to lay the first mile of the narrow gauge.

D. Co. was split up into its component platoons, nos. 13, 14, 15 and 16. Sixteen was put at grading, Fifteen at laying out ties, rails, bolts and spikes, Fourteen at bolting and spiking. Thirteen, "the mechanical gang," were put at cutting rails, laying frogs, points and switches. The ground was good just here, despite the enemy bombardment. The surveyors had done their work well. We decided that D. Co. could lay a mile of track a day. A. Co., coming along behind, would unload ballast and attend to the lifting and lining of the track. B. and C. Cos. were working on another three miles across the Demicourt Road.

The morning was clear and sparkling blue and the enemy's observation balloons seemed quite near. The sappers bent to their tasks, however, and paid no attention. Snatches of song drifted by on the morning breeze and soike mauls rang lustily against the steel. The songs they sang were not the songs you have heard at home. They were all comic with a queer and tantalizing twist—railway songs that helped along the work and that had something of the swing of the deep-sea "chanties."

Here is a verse and chorus for sample, led by Corporal D—, the comedian and football center of D. Co.:-

"One day our Uncle Sammy, he had a war with Spain,  
Not all the boys in blue were in the battle slain.  
They were not killed by bullets. Oh! not by any means,  
For most of them that died, were killed by pork and beans."

Chorus—  
Stung right! Stung right! S-T-U-N-G.  
Stung right! Stung right! Easy mark was me.



Canadian engineers working a quarry for road making material, on the Western Front. Canadian Official War Photograph. Copyright reserved.

work. But when laying narrow gauge, sometimes right across No Man's Land, and often under fire, they were armed and ready with a machine gun squad for each company, stretcher bearers and a Red Cross sergeant. This was the most dangerous kind of work, for the enemy guns were promptly trained on any spot where rail-laying activities were noted. It was particularly dangerous when an advance had been made and our lines of steel had to be extended over the conquered territory; for, then, the enemy strove furiously to hamper "consolidation" and rained shells on us.

To illustrate what happened when it was necessary to build in the wake of an

A momentary chaos was reduced to a semblance of order as the C.R.T. moved from the steep embankment under a multitude of burdens—stores, canteen and quartermaster's tools, tents, grub, a blacksmith's shop, an orderly room, officers' tents, field kitchens, and blankets. Tent floors wriggled in grotesque contortions through the black drop curtain of the night. Dawn broke upon a camp in the being, the tents standing above circular holes, making a 3 ft. shelter with a surrounding bank to afford some protection from shrapnel.

The men secured a breakfast of hot tea, bacon, bread and butter, jam and hard tack, and, as they ate, they took a keen



Oh! when the war is over and once again I'm free. There'll be no more "Trips around the world" for me.

That was the metal of their morale. After four years of war they were laughing at the worst Fritz could do—and many of them were twice and thrice wounded veterans.

In the meantime the enemy observation balloons above L'Escaut had given the tip to the batteries in Bourlon Wood. "Brrraap," "Brrraap," "Brrraap!" big stuff came reaching out for the track. A pelting shower of earth, stones, and shrapnel fell among the men at work. Platoon by platoon they "downed tools," and ducked for the Imperial advanced trenches. No one was caught that time. The cooks made tea in the trenches, and the men ate their lunch of bully beef, cheese, bread and butter and jam. After half an hour of this Fritz turned his attention to the howitzer batteries in the sunken road, so D. Co. sallied out and to work again. By five o'clock the first mile was down. All the guns had gone to supper. The little cars were humming down the track and the tired troops sprang aboard and off they went for "home."

jiffy the track was repaired. Three rails in 23 minutes, gauged, lined and ballasted! Thirteen followed their comrades with the knowledge of a job well done.

It was a happy crowd that swarmed round the hot mulligan dixies that night—a gang of big school boys, ages running from 19 to 57, tired but happy and hungry as wolves in view of a solid meal. To make things complete, the orderly corporal arrived with arms full of mail. The great big event in every Tommy's life was the mail—parcels with toothsome candies, fruit cakes, cigarettes, books, tobacco, socks, handkerchiefs, letters from mother, father, sweetheart, wife and dear, sweet bairns.

Shells, wounds, cold, hunger, hardship, the grisly paw of death ever near, the fretful sergeant and the haughty officer, and a month's pay lost on the Crown and Anchor board—all were forgotten. The man who received a letter or a parcel hurried away, a glad light in his eyes, a warm glow in his heart, for he has come to "the end of a perfect day."

But this was not the end, not on this particular night. The "Last Post" had just blown and the boys were all beneath

leaving their little homes and flying to the open fields or the nearest dugout. Old women, old men, young women and children in every article of night attire were scurrying away from the dreaded air raid. Wherever possible the sappers helped them along and told them "Fritzzy part tout-de-suite" and, as though supporting their strenuous western optimism, the anti-aircraft opened a terrific barrage. The big "blopping" of the Archies was broken by the racket of the machine guns.

The station was like a scene from Dante's "Inferno"—only more so. Grotesque mushrooms of black smoke blotted out the moon and stars. Red, purple and yellow flames played in fantastic wreaths along the avenues of hell. Little figures rushed hither and yon like manikins in torment. And every minute a hot shell exploded with a dull, far-off roar amid the conflagration. Two petrol tanks had been destroyed and an ammunition train blown up. A Red Cross clearing station had been struck, and the huge warehouse levelled with the tracks. Everywhere writhing blue and gold snakes of petrol marked the path of danger. As they died out and flickered into blackness, the sappers rushed in, regardless of the hot shells, ready to blow up at every point any second, and began to clear away the mounds of smoking debris. This was part of their work.

A hospital siding, with two rails blown clear away, was repaired. The crater was filled in, new steel laid on new ties and the whole line spiked and bolted up in half an hour. The men toiled like ruddy fiends in the afterglow of hades. A Red Cross train from the main track was shunted into the new siding. It contained the bodies of two Red Cross nurses with their delicate white hands folded meekly over their courageous hearts in death.

The men of the C.R.T. by this time had reached the wreckage of the ammunition train. It looked as though some monstrous upheaval of nature had tossed it into a forest of twisted girders, hanging shreds of timbers and the burnt skeletons of wagons, tipped in weird gestures of destruction. The sappers tackled it with a cheer. From the south side a wrecking crew of French engineers were removing the large pieces with a powerful wrecking crane and windlass. The worst of the junk was heaped about a vast crater made in the center of the main line by an aerial torpedo.

Dawn broke with the work still being carried on. Carloads of ballast were shot into the cavity. As the grade was made level the new steel was laid, and the wrecking train moved up and hauled away the awful junk piles. In the meanwhile a company of C.R.T.'s had rolled all the hot shells off the track. And as they toiled at this dangerous task, protecting their hands with wet mitts and gunny sacks, they kidded one another along.

"Look out there, Bill. That blinking 9.2 is going up!"

"Aw! Quit yer kidding. I don't want a Blighty now. I'm due fer a Paris leave." And the lad would go on, rolling the hot shell down the track.

"I wonder some guy wouldn't come round with a drink of rum—Gee! I'm all in," says one.

"All you need is something to warm your cold feet," replies his pal, in spite of the obvious fact that both their boots were burning on the hot track.

"Hell! I wonder them French Pollies don't come through with a bottle of Vin Blink?" queries another.

"Close it, you dud!" says the next one.



Rapid Railway Construction in France. Building an Embankment for a Broad Gauge Railway. British Official Photograph taken on the British Western Front. Copyright reserved.

But the day was not over yet. Half a mile towards Hermes they met a "blow-out." A high velocity shell from the northern sector of the German lines had tossed the track into a junk pile. The tired troops looked at the mess with disgust. "Well, guess we're in for it," said a sergeant. "One platoon can attend to this job though." The choice fell on No. Thirteen. "Might have known it!" growled the men as they unloaded their tools again. "Always unlucky! Let's have our number changed."

The other three platoons went on. The men of Thirteen started to work with a will. Broken rails were unbolted, the spikes drawn, and the twisted mess flung over the embankment. The shell hole was next blocked and filled with dirt from outside the ditch. Spare ballast was scraped up and new ties were inserted. Mauls and wrenches were then applied to the task of tightening up. Rails had been carried from up the track, and in a

the blankets and a rosy glow worm in the dark was the cigarette of each tired and contented sapper. Suddenly overhead sounded the unmistakable organ hum of a big Fritzzy plane. "All lights out" was given by three blasts on the sergeant-major's whistle. The droning of the motors came very near and the troops held themselves still in breathless suspense, for this was not the first time they had met hell from German aircraft. The sound died away. Then out of the vast and silent sky came "brrraap" and bellow upon bellow of aerial torpedo.

The men rushed from their tents in their night clothes. Half a mile away, the station at Lillers was ablaze. Petrol tanks were flaming into the dark in vast flashes of flame and smoke. The warehouse was on fire. "Fall in" sounded. The C.R.T. sprang into their clothes. Tools were snatched up and off they went. When they reached la gare, or the station, they saw thousands of French civilians



"You make a noise like a lamb."

By 9 a.m. the great northern road was clear. The new rails were fast and straight. The immense traffic of the Chemin de Fer du Nord rolled on towards the battle lines and tired Canadian Railway Troops sought their blankets for a game of "shut eye" till 2 p.m., when the work up under the guns would begin again.

And so the days and months went by. First it was a case of laying narrow gauge right up under the guns, with every kind of shell plopping around. Then, if they were lucky, it was standard gauge away back; which meant Y.M.C.A. concerts and lectures, sports, baseball and football, maybe some boxing, and all "the mental and moral papulum" which has built our splendid morale.

No one has heard the history of the C.R.T. when the German advance last spring swept through the Lys salient. The Portuguese Division retreated, after four days and nights of gas shelling, when human flesh and blood could stand no more. Merville and its three all-important bridges over the canal were left undefended. Into this breach the general in command plunged three companies of the 11th C.R.T., the only available troops during those momentous hours. This was a strategic point of the utmost importance, for, if it fell, Lillers would be in danger and the whole British line from Arras to the sea threatened by a flanking and rear attack. These troops held the bridges with machine guns, bombers and riflemen till the Jocks and the Australians came up on either flank of the retreating Portuguese.

A little later, when the line was bending at La Basse, Bethune, Locon, three battalions of the C.R.T., the third, the fifth and the seventh, were held in reserve, thus releasing Imperial battalions for the front lines. The fourth and the sixth fought hand to hand battles with the Hun in the Cambrai salient in Nov., 1917. The first day the sixth lost their field kitchens, their equipment and their tools. The second day they went after Fritz and took some of his field kitchens before Bourlon Wood. The scrap the sixth put up was largely instrumental in checking the German waves before Marcoing and Gouzeaucourt. And again the sixth was caught in Velu wood during the spring advance in 1917, and again they fought their way clear of the surrounding Huns.

The C.R.T. are the "handy men" of the British front. They have tackled everything from railroading to strafing the Boche, from taking up ammunition to bringing out the wounded—from laying and running the narrow gauge to shooting down enemy aircraft with their Lewis guns. (The 11th shot down a German plane in the apple orchard at Merville.)

The Railway Troops have played an important, and a most strenuous, part in the campaign now waging which, we are convinced, is going to end the war. I am writing this at a point 40 miles in advance of the positions we held two months ago—and the C.R.T. have laid steel all along that broad slice of reconquered territory! It has been perhaps the most rapid bit of railroading the world has ever seen.

To show how great the hazard has been, I want to tell of the last advance of our victorious armies before Arras and along the valley of the Scarpe, when two platoons were sent up to repair a narrow gauge line under fire. They relaid 123 shell breaks in six days. They had to live in dugouts. Each night the enemy put

over every kind of shell, "Rubber heels," "Coal boxes," "Whizzbangs" and bombs from his aircraft. The Hun was doing all in his power to delay the advance by shelling and bombing our arteries of traffic.

The first morning out the C.R.T. lined up in the square before the station, near the quivering bodies of four disemboweled horses, while members of the Veterinary Corps were busy shooting these poor "Long Faced Pals" to save their pitiful sufferings. The Red Cross were busy taking away dead and wounded Tommies. A 12-inch shell from a long-range naval gun had dropped on a ration-train of the Army Service Corps with frightful consequences. The second morning the Boche blew up a motor lorry in a Mechanical Transport park near by. The third morning he smashed a corner of a cemetery; and bricks, gravestones, shrapnel, rubble and dead bones fell among them. The sixth morning the Hun got four of their transport mules, wounded the transport cook, and killed two Imperials in horse lines quite close to the C.R.T.

Nights were made hideous by every kind of explosion common to these duels of the big guns. When these two platoons finished their job they were congratulated on parade by the general commanding the division. The morale of these troops at such a time of intense nervous strain is shown by the fact that "the clink," or guard tent, standing directly under the range of the German guns, was never dug in or sand-bagged. On the fifth morning one of the defaulters, waiting a court-martial for a few hours A.W.L., was struck by a flying brick on the ankle while busy shaving. He calmly picked up the brick, while shell pieces were rattling down all around him, walked over to the nearest dugout and said:—"Look at that! Jerry tried to give me a free hair cut." Then he proceeded to finish his shave while the earth went reeling and vibrating to the ceaseless impact of exploding shells, any of which may have meant the end of all things for him.

During this last great advance the 5th—in which I am a humble unit—have leap-frogged their companies along the narrow gauge and at this time of writing are actually connecting up our lines with German steel beyond Lille. You see a dozen little cars behind a petrol motor, or a Baldwin dinky locomotive rolling along chock and block with troops going up; ammunition, kits, tents, grub, then more railway material, then ballast from the slag heaps of mines. The farther the line stretches the busier it gets. Truly the veins of the War God are Canadian in structure, Canadian in skill and Canadian in spirit.

The names of some of our commanding officers are household words in France—General "Jacky" Stewart, Colonel Griffin, D.S.O., Major Purdee with his Artemus T. Ward brand of humor and his Champion Baseball Team, Major Adjutant "Bimbo" Sweeny, Major Grant, Major Harrison in charge of the 11th at Merville—these are only a few. There are hundreds unknown to fame, but deserving of the highest honors, kind-hearted, modest gentlemen from every province, doing their duty as they see it from day to day.

The keynote of the Railway Troops is efficiency. It is only by maintaining a high grade of efficiency that the work can be done, and the success this branch of the service has achieved is something that Canada may well prize.—Maclean's Magazine.

## Railway Rolling Stock Orders and Deliveries.

The Canadian Copper Co. has received a steel snow plough from Canadian Car & Foundry Co.

The Timiskaming & Northern Ontario Ry. has received a steel snow plough from Canadian Car & Foundry Co.

The C.P.R. is going to build 30 all steel tourist cars and 20 all steel baggage cars, both 73½ ft. long, at its Angus Shops, Montreal.

Canadian National Rys., as announced in our last issue, have ordered 750 steel frame box cars from National Steel Car Co. Following are the chief details:—

Length inside	.....36 ft.
Width inside	.....8½ ft.
Height inside	.....8 ft.
Door openings	.....5 ft.
Trucks	.....Simplex
Journal boxes	.....McCord
Bolsters	.....Simplex
Side bearings	.....Balanced type
Draft gear	.....Twin type
Roof	.....Inside metal roofing
Brakes	.....Westinghouse 812, automatic, with K-1 triple valves.

Canadian National Rys. have ordered 550 composite service coal cars and 500 steel underframe flat cars from Eastern Car Co., as mentioned in our last issue. Following are the chief details:—

### Coal Cars.

Length inside	.....36 ft. 4½ in.
Width inside	.....9 ft. 3 in.
Height inside	.....5 ft. 2½ in.
Trucks	.....Simplex
Axles	.....5½ x 10 in.
Journal boxes	.....McCord
Brake beams	.....M.C.B. 2
Draft gear	.....Cardwell friction, latest type
Brake	.....Westinghouse 1210, with K2 triple valves
Capacity	.....50 tons

### Flat Cars.

Length	.....41 ft.
Width over side sills	.....8 ft. 10 in.
Width over floor	.....9 ft.
Width over stake pockets	.....9 ft. 7½ in.
Trucks	.....Simplex
Journal boxes	.....McCord, 5 x 9 in.
Brake beams	.....Simplex 2
Draft gear	.....Twin type
Brakes	.....Westinghouse 812, with K-1 triple valves
Capacity	.....40 tons

Canadian National Rys. have ordered 250 Hart-Otis ballast cars, 500 stock cars, 150 refrigerator cars from Canadian Car & Foundry Co., as mentioned in our last issue. Following are the chief details:—

### Ballast Cars.

Length over end sills	.....36 ft. 8 in.
Width over side sills	.....8 ft. 9 in.
Length inside as hoppers	.....20 ft. 10 in.
Length inside as gondolas	.....34 ft. 8 in.
Width inside	.....8 ft. 8 in.
Draft arms	.....Metal built up type
Draft gear	.....Friction type
Journal boxes	.....McCord, 5½ x 10 in.
Capacity	.....50 tons

### Stock Cars.

Length inside	.....36 ft.
Width inside	.....8½ ft.
Height inside	.....8 ft.
Draft gear	.....Tandem
Journal boxes	.....4¼ x 8 in.
Trucks	.....Simplex
Brake beams	.....M.C.B. 2
Springs	.....M.C.B. class G
Capacity	.....30 tons

### Refrigerator Cars.

Length inside	.....36 ft.
Width inside	.....8 ft. 2 in.
Door fixtures	.....Cam arrangement
Insulation	.....La Fleur
Trucks	.....Simplex
Journal boxes	.....McCord
Brake beams	.....M.C.B. 2
Brakes	.....Westinghouse, with K2 triple valves
Capacity	.....40 tons

These refrigerator cars are similar to the last supplied, and will be equipped with brine tanks and the latest device for retaining brine, to meet the American Railway Association's specifications. The underframe will be of wood with steel draft arms.



## Mainly About Railway People Throughout Canada.

**Albert G. Albertsen**, who has been appointed General Agent, Passenger Department, C.P.R., Minneapolis, Minn., was born at Copenhagen, Denmark, Dec. 31, 1887, and came to Canada in 1904. He entered transportation service in Apr., 1908, since when he has been, to Nov., 1909, passenger clerk, Thomas Cook & Sons; Nov., 1909, to July, 1910, Traveling Agent, International Mercantile Marine; July, 1910, to Mar., 1911, passenger and ticket clerk, Pacific Mail Steamship Co.; Mar., 1911, to May, 1912, City Passenger Agent, C.P.R.; May, 1911, to Jan., 1916, Travelling Passenger Agent, C.P.R.; Jan. 1916, to Feb. 15, 1919, City Ticket Agent, C.P.R., all at San Francisco, Cal.

**William E. Allison**, who has been appointed Assistant General Agent, Mail, Baggage and Milk Traffic, C.P.R., Montreal, was born at St. Eugene, Ont., Aug. 1, 1886, and entered C.P.R. service in Feb., 1905, since when he has been, to Jan., 1909, clerk in General Baggage Department, Montreal; Jan., 1909, to Mar., 1910, chief clerk, same department, Montreal; Mar., 1910, to Nov., 1911, Travelling Baggage Agent, Montreal; Nov., 1911, to May, 1912, General Travelling Baggage Agent, Winnipeg; May, 1912, to Jan., 1916, District Baggage Agent, Calgary, Alta.; Jan., 1916, to Feb., 1919, Assistant General Baggage Agent, Montreal.

**Mrs. W. H. Ardley**, wife of the Comptroller, G.T.R., died at Montreal, Feb. 6, following a short illness and subsequent operation for appendicitis, after which peritonitis developed.

**Frederick Barker Atkinson**, Claims Agent, Canadian Government Rys., who died at Levis, Que., recently, was born there Aug. 26, 1852, and after several years in private business, entered C.G.R. service Oct. 1, 1901, and up to his death acted as Claims Agent for the I.C.R. in the Province of Quebec.

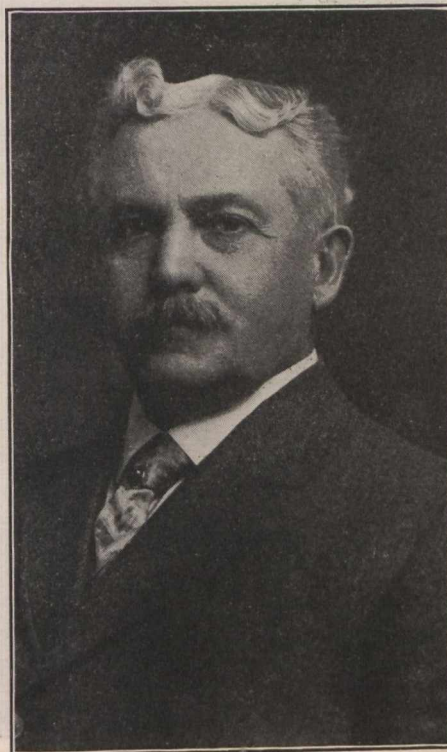
**O. E. Barker**, who has been appointed Chief Dispatcher, Canadian National Rys., Saskatoon, Sask., was born at Montreal, Sept. 20, 1873, and entered railway service Dec. 4, 1890, since when he has been, to Jan., 1898, agent and operator, C.P.R., at various points; Jan. to June, 1898, agent and operator, Minneapolis, St. Paul & Saulte Ste. Marie Ry.; June, 1898, to Mar., 1903, agent and operator, C.P.R., at Regina, Sask., Calgary, and Medicine Hat; Alta.; Mar., 1903, to Jan., 1911, dispatcher, C.P.R.; Jan., 1911, to Sept. 10, 1915, in private business; Sept. 10, 1915, to Nov., 1916, dispatcher, Canadian Northern Ry., Fort Rouge, Man., and Rainy River, Ont.; Nov., 1916, to June, 1917, General Yard Agent, C.N.R., Fort Rouge, Man.; June, to Nov. 27, 1918, dispatcher, C.N.R., Fort Rouge, Man., and Saskatoon, Sask.; Nov. 27, to Dec., 1918, acting Chief Dispatcher, C.N.R., Saskatoon.

**M. B. Beasley**, who died in Toronto, Feb. 22, was father of H. E. Beasley, General Superintendent, Esquimalt & Nanaimo Ry., Victoria, B.C., and H. H. Beasley, Purchasing Agent, Toronto Ry.

**E. W. Beatty, K.C.**, President, C.P.R., has been elected Chancellor of Queen's University, Kingston, Ont. To mark his recent appointment as President of the C.P.R., he was the chief guest at a dinner given in his honor by the Board of Trade at Thorold, Ont., Feb. 3, where he was born.

**William C. Blake**, whose appointment as Divisional Accountant, Canadian National Rys., Winnipeg, was announced in our last issue, was born at Liverpool,

Eng., Nov. 28, 1865, and entered transportation service in 1878, with E. H. Wood, cartage agent for the London & North Western Ry. and the North Staffordshire Ry., and afterwards European



W. H. Grant,  
General Tie Agent, Canadian National Railways.



Walter Pratt,  
Manager, Sleeping, Dining and Parlor Car, Hotels  
and News Service, Canadian National Railways.

Agent, Grand Trunk Ry., in England. He came to Canada in 1889, and was, to Jan. 1, 1903, in Traffic Auditor's office, serving in the freight, statistical and freight claims departments, G.T.R., Montreal;

Jan. 1, 1903, to Dec. 1, 1910, statistical clerk, Audit Department, Canadian Northern Ry., Winnipeg; Dec. 1, 1910, to Dec. 1, 1918, chief clerk to General Auditor, same road, Winnipeg.

**C. B. Brown**, Chief Engineer, Eastern Lines, Canadian Government Ry., Moncton, N.B., is convalescent, after several weeks illness, and has returned to duty.

**Sir George McL. Brown**, European General Manager, C.P.R., left for England, via New York, Feb. 11, after a short visit to Canada.

**Fred J. Buller**, whose appointment as Local Treasurer, Eastern Lines, Canadian National Rys., Toronto, was announced in our last issue, was born at Lindsay, Ont., Jan. 30, 1875, and entered transportation service in Sept., 1893, since when he has been, to Oct., 1896, messenger, Canadian Express Co.; Nov., 1896, to June, 1899, clerk, same company, Toronto; June, 1899, to July, 1901, clerk and relieving cashier, Dominion Express Co., Winnipeg; July, 1901, to Dec., 1902, clerk and timekeeper, General Superintendent's office, Canadian Northern Ry., Winnipeg; Dec., 1902, to Nov., 1906, Cashier, same road, Toronto; Nov., 1906, to Jan., 1919, Cashier and Paymaster, same road, Toronto.

**Sir Guy Calthrop**, who died in London, Eng., Feb. 23, of influenza, was, since 1917, Controller of Coal Mines for Great Britain, and prior to that was General Manager, London & North Western Ry. of England. In 1908 he was General Manager of the Caledonian Ry. of Scotland, and in 1910, General Manager of the Buenos Aires & Pacific Ry. of South America. He was created a baronet in 1918.

**E. J. Chamberlin**, formerly President, G.T.R. and Grand Trunk Pacific Ry., who is spending the winter in California, is resigning from the various directorates with which he has been associated for several years, owing to his prolonged absence from Canada.

**Frederick H. Clendenning**, Division Freight Agent, Steamship Lines, C.P.R., Vancouver, B.C., who was transferred for service with the British Ministry of Shipping (Canada) recently, was born at Montreal, Nov. 9, 1881, and entered transportation service Aug. 1, 1898, since when he has been, to June 30, 1902, junior clerk, Fourth Vice President's office, register clerk, and stenographer, successively, C.P.R., Montreal; July 1, 1902, to Mar. 31, 1903, stenographer and freight clerk, Commercial Agent's office, New York Central and Hudson River Rd., Montreal; Apr. 1, 1903, to Jan. 31, 1904, stenographer, rate and tracing clerk, General Freight Department, C.P.R., Vancouver, B.C.; Feb. 1, 1904, to June 30, 1905, chief clerk, City Freight Office, C.P.R., Victoria, B.C.; July 1, 1905, to Aug. 31, 1908, chief clerk, District Freight Office, C.P.R. and Esquimalt & Nanaimo Ry., Victoria, B.C.; Sept. 1, 1908, to Aug. 16, 1909, City Freight Agent, C.P.R., and District Freight Agent, Esquimalt & Nanaimo Ry., Victoria, B.C.; Aug. 17, 1909, to Mar. 31, 1911, Assistant General Freight Agent, C.P.R., Vancouver, B.C.; Apr. 1, 1911, to Jan. 31, 1914, District Freight Agent, C.P.R., Vancouver, B.C.; Feb. 1, 1914, to Nov. 1, 1918, Division Freight Agent, Steamship Lines, C.P.R., Vancouver, B.C.

**N. P. Dalziel**, formerly Assistant Comptroller, Canadian Northern Ry., Toronto, and latterly Assistant Chief Inspector, Shell Branch, Imperial Munitions



Board, Ottawa, left for Great Britain Feb. 8, excepting to return to Canada in April, when he will assume his duties as Managing Director of Offer, Dalziel & Co., Ltd., which was incorporated under the Dominion Companies Act Feb., 1918, with wide powers to act as engineers, financial agents, etc.

**Elzear Louis Desjardins**, whose appointment as Superintendent, Division 1, Quebec District, Canadian National Rys., Levis, Que., was announced in a recent issue, was born at St. Jean Port Joli, Que., Aug. 17, 1859, and entered Government railway service, Aug. 1, 1876, since when he has been, to Nov. 1, 1876, ballast pit operator, Intercolonial Ry., Amqui, Que.; Nov. 1, 1876, to Apr. 1, 1878, agent, I.R.C., Sayabec, Que.; Apr. 1, 1878, to June 1, 1879, night operator, I.R.C., St. Flavie, Que.; June 1, 1879, to May 30, 1880, train baggage master, I.R.C., Levis, Que., and Halifax, N.S.; May 30, 1880, to Feb. 20, 1898, dispatcher, I.R.C., Riviere du Loup, Que.; Feb. 20, 1898, to May 1, 1912, Chief Dispatcher, I.R.C., Levis, Que.; May 1, 1912, to Feb. 1, 1918, Assistant Superintendent, District 1, Montreal and Mont Joli, Canadian Government Rys.; Feb. 1 to Dec. 1, 1918, Superintendent, District 5, Transcontinental Division, C.G.R., Edmundston, N.B.

**G. E. Drummond**, President, Drummond, McCall & Co., Ltd., Montreal, died in England, Feb. 18, while on a business trip. He was formerly a director of the Canadian Car & Foundry Co.

**James Edward**, who has been appointed Division Freight Agent, G.T.R., Montreal, first entered G.T.R. service as operator and agent on the Ontario Lines, and later entered the traffic department, being appointed agent, Great Eastern Fast Freight Line (Central Vermont Ry.), in 1892. He was afterwards Contracting Freight Agent and Travelling Freight Agent, G.T.R., Montreal, and in 1904 was appointed Travelling Freight Agent, at Moncton, N.B.; Commercial Agent there in 1911, and from 1913, Division Freight Agent, Ottawa.

**Cecil Edward Friend**, whose appointment as Comptroller, Canadian National Rys., Toronto, was announced in a recent issue, was born at Brighton, Eng., Oct. 12, 1871, and entered railway service in Dec., 1893, since when he has been, to 1896, secretary to Traffic Manager, C.P.R., Winnipeg; 1896 to 1897, stenographer to Superintendent, Canadian Northern Ry., Winnipeg; 1897 to 1901, chief clerk and accountant, same road, Winnipeg; 1901 to 1910, Auditor, same road, Winnipeg; 1910 to 1918, General Auditor, same road, Winnipeg.

**H. J. Fuller**, President, Canadian Fairbanks-Morse Co., has been elected a director of the Shawinigan Water & Power Co., vice Sir M. Mitchell Thomson, deceased.

**Mrs. John Galbraith**, widow of the late Dean of the Applied Science Faculty, Toronto University, died in Toronto, Feb. 7, after a long illness.

**R. Falconer Gauld**, Auditor of Pay Rolls, C.P.R., Montreal, died there Feb. 18, and was buried at Halifax, N.S., Feb. 20.

**G. B. Gordon**, who died at Nanaimo, B.C., Feb. 3, as the result of a shock due to an accident at a railway crossing, was born in Whitby, Ont., in 1840, and went to Winnipeg in 1875, where he was engaged as assistant engineer on C.P.R. construction under the Dominion Government, afterwards farming in Southern Manitoba for some years, removing to British Columbia in 1917.

**A. L. Graburn**, who has been appointed General Fuel Agent, Canadian National Rys., Toronto, was born in Quebec Province, May 18, 1870, and entered railway service Feb. 27, 1885, since when he has been, to Apr., 1888, clerk, C.P.R., Winnipeg; May, 1888, to June, 1890, clerk, Chicago Great Western Ry., St. Paul,



R. P. Ormsby,  
Secretary, Canadian National Railways.



H. G. Foreman,  
Assistant Treasurer, Canadian Northern Railway System.

Minn.; July to Sept., 1890, assistant foreman, Chicago, St. Paul, Minneapolis & Omaha Ry., St. Paul, Minn.; Oct., 1890, to Sept., 1891, clerk, C.P.R., Winnipeg; Oct., 1891, to May, 1899, accountant, Northern Pacific Ry., St. Paul, Minn.; June, 1899,

to May, 1900, Shop Superintendent, Great Northern Ry., Great Falls, Mont.; June, 1900, to Aug., 1906, Shop Superintendent, Great Northern Ry., St. Cloud, Minn.; Sept., 1906, to Dec., 1907, in railway supply business, St. Paul, Minn.; Jan. to Nov., 1908, special accountant, Chicago Great Western Ry., St. Paul, Minn.; Nov., 1908, to Sept., 1915, Mechanical Engineer, Canadian Northern Ry., Toronto; Sept., 1915, to Jan., 1919, Assistant Superintendent of Rolling Stock, Canadian Northern Ry., Toronto.

**W. H. Grant**, whose appointment as General Tie Agent, Canadian National Rys., Toronto, was announced in our last issue, was born at Acton, Ont., Dec. 8, 1858. He commenced railway construction work under Donald D. Mann in 1882, and with the exception of eight years spent in Winnipeg, Calgary and British Columbia, in organizing the accounting department of P. Burns & Co., has since been continuously engaged in railway construction work with D. D. Mann and later with Mackenzie, Mann & Co., Ltd. He was serving under D. D. Mann on the latter's contracts on the construction of the C.P.R. main line through the prairies and British Columbia mountains, and on the construction of 75 miles of the Manitoba & Northwestern Ry. main line, and its Russell and Rapid City branches. He had charge of track laying on 40 miles of the old Winnipeg & Hudson Bay Ry., and of the construction of a section of the C.P.R. short line through the State of Maine, under Mackenzie, Mann & Co. From 1889 to 1902 he was Superintendent of Grading and Bridging, Rainy River Rd.; 1902 to 1907, Manager of Construction, Halifax & Southwestern Ry.; 1907 to 1915, Manager of Construction, Canadian Northern Ry. lines east of Port Arthur, Ont.; 1915 to the date of his present appointment, Tie and Timber Agent, Eastern Lines, and during the war acting General Storekeeper, Canadian Northern Ry., Toronto.

**Grant Hall**, Vice President, C.P.R., was the principal speaker at the Canadian Railway Club dinner in Montreal recently.

**Fay Edward Hartshorn**, whose appointment as Assistant Superintendent, Montreal Division, Quebec District, Canadian National Rys., Joliette, Que., was announced in a recent issue, was born at West Stewartstown, N.H., July 21, 1877, and entered railway service in Dec., 1898, since when he has been, to Feb. 1, 1902, operator and assistant agent, Maine Central Rd., at various points; Feb. 15, 1902, to July 6, 1905, operator, same road, Bangor, Me.; July 6, 1905, to Nov. 20, 1911, dispatcher, same road, Bangor, Me.; July 19 to Nov. 1, 1912, operator, various points, Montreal Division, Canadian Northern Ry.; Nov. 1, 1912, to July 1, 1913, operator, same road, Joliette, Que.; July 1, 1913, to June 1, 1914, relieving dispatcher, same road, Joliette, Que.; June 1, 1914, to Oct. 23, 1916, dispatcher, same road, Joliette, Que.; Oct. 23, 1916, to Dec. 23, 1918, Trainmaster, same road, Joliette, Que.

**John J. Harty**, President, Canadian Locomotive Co., Kingston, Ont., died at the Savoy Hotel, London, Eng., Feb. 23, from pneumonia, following influenza. He left Canada Jan. 29, to secure foreign orders for locomotives, and developed bronchitis en route, influenza following. He was born in 1875 and graduated in medicine from Queen's University, Kingston, in 1897, but did not practise. When his father, Wm. Harty, bought out the old locomotive works at Kingston in 1900, J. J. Harty became Secretary, and on the reorganization of the company was elect-



ed Vice President, and in 1918 was elected President. "Jock," as he was familiarly known, took a very active part in sports during his college career, was a good rugby player and excellent in hockey. Afterwards he became interested in lake racing and was a motor boat enthusiast. Three years ago he had the fastest craft on Lake Ontario. He sat in Kingston City Council for several years.

**Walter Hately**, whose appointment as Assistant General Freight Agent, Canadian National Rys., Winnipeg, was announced in our last issue, was born at Brantford, Ont., Mar. 5, 1887, and entered railway service in March, 1904, since when he has been, to Aug., 1908, clerk, local freight office, G.T.R., Hamilton, Ont.; Aug., 1908, to Sept., 1909, accountant, Superintendent's office, G.T.R., Toronto; Sept., 1909, to Oct., 1913, clerk, Freight Tariff Bureau, G.T.R., Montreal; Oct., 1913, to Oct., 1915, clerk, Freight Tariff Bureau, Canadian Northern Ry., Winnipeg; Oct., 1915, to Jan., 1919, Chief of Tariff Bureau, Canadian Northern Ry., Winnipeg.

**Chas. R. Hosmer**, a C.P.R. director, was reported on Feb. 20 to be making satisfactory progress at the Royal Victoria Hospital, Montreal, where he underwent an operation.

**George Gladstone Hall Hutton**, whose appointment as Superintendent of Agriculture and Animal Industry, Department of Natural Resources, C.P.R., Calgary, Alta., was announced in our last issue, was born in Ontario, Feb. 18, 1878, and from 1906 to the date of his present appointment, was Superintendent of the Dominion Experimental Station at Lacombe, Alta.

**Howard G. Kelley**, President, G.T.R. and G.T.P.R., who left Montreal for England, towards the end of January, will probably return before the end of March. Before leaving, he stated that the Chairman, A. W. Smithers, M.P., will not make his usual annual visit to Canada this year, owing to his parliamentary duties.

**J. Edgar LePage**, whose appointment as Division Freight Agent, Canadian National Rys., Quebec, Que., was announced in our last issue, was born in Canada, Mar. 7, 1882, and educated at Rimouski College and at Laval, Que., and was awarded the Prince of Wales prize. He entered railway service in May, 1902, since when he has been, to Feb., 1912, successively telegrapher, freight clerk, station agent, and freight agent, Montreal-Levis Division, Intercolonial Ry.; Feb., 1912, to June, 1915, Travelling Freight Agent, I.R.C., and National Transcontinental Ry., Montreal; June, 1915, to Jan. 27, 1919, Division Freight Agent, and District Passenger Agent, Canadian Government Rys., Quebec, Que.

**Hon. W. M. Martin**, Prime Minister of Saskatchewan, has also been appointed Minister of Railways, in the re-arrangement of portfolios made recently.

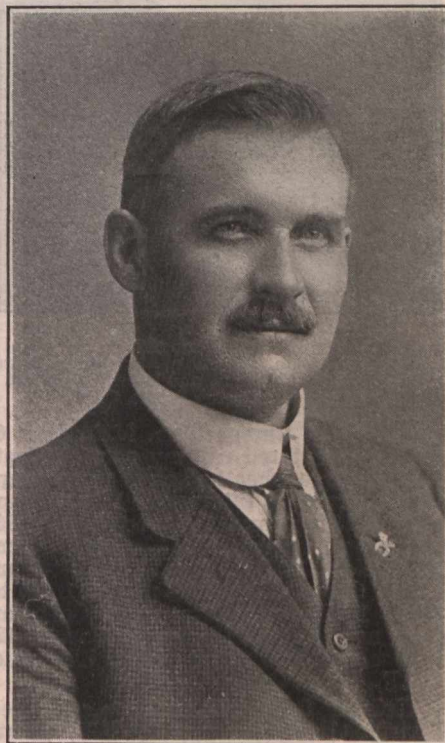
**Allan Stanley McLean**, who has been appointed Superintendent of Hotels, Canadian National Rys., Winnipeg, was born at Walkerton, Ont., Dec. 5, 1871, and entered Canadian Northern Ry. service in Sept., 1910, since when he has been, to Mar., 1911, clerk, Hotel Department, Winnipeg; Mar., 1911, to Dec., 1917, Manager, Prince Arthur Hotel, Port Arthur, Ont.; Dec., 1917, to Dec., 1918, Assistant General Superintendent of Hotels, Winnipeg. Prior to entering Canadian Northern Ry. service, he was, between 1899 and 1910, clerk, Dufferin Hotel, St. John, N.B.; and Queens Hotel, Montreal; and Manager, Corona Hotel, Montreal, and Kings Hotel, Regina, Sask.

**S. J. McLean**, one of the Railway Commissioners for Canada, addressed the Canadian Club at Toronto, Feb. 10, on the Board of Railway Commissioners' work.

**G. E. McCoy**, who has been appointed Master Car Builder, Eastern Lines, Canadian National Rys., Moncton, N.B., was



G. E. McCoy,  
Master Car Builder, Eastern Lines, Canadian  
National Railways.



A. McCowan,  
Master Car Builder, Western Lines, Canadian  
National Railways.

born there, Jan. 8, 1886, entered government railway service Oct. 16, 1900, and served an apprenticeship in the shops and drafting office. He was appointed assistant chief draftsman in charge of car work in 1915, and in 1916 Assistant Master Car

Builder at Moncton, N.B., which position he held to the date of his present appointment.

**Henry Hilaire Melanson**, whose appointment as Passenger Traffic Manager, Canadian National Rys., Toronto, was announced in a recent issue, was born at Scadouc, N.B., Mar. 9, 1872, and entered Government railway service Nov. 18, 1889, since when he has been, to Aug., 1892, clerk in Mechanical Department, Intercolonial Ry.; Aug., 1892, to Dec., 1899, clerk in Passenger Department; Dec., 1899, to Mar., 1901, chief clerk, Passenger Department; Mar., 1901, to May, 1903, General Baggage Agent; May, 1903, to Nov., 1909, chief clerk, Passenger Department; Nov., 1909, to May, 1913, Assistant General Passenger Agent; June 1913, to June, 1917, General Passenger Agent; June, 1917, to Jan. 1, 1919, Passenger Traffic Manager, Canadian Government Rys., all at Moncton, N.B.

**Richard W. Moore**, who has been appointed District Car Foreman, Prairie District, Canadian National Rys., Saskatoon, Sask., was born at Listowel, Ont., Oct. 20, 1882, and entered railway service in July, 1906, since when he has been, to Feb., 1908, car repairer, Grand Trunk Pacific Ry.; Feb., 1908, to Oct., 1913, Car Foreman, G.T.P.R., Melville, Sask.; Oct., 1913, to Feb., 1914, Car Foreman, G.T.P.R. Rivers, Man.; Feb., 1914, to Nov., 1917, Car Foreman, G.T.P.R., Fort William, Ont., and continued with Canadian Government Rys., when that section of the road was taken over; Nov., 1917, to Jan. 15, 1919, General Car Foreman, Western Lines, C.G.R., Cochrane, Ont.

**Sir Augustus Nanton**, director, C.P.R., Winnipeg, has been elected President, Winnipeg Electric Ry., and President of the Western Bond Dealers Association of Canada.

**R. E. Newcomer**, whose transfer from the position of Trainmaster, G.T.R., London, Ont., to that of Trainmaster, G.T.R., Brantford, Ont., was announced in our last issue, has resigned and returned to Wabash Ry. service at St. Louis, Mo. Before leaving the district, he was presented by his associates with a travelling bag and equipment.

**T. P. Phelan**, President Canada Railway News Co., Toronto, who was operated on for gall stones, at Johns Hopkins Hospital, Baltimore, towards the end of January, and who suffered subsequently from influenza, was reported Feb. 27 as convalescing satisfactorily.

**F. H. Phippen, K.C.**, formerly General Counsel, Canadian Northern Ry., left Toronto for Vancouver at the middle of February, expecting to be away 1 month.

**B. A. Pottle**, Car Inspector, Portland Terminals Co., who was accidentally killed at Potrland, Me., Feb. 21, through being struck by a shunting locomotive, was formerly in C.P.R. yard service at Toronto.

**Walter Pratt**, who has been appointed Manager, Sleeping, Dining and Parlor Cars, Hotels and News Service, Canadian National Rys., Toronto, was born at Sibbertoft, Northamptonshire, Eng., Jan. 18, 1870, and entered railway service Oct. 1, 1883, since when he has been, to June, 1887, clerk, Audit Department, C.P.R., Winnipeg; July, 1887, to May, 1889, in Purchasing Department, and cashier, Treasury Department, C.P.R., Winnipeg; June, 1889, to Oct., 1891, in Engineering Department, C.P.R., Winnipeg; Nov., 1891, to Feb., 1892, chief clerk, Purchasing Department, C.P.R., Winnipeg; Mar., 1892, to Dec., 1894, accountant, Dining Car Department, C.P.R., Winnipeg; Jan.,



1895, to Dec., 1896, Sleeping and Dining Car Agent, C.P.R., Winnipeg; Jan., 1897, to May, 1902, Superintendent, Sleeping and Dining Cars and Hotels, C.P.R., Winnipeg; June, 1902, to Feb., 1910, Superintendent, Sleeping, Dining and Parlor Cars and News Department, Canadian Northern Ry., Winnipeg; Mar., 1910, to Jan., 1911, Superintendent, Sleeping, Dining and Parlor Cars, Hotels and News Department, same road, Winnipeg; Feb., 1911, to Dec., 1918, General Superintendent, same department, C.N.R. System, Winnipeg.

**Augustine V. Redmond**, whose appointment as District Engineer, Central District, Canadian National Rys., Winnipeg, was announced in our last issue, was born at Kingston, Ont., May 16, 1879, and graduated from Queen's University, Kingston, in April, 1903, with the degree of B.Sc. He entered railway service in May, 1903, and was to Dec., 1903, engaged on concrete construction on the C.P.R.; Jan., 1904, to July, 1905, leveller on location surveys, Grand Trunk Pacific Ry.; Aug., 1905, to Oct., 1907, transit man and acting engineer in charge of location surveys, District E., National Transcontinental Ry.; Jan. to Oct., 1908, Resident Engineer on location and construction, Canon City pipe line, Canon City, Col.; Oct., 1908, to Oct., 1909, Resident Engineer, District E, National Transcontinental Ry.; Oct., 1909, to May, 1915, District Engineer, District E, N.T.R.; June to Sept., 1916, Resident Engineer, District 2, Transcontinental Division, Canadian Government Railways, Cochrane, Ont.; Oct., 1916, to Mar., 1917, acting Division Engineer, Transcontinental Division, C.G.R., Cochrane, Ont.; April to May, 1917, Resident Engineer, District 2, Transcontinental Division, C.G.R., Cochrane, Ont.; June 1, 1917, to Jan., 1919, Division Engineer, Transcontinental Division, C.G.R., Cochrane, Ont.

**Miss Lois Reid**, only daughter of Sir William D. Reid, formerly President, Reid Newfoundland Co., was married recently at St. John's, Nfld., to Lieut.-Col. H. N. Niven of the 25th Cavalry, Indian Army.

**W. J. Robider**, who was appointed General Master Car Builder, C.P.R., recently has taken up his residence at 367 Elm Ave., Montreal, where he has been joined by his wife and daughters, from Savannah, Georgia.

**Leslie Greeley Roblin**, who has been appointed Master Mechanic, Prairie District, Canadian National Rys., Saskatoon, Sask., was born in Prince Edward Island, Mar. 24, 1864, and entered railway service July 14, 1885, since when he has been, to Nov., 1886, wiper and helper, C.P.R., West Toronto, Ont.; Nov., 1886, to Apr., 1892, locomotive fireman, C.P.R., West Toronto and Havelock Ont.; Apr., 1892, to May, 1893, locomotive man, C.P.R., London, Ont.; May, 1893, to Jan., 1894, locomotive fireman, C.P.R., London, Ont.; Jan., 1894, to Aug., 1905, locomotive man, C.P.R., Toronto and London, Ont.; Oct., 1905, to Dec., 1907, acting Locomotive Foreman and Road Foreman of Locomotives, C.P.R., London, Ont.; Jan., 1908, to Feb., 1911, District Master Mechanic, C.P.R., London, Ont.; Feb., 1911, to May, 1915, District Master Mechanic, C.P.R., North Bay, Ont.; June, 1915, to Dec. 31, 1918, General Master Mechanic, Western Lines, Canadian Government Rys., Cochrane, Ont.

**Frederick A. Rutherford**, whose appointment as Trainmaster, G.T.R., London, Ont., was announced in our last issue, was born at Parkhill, Ont., Sept. 16, 1877, and entered G.T.R. service Jan. 18, 1894, since when he has been, to July,

1894, assistant to agent, Aylmer, Ont.; July, 1894, to July, 1900, telegraph operator, at various points; July, 1900, to Jan., 1908, dispatcher, London, Ont.; Jan., 1908, to Mar., 1914, Chief Dispatcher, London and Stratford, Ont.; Mar., 1914, to June, 1917, Trainmaster, Battle Creek, Mich.; June, 1917, to Feb. 1, 1918, Trainmaster, Durand, Mich.; Feb. 1, 1918, to Jan., 1919, Inspector of Transportation, Montreal.

**J. G. Rutherford**, C.M.G., appointed recently as a member of the Board of Railway Commissioners, was entertained to dinner by a number of friends at Calgary, Alta., towards the end of January, and presented with an oak table. Special mention was made of his work in the west, where he was Superintendent of Agriculture and Animal Industry, Department of Natural Resources, C.P.R., for some time.

**Harvey Walter Sharpe**, whose appointment as Master Mechanic, Quebec District, Canadian National Rys., Quebec, Que., was announced in a recent issue,



**Edward Fitzgerald**, Deputy Chairman, Canadian Advisory Board, Hudson's Bay Company, and latterly Assistant General Purchasing Agent, C.P.R.

was born at Campbellton, N.B., Dec. 6, 1869, and entered railway service, Sept. 1, 1883, since when he has been, to Aug., 1884, messenger, Intercolonial Ry., Campbellton, N.B.; Aug., 1884, to June, 1886, apprentice helper, I.R.C., Campbellton, N.B.; Nov., 1886, to Feb., 1890, fireman, I.R.C., Campbellton, N.B.; Feb., 1890, to Nov., 1912, locomotive man, Canadian Government Rys., Montreal; Nov., 1912, to Dec., 1918, District Master Mechanic, C.G.R., Levis, Que.

**Vivian G. Snell**, who has been appointed Division Freight Agent, G.T.R., Stratford, Ont., entered G.T.R. service in 1895, in the Transportation Department, and later entered the Traffic Department, becoming agent, National Despatch-Great Eastern Fast Freight Line at Montreal; 1905 to 1910, Contracting Freight Agent, G.T.R., Montreal; 1910 to 1913, Soliciting Freight Agent, Montreal; 1913 to 1914, City Freight Agent, Montreal; 1914 to Jan. 31, 1919, Commercial Agent, Mon-

ton, N.B.

**Cerdic Steeves**, whose appointment as General Boiler Inspector, Eastern Lines, Canadian National Rys., Moncton, N.B., was announced in our last issue, was born at Hopewell Cape, N.B., July 6, 1874, and entered Government railway service Oct. 18, 1890, since when he has been, to Jan. 1894, apprentice, Intercolonial Ry.; Jan., 1894, to Aug., 1902, boilermaker, I.R.C.; Aug., 1902, to Apr., 1907, flanger and tryer out, I.R.C.; Apr., 1907, to Sept., 1913, Boiler Inspector, I.C.R.; and Sept., 1913, to Jan., 1919, General Boiler Inspector, Eastern Lines, Canadian Government Rys., all at Moncton, N.B.

**Joseph A. Sutton**, who has been appointed District Fuel Agent, Canadian National Rys., Cochrane, Ont., was born at Moncton, N.B., Apr. 12, 1894, and entered railway service Dec. 14, 1911, since when he has been, to Aug., 1913, stenographer, Mechanical Department, Canadian Government Rys., Moncton, N.B.; Aug., 1913, to June, 1915, secretary to Engineer of Bridges, C.G.R., Moncton, N.B.; June, 1916, to Sept., 1917, chief clerk to Division Engineer, C.G.R., Cochrane, Ont.; Sept., 1917, to Jan., 1919, Fuel and Tie Accountant, Western Lines, C.G.R., Cochrane, Ont.

**George Mitchell Thomas**, whose appointment as District Freight Agent, Canadian National Rys., Hamilton, Ont., was announced in our last issue, was born at Dundas, Ont., Apr. 21, 1876, and entered transportation service in Aug., 1898, since when he has been, to 1903, in office, chief clerk, on the road, and Soliciting Agent, for Beaver Line Steamships, afterwards owned by Elder, Dempster & Co., and in 1903, taken over by the C.P.R. as the nucleus of its Atlantic steamship service; Apr., 1903, to Feb. 1, 1919, travelling Freight Agent, Canadian Government Rys., all at Toronto.

**S. G. Tiffin**, whose appointment as Assistant General Freight Agent, Canadian National Rys., Montreal, was announced in our last issue, was born at Hamilton, Ont., and entered railway service Apr. 1, 1886, since when he has been, to May, 1888, clerk, Local Freight Office, G.T.R., Stratford, Ont.; May, 1888, to July, 1890, secretary to Superintendent, G.T.R., Stratford, Ont.; July, 1890, to May, 1891, secretary to General Manager, Chicago and Grand Trunk Rd., and Detroit, Grand Haven & Milwaukee Ry., Detroit, Mich.; May, 1891, to Oct., 1892, chief clerk to General Agent, same roads, Saginaw, Mich.; Oct., 1892, to Nov., 1893, Travelling Freight Agent, Commercial Express Fast Freight Line, Rockford, Ill.; Nov., 1893, to Feb., 1898, Travelling Freight Agent, Wisconsin Central Ry., Milwaukee, Wis.; Feb. to Nov., 1898, Wisconsin Agent, North Shore Despatch Fast Freight Line, Milwaukee, Wis.; Jan. 1899, to Nov., 1900, Wisconsin Agent, Reading Despatch Fast Freight Line, Milwaukee, Wis.; Nov., 1900, to May, 1910, Travelling Freight Agent, Intercolonial Ry., Toronto; May, 1910, to Aug., 1913, General Agent, Intercolonial Ry., Toronto; Aug., 1913, to Feb., 1914, Division Freight Agent, Canadian Government Rys., St. John, N.B.; Feb., 1914, to June, 1915, Division Freight Agent, C.G.R., Montreal; June, 1915, to Jan., 1919, Assistant General Freight Agent, C.G.R., Montreal.

**R. C. Vaughan**, Assistant to President, Canadian National Rys., Toronto, and Mrs. Vaughan, spent a short time at Atlantic City, at the end of February.

**William Dryden Waddell**, whose appointment as chief accountant, Canadian Northern Ry. System, Toronto, was an-



nounced in our last issue, was born at Waterford, Ireland, Aug. 7, 1887, and entered Canadian Northern Ry. service Nov. 30, 1908, since when he has been, to Nov., 1916, clerk in Accounting Department, and Nov., 1916, to Jan. 1, 1919, chief clerk, same road, Toronto.

**Robert James Scott Weatherston**, whose appointment as Division Freight Agent, G.T.R., Ottawa, Ont., was announced in our last issue, was born at St. Thomas, Ont., Jan. 27, 1878, and entered G.T.R. service July 4, 1893, since when he has been, to Dec. 31, 1901, clerk in Transportation Department, Hamilton, Ont.; Jan. 1 to July 22, 1902, clerk in Traffic Department, Hamilton, Ont.; July 23, 1902, to May 10, 1903, Soliciting Freight Agent, Hamilton, Ont.; May 11, 1903, to June 17, 1906, Soliciting Freight Agent, Toronto; June 18, 1906, to May 31, 1907, Travelling Freight Agent, Ottawa, Ont.; June 1, 1907, to Oct. 31, 1911, chief clerk to Division Freight Agent, Hamilton, Ont.; Nov. 1, 1911, to Jan. 31, 1919, Division Freight Agent, Stratford, Ont.

**Thomas Wilford White**, who has been appointed District Engineer, Western District, Canadian National Rys., Edmonton, Alta., was born at Clinton, Ont., Nov. 29, 1880, and entered railway service in June, 1889, since when he has been, to Oct., 1899, junior clerk, Manager's office, C.P.R., Winnipeg; Oct., 1899, to Apr., 1900, junior clerk, engineer's office, C.P.R., Winnipeg; Apr., 1900, to June 1901, chairman and rodman, Western Lines, C.P.R.; Sept., 1901, to Apr. 1905, rodman, etc., Western Lines, Canadian Northern Ry.; Apr., 1905, to Apr., 1906, instrument man and inspector on bridge construction, Western Lines, C.N.R.; Apr., 1906, to Dec. 31, 1918, Assistant Engineer, chiefly engaged on bridge construction, Western Lines, C.N.R.

**Machine Tool Equipment for Lease Shops, Canadian National Railways.**

The Canadian National Rys. invited tenders recently for the following machine tools, etc., for its Leaside shops, Toronto:—

- 1—34 x 10 x 20 in. Universal milling machine.....belt driven
- 1—16 in. x 6 ft. Tool-room lathe.....belt driven
- 1—Heavy duty double end axle lathe.....motor driven
- 1—48 in. x 48 in. x 15 ft. 4-head planer.....motor driven
- 2—Turret lathes, 2 1/4 x 24 in.....belt driven
- 2—26 in. x 8 ft. engine lathes.....belt driven
- 4—18 in. x 6 ft. engine lathes.....belt driven
- 2—36 in. vertical drills.....belt driven
- 2—25 in. vertical drills.....belt driven
- 1—6 in. radial drill.....motor driven
- 1—Beaudry or Fairbanks hammer.....motor driven
- 1—18 in. wood worker.....belt driven
- 1—72 in. horizontal boring machine.....motor driven
- 1—84 in. vertical boring turning drill.....motor driven
- 1—72 in. planer type surface grinder.....belt driven
- 1—24 in. Morton draw cut shaper.....belt driven
- 1—set 54 in. throat punch and shears, heavy duty.....motor driven
- 1—22 ft. tube rumbler.....belt driven
- 1—Lincoln welding set, suitable for 550 volts, 3 phase, 25 cycles.
- 1—Mephisto welder, suitable for 550 volts, 25 cycle, to be mounted on castors.

**Toronto University, Applied Science Building.**—The Engineering Building used for many years by the Applied Science Faculty, Toronto University, and which has always been an eyesore on account of its ugliness, will, it is said, be pulled down, the Ontario Government having decided to provide \$350,000 for the erection of an electrical engineering building to take its place.

**Traffic Orders by Board of Railway Commissioners.**

**Interswitching at Brandon.**

28063, June 27. Re application of Canadian Northern Ry. for an order amending order 14606, Aug. 21, 1911, providing for interswitching at Brandon. Upon hearing what is alleged in support of the application, the C.P.R. consenting; and upon the recommendation of the board's Chief Traffic Officer; and upon its appearing that clause 2 of order 14606 conflicts with clause 7 of the General Interswitching Order 252, Oct. 28, 1918, it is ordered that order 14606 be amended by striking out the words and figures "eight dollars (\$8)" in the eighth line of clause 2 and substituting therefore the words and figures "twelve dollars (\$12)."

**Rates on Agricultural Lime or Stone Dust.**

28073, Feb. 5. Re application of Henderson Farmers' Lime, Ltd., Woodstock, Ont., for suspension of proposed increase in rates on agricultural lime or stone dust from Kirkfield, Ont. Upon reading what has been filed in support of the application, and upon its also appearing that a similar advance in rates on the same commodities is proposed from Beachville, Ont., it is ordered that G.T.R. supplement 16 to Tariff C.R.C. no. E-4024, and the cancellation of item 195 in C.P.R. supplement 14 to Tariff C.R.C. no. E-3551 be suspended pending hearing at a date to be fixed by the board.

**Commodity Rates on Cheese.**

28088, Feb. 13. Re application of Montreal Board of Trade for suspension of proposed cancellation of commodity rates on cheese to Montreal by C.P.R., G.T.R. and Canadian National Rys.. Upon reading what is filed in support of the application, it is ordered that Supplement 3 to C.P.R. Tariff C.R.C. no. E-3383, Supplement 5 to G.T.R. Tariff C.R.C. no. E-3411, and Supplement 1 to Canadian Northern Ry. Tariff C.R.C. no. E-1121 be suspended pending a hearing of the matter on a date to be fixed by the board.

**Canadian National Railways Tariffs.**

28089, Feb. 10. Re application of the Canadians National Rys., under the amending Act 7-8 Edward VII, sec. 11, chap. 51, for approval of a bylaw enacted by the Canadian Northern Ry. directors, Jan. 10, 1919, authorizing B. E. Perry, Assistant General Freight Agent, Montreal, and W. Hately, Assistant General Freight Agent, Winnipeg, to prepare and issue freight tariffs, and H. H. Melanson, Passenger Traffic Manager, Toronto, R. F. MacLeod, Assistant to Passenger Traffic Manager, Montreal, R. L. Fairbairn, General Passenger Agent, Toronto, and R. Creelman, Assistant Passenger Traffic Manager, Winnipeg, to prepare and issue passenger tariffs, in the districts specified in the bylaw, in respect of tolls upon freight and passenger traffic of every description, to be charged by Canadian National Rys. upon its railways or any part thereof. Upon recommendation of the boards Chief Traffic Officer, it is ordered that the bylaw be approved.

**Rates on Live Poultry.**

28090, Feb. 11. Re application of J. H. Warrington, of Cornwall, Ont., and others for a reduction in class rating and carload minimum weight on shipments of live poultry. Upon reading the application and what is alleged in support thereof, and on behalf of the Canadian Freight Association, and upon the recommendation of the board's Chief Traffic Clerk, it is ordered that the application be dismissed.

**Rate on Second Hand Rails.**

28111, Feb. 18. Re complaint of the St. Lawrence Pulp & Lumber Corporation against rate of \$23.07 a gross ton on second-hand rails from Matapedia, Que., to Vancouver, B.C., published in Canadian Freight Association Tariff C.R.C. 12, effective April 22, 1918, as excessive and unjust, and requesting reparation on shipments made subsequent to April 9, 1918, to the basis of rate of \$14.79 a gross ton from Montreal to Vancouver, published in Canadian Freight Association Tariff C.R.C. 6, effective Mar. 9, 1918, expiring April 9, 1918, with the addition of the customary arbitrary of \$1.12 a gross ton from Matapedia to Montreal. Upon hearing the complaint at Ottawa, Dec. 17, 1918, in the presence of counsel for the Canadian Pacific and the Grand Trunk Railways, the complainant being represented, and what was alleged; and upon reading the further written submission filed on behalf of the C.P.R., it is ordered that the complaint be dismissed.

**Changes in Passenger Fares.**

The following changes went into effect Feb. 1, between stations in Eastern Canadian Passenger Association territory, Quebec, Levis, Megantic and west, including Canadian National Rys., viz., Canadian Northern lines, Intercolonial Division, Quebec, Levis, and west, and Transcontinental Division, Quebec and west.

The ordinary one month round trip fares were increased to the basis of 10% less than double the one way fare. Any fraction of 5c less than 2 1/2c is waived by the carrier, and even 2 1/2c and up to 5c is considered as 5c by the carrier. The basis in effect previous to Feb. 1 was 16 2/3% less than double the one way fare.

Also effective Feb. 1, the charge for 1,000-mile tickets was made \$31, instead of \$25 as theretofore. The former price for a mileage book was the same as the mileage basis of the return fare, and since the new return fare is 3.105c a mile, the price of mileage books was raised to correspond.

Tariffs covering the foregoing were filed with the Board of Railway Commissioners, and are also open for the public's inspection, during office hours, at all ticket offices. As these are special tariffs lower than the standard, they do not require the board's affirmative approval. They were filed on three days notice and remain in effect until they are superseded or are disallowed by the board.

The basis for one month round trip fares mentioned above also became effective on all other Canadian railways on Feb. 1, that is, on the western lines, as well as those in E.C.P.A. territory. Mileage books are not issued on lines west of Port Arthur, or Armstrong, Ont.

The Canada Steamship Lines' Traffic Department advised Canadian Railway and Marine World, Feb. 24, that it had not decided whether it would join with the railways in advancing fares between Quebec and Montreal and between Montreal and Toronto.

**Canadian Locomotive Co., Kingston, Ont.**—Consequent on the death of J. J. Harty in England, F. G. Wallace, of Pittsburgh, Pa., heretofore Vice President, has been elected President, and J. L. Whiting, K.C., of Kingston, has been elected Vice President.



## Payment of Transportation Charges on a Cash Basis.

The Canadian Railway War Board issued circular 97 Feb. 3, superseding circular 86 and supplements thereof.

Effective Mar. 1, 1919, the collection of transportation charges (including demurrage and storage charges) by railways operating in Canada, for services rendered, shall be on a cash basis, and, effective as of that date, credit accommodations then in existence which may be in conflict with the following regulations shall be cancelled:

1. Tickets shall be sold only for cash in advance of service. Baggage charges are subject to the same rule as tickets, except c. o. d. baggage and storage charges, which must be paid in cash before delivery.

2. In cases where the enforcement of this rule with respect to freight will retard prompt movement or delivery of the freight or the prompt release of equipment or station facilities, carriers will be permitted to extend credit for not exceeding seven days after receipt for shipment of a consignment, if it be prepaid, or after delivery at destination if it be a collect consignment (see clause 6) provided the consignor, if it be a prepaid consignment, or the consignee, if it be collect, file a surety bond, either individual (not connected with the business for which credit is requested) or corporate surety company or bank guarantee, in an amount satisfactory to the treasurer or other properly designated officer of the carrier. The form of such bond shall be as per form attached, conditioned upon and providing for payment of all charges within seven days after forwarding or delivery of the freight. Upon receipt and acceptance of such bond a carrier may accept and forward prepaid consignments or may deliver collect consignments in advance of payment of all charges thereon, to the amount covered by the bond. Failure to pay such charges within the time prescribed will automatically cancel such credit.

3. Treasurers or other properly designated officers of individual carriers are required to arrange and conduct all matters relating to such credits. They shall designate the amount and accept or reject the surety offered. Bonds may be required and accepted for individual consignments, or blanket bonds may be accepted from individual shippers or consignees, to cover all of their consignments for a given period. The period of credit in such cases shall, however, be limited to seven days on each shipment as herein prescribed. Where shipper or consignee so desires, one bond may be taken out to cover two or more points. The name of each point and proportion of amount of bond applicable to each point, however, must appear in bond.

4. Premiums on all bonds and all expenses incident thereto shall be borne by the applicant for credit to whom the accommodation is granted.

5. Cheques within the instructions issued by the individual railways to their agents will be considered as payment in cash. At points where there are no banking facilities or where firms have no accounting office, arrangements may be made, subject to the carrier's treasurer or other duly authorized officer, whereby representative of shipper or consignee may settle by giving the carrier's agent a sight draft on shipper or consignee. Remittance of draft, in these circumstances, attached to expense bills, to treasurer, or

other designated officer of carrier, will be accepted as cash. Where acceptance of draft as cash as herein provided is arranged, shipper or consignee, as the case may be, shall absorb the amount of exchange on such draft.

6. In computing the credit period the following will govern—

(a) Prepaid shipment. Credit period shall be computed from time shipper is notified of amount due the carrier covering transportation of the shipment or shipments concerned.

(b) Collect consignment. Credit period shall be computed from time consignee is advised of charges due or time goods are made available for delivery, whichever may be the later.

(c) In either instance where notice of charge due is mailed shipper or consignee, as the case may be, shall be held to have been notified at 7 a.m. following date of mailing.

7. Transportation charges on freight placed in storage, either on property of carrier or in private warehouses, on order of shipper or consignee, after arrival at ultimate destination, are due and payable when such freight is placed in storage. If charges are not collected from the warehouse company, they should be collected from the consignee, under the terms of this circular, or immediately succeeding the time of the placement in storage and not after final delivery to consignee.

8. In the handling of cars in connection with "industrial" railways, delivery shall be considered to have been accomplished and transportation charges due—

(a) When cars are placed upon sidings or team tracks of so-called plant facility industrial railroads, either those connecting directly with the road haul carrier or those located on terminal switching lines.

(b) When placed on interchange tracks with industrial railroads.

(c) Under the provisions of paragraphs (a) and (b), cars will also be considered as delivered when constructively placed as provided by demurrage rules.

(d) The provisions of paragraph (a), (b), and (c) do not apply to "common carrier" industrial railways so long as in good faith deliveries are promptly made by them to consignees and the trunk line carrier's agent is furnished with adequate information with respect to such deliveries so as to permit the prompt rendition of the freight bills.

9. In case of any question as to accuracy of charges, bills must be paid as rendered and claims presented for alleged errors. This will not prevent adjustments by agents of obvious error. An obvious error is one on which both railway agent and shipper or consignee are agreed and which may be corrected without further investigation. In circumstances where the carrier's representative is unable to recognize the inaccuracy claimed by shipper or consignee prior to settlement, the ruling embodied in the first sentence of this paragraph shall govern.

Agents are required to revise their bills properly before presenting for payment, but there is no objection to the consignor or consignee checking the bills and paying charges on the corrected basis, providing the practice is not abused and they proceed in good faith with a revision of the bill, both for undercharges and overcharges. Consignor or consignee should make the change in red ink and the tariff authority for the change should be indi-

cated upon the bill.

In the event of settlement being made on corrected bill and the correctness of the consignor or consignee's action is not apparent to the railway representative, due bill for the deducted amount shall be rendered promptly and credit period of seven days allowed on the supplementary bill, computed from time of service or mailing, as prescribed in clause 6, paragraph (c) hereof.

10. Freight consigned "to order" or "to, order notify" shall be delivered only upon surrender to the agent of the carrier of the original bills of lading for such freight and the payment of the freight charges thereon as hereunder provided. Provided, however, if such bill of lading be lost or delayed, the freight may be delivered in advance of surrender of the bill of lading upon receipt by the agents of a certified cheque for an amount equal to 110% of the invoice, or upon receipt of surety bond, either individual or corporate, acceptable to the Treasurer or other properly designated officer of the carrier in an amount for twice the amount of the invoice.

11. In the event of cancellation of credit by one carrier for failure to pay transportation charges within the prescribed credit period, the carrier cancelling credit shall immediately notify other railways concerned, who shall make similar cancellation. Similar notice shall be given as between carriers in the event of the cancelled credit being re-established.

12. The foregoing regulations shall apply to shipments delivered to and received from consignors and consignees by cartage companies, as well as to shipments handled direct between consignor and consignee and carrier.

13. Until otherwise ordered, these regulations shall not apply to transportation service rendered departments of the Dominion Government; nations allied with Canada in war; the various Provincial Governments of Canada; the counties and municipal governments; transportation and authorized cartage companies.

14. Advice of the foregoing regulations shall be given promptly to all to whom credit accommodations are now given to the end that the regulations may be put into effect at the time specified with as little inconvenience as possible.

### Postponement of Regulations.

The board issued the following circular Feb. 28:—This will confirm telegraphic notices issued to member lines Feb. 27, reading as follows:—

1. "Referring article 2, circular 97. Where literal application of terms of circular with respect to cash collection of transportation charges would involve undue delay to traffic, or congestion of facilities, account holding shipments, either collect or prepaid, until cash actually in hands of railways, carrier's agent should apply to treasurer or other duly authorized officer of railway for authority to grant 48 hours credit without bond."

2. "Although majority of the larger railway patrons have arranged to comply with terms of board's circular 97, board is informed that in certain localities, notice of cancellation existing credits and establishment credits pursuant to circular was late in reaching public from railways, sufficient time not having been allowed for shippers to provide bonds. It is suggested that in such circumstances, with a view to minimizing inconvenience to public, account change of methods, arrangements should be made



for continuation of present credits for reasonable length of time, but not later than June 1, 1917, to permit shippers and consignees to procure and file bonds. Acknowledge."

While the period during which present credit arrangements may continue in effect has been extended to June 1, 1919,

it is on the understanding that railway representatives, shippers and consignees, will proceed in good faith with the completion of arrangements under the terms of circular 97, so that the entire system will be in condition for inauguration at all points throughout the country not later than the date mentioned.

## Canadian Transportation Men, Engineers, Etc. in the War.

**C.P.R. Employees in the War.**—Since the outbreak of war, 9,629 C.P.R. employees joined the army. Of these 842 are dead, 1,844 were wounded and 1,108 have been re-employed. The company is employing 1,557 soldiers who were not previously in its service, so that it has given work to 2,665 returned soldiers.

**The Timiskaming & Northern Ontario Railwaymen's Patriotic Association,** up to Nov. 30, 1918, contributed \$96,872.37 to the Canadian Red Cross and the Canadian Patriotic Funds, exclusive of personal subscriptions made direct by members of the commission and employes.

### PERSONAL NOTES.

**Lieut.-Col. H. L. Bodwell, C.M.G., D.S.O.,** who died of pneumonia at St John, N.B., when returning from the front, recently, was born at Ingersoll, Ont., Oct. 13, 1881, and educated at the Royal Military College, Kingston, Ont. He was one of the engineers on the construction of the Grand Trunk Pacific Ry., and later was an instructor in civil engineering at the Royal Military College. In 1907 he was appointed Resident Engineer of the Canton-Hankow Ry., at Kwong Tung, China, and later returned to Canada, where he was for some time on railway construction with Foley, Welch & Stewart. On the outbreak of war he enlisted, was wounded at St. Eloi in Apr., 1916, awarded the D.S.O. in Sept., 1916, appointed Assistant Director of Light Railways in Dec., 1916, and was subsequently made a Companion of the Order of St. Michael and St. George, and also awarded the Croix de Guerre by the French Government. The official notice in the London Gazette stated that he directed, with great competence and sustained energy, and carried to a successful completion, in the minimum of time, in spite of conditions of working which were often difficult, the construction and putting into operation of a new system of 60 kilometers of railway, which greatly facilitated the supply of the French troops.

**Col. J. S. Dennis, C.M.G.,** Chief Commissioner of Colonization and Development, C.P.R., and Canadian Commissioner with the Siberian Expedition, has, it is said, been placed in charge of the united Canadian and British Red Cross organizations for this expedition.

**Major A. deCourcy Meade, M.C.,** who was killed in a motor accident near Drogheda, Ireland, recently, was formerly engaged on railway construction in Western Canada. He enlisted in 1914, and went to France early in 1915, and was there continuously until after the signing of the armistice.

**Brigadier General J. W. Stewart,** formerly of Foley Bros., Welch & Stewart, railway contractors, Vancouver, B.C., and who was appointed Director of Transportation in France and Flanders towards the end of the war, has been made a Companion of the Order of the Bath, in recognition of his work in connection with railways during the war.

**Major W. G. Swan,** who received the Distinguished Service Order recently, also holds the French Croix de Guerre, and has been mentioned in dispatches twice. Prior to entering the army, he was on the Canadian Northern Ry. engineering staff at Vancouver, B.C., as Division Engineer in charge of construction from Steveston to Hope. He enlisted in the 131st Battalion, and on arrival overseas he was transferred to the Railway Troops, being for 20 months with the Imperial Army, and later being transferred to the Canadians.

**Capt. J. A. Tuzo,** who was killed in action in German East Africa in the early part of 1918, was born in England in 1874, and came to Canada in 1897, and was engaged in mining in Yale District, B.C., for about 8 years, and later took up railway work in the U.S. and in British Columbia. In 1907 he was Resident Engineer, Spokane, Portland & Seattle Ry., and 1910 was Resident Engineer, Kettle Valley Ry., Midway, B.C. On the outbreak of war he returned to England and received a commission in the Imperial Army.

### Railway Finance, Meetings, Etc.

**Canadian Northern Rolling Stock Co.**—There has been deposited with the Secretary of State at Ottawa duplicate original of a lease dated Jan. 2, made between the company and the Canadian Northern Ry., covering certain rolling stock, there being attached to the lease an assignment to the Pennsylvania Co. for Insurance on Lives and Granting Annuities.

**Elgin & Havelock Ry.**—A meeting of the shareholders of the company was called to be held at Halifax, N.S., Feb. 17, to ratify an agreement for the sale of the company's railway in New Brunswick to the Dominion Government, and for the transaction of other business in connection with the winding up of the company's affairs.

**Grand Trunk Pacific Ry.**—An issue of G.T. Pacific Ry. bonds, guaranteed by the Dominion of Canada, was placed on the Canadian market Jan. 29. The issue, which amounts to \$5,254,632, was authorized in 1914, bearing interest at 4%, and is redeemable in 1962. The issue price was 75.37, yielding 5½%. The issue is reported to have been entirely taken up on the day of issue, 80% being taken by Canadian institutions. This is the first time the G.T.R. or the G.T. Pacific Ry. has made an offering of securities on the Canadian market.

**Michigan Central Rd.**—There has been deposited with the Secretary of State at Ottawa an agreement dated Dec. 31, 1918, made between John Carstensen and others, the Guarantee Trust Co. of New York, and the Michigan Central Rd., relating to the Michigan Central Rd. Equipment Trust of 1917.

**North Shore Ry.**—The New Brunswick courts have ordered the sale of seven

parcels of land owned by the North Shore Ry., as successor to the old Beersville Coal & Ry. Co., in connection with the action brought by G. W. Fowler against the company. The sale is fixed for Mar. 8, at Kent Jct. station, N.B. The lands seized under the order are those sold to the Beersville Coal & Ry. Co. for a right of way by P. Beers and wife; W. Stevens and wife; E. Ogden; T. Burgess; G. Reid; R. N. Reid, and J. F. Irvine.

**Quebec & Saguenay Ry.**—The Quebec Savings & Trust Co., acting as trustees for the holders of two issues of the company's bonds, is offering for sale by tender, to Mar. 4, the company's railway from its junction with the Quebec, Montmorency & Charlevoix Ry., to Nairn Falls. The first is of \$3,000,000 of 5% 30 year 1st mortgage bonds, dated Jan. 28, 1911, and the second is of \$2,000,000 5% 30 year 1st mortgage bonds dated Mar. 20, 1912, the whole of both issues being held by the Quebec Ry., Light, Heat & Power Co. The minimum price is \$3,489,313.53, and the railway will be delivered to the purchaser free and clear of all charges, encumbrances or claims. The purchase price is to be paid 20% at the time of making the offer and the balance on the execution of the deeds.

### Timiskaming & Northern Ontario Ry.—

	Dec. 1918	Dec. 1917
Passenger revenue .....	\$ 52,921.20	\$ 54,374.86
Freight revenue .....	153,799.78	110,112.03
Total revenue.....	\$206,720.98	\$164,486.89

**Tobique Valley Ry. Extension Co.**—A meeting of shareholders has been called to be held at Andover, N.B., Mar. 4, to receive the annual statement of accounts, to elect directors, to make a call of 10% on the capital stock, and to transact other business. J. W. Niles is Secretary. The company was formed some years ago under a New Brunswick charter to build a line from Plaster Rock, the terminus of the Tobique Valley Ry., extending from Andover to Plaster Rock, and operated by the C.P.R., to Riley Brook, and other points in the interior of the country. Plaster Rock is also a station on the National Transcontinental Ry., at mileage 165 from Moncton.

### Canadian National Railways Earnings, Expenses, Etc.

Approximate earnings for January, \$6,744,018, against \$4,696,567 for Jan., 1918, and for two weeks ended Feb. 14, \$2,982,199, against \$2,150,957 for same period 1918.

### Canadian Pacific Railway Earnings, Expenses, Etc.

Gross earnings, working expenses, net earnings, and increases or decreases, compared with those of 1918, from Jan. 1, 1919:

	Gross earnings	Expenses	Net earnings	Increases
Jan.	\$13,028,328	\$11,474,816	\$1,553,512	\$385,519

Inc. \$ 2,238,511 \$ 1,852,992 \$ 385,519 .....  
Approximate earnings for three weeks ended Feb. 21, \$8,191,000, against \$6,837,000 for same period 1918.

### Grand Trunk Railway Earnings, Expenses, Etc.

Approximate earnings for January, \$4,405,236, against \$2,984,419 for Jan., 1918, and for two weeks ended Feb. 14, \$1,853,957, against \$1,006,316 for same period 1918.

### Grand Trunk Pacific Ry. Earnings.

Approximate earnings for January, \$412,499, against \$440,209 for Jan., 1918.



## Canadian National Railways Construction, Betterments, Etc.

**General Betterments, Extensions, etc.**—As stated in Canadian Railway and Marine World for February, it is said that the Dominion Government has consented, subject to parliamentary approval, of an expenditure of at least \$50,000,000, and possibly \$60,000,000, this year, of which \$20,000,000 will be required for rolling stock already and about to be ordered, and possibly the expenditure under this head will be increased to \$30,000,000. Betterments, extensions, etc., will probably require at least \$20,000,000, and possibly \$30,000,000.

While no definite figures are yet available, ministers gave some general particulars in the House of Commons recently in the debate on the speech from the throne. The Finance Minister said on Feb. 25:—"To give an idea of the amount of money which will be involved in the programme which I have outlined, it will be sufficient to say that it is estimated that there will be required \$35,000,000 for rolling stock and material such as steel rails. In addition to that, a sum exceeding \$20,000,000 will be needed for railway extensions and more than \$10,000,000 for betterments and improvements. The government lost no time in taking up these important plans, which are useful and advantageous from the national standpoint in adding to our national railway plant and equipment, and which will, at the same time, provide employment for thousands of men."

The Minister of Public Works said on Feb. 26:—"I am speaking from memory, and did not expect to be asked about this railway question particularly. There is provision, as I recollect it, of about \$10,000,000 for the construction of branch lines in the west. I think that this expenditure for the west will be pretty well confined to lines already partially constructed. Many of these lines have been graded and are only waiting for the rails. In general terms, the idea is to extend those lines already under construction, but, in addition, very large sums are to be expended on betterments over the whole government system. This will distribute the money all over the country and will provide employment."

President D. B. Hanna is reported to have said at Ottawa, Feb. 4:—"The Canadian National Rys. management has in contemplation a programme of construction, betterments and augmentation of motive power and rolling stock, which will give employment to some fifteen thousand men, and will involve an expenditure of many millions of dollars."

Since the above was put in type, Canadian Railway and Marine World has been advised that the total appropriations required for the Canadian National Rys. this year, for rolling stock, betterments, extensions, etc., will be about \$60,000,000. The rolling stock will be added to, so as to provide for a daily train service both ways between Montreal, Toronto and Vancouver, and for the demands caused by increased freight and passenger traffic over the whole system. There will also be an extensive programme of betterments from coast to coast, and a number of extensions will be built in the west.

On the Eastern Lines, the Halifax ocean terminals construction will be proceeded with, as fast as circumstances will permit. Some second track will be built from division points in both directions. A number of passing tracks will be extended, and new ones built, and yards will be enlarged. There will be a large

expenditure for renewal of bridges, to accommodate the heavier locomotives which will be operated. A number of passenger and freight stations will be enlarged, a number of section houses will be built, also a number of workmen's houses at divisional points, to better employes' living conditions. Some locomotive houses will be enlarged to accommodate larger locomotives, water supply stations will be improved and a number of coal handling plants and ice houses will be built. The National Transcontinental Ry. shops at St. Malo, Que., will be equipped and opened.

On the Western Lines, very similar general work of betterments to that on the Eastern Lines will be done. A considerable number of section houses and workmen's houses will be built. Terminal facilities generally will be improved as business necessitates. There will be an extensive construction programme on the Western Lines, track will be laid on over 200 miles of lines already graded, and some extensions will be graded and laid with track, making about 350 miles of new track to be laid. The rails for these branches will be taken from the main line, where they will be replaced by heavier rails, making a total of about 700 miles of track to be laid altogether.

A large amount of ballasting and bridge filling will be done over the entire system, both Eastern and Western Lines.

In addition to the large orders already placed, and to be placed, for rolling stock, orders will have to be given for a very large amount of material, including some 50,000 tons of steel rails, some millions of ties, and considerable quantities of track bolts, plates and spikes, piling and bridge timber. It is expected that the works outlined above will give employment to some 15,000 men.

**Intercolonial Ry.**—The Sydney, N.S., Board of Trade, on Feb. 4, heard a deputation from the Farmers' Association, asking co-operation in endeavoring to secure the building of a railway into Sydney via East Bay. The matter will, it is said, be brought before the House of Commons by members, and the Farmers' Association and the Board of Trade will forward resolutions of approval.

The Halifax Board of Trade at its recent annual meeting passed a resolution favoring the building of a second track from Moncton, N.B., to Halifax, N.S.

A Fredericton, N.B., press report states that among the appropriations to be asked from Parliament at the current session will be one for \$800,000 for improvements on the old Canada Eastern Ry., between Fredericton and McGivney Jct., in order to make it suitable for the operation of trains into St. John, over the St. John & Quebec Ry. The work to be done on the section of the line referred to will include a reduction of gradients and curvature, and the laying of heavier rails. Surveys were reported to be in progress Feb. 11.

It is also reported that it is contemplated to erect in a near future a new bridge over the St. John River at Fredericton, at an estimated cost of \$1,000,000. Boring operations for testing for foundations were reported to have been started Feb. 17.

**National Transcontinental Ry.**—Mayor Lavigne, on returning to Quebec, Feb. 11, from Toronto, was reported to have said D. B. Hanna President Canadian National Rys., informed him that the N.T.R. shops at St. Malo, Quebec, will be

opened within six months.

A press report states that it is contemplated to build a line from Montreal via Cartierville to La Tuque, Que., which is on the St. Maurice River, and on the National Transcontinental Ry.'s main line, mileage 583 from Moncton, and is the terminus of a Canadian Northern Ry. branch

**Canadian Northern Ry.**—The temporary bridge to carry the company's traffic, etc., over the St. Charles River, at Quebec, was opened for traffic Feb. 7. It is expected that the new steel bridge will be opened for traffic in May. The Dominion Bridge Co. is the contractor.

An Ottawa press report of Feb. 18 stated that the company's shops at Rideau Jct., Ottawa, will be closed before long, and that new shops will be erected on the north bank of the Rideau Canal, within the city limits. A site of over four acres is reported to have been secured for this purpose.

President D. B. Hanna is reported to have said in an interview at Ottawa, Feb. 4, that this year's work on the C.N.R. will include the laying of 85 lb. steel rails on many portions of the main lines, where traffic is heavy, notably between Port Arthur and Winnipeg. The Goose Lake line, for 40 miles between Hanna and Wayne, in the Drumheller coal-bearing region, would be double tracked as soon as possible, and later the whole line to Calgary will be double tracked.

We are officially advised in regard to the Hanna-Medicine Hat line, that the starting point is at Bonar, the first siding east of Hanna, and its terminus at Medicine Hat, 144 miles. Grading has been completed from Bonar to the Red Deer River, approximately 59 miles, and 3 miles of track have been laid from Bonar. It is proposed to lay rails on the completed grading to the Red Deer River. Grading will be continued from the Red Deer River toward Medicine Hat, and possibly some track will be laid this year. The line has an easy gradient and curvature. The track will be of 80 lb. steel. The W. J. Cowan Co., Winnipeg, had the contract for the grading of the first seven miles, and the W. J. Dutton Contracting Co., Winnipeg, had the contract for grading from mileage 7 to to 59. It is expected to start construction on the bridge across the Red Deer River at an early date.

The British Columbia Premier is reported to have stated recently that President D. B. Hanna had advised him of the early starting of construction on the Kamloops-Vernon branch line. This will mean taking the present line from the north side of the South Thompson River across the river into the City of Kamloops and southwards through the Grand Prairie locality. At present the line parallels the North Thompson to the Y across the South Thompson from Kamloops, proceeding for that point westward across the North River bridge to the coast. We were advised in January that the bridge across the Thompson River at Kamloops had been completed, and that the grading of the line into Kamloops would be gone on with this year.

Tenders have been asked up to Mar. 15 for the excavation and lining of the Rosebud Valley tunnel, on the proposed revision of the line in the vicinity of mileage 334.00, Calgary Subdivision. The proposed tunnel is on the line from Saskatoon to Calgary, and is situated between Benyon, mileage 330.4, and Rosebud, mileage 339.00.



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**Railway Tribute to Ex-Premier.**—On Feb. 22, when the late Sir Wilfrid Laurier was buried, all work was suspended on the railways throughout Canada for one minute. Representative officials of the various railways attended the funeral at Ottawa.

**Government Control of British Railways.**

London press dispatch, Feb. 28, by British wireless service:—Publication of the government's transport bill, which has been introduced in Parliament, shows that it will give the Minister of Transport complete control over every conceivable form of land transport. The bill provides that complete management of the railways of the United Kingdom is to be conducted by the state for two years, partly to enable the government to make the railways pay dividends, and partly to facilitate the movement of men and material during the period of reconstruction. Complete power is given to the Minister, during the two years, to settle all railway rates and charges, salaries and wages and conditions of employment, and to make any alterations in the policy of the roads and accounts that he may deem advisable. The Minister is authorized to purchase various kinds of railway companies by agreement or by compulsion. Under these provisions he could purchase, in whole or in part, any railway, light railway, street car company, canal, inland waterways or harbor and dock undertakings during the first two years of the ministry.

**The Hamilton Railway Location and Terminals Question.**

The following report was approved at Ottawa by the Privy Council Jan. 30:—"The committee of the Privy Council, after having duly considered the appeal of the City of Hamilton, dated Dec. 18, 1918, against orders 27843 and 27857 of the Board of Railway Commissioners, and having heard the appellant in support thereof, on Jan. 22, have come to the conclusion that as the circumstances under which said orders were issued have been altered by the signing of the armistice, the matter should be referred to the Board of Railway Commissioners for the reconsideration of the said orders, and for any further action in the premises which, under present conditions, it may now deem advisable."

One of the orders in question authorizes the Toronto, Hamilton & Buffalo Ry. to expropriate some city property for the extension of its Kinnear yards, and the other authorizes the company to lay four additional tracks across Selby Ave. In connection with these matters, certain city property was to be leased to the T. H. & B. Ry. temporarily.

G. A. Mountain, Chief Engineer, Board of Railway Commissioners, was in Hamilton, Jan. 29, and following days in consultations with R. L. Latham, Chief Engineer, T. H. & B. Ry., and N. Gray, City Engineer, upon the various matters involved. In the course of an interview, he is reported to have said that the proposition to be dealt with was one of the most difficult he had ever had. The carrying out of the recommendations of the Tye-Cauchon report would mean the complete tearing up of the eastern section of the city. It calls, for instance, for the abolition of the Ferguson Ave. cross-town line, the elimination of the T. H. & B. Ry. through line in the south end of the city and the wrecking of two stations. A number of manufactories, with big investments, would have to be transferred to new locations. This means the expenditure of millions of dollars. Upon the completion of Mr. Mountain's report on the situation the board will fix a date for the rehearing of the matters covered by the two orders.

In the meantime the city council has made application to the Ontario Legislature for authority to build a line from the T. H. & B. Ry. in lot 29, con. 4, of Saltfleet Tp., northerly to the Grand Trunk Ry., Northern and Northwestern Division in lot 29 or 30, broken front concession of Saltfleet Tp.; and to authorize the council to pass bylaws, with the assent of the ratepayers, to provide the funds necessary for the construction and operation of the line; and further to authorize the passing of a bylaw for the expenditure of \$15,000 to complete the filling in of Sherman inlet, between the T. H. & B. Ry. belt line and the G.T.R., Northern and Northwestern Division.

A special meeting of the civic railway committee was called for Feb. 21 to consider a proposed application to the Board of Railway Commissioners to approve plans for the extension of streets extending up the side of the Mountain, east of Sherman Ave.

**Reported Sale of National Steel Car Company.**

It was reported on the Toronto Stock Exchange, Feb. 25, that negotiations had been completed for the purchase of the National Steel Car Co.'s plant at Hamilton, Ont., by the American Car & Foundry Co., and that it would be operated for the handling

A New York press despatch of Feb. 25 said: "Information circulated in the financial district today to the effect that negotiations are being carried on between the American Car & Foundry Co. and the National Steel Car Co. of Hamilton, Ont., for the acquisition of the latter by the former attracted considerable attention. When an officer of the company was asked to deny or affirm the report he refused to comment upon it, saying that he might have a statement to make on the matter in the course of a few days. This was interpreted in some quarters to mean that a deal is on, but has not been completed as yet."

The Hamilton Spectator said on Feb. 26: "Sir John Gibson, the President, has stated day after day that no deal had been closed whereby the control of the local company had changed hands. Today he stated that there was 'no change in the situation.'"

A Hamilton press despatch of Feb. 27 said: "Sir John Gibson today confirmed the report that negotiations for the purchase of the National Steel Car Co., by the American Car & Foundry Co., were in progress, but he declined to say anything further."

A New York press dispatch of Feb. 27, said that the purchase had been concluded.

Moose Jaw, Sask., wants the C.P.R. to build an hotel there.

**Consolidated Railway Act.**—The first bill introduced in the Senate at Ottawa this session is "An act to consolidate and amend the Railway Act", which has been under consideration by parliament for several sessions.

The Canadian Engineering Standards Association has been incorporated under Dominion law by Sir John Kennedy, Prof. R. F. Ruttan, R. D. Durley and H. H. Vaughan, of Montreal. The objects are to co-ordinate the various producers and users for the improvement and standardization of engineering materials, and the general adoption of standards in connection with engineering structures, materials, etc.



## Canadian Pacific Railway Construction, Betterments, Etc.

**Betterment Work for 1919.**—We are officially advised that the betterments to be made on the system during this year include the following:—The renewals, bridge work, locomotive turntables, ballasting, ditching, tile drains, etc., tie plates and rail anchors, station and building work and erecting section dwelling houses, laying sidings and yard tracks, terminal and other improvements, water supply, pipe lines, tanks, etc.; automatic signals and interlocking plants; fencing, repairs and renewals; telegraph work, renewals and improvements; additional plant for British Columbia lake and river steamboats, and other miscellaneous work.

Repairs and renewals of bridges covers, in addition to ordinary maintenance, the putting in of heavier spans between Guy St. and Green Ave., Montreal, as well as a large amount of new culverts and culvert extensions. New turntables will be constructed at various points. The ballasting, ditching, tile draining, tie plates and rail anchors will be largely improvements of present tracks. The station building work will include a number of minor stations, and additions and improvements of old stations, as well as new platform and other work; also some new freight sheds and freight shed facilities. About 38 dwellings are to be built as section and dwelling houses for the accommodation of employes, in order to attract a good type of labor. The siding and yard tracks to be laid will be additions to present yard accommodation at various congested points. The water supply and pipe lines will include a number of steel tanks, new pipe lines and some pumping machines, as well as dam and other work. Automatic signals will be installed between Guelph Jct. and Galt, Ont., and interlocking plants at Walkerton, Ont., Saskatoon, Sask., will be renewed. In addition to the ordinary fencing repair work, there will be some new fences put up, and some additional tree planting for snow protection. The miscellaneous work will cover a large amount of small work in renewing floors, roofs, skylights, piping, boiler and other work at a large number of locations all over the system. The telegraph work will include a new copper wire line from Halifax to Winnipeg, and from Toronto to Windsor, Ont., as well as dispatcher telephones, together with the usual renewals and improvements.

The British Columbia lake and river steamship work will include maintenance and general repairs, as well as the purchase of a new tug for the coast service, and a transfer barge for lake service.

Grant Hall, Vice President, made a trip of inspection of the company's lines east of Montreal recently, during which he looked into various matters connected with the construction programme for 1919. A. D. MacTier, Vice President, Eastern Lines, was in London, Feb. 18, and Hamilton, Feb. 20, looking into similar matters.

**Employes Houses at Fredericton.**—A press report states that the company proposes to build 30 new houses at Fredericton, N.B., for its employes.

**Ontario District.**—We are officially advised that there is no foundation for recent press reports that the C.P.R. has under consideration plans for electrifying its line between Toronto and Windsor, Ont.

**Manitoba District.**—A press report

states that among the betterments which will be carried out during this year at Fort William, Ont., will be the paving of the large stock yards with concrete for permanency and the placing of new ties and steel in different parts of the yards. At Raith, a few miles west of Fort William, the company will build a large coal handling plant, and it is said that new ties will be laid on a considerable portion of the right of way from Fort William west.

Tenders were received to Feb. 28 for the construction of reinforced concrete culverts, arches, slabs and piles at various points on the division.

**British Columbia District.**—In reference to the proposal to build a new pier at the Vancouver ocean terminals, we are officially advised that the special committee appointed to consider the company's needs at the port recommended the construction, when traffic might demand it, of two more ocean piers. The one now recommended to be built is the first of these. No decision has yet been announced as to its size, design or exact location. (Feb., pg. 75.)

## Freight and Passenger Traffic Notes.

The New York Central Rd. has been ordered to stop all its trains both incoming and outgoing, on flag at Westmount station, Que.

Grand Trunk Pacific Ry. freight and passenger officials, also those connected with its steamship lines on the Pacific, had a conference at Edmonton, Alta., Feb. 9 to 12.

The C.P.R. informed the Montreal Board of Trade's Transportation Bureau Feb. 14, that all embargoes against the shipping of freight in transit for orders had been removed.

The Great Northern Ry.'s time table, showing service proposed between Guichon and Sumas, via Coldbrook, and to Vancouver, B.C., was approved by the Board of Railway Commissioners, Jan. 25.

As showing the development of passenger traffic on the Edmonton, Dunvegan & British Columbia Ry., and its subsidiary lines, on the arrival of the train at Edmonton, Alta., Feb. 12, there were over 300 passengers on board.

The Canadian Northern Ry. has been ordered, by the Board of Railway Commissioners, to establish a mixed train service, carrying both baggage and express, daily except Sunday, between Yarker and Napanee, Ont.

The relaxation of the war time limitations of the Food Board, enables the railway companies to restore to former fullness the dining car menu. It is reported that the a la carte dining car service is to be restored on the United States railways Mar. 1.

The Delaware & Hudson Rd. has commenced running a sleeping car containing 7 compartments and 2 drawing rooms on its Montreal-New York trains, which leave the C.P.R. Windsor St. station, Montreal, at 8.10 p.m., and the Grand Central Terminal in New York at 7.45 p.m. daily.

Two C.P.R. sleeping car conductors were sentenced to 10 days in jail, and a further term of six months in default of paying \$500 fines at the Fort William Assizes, Feb. 13, on three charges of wrongfully dealing with sleeping car fares. The accused pleaded not guilty to theft, but

guilty to the lesser charge of accepting secret commissions.

The Canadian Pacific Ry. announces that stop-over privileges for not exceeding 10 days are permitted, on application to conductor and deposit of tickets with agent at stopover station on through limited tickets between U.S. points, reading over C.P.R., at the following points: Banff and Lake Louise, Alta; Field, Glacier, Revelstoke, Sicamous and Penticton, B.C.

An embargo on the shipment of all grain consigned to the terminal elevators at Port Arthur, Ont., was reported to have been put into effect Feb. 16. All the Canadian Northern Ry. elevators at Port Arthur are full, and it was estimated that there were 700 cars of grain on the Canadian National Railways east of Winnipeg. The embargo, which does not affect C.P.R. lines, is not expected to be lifted until the spring.

Mrs. E. Slade, Quebec, brought an action in a Quebec court against the Pullman Co. for \$2,000 damages for injuries to the health of her minor daughter alleged to have been caused by the negligence of the company's servants, while the girl was on a journey. The judge found that satisfactory proof was not furnished that the injury to the girl's health was caused by an open ventilator which the conductor refused to close, and the action was dismissed with costs.

The C.P.R. is reported to have purchased the site of Evangeline's house at Grand Pre, N.S., on the Dominion Atlantic Ry., which it operates, and will maintain it as a public park. The site is the scene of Longfellow's poem, Evangeline, and is the second of the scenes of Longfellow's poems to be utilized by the C.P.R. for tourist attractions. This other is at Desbarats, Ont., on the Sault Ste. Marie line, where a representation of Hiawatha is occasionally given by Indians during the tourist season.

The Canadian National Rys. has adopted, ratified, and made its own, in every respect as if the same had been originally filed and posted by it, all passenger tariffs, rules, notices, concurrences, traffic agreements, divisions, authorities, powers of attorney, or other instruments whatsoever, filed with the Interstate Commerce Commission and Board of Railway Commissioners for Canada, by the Canadian Northern Ry. (all lines), Canadian Government Rys. (all lines), Halifax & South Western Ry., or filed by their agents, prior to Mar. 1, the beginning of its possession. It has also adopted all supplements or amendments to any of the above tariffs, etc., which have been heretofore filed with said commissions by the above-mentioned lines or their agents.

**Passenger Meetings.**—Owing to present conditions affecting railways in the United States, it is not likely that it will be practicable for the Niagara Frontier Summer Rate Committee to meet in the near future, as in former years. The question of holding meetings of the Great Lakes and St. Lawrence River Rate Committee, and the International Waterlines Passenger Association, is under consideration.

**St. John & Quebec Ry. Financing.**—The action brought by the New Brunswick Government for the recovery of certain funds belonging to the St. John & Quebec Ry., which a royal commission found to have been improperly applied, came before the New Brunswick Court of Appeal Feb. 14, on a motion to dismiss. Judgment was reserved.



## Transportation Appointments Throughout Canada.

The information under this head, which is gathered almost entirely from official sources, is compiled with the greatest care, so as to ensure absolute accuracy. Anyone who may notice any error in our announcements will confer a favor by advising us.

**Canada Steamship Lines, Ltd.**—For changes in directorate and officials, see Marine Department, farther on in this issue.

**Canadian National Rys.**—E. P. MALORY, heretofore chief clerk to Assistant Vice President, Canadian National Rys., has been appointed Statistician in the Assistant to President's office.

EWART B. WALKER, formerly of Chapman & Walker, Ltd., Toronto, and who has been employed by the Canadian Northern for some time in electrical work, has been appointed Electrical Engineer, Canadian National Rys. Office, Toronto.

J. B. SMITH has been appointed Chief Dispatcher, Canadian National Rys., Ottawa, Ont.

R. FYFE, heretofore Scale Inspector, Western Lines, Canadian Northern Ry., Winnipeg, has been appointed Scale Inspector, Western Lines, Canadian National Rys. Office, Winnipeg.

J. SCHOFIELD, heretofore Architect, Western Lines, Canadian Northern Ry., Winnipeg, has been appointed Architect, Western Lines, Canadian National Rys. Office, Winnipeg.

O. E. BARKER has been appointed Chief Dispatcher, Saskatoon, Sask., vice A. MacRae, transferred.

H. R. ARTHUR has been appointed Trainmaster, Saskatoon, Sask., vice D. W. Mahoney, transferred.

W. F. MILLER has been appointed Car Foreman, Trenton, Ont., vice — Walsh, who has been absent for some time on sick leave, during which time W. Dadswell was acting Car Foreman there.

R. W. MOORE, heretofore General Car Foreman, Western Lines, Canadian Government Rys., Cochrane, Ont., has been appointed District Car Foreman, Prairie District, Canadian National Rys. Office, Saskatoon, Sask.

T. W. WHITE, heretofore Inspecting Bridge Engineer, Canadian Northern Ry., Winnipeg, has been appointed District Engineer, Canadian National Rys., Edmonton, Alta.

J. BIRSE, heretofore Master Mechanic, District 3, Transcontinental Division, Canadian Government Rys., Fort William, Ont., has been appointed Assistant Master Mechanic, Central District, Canadian National Rys. Office, Sioux Lookout, Ont.

G. H. HEDGE, heretofore General Master Mechanic, Western Lines, Canadian Northern Ry., Winnipeg, has been appointed Works Manager in charge of Fort Rouge and Transcona Shops, Canadian National Rys. Office, Winnipeg.

The Sleeping, Dining and Parlor Car, Hotel and News Department is under the management of WALTER PRATT, Manager, Toronto, and A. S. McLEAN is Superintendent of Hotels, with office at Winnipeg. The train service is divided into three districts, with Superintendents, as follows: Lines east of Montreal, Superintendent, E. CAMERON, Halifax, N.S.; lines west of Quebec and Montreal to Port Arthur and Cochrane, Ont., Superintendent, EUSTACE SMITH, Toronto; lines west of Port Arthur and Cochrane, Ont., to Vancouver, B.C., Superintendent, J. M. GRIEVE, Winnipeg.

E. CAMERON has been appointed

Superintendent of Sleeping, Dining and Parlor Cars, vice F. W. ROBERTSON, transferred. Office, Halifax, N.S.

JAMES F. COLEMAN has been appointed Assistant Superintendent, Sleep-



J. O. Apps,

General Agent, Mail, Baggage and Milk Traffic, Canadian Pacific Railway.



J. E. LePage,

Division Freight Agent, Canadian National Rys., Quebec, Que.

ing, Dining and Parlor Cars. Office, Halifax, N.S.

S. D. DULMAGE has been appointed Supervisor, Sleeping, Dining and Parlor

Cars, Halifax, N.S.

JOHN A. McISAAC has been appointed Assistant Supervisor, Sleeping, Dining and Parlor Cars, Halifax, N.S.

S. R. CAIRNS has been appointed Inspector, Sleeping, Dining and Parlor Car, Hotel and News Department on all eastern lines. Office, Ottawa, Ont.

H. B. NEVIN has been appointed Inspector, Sleeping and Dining Car Department, Eastern Lines, Canadian National Rys., Toronto.

W. C. POTTS has been appointed Inspector, Sleeping and Dining Car Department, Eastern Lines, Canadian National Rys., Toronto.

J. W. KIMBALL has been appointed Superintendent, Boarding Car Department, Western Lines. Office, Winnipeg.

A. S. McLEAN, heretofore Assistant Superintendent of Hotels, Canadian Northern Ry., Port Arthur, Ont., has been appointed Superintendent of Hotels, Canadian National Rys. Office, Winnipeg.

F. H. KINNEAR, heretofore Assistant Purchasing Agent, Department of Railways and Canals, Ottawa, Ont., has been appointed chief clerk to General Purchasing Agent, Canadian National Rys., Toronto.

H. T. RAWLINGS, heretofore Chief Clerk to R. C. Vaughan, Assistant to President, Canadian National Rys., Toronto, has been appointed Lake Forwarding Agent and Fuel Inspector, with office at Rockefeller Building, Cleveland, Ohio, effective April 1.

L. E. PRATTE, of the Legal and Claims Department, Canadian Government Rys., has been appointed Claims Agent, Levis, Que., vice F. B. Atkinson, deceased.

ORANGE H. CLARKE, heretofore Western Counsel, Canadian Northern Ry., Winnipeg, has left the service. W. W. EVANS, heretofore Solicitor, Canadian Northern Ry., Winnipeg, has taken over, for the present, the duties performed heretofore by Mr. Clarke, and is acting for the Canadian National Rys.

The General Claims Department, Winnipeg, has been merged with the Legal Department there, under W. W. EVANS, Solicitor; and A. E. MACDONALD, heretofore General Claims Agent, Winnipeg, having been appointed acting Superintendent, Dauphin, Man., as announced previously.

H. A. STUART, heretofore City Freight Agent, Winnipeg, has been appointed Division Freight Agent, Brandon, Man., vice R. M. MILLIKEN, transferred.

R. M. MILLIKEN, heretofore District Freight Agent, Canadian Northern Ry., Brandon, Man., has been appointed Division Freight Agent, Canadian National Rys., Regina, Sask., vice W. A. Whyte, transferred.

B. R. MARSALES, heretofore District Freight Agent, Canadian Northern Ry., Calgary, Alta., has been appointed Division Freight Agent, Canadian National Rys., Saskatoon, Sask., vice J. M. Macrae, whose appointment as Assistant General Freight Agent, Winnipeg, has been announced previously.

W. A. WHYTE, heretofore District Freight Agent, Canadian Northern Ry., Regina, Sask., has been appointed Division Freight Agent, Canadian National Rys., Calgary, Alta., vice B. R. Marsales, transferred.

C. H. HICKIE, heretofore Cashier and Paymaster, Western Lines, Winnipeg, has been appointed Local Treasurer, lines west of Port Arthur, Ont., Canadian



Northern Ry. System. Office, Winnipeg.

P. J. FARLEY, heretofore Assistant Paymaster, Western Lines, Winnipeg, has been appointed Paymaster, lines west of Port Arthur, Ont., Canadian Northern Ry. System. Office, Winnipeg.

L. C. GROOM has been appointed Auditor, Canadian Northern Ry. Land Department. Office, Toronto.

A. E. FIELD has been appointed Land Commissioner, Canadian Northern Ry., Western Lines. Office, Winnipeg.

**Canadian Pacific Ocean Services, Ltd.** R.S. ELSWORTHY, heretofore General Agent, Passenger Department, C.P.R., Minneapolis, Minn., has been appointed General Agent, C.P.O.S., Ltd., Chicago, Ill.

H. M. MacCALLUM, heretofore General Agent, Passenger Department, Chicago, Ill., has been appointed General Agent, Passenger Department, Toronto, vice I. E. Suckling, resigned.

R. E. ELSWORTHY, heretofore General Agent, Passenger Department, C.P.R., Minneapolis, Minn., has been appointed General Agent, Passenger Department, C.P.O.S., Ltd., Chicago, Ill., vice H. M. MacCallum, transferred.

**Canadian Pacific Ry.**—J. O. APPS, heretofore General Baggage Agent, has been appointed General Agent, Mail, Baggage and Milk Traffic, and his former position has been abolished. Office, Montreal.

W. E. ALLISON, heretofore Assistant General Baggage Agent, has been appointed Assistant General Agent, Mail, Baggage and Milk Traffic, Eastern Lines, and his former position has been abolished. Office, Montreal.

H. H. BOYD, heretofore Superintendent, Vancouver Division, British Columbia District, Vancouver, has been appointed Assistant Chief Mechanical Engineer. Office, Montreal. This position has been vacant since Mar., 1918, when W. H. Winterrowd was promoted to Chief Mechanical Engineer.

J. J. HORN has been appointed Superintendent, Kenora Division, Manitoba District, vice J. L. Jamieson, transferred. Office, Kenora, Ont.

J. L. JAMIESON, heretofore Superintendent, Kenora Division, Manitoba District, Kenora, Ont., has been appointed Superintendent, Vancouver Division, British Columbia District. Office, Vancouver.

C. H. FOX, returned recently from active service, has been appointed Division Engineer, Regina, Sask., vice M. Mackenzie, transferred.

H. R. MILES, heretofore Assistant Engineer, Montreal, has been appointed Division Engineer, Lethbridge, Alta., vice J. K. Yorston, transferred.

J. K. YORSTON, heretofore Division Engineer, Lethbridge, Alta., C. H. LARSON and J. R. PAGET, have been appointed locating engineers, Western Lines.

R. SINCLAIR, heretofore Trainmaster, Field, B.C., has been appointed Bridge and Building Master, Moose Jaw, Sask., vice J. McFadyen, deceased.

J. S. BRANSTON has been appointed agent, Moose Jaw, Sask., vice J. Cavanagh, transferred.

J. CAVANAGH, heretofore Agent, Moose Jaw, Sask., has been appointed acting agent, Outlook, Sask.

W. E. PIMLOTT has been appointed acting District Storekeeper, Saskatchewan District, Moose Jaw, vice I. G. Trudel, transferred.

F. G. BANNISTER, heretofore District Storekeeper, British Columbia District, Vancouver, has been appointed District

Storekeeper, Alberta District. Office, Ogden, Alta.

I. G. TRUDEL, heretofore District Storekeeper, Saskatchewan District, Moose Jaw, has been appointed District Storekeeper, British Columbia District, vice F. G. Bannister, transferred, as reported in our last issue. Office, Vancouver.

D. O. WOOD, Assistant Export and Import Agent, Toronto, who was loaned to the British Ministry of Shipping (Canada), and occupied the position of Superintendent of Inland Transportation, at Montreal, for a considerable portion of the war, has returned to Toronto and resumed his duties with the company.

J. G. McNAB, heretofore District Freight Agent, Vancouver, B.C., has been appointed acting Division Freight Agent, Steamship Lines, Vancouver, B.C., vice F. H. Clendenning, transferred for service with the British Ministry of Shipping (Canada). Office, Vancouver, B.C.

G. S. BEER has been appointed City Passenger Agent, Toronto.

W. H. POLLEY has been appointed City Ticket Agent, Toronto.



H. W. Sharpe,  
Master Mechanic, Quebec District, Eastern Lines,  
Canadian National Railways.

E. OFFICER has been appointed Travelling Passenger Agent, Calgary, Alta.

L. R. HART, heretofore General Agent, Passenger Department, Buffalo, N.Y., has been appointed General Agent, Passenger Department, Boston, Mass., vice E. F. L. Sturdee, transferred.

G. O. WALTON, heretofore City Passenger Agent, New York, has been appointed General Agent, Passenger Department, Buffalo, N.Y., vice L. R. Hart, transferred.

A. G. ALBERTSEN, heretofore City Ticket Agent, San Francisco, Cal., has been appointed General Agent, Passenger Department, Minneapolis, Minn., vice R. S. Elsworthy, transferred to Canadian Pacific Ocean Services' service.

E. F. L. STURDEE, heretofore General Agent, Passenger Department, Boston, Mass., has been appointed General Agent, has been appointed General Agent, Passenger Department, Seattle, Wash., vice

E. E. Penn.

E. E. PENN, heretofore General Agent, Passenger Department, Seattle, Wash., has been appointed General Agent, Passenger Department, Portland, Ore.

A. P. VILLAIN has been appointed City Ticket Agent, San Francisco, Cal.

H. GATJE has been appointed Travelling Passenger Agent, San Francisco, Cal.

G. H. HUTTON, heretofore Superintendent, Dominion Experimental Farm, Lacombe, Alta., has been appointed Superintendent of Agriculture and Animal Industry, Department of Natural Resources, vice J. G. Rutherford, C.M.G., who resigned on his appointment to the Board of Railway Commissioners, as announced previously. Office, Calgary, Alta.

**Grand Trunk Ry.**—J. L. KENNY, formerly Division Signal Foreman, Belleville, Ont., and during the war, in active service with the 4th Canadian Railway Troops, has been appointed Supervisor of Signals, vice E. L. Dyson, assigned to other duties. Office, Montreal.

H. R. McLENNAN, heretofore Chief Dispatcher, Brantford, Ont., has been appointed Trainmaster, Districts 20 and 21, London Division, Ontario Lines, vice R. E. Newcomer, resigned. Office, Brantford, Ont.

W. K. ROGERS has been appointed Chief Dispatcher, Districts 20 and 21, London Division, Ontario Lines, Brantford, Ont., vice H. R. McLennan, promoted.

JAS. EDWARD, heretofore Division Freight Agent, Ottawa, Ont., has been appointed Division Freight Agent, Montreal, vice G. T. Pettigrew, resigned.

R. J. S. WEATHERSTON, heretofore Division Freight Agent, Stratford, Ont., has been appointed Division Freight Agent, Ottawa, Ont., vice Jas. Edward, transferred.

V. G. SNELL, heretofore Commercial Agent, Moncton, N.B., has been appointed Division Freight Agent, Stratford, Ont., vice R. J. S. Weatherston, transferred.

R. H. WEBSTER, heretofore Travelling Freight Agent, Moncton, N.B., has been appointed Commercial Agent there, vice V. G. Snell, promoted.

H. B. GIBSON, heretofore chief clerk, Commercial Agent's office, Moncton, N.B., is reported to have been appointed Travelling Freight Agent there, vice R. H. Webster, promoted.

R. CAPSON, heretofore in Assistant General Freight Agent's office, Canadian Government Rys., Moncton, N.B., is reported to have been appointed chief clerk, Commercial Agent's office, G.T.R., Moncton, N.B., vice H. B. Gibson, promoted.

**Grand Trunk Pacific Ry.**—J. H. GROAT, heretofore Chief Dispatcher, Biggar, Sask., has been appointed Assistant Superintendent there, vice C. B. Thompson, transferred.

C. B. THOMPSON, heretofore Assistant Superintendent, Biggar, Sask., has been appointed Assistant Superintendent, Edmonton, Alta., vice S. A. Milner, who has returned to train service at Rivers, Man.

J. T. B. FOOTE, heretofore chief clerk, Fort Garry Hotel, Winnipeg, is reported to have been appointed Assistant Manager there.

**Kettle Valley Ry.**—ANDREW McCULLOCH, heretofore Chief Engineer and acting General Superintendent, has been appointed Chief Engineer and General Superintendent. Office, Penticton, B.C.

**Michigan Central Rd.**—C. L. SINGER is reported to have been appointed District Passenger Agent, St. Thomas, Ont., vice S. H. Palmer, retired.



## The Canadian Railway War Board's Work.

**Advancing Demurrage Charges.**—While the practice of advancing demurrage charges, which have accrued on loaded cars in transit, against the freight for collection from consignee at destination, has objectionable features, it is considered the only practical method of securing payment of such charges, and should therefore be recognized by all railways as a proper lien against the traffic. In order to bring about uniform method of handling advanced demurrage charges, on Canadian railways, it is suggested that the following regulations be made effective by Canadian lines, immediately:—

"Cars containing freight, the billing for which calls for the collection or car demurrage charges which have accrued on connecting lines will not be accepted from connections unless the charges are guaranteed by such connections and notation to that effect made on billing or transfer, in which case the charges may be shown as 'advances.'

"Car demurrage charges accruing at loading stations must be collected or guaranteed by shipper (in writing) before shipping instructions are accepted, or car forwarded. If charges are guaranteed by shipper notation to that effect must be made on billing.

"Car demurrage charges accruing en route, or at frontier points, due to re-consignment, awaiting necessary customs papers, or other reasons for which the shipper or consignee is responsible, may be billed forward as 'advances,' and if connecting line demands it, be guaranteed and notation to that effect made on billing."

**Carload Traffic Arriving Ahead of Billing.**—Considerable inconvenience is experienced, by both consignees and the railways, due to less than carload traffic arriving at destination ahead of billing, due, on many occasions, to billing and shipments becoming separated at transfer or other stations enroute and held awaiting location of shipments. In order to overcome this difficulty as nearly as possible it is suggested that railways issue the following instructions in the matter: "When way bills covering less than carload shipments become separated from the freight, they shall be promptly mailed to billed destination by the agent at junction, transfer, or other station."

**Continuation of Organization.**—The Canadian Railway War Board, made necessary by the war, in order to centralize the control and co-ordinate the effort of Canada's railways, is among the new things likely to remain to give service in time of peace. It has been decided to extend the term of its activities indefinitely. It retains for the time being the name under which it has become known. It continues as a voluntary, rather than compulsory, association of railway managements, thus preserving what has had to be sacrificed in some countries in order to obtain even a semblance of co-ordination, to wit, the useful features of competition between the various great groups of railway workers; competition protecting the esprit de corps of employes, the alertness of executive officers and the enterprise of the directorates; placing no road directly or indirectly under the power of its competitor; promoting rivalry as to the quality of service and the welfare of the respective territories served, but without permitting, amid such rivalries, old time anxieties for tonnage, to overtax the facilities of any one carrier,

or to lead to indirect or uneconomic routings of goods. The Canadian Railway War Board looks forward to receiving the continued generous support of the shipping and travelling public, without which its efforts heretofore or in the future could come to nothing.

**Diversion of Private Tank Cars.**—On occasions it is necessary to divert tank cars of private ownership, for the purpose of transferring contents of cars, which have developed defects enroute, preventing loaded movement to destination. It is objectionable to owners to have their cars diverted by the railways in any circumstances, but particularly so when this is done without advice from the railways of action taken. In order that owners or lessees may be informed as to such diversions, and to guard against improper handling of diverted cars, after arrival at destination, it is suggested that the following regulations be put into effect at once by Canadian railways:—

"1. The diverting road must promptly notify both consignor and consignee, as shown by the slip or other way bill covering the empty car, or if this information is not shown, notify car owners as shown by Boyd's Tank Car Circular 6M, giving new destination and terminating railway in each case. Furnish to the agent of the terminating line, at the destination of the transferred load, a copy of the original slip bill or way bill, on which the empty tank was moving, showing clearly that the car has been moved out of route in an emergency.

"2. The agent of the terminating line at such destination must, upon release of the car, promptly rebill and forward same to its original destination, unless otherwise instructed by the owner or owner's authorized representative."

**Goods for War Relief Societies.**—Referring to circular 67, May 1, 1918, providing for free carriage of goods for account of certain war relief societies and supplement 2, Jan. 10, 1919, extending the authority for such free carriage to April 1, 1919. The board is now advised that the free carriage of such goods will not be required after April 1 next and member lines are directed to cancel any regulations they have in force calling for handling of goods free of charge for account of war relief societies, including those named in circular 67, effective as from that date.

**Handling of Freight Between Canadian and U.S. Lines.**—Pending issuance of further instructions, the following regulations will govern the handling of freight cars between railways operating in Canada and between Canadian and United States roads, in so far as the several points covered are concerned:—

1. Regulations issued by this board restricting use of Canadian owned cars to movement between points in Canada have been cancelled and such cars may be used in international as well as domestic service.

2. The arrangements made with the U. S. Railroad Administration provide for prompt return to Canada, either loaded or empty, of all Canadian freight cars received in the U.S. As all U.S. railways are working under pool regulations and conditions, it would obviously cause delay and confusion in the return of Canadian equipment from the U.S. were we to insist upon cars being sent back on home route, or direct to owning road: therefore, Canadian cars will be accepted from U.S. roads regardless of class or

railway ownership, at any junction point between the U.S. and Canadian lines, such cars, after receipt by the latter, to be forwarded promptly, either loaded or empty, to the owning line, by the most direct available route. In the event of excessive movement of empty cars via a particular junction point or points, under the foregoing arrangement, the line concerned will promptly notify this board, giving full report of the circumstances so that remedial measures may be adopted.

3. Freight cars owned or controlled by U.S. lines must be promptly loaded to any point in the U.S. or to a junction point with a U.S. line, or sent empty to any U. S. railway via the nearest junction point.

4. Car ownership regulations and methods will continue to govern the handling of Canadian cars on Canadian railways and the following adaptation of the American Railroad Association Car Service rules 1 to 4 inclusive will apply:—

(Note—Where the term "foreign car" is used hereunder it is understood that reference is made to such cars of Canadian ownership only, article 3 covering generally the handling of U.S. owned cars in Canada.)

(a) A foreign car received under load may be forwarded to destination.

A foreign car may be loaded in local service in the direction of the home road, or may be moved once, loaded or empty, locally, in an opposite direction from the home road if to be loaded in accordance with the following: A railway receiving a loaded car from an industrial railway or a shipper must require that such car be routed in accordance with these regulations.

(b) A foreign car belonging to a direct connection may be loaded via any route so that the home road shall participate in the freight rate, or must be returned to the home road.

(Definition of direct connection:—All lines interchanging cars at a common point, or within switching limits, either over their own rails or through intermediate line or lines, or via car ferry, or float, within such switching limits, shall be considered direct connections under these rules.)

Unless otherwise arranged between the interested carriers, empty cars belonging to direct connection, for which loading in accordance with these rules is not available, must be returned to owner at point at which received.

(c) A foreign car belonging to other than direct connection must be

(i) loaded via any route so that the home road shall participate in the freight rate.

(ii) in absence of loading as per clause (i), it must be loaded to a point on direct route to home road.

(iii) in absence of suitable loading it must be sent empty to the owning road via the most direct available route, or via route arranged for the movement by the interested carriers.

(d) It is desirable in the interests of efficient maintenance of equipment and for other equally meritorious reasons, owners' cars should be kept in service on home rails to the greatest possible extent; therefore, such cars should be used in preference in the handling of local traffic, and foreign cars supplied, where it is possible to do so, for the carriage of shipments to off-line points.

The foregoing regulations outline a general policy for railways operating in this country, and are subject to modifica-



tion by the issuance of special instructions as may be necessary from time to time, applicable to specific classes of equipment, traffic or districts.

**Notations on Way Bills.**—Notations on way bills made with lead pencil soon become indecipherable, therefore, it is suggested that railways in issuing instructions covering the making of alterations in way bills should stipulate that lead pencil must not be used for this purpose.

**Reduced Passenger Fares for Soldiers.** Complaint having been made to the Minister of Railways in connection with the cancellation of reduced passenger fares for soldiers, the matter has received further consideration by the board's passenger traffic section, and it has been arranged that the privilege whereby members of the Canadian Expeditionary Force

were granted round trip tickets, at rate of single fare, for the round trip, when visiting their homes, etc., upon production of certificate showing they were actually on the strength of the Canadian Expeditionary Force, which was cancelled at the end of 1918, is to be restored until September 30, 1919. Arrangements have been made with the Militia Department covering the details of the methods under which reductions are to be granted.

**Seats on Locomotives for Brakemen.**—Representations have been received from members of the Train Service Employees' Organization, with respect to the provision of suitable seating accommodation in locomotive cabs, for front end brakemen on freight trains, who are required to ride on the locomotive. It is realized that in the case of some types of

locomotives, particularly the larger power, it is impossible, on account of cab width limitations, and the narrow space between the fire box and the side of the cab, to install seats of the dimensions suggested by the employees. It is the opinion of the board, however, and member lines are hereby requested to arrange accordingly, that convenient and comfortable seats should be provided, commensurate with the possibilities of complying with such a request, according to the locomotive cab conditions above mentioned.

**Use of U.S. Open Topped Cars.**—The provisions of the board's circular 64 and supplement 1 thereof, prohibiting the use of certain classes of United States owned open top cars, for return loading to the owners, or in direction thereof, are cancelled.

## Railway Development, Projected Lines, Surveys, Construction, Betterments, Etc.

**Alaskan Railway.**—The United States Congress was asked Feb. 8 for an appropriation of \$13,800,000 to complete the construction of the government railway in Alaska, which the Alaskan Railroad Commissions estimate will take three years to accomplish. This appropriation includes \$4,000,000 of the original estimate of \$35,000,000 for the construction of the road and a deficiency appropriation of \$9,800,000 representing the increase in the cost of practically everything that is necessary for the work. It is estimated that the road can be finished for \$44,800,000. While work was never stopped, it was slowed down materially by the war, which drew thousands of men out of the territory and cut off the supply of steel.

**Alberta & Great Waterways Ry.**—Five miles of track was reported to have been laid to the edge of the Clearwater Valley, at the end of January. The erection of the bridge across Hanging Stone Creek was then reported to be in progress. About 12 miles more track has to be laid before the line will reach its terminus at McMurray. (Feb., pg. 79.)

**Athabasca & Grande Prairie Ry.**—The Edmonton, Alta., Bulletin, referring to the application to the Dominion Parliament for the incorporation of a company with this title, states the route of the projected railway is from Solomon station on the Canadian Northern and Grand Trunk Pacific Railways, in the Jasper Pass, about 8 miles east of the Brule mines, to the junction of the Muskeg with the Smoky River, and thence to Dunvegan on the Peace. Whatever purpose there is in the proposal relates to rail connection between the C.N.R. and the high grade coal deposits at the Grande Cache at the exit of the Smoky River from the mountains. The distance from the railway at the mouth of the Solomon River with the Grand Cache is about 80 miles. The direction is northwesterly along the base of the mountains. Construction is quite feasible, but what the grade may be, in default of actual survey, is unknown. As the Hay and Baptiste Rivers are to be crossed on the way to the Muskeg River, which is to be followed down its course to the coal area, there may be some stiff grades. The continuation of the line from the Grande Cache to Dunvegan is said to be only camouflage. There would be no sound purpose in its construction, but the section from near Brule to the Grande Cache will come sometime. (Feb., 79.)

**Dolly Varden Mines Ry.**—The British Columbia Legislature is being asked to

extend the time within which this projected railway from the company's wharf, at Arctic Arm, to the Dolly Varden and Wolfe mining claims in the Kitgault Valley of northern British Columbia may be built.

When the bill was before the legislature Feb. 10, it was resolved, after discussion, that the petition of the Taylor Engineering Co., by A. J. Taylor, and the company's petition be referred to a select committee to enquire into all the allegations contained in the petitions and to report its findings and recommendations to the house. The character of the allegations were not disclosed. (Dec., 1917, pg. 470.)

**English Valley & Hudson Bay Ry.**—The Dominion Parliament is being asked to extend the period within which the company may build its projected railway from Brereton station, Man., on the National Transcontinental Ry., mileage 1,735 from Moncton, to the English River, Ont., between the eastern boundary of Manitoba and the 94th meridian of longitude. H. A. Stewart, Toronto, is solicitor for the company. (Oct., 1917, pg. 393.)

**Essex Terminal Ry.**—The Dominion Parliament is being asked to extend the time within which the company may build its authorized branch line from Ojibway to Pelton, Ont., 7 miles, and connect the same with the Michigan Central Rd., the Pere Marquette Ry., and the Windsor, Essex & Lake Shore Rapid Ry., or any of them. (Jan., pg. 26.)

**Grand Trunk Pacific Ry.**—W. P. Hinton, Vice President and General Manager, returned to Winnipeg, Man., Feb. 14, after a trip of inspection over the company's lines. He is reported to have said at Edmonton, Feb. 8, that there was not much chance of the company undertaking any branch line construction this year. Labor and material were too high to warrant the large expenditures necessary. While there was still an ample field for railway expansion, it would unduly hinder the future to build branch railways at present prices. At Calgary, on Feb. 12, the construction of a spur track along Fifth Ave. to open up industrial sites was discussed, and a plan will be laid before the city council at an early date. At Regina, Feb. 13, the question of a union station and matters affecting the building of an hotel were taken up. Mr. Hinton is further reported to have said that the arrangement for running through Saskatoon, on the C.P.R. tracks, using that company's station and yard facilities, was found to be very satisfactory

all round, although the increased length of line was between 4 and 5 miles. At Winnipeg Mr. Hinton gave out the following statement:—"In view of the fact that the government's policy as to the nationalization of the Grand Trunk Pacific has not yet been stated, we are marking time in our construction plans for the coming year." (Feb., pg. 79.)

**Grand Trunk Ry.**—Local reports state that considerable extensions and improvements are to be made at the company's yards at York, near Toronto, and that plans have been prepared. It is also reported that part of the work now done at the Mimico yards will be transferred to York. When the Mimico yards were laid out, some years ago, the York yards were almost closed down, the train crews removing to Mimico. The increase in traffic is reported to be so great as to necessitate the reopening of the yards at York.

The work of strengthening the bridges on the line between Palmerston and Owen Sound, Ont., is reported to have been completed.

A press dispatch states that work was started Feb. 20 on a 3,000,000 bush, grain elevator at the G.T.R. terminals at Portland, Me. The company has two elevators there already.

A recent press report stated that plans had been prepared for removing the company's yards east of London, Ont., contiguous to Highbury Ave., and that work would be started on laying out 25 tracks there. Superintendent Forrester is reported as stating that the company was connecting up some tracks at the point mentioned; that there had been some talk about the other matter, but that nothing had been decided and that no plans had been prepared. (Jan., pg. 26.)

**Greater Winnipeg Water District Ry.** At a meeting of the Great Winnipeg Water District Commission, Feb. 6, the question of applying to the Manitoba Legislature for authority to operate the railway, built for construction purposes, as a regular freight and passenger line, was laid over for further consideration. The idea behind the project is that Dominion and Manitoba subsidies could be obtained and the line put in such a condition that it would command a better price if it was decided to offer it for sale. It was suggested that the question of the future of the line should be decided by a vote of the electors of the district. (Mar., 1918, pg. 98.)

**High River, Saskatchewan & Hudson Bay Ry.**—The Dominion Parliament is being asked to extend the time within



which the company may build this projected railway from any point in Tps. 25 to 28, Range 1, West 4th Meridian, Alta., to Saskatoon, Sask., to the Saskatchewan-Manitoba boundary between Tps. 52 to 56, and thence to a junction with the Hudson Bay Ry. at Pas, Man., under construction by the Dominion Government. (See High River & Hudson Bay Ry., Jan., 1917, pg. 20.)

**Kettle Valley Ry.**—Clearing up operations are reported to be in progress at the rock slide at Petain, on the Coquihalla section of the line, upon which traffic has been suspended temporarily. Work is also in progress between Jessica and Portia, widening cuts and otherwise improving the roadbed. The matter referred to above is not expected to be reopened until the summer, traffic being carried meanwhile via Spences Bridge and Merritt. (Feb., pg. 79.)

**Lacombe & Blindman Valley Ry.**—The Premier of Alberta stated in the legislature recently that the government had been obliged to take over this line, and that an extension must be built with as little delay as possible.

We are officially advised that the line is built and track laid between Lacombe and Bentley, approximately 20 miles, and is graded for 15 miles further, to within 1½ miles of Rimby, the projected terminus. The portion between Lacombe and Bentley is being operated for freight and passenger traffic, a service of three trains a week being provided. Steam locomotives are being used for normal operation, and an internal combustion motor car for summer vacation service. The motive power comprises one 51-ton 2-6-0 mogul type locomotive; one 20-ton dinky locomotive, and one 20-ton motor railway car of 100 h.p., equipped with Hill-Shaw oil transmission, fitted with couplers and air brakes, for hauling a light train of standard equipment. This car will accommodate 24 passengers and has a compartment for baggage. The line is being operated by F. T. Ames as Superintendent, under the direction of H. Warnar, Railway Engineer for Alberta. (May, 1918, pg. 186.)

**Magdalene River Valley Ry.**—In order to allow of the reduction of the gradient on the location of the present projected line of this railway on lot 37 of St. Maxime du Mont Louis, the Quebec Legislature is being asked to authorize a change of location on about 4,500 ft., of which 2,500 ft. are in the Magdalene River Seignior, northly to a location at least 350 ft. from the east bank of the Magdalene River. (Feb., pg. 79.)

**Medicine Hat, Alta.**—The Medicine Hat City Council is applying to the Alberta Legislature for the confirmation of a by-law leasing to Joseph B. Swan the right of way for a railway spur in the city, and granting him an option to purchase the spur track and right of way. (Jan., pg. 26.)

**Medicine Hat Central Ry.**—The Alberta Legislature is being asked to incorporate a company with this title to build a railway from Coutts, on the International Boundary, northeasterly, crossing the C.P.R. Lethbridge-Weyburn line near Foremost, and the C.P.R.'s Crowsnest line at Whitla or Winnifred, thence to Ajax on the South Saskatchewan River, and on to Medicine Hat, and thence northeasterly to the Alberta-Saskatchewan boundary, approximately due east of Hilda post office, Alta., the total length of the line being approximately 200 miles. Laidlaw, Blanchard & Co., Medicine Hat, Alta., are solicitors for applicants.

**Pacific Great Eastern Ry.**—The British Columbia Premier, in the course of a speech at Vancouver recently, is reported to have said that as soon as the frost is out of the ground work on the extension of this railway will be started. An adequate sum for this purpose will be included in the estimates to be submitted to the legislature, on which the government will draw from time to time as construction proceeds. (Feb., pg. 79.)

**Quebec & Ungava Ry.**—The provisional directors named in the application to the Quebec Legislature for the incorporation of a company with this title are Viscount Templeton, London, Eng.; the Earl of Clarendon, London, Eng., and Pickering, Ont.; B. Spring Rice, Burwash, Sussex, Eng.; E. S. Homewood, London, Eng., and H. C. Thomson, London, Eng. Lord Templeton was connected with the Atlantic, Quebec & Western Ry. or some of its associated enterprises, which failed. The company desires to have power to build a railway from Seven Islands, on the north shore of the St. Lawrence River, in Saguenay County, northerly to Lake Menihak, thence westerly or northwesterly to the most suitable harbor between the mouth of Big River and Nastapoka Sound on Hudson Bay, with branch lines. The applicants ask power to acquire and develop water powers, timber limits, fishery rights, and conduct various other business within the territory to be opened up by the line. See St. Felicien & Ungava Ry. (Feb., pg. 80.)

**Quebec Central Ry.**—We are officially advised that contracts have been let to the Sherbrooke Construction Co. for masonry and other work, and to the MacKinnon Steel Co. for the steel construction for car shops and other buildings for the company at Newington, Que. The work which had then been done, and the further work proposed to be done in connection with these shops was fully described in Canadian Railway and Marine World, Sept., 1914, pg. 397. A plan of the layout was also given. The general holding up of railway work resulting from war conditions prevented the continuance of the work at that time, and the company is now taking up the programme of improvements, the conditions being again favorable. April, 1916, pg. 139.)

**St. Felicien & Ungava Ry.**—The provisional directors named in the application to the Quebec Legislature for the incorporation of a company with this title are Viscount Templeton, London, Eng.; the Earl of Clarendon, London, Eng., and Pickering, Ont.; B. Spring Rice, Burwash, Sussex, Eng.; H. C. Thomson, London, Eng.; J. T. Ross, Quebec. The applicants ask for power to build a line from St. Felicien, St. John County, to Lake Mistissini, thence to Lake Nichikum to Lake Petitsikaplan, or by an alternative route between the same points. The applicants also ask for power to acquire lumber limits, water powers and fishery rights, and to develop the same, and to carry on other businesses within the territory reached by the line. (See Quebec & Ungava Ry.)

**St. John & Quebec Ry.**—It was reported in Fredericton, N.B., Feb. 5, that notice had been served on the Nova Scotia Construction Co., calling for the completion of the Gagetown-Westfield section of the line by June 15. At the end of 1918 it was reported that there were about 7 miles to be completed, and that ballasting had not been started on the 30 miles on which track had been laid.

A Fredericton report of Feb. 7 states

that the steel bridge work on the extension has been completed, and that the Canadian Bridge Co.'s erecting gangs have returned to Walkerville, Ont. It has been decided to put in only a temporary span on the highway bridge over the Narapis, owing to the high cost of steel. The concrete abutments for the bridge are completed, and will be utilized for the temporary span. It is estimated that the work to be done will cost about \$100,000. One of the most important pieces of work is the widening of the Nerepis bridge embankment, which C. O. Foss, Chief Engineer, is quoted as stating will be done by the company's own forces on the unit basis. Tenders for installing a number of loading platforms on the extension have been called for. (Feb., pg. 80.)

### Railway Construction for Saskatchewan.

At the Saskatchewan Legislature's closing sitting, Feb. 5, an address to the Governor General was adopted which included the following paragraph:—The early announcement by the Dominion Government of its railway policy, in order that the uncertainty now surrounding the railway situation in Saskatchewan be removed and that the Provincial Government and other authorities may, if necessary, make suitable arrangements for the required facilities."

The resolution and terms of the address were discussed at several sittings before being adopted. Under the legislature's railway building plan the province guaranteed Canadian Northern Ry. and Grand Trunk Pacific Ry. securities, either directly or through subsidiary companies, for the purpose of building certain branch lines within the province. There has been some construction on a number of these lines, while nothing has been done on others. The taking over of the Canadian Northern Ry. by the Dominion has affected the situation with regard to its lines, and the Saskatchewan Legislature desires to have the situation cleared up, so that railway accommodation may be provided at points where it is required.

**Re-employment of Railway Men.**—The Canadian Railway War Board's Winnipeg office is reported to have announced that railway employes from western points who enlisted in the Canadian Expeditionary Forces, as they are being discharged are being reinstated in the positions they held at the time of enlistment, or in equivalent positions, provided they are physically fit to do the work required. When they are not physically fit, efforts are being made to provide them with positions which they are capable of filling. The railways have given orders that, where new employes are being taken on, returned soldiers are, in every case, to be given the preference.

The Prince Edward Island Aerial Transport Co. has been incorporated under the Dominion Companies Act, with office at Charlottetown, P.E.I., and authorized capital of \$250,000, to manufacture and deal in aeroplanes, balloons, airships and flying machines of all kinds; to establish aerodromes, etc., to establish and maintain lines or regular services of aircraft of all kinds, and to carry on business as carriers of passengers and goods by air, sea, river, canal or otherwise, in Canada and elsewhere. The provisional directors are: L. A. David, K.C., and other Montrealers.



Among the Express Companies.

The Canadian Northern Ex. Co. has closed its office at Bears Pass, Ont.

The Canadian Northern Ex. Co. has closed its office at Moscow, Ont.

F. V. Clare, heretofore agent, Canadian Ex. Co., Moose Jaw, Sask., has been appointed route agent, Winnipeg, vice F. Sails, resigned.

J. T. Madigan, heretofore chief clerk to Superintendent, Canadian Ex. Co., Toronto, has been appointed route agent, Hamilton, Ont.

R. J. Timpson, heretofore stenographer, has been appointed chief clerk to Superintendent, Canadian Ex. Co., Toronto, vice J. T. Madigan, promoted.

H. W. Lennox, heretofore chief clerk, Ottawa, Ont., has been appointed agent, Dominion Ex. Co., there, vice G. Parker, whose appointment as Superintendent, Eastern Division, Toronto, was announced in our last issue.

William Walsh, General Superintendent of Stables and Street Equipment, Dominion Ex. Co., Toronto, who died there Dec. 2, 1918, left an estate of \$29,478.55. The residue, after payment of bequests of \$5,000 and \$2,000 to a step-sister and step-brother, respectively, was left to the widow.

An act passed by the Saskatchewan Legislature recently, for the taxation of certain companies, provides that every express company shall pay \$150 for each city in which it transacts business; \$50 for each town, and \$10 for each office in any other place with a population of 200 or more.

W. C. Muir, General Superintendent, Canadian Northern Ex. Co., will probably remove his office from Winnipeg to Toronto in the spring. No announcement has been made as to the extension of the Canadian Northern Ex. Co.'s operations over the Intercolonial, National Transcontinental and Prince Edward Island Railways, but it is probable that this will occur before many months are over.

George Parker, whose appointment as Superintendent, Eastern Division, Dominion Ex. Co., Toronto, was announced in our last issue, was born at Ottawa, Ont., Jan. 6, 1876, and entered the company's service Oct. 19, 1892, since when he has been, to Apr., 1904, successively, clerk, station foreman, cashier and chief clerk, Ottawa; Apr. to Dec. 31, 1904, route agent, Ottawa; Jan. 1, 1905, to Dec. 31, 1918, agent, Ottawa.

The American Railway Ex. Co. has filed with the Interstate Commerce Commission, an application to increase the rates applying to or from all its offices and those of the Canadian, Canadian Northern and Western Ex. Co.'s in the U.S., and between its offices and express offices in Canada and Newfoundland, in order to align those rates with the general increases authorized by the Director General of the U.S. Railroad Administration.

**Railway Lands Patented.**—Letters patent were issued during January respecting railway lands in Manitoba, Saskatchewan, Alberta and British Columbia, as follows:—

	Acres
Alberta & Great Waterways Ry.....	6.27
Calgary & Edmonton Ry.....	117,633.92
Canadian Northern Alberta Ry.....	190.00
Canadian Northern Ry.....	3,199.00
Canadian Pacific Ry.....	15.02
Qu'Appelle, Long Lake & Saskatchewan Rd & Steamboat Co.....	68,781.88
<b>Total</b> .....	<b>189,646.09</b>

Canadian Pacific Railway's Honor Roll, No. 40

Adamson, Albert O.	Clerk	Montreal	Wounded
Anderson, Alfred W.	Sectionman	Renfrew	Killed in action
Ashton, Herbert	Storeman	Winnipeg	Wounded
Austin, John P.	Carpenter	Ogden Shops	Wounded
Bailey, Edwin G.	Sectionman	Milton	Wounded
Baker, Harry A.	Houseman	Calgary	Wounded
Beavis, Godfrey H.	Clerk	Victoria	Killed in action
Bell, John W.	Operator	MacTier	Wounded
Birchman, Warren S.	Freight checker	Lacombe	Wounded
Blake, Alex.	Laborer	Outremont	Died of wounds
Bowen, John	Painter	North Bay	Wounded
Boyce, Alfred J.	Bill	Calgary	Wounded
Bullman, Ernest	Apprentice	Winnipeg	Wounded
Campbell, John C.	Machinist	Ogden	Wounded
Carphin, Wm. McS.	Apprentice	Winnipeg	Wounded
Chalmers, David A.	Clerk	Fort William	Wounded
Christie, Andrew F.	Clerk	Winnipeg	Killed in action
Clapstone, Leo	Fireman	Lethbridge	Died of wounds
Coutts, William A.	Car cleaner	Toronto	Wounded
Cunningham, William	Brush hand	Winnipeg	Wounded
Curry, Johnston S.	Trainman	Brandon	Killed in action
Dawson, Robert	Boilerwasher	Outlook	Wounded
Donly, Frank	Fitter's helper	North Transcona	Wounded
Eames, Geo. E.	Operator	Minnedosa	Wounded
Edwards, John T.	Trainman	Kenora	Wounded
Emery, Harold	Carpenter	Winnipeg	Wounded
Estabrooks, Otto L.	Pilot	Rossland	Wounded
Evans, Edwin	Helper	Angus	Killed in action
Fancy, Geo. H.	Blacksmith's helper	Winnipeg	Died of wounds
Fielder, Alfred	Helper	Lambton	Wounded
Flanagan, Joseph S.	Clerk	London, Eng.	Killed in action
Fletcher, Charles	Clerk	Winnipeg	Wounded
Fox, Gordon	Clerk	Montreal	Wounded
Freeman, James A.	Fireman	Smiths Falls	Wounded
French, George G.	Trainman	Souris	Killed in action
Gammon, Wm. A.	Locomotive man	Moose Jaw	Wounded
George, Gordon H.	Brakeman	Moose Jaw	Wounded
Grant, Athol G.	Fireman	Lambton	Wounded
Groenier, Wiardus	Porter	Calgary	Killed in action
Hampson, Sidney T.	Apprentice	Moose Jaw	Wounded
Hannesson, Oscar	Clerk	Winnipeg	Wounded
Hannon, Albert G.	Clerk	Liverpool, Eng.	Presumed dead
Hartley, Wm. J.	Brakeman	Chapleau	Died of wounds
Hugonnet, Edwin F.	Timekeeper	Nipigon	Wounded
Jackson, Alex. C.	Call Boy	Winnipeg	Killed in action
Jarvis, Richard E.	Accountant	Calgary	Wounded
Kee, John J.	Fireman	Lambton	Wounded
Kirkland, Melville	Laborer	Calgary	Killed in action
McCarthy, Edward L.	Clerk	North Bay	Wounded
McCormick, John	Section foreman	Milan	Wounded
McDonald, Gordon P.	Brakeman	Cranbrook	Died of wounds
McGowan, James	Cashier	Camrose	Killed in action
Melver, Roy	Wiper	Brandon	Wounded
McLeod, Donald	Fireman	B.C. Lake Steamers	Killed in action
McNeil, David B.	Bill	Regina	Wounded
Mahon, Arthur J.	Clerk	Montreal	Gassed
Manson, John C.	Clerk	Winnipeg	Wounded
Meating, Joseph T.	Clerk	McAdam Junction	Wounded
Mitchell, Reginald	Clerk	Toronto	Wounded
Mitchell, Wm. J.	Wiper	Victoria	Died of wounds
Moore, John	Car cleaner	Toronto	Wounded
Morland, Robin C.	Clerk	Liverpool, Eng.	Killed in action
Murray, Thistle C.	Clerk	Regina	Wounded
Neal, Walter S.	Bell boy	Sicamous	Wounded
Newton, John H.	Clerk	Winnipeg	Wounded
Parker, Ernest	Laborer	Calgary	Wounded
Pascoe, Thos. G.	Car oiler	Calgary	Wounded
Paul, George F.	Seaman	B.C. Coast Steamers	Killed in action
Peake, Chas. J.	Clerk	Halifax	Wounded
Purdy, Stephen C.	Trainman	St. John	Wounded
Rhoades, Rupert	Hostler	Ignace	Wounded
Riches, Alvin	Fireman	Minnedosa	Died of wounds
Robertson, Arthur	Clerk	Winnipeg	Wounded
Robinson, Robert P.	Signalman	Bowmanville	Wounded
Ross, Donald	Boilermaker	Ogden Shops	Wounded
Rutherford, Albert	Operator	Toronto	Killed in action
Rutherford, Milford H.	Wiper	Sutherland	Wounded
Scouse, Robert	Boilermaker	West Toronto	Killed in action
Seeley, Peter J.	Engineer	North Bay	Wounded
Senior, Ernest	Baker	Moose Jaw	Wounded
Servey, Frank	Lineman	Sudbury	Wounded
Sessions, Gerald C.	Switchman	Dunmore	Wounded
Shackleton, Fredk. J.	Checker	Ignace	Killed in action
Sherring, Leonard	Apprentice	Ogden Shops	Wounded
Slovan, Edward F.	Apprentice	Angus	Gassed
Smith, John T.	Cook	Montreal	Wounded
Smith, Wm. C.	Trucker	Toronto	Wounded
Staples, Fredk. W.	Steward	B.C. Coast Service	Killed in action
Stewart, Chas. C.	Clerk	Montreal	Wounded
Sumner, James	Car handler	Lethbridge	Gassed
Sumner, John	Sectionman	Chatham	Wounded
Sutherland, Wm.	Car cleaner	Toronto	Killed in action
Tackaberry, Harold H.	Clerk	Brandon	Wounded
Waldie, Wm. C.	Painter's cleaner	Winnipeg	Wounded
Wallace, Samuel H.	Clerk	Brandon	Wounded
Watson, George	Wiper	Rogers Pass	Wounded
Webb, Geo. J.	Section foreman	Sedgewick	Wounded
Weir, John J.	Call boy	West Toronto	Wounded
Wheeler, Percy W.	Clerk	Winnipeg	Wounded
White, George	Bill	Owen Sound	Wounded
Whitman, George C.	Apprentice	Winnipeg	Killed in action
Wilding, Harry	Clerk	Winnipeg	Wounded
Williams, John K.	Car cleaner	Port McNicoll	Wounded
Wills, William G.	Car repairer	Sudbury	Wounded
Wilson, Bertram	Clerk	Strathcona	Wounded
Wilson, Thos.	Fireman	Lambton	Wounded
Winder, Thos.	Apprentice	Angus	Wounded
Worboys, William	Carpenter	Winnipeg	Wounded
Wright, Wm. R.	Brakeman	B.C. District	Wounded
Young, John F.	Investigator	Montreal	Killed in action

Shown on Honor Lists to date:—Killed, 804; wounded, 1,756. Total, 2,560.



# Electric Railway Department

## Ottawa Electric Railway Refused Increases in Suburban Fares, by Board of Railway Commissioners.

Sir Henry L. Drayton, Chief Commissioner, Board of Railway Commissioners, gave the following judgment Feb. 10:—The applications of Westboro Police Village and Nepean Township, for an order disallowing the Ottawa Electric Ry.'s proposed tariff C.R.C. 5, published and filed to become effective Nov. 18, 1918, were heard jointly in Ottawa on Nov. 18, 1918, and Dec. 2, 1918. At the close of the hearings further statistics were to be filed. These have since been filed, and the matter is now ripe for adjudication. At the hearings the City of Ottawa intervened, as well as certain property owners, in support of the applications of Westboro and Nepean for the disallowance of the tariff. The tariff complained of provides, inter alia, for fares on the following basis:—

Cash Fares Between 6 a.m. and 12 Midnight.		
	Adults	Children under 10
Within zone 1, 2, 3 or 4.....	5 cents	3 cents
Between zone 1 and zone 2 or 3	10 "	6 "
Between zone 1 and zone 4...	15 "	9 "
Between zone 2 and zone 3...	15 "	9 "
Between zone 2 and zone 4...	10 "	6 "
Between zone 3 and zone 4...	20 "	12 "
Between 12 midnight and 5.30 a.m., double the above fares.		

**Special Tickets.**  
Between zone 1 and zone 2 or 3.... 3 tickets 25c  
Between zone 1 and zone 4..... 2 tickets 25c  
**Workmen's Tickets.**—Good only within zone 1, from first morning trip until 7.30 a.m., and between 5 and 6.30 p.m.: Thirty-three tickets \$1; eight tickets 25c.

**School Children** (under 14 years of age).—Good only between 7 and 9.30 a.m., 11.30 a.m. and 1.30 p.m. and 3.30 and 5 p.m.: Forty tickets \$1. One ticket for each zone travelled.

**Sunday.**—Seven tickets 25c. One ticket for each zone travelled.

**Limits of Zones.**  
Zone 1—Within municipal limits of City of Ottawa and beyond to the Experimental Farm and to Cloverdale Ave. on Rockcliffe line.  
Zone 2—West of zone 1, to and including McKellar.  
Zone 3—East of Cloverdale Ave. to and including Rockcliffe Rifle Range.  
Zone 4—West of McKellar, to and including Britannia-on-the-Bay.

This tariff was suspended by the board's order 27830, and the old tariff still remains in force and effect. The new tariff would radically change the fare basis. As matters now stand, to give an extreme illustration, a passenger is carried from Britannia-on-the-Bay to the rifle range, involving a movement of 11.70 miles, for a fare of 5c. It is obvious that if the company was operating only for such a distance and at such a rate, its operation could not continue; the return is not compensatory, the actual cost of operation is much greater. On the other hand, under the company's proposal, for the same trip a fare of 20c would have to be paid, an increase of 300%. The old rate, approximating 0.43c a mile, becomes approximately 1.71c. This again, heavy as the increase is, would be well below the recognized standard mileage rates were this company a radial company, and not really an urban system with feeders.

Another movement, not so extreme, but still long, is that from Britannia-on-the-Bay to the corner of Rideau and Charlotte Sts., 8.68 miles. Under the proposed tariff the old rate of 5c now applicable would become 15c, and the return per mile of 0.576 would be increased to 1.72c.

The company has filed statements which clearly establish that the opera-

tion of the extension to Britannia, standing by itself, is not remunerative. If the operation of this line can be so considered, it is clear that the company is entitled to an increased remuneration for the service it performs on it. The determination of this issue is attended with difficulty. The company operates in Ottawa under agreement with the city dated June 28, 1893. The company's franchise expires Aug. 13, 1923. The rates which the company desires to put into effect in each zone, are the rates reserved by the agreement, paragraph 46 of which reads:—

"46. No higher fare than 5c shall be charged for the conveyance of one passenger from one point to another on the said line, and branches thereof, within the present city limits, and for children under 10 years of age no higher fare than 3c shall be charged except between the hours of 12 o'clock midnight and 5.30 a.m."

It will be observed that the contractual fare limitation applies merely to the limits of Ottawa as then constituted. Ottawa's boundaries in 1893 were, on the east, at the material point, viz., on the line running to the rifle range—Riverside Terrace, the city limits practically ending with the grounds of Government House, Lisgar Road, and Maple Lane. These easterly boundaries have not been extended. The other material boundary is to the west. Along the line of Somerset St., where the cars run, this boundary was Bayswater Ave., the general western boundary being the C.P.R. right of way up to Somerset St., when a jog was made to the west and the line continued up Bayview Road north. On July 27, 1907, the city's western boundary south of the G.T.R. and north of Caroline Ave. was extended to Holland Ave. On Dec. 19, 1907, the city was again extended to the north of the G.T.R. and south of Scott St. to the present westerly city limit. The route to Britannia ran through the territory covered by this annexation. The new western city boundary resulting from this annexation is described in the evidence as the division line between Lots 33 and 34 in the 1st Concession, Ottawa Front, of Nepean Tsp., along the company's line to Britannia. This new boundary is some 2,000 ft. west of Holland Ave. The city's westerly boundary was squared off by the annexation of Feb. 4, 1909, which extended part of the city lying north of Caroline Ave., and south of the G.T.R. tracks to the prolongation of the westerly boundary of the territory annexed Dec. 19, 1907.

The section of the Ottawa agreement above set out, confined as it is to the old city boundaries, does not apply to the territory covered by these annexations. The company, in a further agreement of April 8, 1895, made with the city, contracted to build, equip, and operate the line to the Experimental Farm. The resolution of the city council of April 1, 1895, adopted by the agreement and referring to the branch to the Experimental Farm, reads:

"2. That the company be bound to have a line of railway fully equipped and in operation from the city to the Experimental Farm, before the end of the present year (1895), and that the company be allowed to charge only city rates for any passenger from any point within the city limits to the Experimental Farm (or any intermediate point), and the same rates from the farm (or any intermediate point) to any part of the city."

The route to the farm, as provided in the agreement relating to it, was not followed, and the line as today operated to the Experimental Farm runs from the Britannia line south along Holland Ave. to and along Carling Ave., and thence to the Experimental Farm. The company does not seek to raise the rates to the Experimental Farm; it is included in zone 1, the company admitting that the rates of fare are governed by agreement, and are not sought to be advanced. In like manner the territory annexed Dec. 16, 1907, which consisted of the former Village of Hintonburg, is, as far west as Holland Ave., included in the same zone. Here again rates are covered by the agreement of May 11, 1895, the company's agreement with Hintonburg containing the following provision:

"37. No higher fare than 5c shall be charged for the conveyance of one passenger from one point to another on the said line and branches thereof within the present and any future limits of the Village of Hintonburg, and from thence to any point within the present limits of the City of Ottawa or to the Experimental Farm, and for children under 10 years of age no higher fare than 3c shall be charged, except between the hours of 12 o'clock midnight and 5.30 a.m."

The principle on which the company has constructed its first zone, makes it applicable, not only to Ottawa as constituted in 1903, but as extended on the east to Cloverdale and on the west through the former Municipality of Hintonburg to Holland Ave. I am of the opinion that this zone in any event cannot stop at Holland Ave. On the other hand, it must be continued to the present existing city limit. The company's agreement with Hintonburg limits the rate to 5c, not only within present and future limits of the village, but from it to any point within the then (1907) limits of the City of Ottawa, or to the Experimental Farm. Hintonburg was to get Ottawa rates. On the evidence Hintonburg's westerly limit was not Holland Ave., but was the division line which now constitutes the westerly city limit already described. In any event, bound as the company is by its Hintonburg agreement, zone 1 ought to extend to the present westerly city limit, which coincides, as stated, with the limit of the old Municipality of Hintonburg. It is clear that the company's operations to the Rifle Range on the east, past the easterly city limit, and to Britannia on the west, past the westerly city limit, are not in any way bound by municipal agreements, and are not subject to municipal rate limitations.

Mr. Proctor, who appeared for Ottawa, urged that as the company's general operations showed a good return, that notwithstanding the loss on the extensions, the board ought to level up rates, having regard, doubtless, to expenses on the one hand and profits on the other; and that when increasing fares on the extensions the city rates should be reduced to a more reasonable basis. Such action is not open to the board. The city, as well as the company, is bound by the agreement. In my opinion, Mr. Proctor's argument that the effect of the municipal agreement is only to provide that the company cannot charge more than a certain amount, and that the board can reduce it, is not tenable. The muni-



city and the company agreed that rates should not be higher than the amount stipulated. As between the city and the company, rates within the amount stipulated are accepted, and are just and reasonable. The company has the right to charge them.

Following the board's practice, notwithstanding the city's agreement, on a proper case being made out for reduction, generally speaking, the board's jurisdiction would enable it to reduce the rate. The scheme of the act is that rates shall be just and reasonable, and if under an agreement the carrier is getting more than a reasonable rate, beyond question the board ought to reduce that rate; and, conversely, if the agreement has not reserved a rate just and reasonable, and discrimination has resulted, it is the duty of the board to increase it. While, therefore, under the general rule, effect could be given to Mr. Proctor's contention, no such action can here be taken, because the Dominion Parliament, whose legislation absolutely binds the board, has confirmed the agreement. Section 2 of the Dominion act of 1894 provides:—"The agreement between the said companies and the Corporation of the City of Ottawa, dated June 28, 1893, and set out in schedule B to this act, is hereby ratified and confirmed." The board's general jurisdiction is bound by this special act. The same question was considered by the board having reference to the Crowsnest Pass agreement in the Increase in Passenger and Freight Tolls Case, reported in 22 Can. Ry. Cas. 49. Similar effect was given to municipal agreements in *Hamilton Radial Electric Co. v. Hamilton et al.*, 23 Can. Ry. Cas. 114.

I now deal with the Britannia-on-the-Bay service. The evidence shows that this line commenced its operations May 24, 1900; that the company charged an extra fare beyond Holland Ave. for three or four years; and that the company then exacted the extra fare only for the winter months, and in 1908 abandoned the extra fare altogether. Operations have since been carried on subject to the company's general tariff applicable to Ottawa. The extension to Britannia was authorized by the Dominion Act of 1899, c. 82, which provides that the company may, as an extension of its present railway, construct and operate a railway from some point on its present railway, in Hintonburg or Nepean, to some point at or near Bells Corners, in Nepean Tsp. Mr. Proctor contends that the operation of this line is purely optional on the company, and that as it is optional the company is not in a position to come to the board for relief; that the company is not in a position to say that service must be given, and that the board should therefore allow a just and compensatory rate. If this principle be adopted, the result would be that when the line would be remunerative, that is, during the summer, a service would be given and no service at all in the spring, autumn or winter. While this result would work little or no inconvenience to those living in Ottawa, who would be able to get out to the Britannia summer resort when they desired to go, for the single fare. It would work a direct hardship on all residents on the line, Westboro and west. Relatively a very considerable population (although insufficient to support the car service at the present rates) is served the whole year round by the line. Its operations ought to continue. The wording of the act, as I view it, does not relieve the company from its duty to operate. The wording is usual. No railway act of incorporation

provides that the railway shall be built. Permission is simply given to build and operate, but when once the line is built and the company is solvent and can operate, the statutory duty to operate applies. In any event, if the line is not to be run regularly and with a proper service, the only alternative would be its complete abandonment and removal. No railway company should be permitted to operate a line for a given short period of the year only, and decline to operate it for the remainder, when against public interest.

Rates of fare not being determined, it becomes necessary to ascertain the company's position having regard to Dominion control. The company's original incorporation is an act of the old Province of Canada, 1866, c. 16. No reference is made in the statute to any regulative tribunal or general act, but the directors of the company are given power and authority to "make, amend, and repeal, and re-enact all such bylaws, rules, resolutions, and regulations as shall appear to them proper and necessary, touching . . . the fares to be received for passengers and freight transported over the railway, or any part thereof, the intervals of time in running each car, the time within which, on each day, the cars shall run, the speed of running the same. . . ."

The railway at this time being entirely local, jurisdiction over it after Confederation rested in the Ontario Legislature, and that legislature amended the act of incorporation by its statute, c. 45, in 1868. Under this act a number of clauses of the Railway Act of the old Province of Canada were made applicable. No clause made applicable, however, covers the regulation of fares and tolls. The measure of public control over railway fares, provided by the Railway Act in force at the time of the company's incorporation and when this amending act was enacted, and being Consolidated Statutes of Canada, 1859, c. 66, is contained in the following provisions:

"118. The legislature of this province may from time to time reduce the tolls upon the railway, but not without consent of the company, or so as to produce less than 15% per annum profit on the capital actually expended in its construction; nor unless, on an examination made by the Commissioners of Public Works, of the amount received and expended by the company, the net income from all sources, for the year then last passed, is found to have exceeded 15% upon the capital so actually expended."

"151. The by-laws of every railroad company regulating the tolls to be taken on such road, in the special act respecting which a provision has been inserted that such railroad should be subject to the provisions of any general act relating to railroads, shall be subject to the approval of the Governor in Council, and no bylaw of any railroad or railway company in this province by which any tolls are to be imposed or altered, or by which any party other than the members, officers, and servants of the company are intended to be bound, shall have any force or effect until the same has been approved and sanctioned by the Governor in Council."

As already pointed out, sections of the Railway Act incorporated do not include the above provisions. On the other hand, they are expressly excluded, the special act providing that no other clause, except the clauses mentioned, shall apply. As a result, under the two special acts of 1866 and 1868, the whole question of fares to be charged for both passengers and freight transported was left to the regulation of the directors' bylaws. No parliamentary or other public regulation was provided.

In 1892, the company contemplating its extension across the river into Hull, an act was passed by the Dominion Parliament, c. 53, which contains the declaration to the effect that the company's undertaking is declared to be a work for the general advantage of Canada. The usual

effect of the declaration is to give the Parliament of Canada full jurisdiction over the company and its undertaking, and to make the Dominion Railway Act in its entirety applicable. This result is, however, qualified by a provision that:

"The operation of so much of the company's line of railway as may be within the Province of Ontario by any new or additional powers covered by this act, shall be subject to the statutes of Ontario in force from time to time in relation to street railways, and the operation of so much of the said line of railway as may be within the Province of Quebec by any new or additional powers conferred by this act, shall be subject to the statutes of Quebec in force from time to time in relation to street railways."

This act again makes specific sections of the Railway Act applicable. In view of the well known effect of the declaration of the general advantage of Canada, it is difficult to account for this action, unless the incorporators desired the specific reference, or the intention was to exclude the company and railway from unnamed sections, and among others the sections empowering the board to regulate fares. All doubt, however, which might arise as to whether or not the board had jurisdiction under the Railway Act to regulate the company's tolls was removed by the subsequent act of the Dominion, 1894, c. 86. Sec. 7 of this act declares the company's lines to be works for the general advantage of Canada, and the Ottawa Electric Ry. Co. to be a body corporate, subject to the legislative authority of the Parliament of Canada. This absolute declaration would also appear inconsistent with the exceptions reserved in favor of provincial jurisdiction in the statute of 1892.

A further act of the Dominion, however, 1899, c. 82, was also passed on the company's petition, this act being the act already referred to as authorizing the construction of the Britannia line. For some reason which is not at the moment apparent, again, certain sections of the act were made specifically applicable, sec. 3 of the statute reading:

"Sections 90 to 172, both inclusive, of the Railway Act, and such of the other sections of the said act as are applicable, shall apply to the company with respect to the said extension."

In view of the declaration contained in the act of 1894, the company in all its operations was subject to the provisions of the Railway Act. The provisions of the act of 1899, making specific sections of the act applicable, does not of necessity, in view of the circumstances, relieve the company from the operation of the act generally. The promoters of the legislation may have desired, and parliament may have enacted the specific sections merely for greater certainty. The board ought not to find the provisions of the act of 1894 repealed by implication without some very strong reason. The apparent inconsistency now considered in my opinion is not sufficient. Sec. 5 is of special importance, in that parliament thereby recognizes as continuing the provisions of the act of 1892 and which reserves a limited provincial control. In 1899 parliament thus treats as existing, and legislates on the supposition, rights reserved to the provinces by the act of 1892.

I am of the opinion that all these special acts have to be read together, and that they should be so read as to give effect, where possible, to the provisions of all. I therefore find that the company is under the control of the Dominion Parliament and subject to the provisions of the Railway Act, subject to the exception made in the statutes of 1892. The result, therefore, is that the actual operation of the company's line in Ontario, by any new



or additional powers conferred by the act of 1892, is subject to the statutes of Ontario in force from time to time in relation to street railways. The new and additional power granted by this act, and having reference to operation, is the authority which has since been exercised by the company to operate the railway by the force and power of electricity. As a result, subject to the modifications worked by the Dominion acts of 1892 and 1899, the company and its railway, apart from the electrical operation, are subject to the board's jurisdiction, and the electrical operation of the railway only is subject to provincial law. As a result, I find that the board is properly seized of the present case.

Under the Railway Act, the same company may have different rates on different parts of its system, where traffic and operating conditions and construction costs are dissimilar; for example, railway tolls are justifiably higher in a mountainous district, where cuttings and grades are heavy, and as a result the cost of construction and operation is greater than in other districts. Again, the tolls may be greater where traffic density and diversity differ. Rates on a branch or lateral line may be justified, although higher than those of a main line, with greater traffic and although owned by the same company. *Almonte Knitting Co. v. C.P.R. and M.C.R.R.*, 3 Can. Ry. Cas. 441.

These considerations apply to railways which give a measured service, and receive a measured rate, reasonable and just for the service rendered. No case has heretofore arisen requiring consideration as to whether or not such principles can be applied to a city street railway, although possessing an outside feeder, and which does not give a measured service for a measured rate, but on the other hand applies a flat rate to all using its facilities, and without regard to the actual value of the service rendered, for which a particular fare is paid. The conditions applying to the tolls and tariffs of the railway systems of the character contemplated by the Railway Act, and considered in the board's past decisions, are so different to the conditions surrounding the operation of the Ottawa Electric Ry., that previous decisions of the board are easily distinguishable. In the case of a measured service, finding as I do that the service on the branch line of itself is not at the present remunerative, the company's other tolls would in such case be subject to reduction, in case the revenues of the branch were increased, and the company's general revenue from transportation greater than it ought to enjoy.

The Britannia line forms part of the company's general investment. As previously stated, the line was constructed in 1899 and operated on and after May 24, 1900. In 1899 the company's capital was \$814,000, its funded debt \$310,000, and its current liabilities \$107,553. In 1900, while the capital was the same, the funded debt was increased to \$500,000 and current liabilities reduced to \$50,436. In the absence of exact information on the point, it would appear that the construction of the line was financed, at least in part, by the addition of the funded debt. The stock issue and funded debt remained constant until 1903, at which time the capital was increased to \$995,700 and the current liabilities reduced to \$33,601. In 1905, the capital issue was again increased, amounting as it then did to \$998,200, while the current liabilities amounted to \$120,566. In 1908 the capital was increased to \$1,247,700, and the cur-

rent liabilities then amounted to \$210,394. In 1912 the capital had increased to \$1,876,900, and the current liabilities were \$136,909. The funded debt still remained at \$500,000. It will be observed that the construction of the Britannia line caused no particular change in the capital account, but that account has varied quite as sharply as when the line was built. The investment became, and is, part and parcel of the company's general investment in its transportation undertaking.

The company, in support of its application, shows that, in view of greatly increased cost of operation, conditions have changed, and urges that increased fares have become necessary. Undoubtedly all costs have greatly risen. War conditions have brought about abnormal conditions. Transportation companies have been injuriously affected to a very marked degree. The Ottawa Electric Ry. has suffered from general increased costs, in common with other companies and business concerns. Some of these increased costs, at any rate, were more marked during the period of active hostilities than they are today. I now consider the effect of the active war period on the company.

The year ended June 30, 1913 (the date as of which the company has to make its statutory return), may, as I think, be looked upon as normal. The last return made to the Railways Department is for the year ended June 30, 1918. A perusal of the reports filed with the department shows that during this period the company maintained its position, having regard to both its balances and dividend payments. While there was no new issue of stock, the mileage operated increased from 47.7 miles to 52.82 miles. The funded debt in 1913 was \$500,000; in 1918 it had been reduced to \$410,000. In 1913 the company's reserves were \$210,000; in 1918 they were \$558,076. As against this, the company's current liabilities in 1913, of \$520, grew to \$400,056 in 1918. This increase in current liabilities, in the absence of any increase in funded debt or capital, may well be accounted for by the fact that the company's return of cash spent in construction and equipment, less deductions, which it made in 1913, amounted to \$2,725,778, while the total returned in 1918 had increased to \$3,370,368, an increase of \$644,500. In 1913 the company commenced its operations with a surplus of \$203,500, and after paying the usual dividends and interest, as well as \$69,000 transferred to contingent account, increased its surplus by \$13,259. In 1918 the year's operations commenced with a surplus of \$47,589. The company paid the usual dividends and its interest charges, and transferred \$110,000 to depreciation reserve, but decreased the surplus it commenced the year with by \$29,929. The results of the respective years' business differ but slightly. In so far as surpluses are concerned, 1913 has the advantage to the extent of \$43,188, while in 1918 transfers to other accounts exceeded 1913 by \$41,000.

In so far as the company's balance sheet is concerned, admittedly an increased floating debt has the drawbacks inherent to such liabilities. Nevertheless, the railway property operated has increased over 10%. The funded debt has decreased \$90,000; the reserve, apart from any consideration of specific depreciation reserves, or the contingent account, has increased \$348,076. On the other hand, the increase in current liabilities is \$399,536, and the surplus remaining on hand at the end of the year decreased \$186,831. To recapitulate, the

company's returns support the following conclusions as to changes worked in the company's position between 1913 and 1918:

Decrease in funded debt.....	\$ 90,000
Increase in reserve or surplus.....	348,076
Increase in construction and equipment account. ....	664,590
	<hr/>
	\$1,082,666
Increase in current liabilities.....	\$ 399,536
Decrease in yearly balance.....	186,831
To balance .....	496,299
	<hr/>
	\$1,082,666

In other words, after maintaining a 15% dividend and all interest on its funded debt, the company's returns show it to be \$496,299 better off on June 30, 1918, than it was before the war. Another method of estimating the company's prosperity is that afforded by the operating ratio, which expresses the percentage of operating expenses to receipts. The company's annual reports to its shareholders gives the operating ratio for the calendar year 1899, at 57%. The same return is made for 1900, but as at that time a special charge was made for the Britannia service, the effect of the Britannia operation without the payment of fares cannot be illustrated. For the calendar year 1901, with fares charged on the Britannia line, a percentage of 63% is shown, dropping to 60% in 1902, and in 1904 rising again to 62%. It was about this period that the company carried passengers on the Britannia line without an extra fare, during the summer. For the calendar year 1905 the ratio was shown as 59 2/5%. Some time in 1908 the company ceased making any extra charge on the Britannia line. The operating ratio in 1908 was 66 2/5%; in 1909, 63 1/2%; in 1912, 57 1/5%; in 1913, 60 2/5%; and for the calendar year 1917 the operating ratio had dropped to 56 4/5%.

The company, however, since the last return was made to the government, has been obliged to make a large increase in its wage account. The evidence shows that the wage increase, calculated on the actual payments for Sept. and Oct., 1918, and compared with the same months of 1917, amounted to an increase of 28%, while the total expenses showed an increase of 30%. It is, of course, impossible to deny the grave effect of the increase, but the company is, on the other hand, in receipt of increased revenues. It no longer sells 6 tickets for 25c. As a result of the change in the rate basis, which under its contract the company was able to make, the average fare paid per passenger has increased from 4.19c to 4.71c, an increase of 0.52c. If the company's volume of traffic is maintained, this increased revenue will go a long way in recouping increased expenses. The returns of Sept. and Oct., 1918, are undoubtedly disappointing, but these months cannot be considered characteristic—the influenza epidemic was then at its height—not only were many people ill and unable to be about, but those who could, were urged to keep out of street cars and all crowded places.

Much has been said of the London and Port Stanley and the Hull Electric cases. They do not apply. The circumstances were, and are, entirely different to those of this case. London was netting less than 2% on its original investment, and the Hull Co. operating without profit.

It is undoubtedly in the public interest that railway companies should be prosperous, and their operation remunerative. With impoverished companies, service always suffers, and the rails, rolling stock, and equipment rapidly deteriorate.



Happily, in the present case, the company has been, and is, prosperous and well managed, the plant well maintained, and perhaps the best service in the country afforded. All of this is in the best interest of the public; it is also in the best interest of the company, whose careful and efficient management has resulted in large dividend earnings, as well as a proper service.

As a result of the view I take of the

## Winnipeg Electric Railway Report, Meeting and Changes in Directorate.

The outstanding feature of the Winnipeg Electric Ry.'s annual meeting, held at Winnipeg, Feb. 12, was the retirement of the four non-resident directors, Sir Wm. Mackenzie, Sir Donald Mann, D. B. Hanna, and R. J. Mackenzie, the election of Sir Augustus Nanton, heretofore Vice President, as President, and of A. W. McLimont, heretofore General Manager, as Vice President and General Manager.



Sir Augustus Meredith Nanton,  
President, Winnipeg Electric Railway.

The annual report was presented as follows and adopted.

Gross earnings from operations.....	\$3,588,723.09
Operating expenses, before charging depreciation .....	2,412,226.47
Net operating revenue.....	1,176,496.62
Miscellaneous income.....	44,931.65
Income available to meet fixed charges, etc. ....	1,221,428.27
From which the following deductions are made:—	
Interest charges on debenture stock, bonds, gold notes, etc.....	\$668,341.96
Extinguishment of discount on securities...	16,254.98
City percentage and car license .....	114,509.46
Taxes .....	114,927.79
Miscellaneous non-operating expenses.....	2,190.66
Other income deductions .....	15,419.34
	\$ 931,644.19
Net income, excluding depreciation.	\$ 289,784.08

The gross income for 1918 shows an

general issue, it is unnecessary to discuss the line to the Rifle Range in any detail. It is hoped and expected by many that costs will shortly decrease. However this may be, the company has failed to show that it requires increased revenues. I would disallow the suspended tariff.

The foregoing judgment was concurred in by Deputy Chief Commissioner Nantel and by Commissioners McLean, Goodeve and Boyce.

increase of \$249,713.20 over 1917, but increased wages and operating expenses have swelled the operating charges, so that for 1918 the net income shows a decrease of \$63,845.57 from 1917.

During 1918 great difficulties were encountered. The prevalence of the influenza epidemic was responsible for a large loss in revenue, and in May the company's motormen and conductors went out on a sympathetic strike, with the city fire brigade, tying the service up for several days. The motormen and conductors were granted a board of conciliation, which awarded to them very large increases of wages dating from Oct. 1, 1918. A similar result ensued from a board of conciliation appointed at the request of the shop and track men. The increased wages thus awarded, together with higher wages paid in all departments, and increased cost of materials, made a very large addition to operating costs. On the other hand, your directors are glad to be able to report that the jitney competition, which this company had to endure so long, and which was a source of much financial loss to it, has been eliminated. The Public Utilities Commission, upon the company's application, made an order providing for a temporary increase of fares, effective on Nov. 1, 1918. Application for a permanent increase of fares is now before the commission.

Unless further unforeseen adverse conditions have to be contended with, the outlook for 1919 is much brighter, and more hopeful than for a number of years past. With the return of peace, business is gradually resuming its normal activity, and provision is being made by the management to take advantage of the increased business which is looked forward to.

Sir Wm. Mackenzie, who was in the chair, and who had been President from the company's inception, announced his intention of retiring from the board, and also that Sir Donald Mann, D. B. Hanna and R. J. Mackenzie would retire.

Sir Augustus Nanton, Vice President, referred to the great service rendered to the company by Sir Wm. Mackenzie and expressed regret at his retirement, and said:—"Sir William has been President of the company practically since its inception. Today the citizens of Winnipeg can be proud of the fact that they have an electric railway second to none on the American continent, due to the great energy, ability, and farsightedness of Sir Wm. Mackenzie and his associates. Sir William fathered the establishment of water power plants on the Winnipeg River and the Winnipeg Electric Ry. Co.'s line was the first long distance power transmission line in Canada. The introduction of the electric railway transportation system has given rapid transportation to outlying districts of Winnipeg and has increased the value of suburban prop-

erties."

The following directors were re-elected: Sir Augustus Nanton, F. Morton Morse, G. V. Hastings, J. D. McArthur, Hugh Sutherland. The following were elected directors to fill the four vacancies mentioned above: G. W. Allan, K.C., M.P., W. R. Bawlf, W. J. Bullman, and A. W. McLimont. This constitutes a completely resident board, all the directors living in Winnipeg.

At a meeting held subsequently, Sir Augustus Nanton was elected President, and A. W. McLimont, Vice President and General Manager. F. Morton Morse was re-elected Secretary, and Lawrence Palk was re-elected Assistant Secretary.

## Electric Railway Employes' Wages.

The Brantford Municipal Railway Commission has, according to a press report, been asked by the street railway men's union for a rearrangement of schedule of hours, so that they will work on a 9-hour day basis, with pay at the same rate as now paid for 12 hours.



A. W. McLimont,  
Vice President and General Manager, Winnipeg Electric Railway.

The Montreal Tramways Co.'s employes on Feb. 1 negotiated with the company's officers for a further increase of wages, a 9-hour working day and better conditions as to holidays, clothing and some other matters. The present wage scale is for different periods of service, 31c, 33c, 35c and 37c an hour, and it is reported that the men are asking that these rates be increased to 43c, 45c, 48c and 50c an hour. Several meetings have been held.

The Quebec Public Utilities Commission, in a report to the legislature, calls attention to the fact that "the lack of definite authority to compel public utilities to enter into co-operation arrangements with one another, subject to mutual service and proper compensation, is not in the public interest, and, it is respectfully suggested, should be given by amendment to the law."



## Advances in Electric Railway Freight and Passenger Rates.

**British Columbia Electric Ry.**—The voting upon the bylaw in North Vancouver recently resulted in the overwhelming majority of 482 to 90 in favor of the new agreement. As a result of this, the company receives an extension of its franchise to sell light until 1925, and in return give the North Vancouver people a 7c commutation fare, with transfer, to Vancouver city lines. The city fare in North Vancouver remains at 6c.

The 1919 city council has taken office in Vancouver. The new bridges and railways committee recommended that the mayor sign the 6c fare bylaw, which was passed last July. The mayor, however, still refuses to sign. The B.C. Electric Ry. has declined to continue franchise negotiations and has notified the city of this, and that it will rely upon the public utilities commission to deal with fares.

The Vancouver City Council passed a resolution, Feb. 7, cancelling the existing agreement authorizing the B. C. Electric Ry. to collect a 6c fare on its cars, at the expiration of the 9-month period dating from July 8, 1918, viz., April 8, 1919.

Alderman Porter, now Mayor of Victoria, said in the course of his recent election campaign that, if elected, he would take up immediately the 6c fare issue with the B.C.E.R. and press it to a satisfactory conclusion. A special meeting of the newly-elected city council, presided over by Mayor Porter, was held toward the end of January, to deal with the proposed agreement between the city and the company. It was agreed that a delegation should meet the company without delay. The council authorized the committee to come to terms with the company along lines much simpler than the list of conditions submitted to the company in the early part of December, during Mayor Todd's term of office. At a meeting of the city council, held the last week in January, it was decided to abandon the original 14 demands and to ask only three main concessions from the company, in return for permission to charge a 6c fare with transfer privileges, in place of the existing straight 5c fare. These conditions are:

1. That the company put into effect a fare schedule, making the regular fare on all lines 6c, with transfer privilege, 6 tickets being sold for 35c; special tickets for children under 12, good at all hours, and for school children, during school hours, to cost 25c for a strip of 10; children under 5 to be carried free.

2. That the same rates for electric lighting be in force in Victoria as in Vancouver. This would probably make the rate per kilowatt 6c, abolish meter rent, and make the minimum 50c a month.

3. That the company maintain the strip of roadway between the rails and a strip of 18 in. on either side of the track.

Whatever agreement the city reaches with the B.C.E.R., the council stipulated that it should be binding for at least a year, or until such time as a public utilities board is appointed, when the question will be re-opened.

The question of regulating jitneys was brought up at the same meeting of the council, but no definite action was decided on.

A Victoria press dispatch of Feb. 18 states that A. T. Goward, Local Manager B.C.E.R. there, had notified the city council that, with a few minor amendments,

the company would accept the proposal for a temporary arrangement of the terms of the franchise drawn up by the city recently.

The Vancouver, Fraser Valley & Southern Ry. and the Vancouver & Lulu Island Ry., two lines operated by the B. C. Electric Ry., put in effect Feb. 1 a new standard freight mileage tariff, authorized by the Board of Railway Commissioners.

**Hamilton Radial Electric Ry.**—After a period of considerable electioneering activity, a new mayor and several other members of council were elected for Burlington, Ont., Feb. 3, with the result that on Feb. 5, the H. R. E. Ry. resumed service between Hamilton and Oakville, 21.46 miles. The agreement with the Burlington council as to fares to be charged supersedes for a year the provision in the original franchise, and provides as follows:—

Workman's ticket for 12 trips, good for one week, Burlington to Hamilton terminal and return, \$1.50, and to Sherman avenue, \$1.20.

Hamilton commutation tickets, to and from Hamilton, good for 26 trips within 6 weeks, \$4.50 each, or a rate of 35c for return trip.

Transient tickets, one way 25c, return 45c.

School tickets to be sold at the same price as formerly.

Ratification of this agreement is to be made by the company, the Burlington council and the Board of Railway Commissioners, and the proceedings in connection therewith are in progress. A full schedule put in effect Feb. 20 provides for an hourly car service from 6.10 a.m. to 11.10 p.m. every week day, and from 9.10 a.m. to 10.10 p.m. on Sundays; while there is a service from Burlington to Hamilton at 6 and 7 a.m., the regular hourly service starting from Oakville at 7.30 a.m. and continuing to 10.30 p.m., except on Sunday, when the last car to Hamilton leaves at 9.30 p.m. There is a car leaving Oakville for Burlington at 11.30 p.m. (daily) and another at 12.30 a.m. (daily except Sunday), and on Sundays only a car from Oakville to Burlington is run at 10.30 p.m.

**London St. Ry.**—The London, Ont., Chamber of Commerce committee appointed to investigate the service-at-cost plan for streets railways and other matters relating to the London St. Ry. met Feb. 14, when Mr. E. P. Fredericks, of the Association of Holders of Public Utility Securities, Toronto, was heard again on the subject, he having addressed the whole chamber at an earlier date. At this committee meeting he explained the plan in more detail and submitted a draft copy of a proposed bylaw, which might be applied to London, and he also answered queries by members of the committee. The company's annual report was informally discussed by the committee, but no action was taken.

At another meeting on Feb. 17, members of the committee took up the service-at-cost plan, and after some expressions to the effect that it was apparently quite an experiment in most places, and in view of the fact that they had not received replies to enquiries sent out in regard to it, they again deferred any definite action. The mayor expressed himself as against the plan.

The company's application for increased

fares, as set for in a letter to the mayor, dated Feb. 5, asking an increase to 5c cash, or 6 tickets for 25c, was taken up by the city council's no. 1 committee on Feb. 19. In that letter the company's president asked the city council to consider whether it would care to buy the property, as provided in the bylaws, without waiting until the expiration of the franchise in 1925. Ex-Alderman H. B. Ashplant, an admitted socialist, claiming to represent the real investors in the property, asked to be heard, and presented figures compiled from the company's reports for the past five years, aiming to show that the property had been built up on earnings, and that whereas capital was entitled to get out only what it had put in, without any return in the meantime, the company did not therefore need to increase its fares. After consideration by the committee, it was decided to recommend that the city council employ an independent auditor, familiar with street railway work, to investigate and report on the company's position. The company had previously expressed perfect willingness to have such an investigation made by any independent, competent authority.

**Nipissing Central Ry.**—A Cobalt, Ont., press dispatch of Feb. 19 says that over \$8,000 was lost in 1918 in operating this line, which is owned by the Province of Ontario and operated by the Timiskaming & Northern Ontario Ry. Commission. The report also stated that some of the officials had been interviewing local authorities to ascertain their opinions as to a 25% increase in passenger fares.

**Ottawa Electric Ry.**—The Board of Railway Commissioners' judgment, refusing to allow the company to advance passenger fares on its suburban lines, is given in full on another page of this issue.

The Board of Railway Commissioners passed order 28,120, Feb. 25, disallowing the Ottawa Electric Ry.'s tariff C.R.C. 5, published and filed, to become effective Nov. 18, 1918.

### Attempt to Cancel Montreal Tramways Co's Franchise Defeated.

A bill having for its object the amending of the City of Montreal's charter was introduced into the Quebec Legislature recently by G. Myrand. The petitioners named in the preamble were A. Goyette, J. A. Vaillancourt, L. Dubois and J. M. Savignac, who alleged that public opinion was manifestly in favor of the repeal of secs. 2 to 24 of chap. 24 of the statutes of 1918, creating an administration commissioner not elected by the people for the city, and of sec. 28, chap. 60 of the statutes of 1917, appointing a commission to draw up a contract for the tramways franchise between the City of Montreal and the Montreal Tramways Co.; and of sec. 75, chap. 84 of the statutes of 1918, ratifying such franchise contract. The preamble further alleged that public opinion was evidently in favor of not having any franchise and exclusive privileges and any modification of such franchise and privileges already existing in connection with any public utility company being granted in Montreal, otherwise than by the direct representatives of the electors of the city, nor of their coming into force until they had been ratified by a referendum or by a vote of the majority of the electors. The sections of the measure provided for the repeal of various portions of the acts mentioned, and the insertion of sections providing for the governing of the city after April 1, by



the mayor and aldermen then in office, instead of by the commission, defining their duties, etc. Sec. 10 provided for the repeal of sec. 28 of chap. 60 of the statutes of 1917 appointing a commission to draw up a franchise agreement between the Montreal Tramways Co., and sec. 11 provided for the insertion of an article in chap. 58 of the act of 62 Vict., enacting the second allegation of the preamble.

The bill was read a second time and referred to the private bills committee for consideration. The hearing before this committee was begun Feb. 18, when the sections proposing to do away with the present commission governing the city were thrown out by 32 to 2. There was considerable discussion on the two

sections affecting the tramways franchise, and further discussion was postponed. The final sections of the bill were dealt with in the committee Feb. 19, when they also were defeated, only two members voting in their favor.

At a meeting of the city council Feb. 3, Alderman Bedard submitted a motion asking that the council support the bill, but after a discussion the motion was referred to the legislative committee by a vote of 12 to 5. A report of the legislative committee recommending the council to support the measure was considered at a meeting of the council Feb. 10, Mayor Martin and Alderman Shaw only voting against it, the remaining 17 aldermen present voting for it.

the municipalities, and all other matters necessary to the carrying out of the agreement. A very full summary of the agreement was given in Canadian Railway and Marine World, Jan., 1917, pgs. 26 and 27, when the bylaw was submitted originally. Of the 16 municipalities interested in the Toronto-St. Catharines section of the line, only three—Hamilton City, Nelson Tp. and Saltfleet Tp., voted against the bylaw, while all the eight municipalities interested in the Welland-Bridgeburg line voted in favor of the bylaw.

### One-Man Cars Authorized for Saskatchewan.

At its 1913 session, the Saskatchewan Legislature added the following as sec. 237 of its Railway Act:—"Every street car shall be in charge and under control of at least two competent men, a motor-man and a conductor." Since that time the desire of the municipalities and companies operating electric railways to give the fullest possible service to the public, brought about the adoption of one-man cars on the less frequented lines, and on other lines during hours when travel was at its lowest. War conditions, with the consequent increased cost of labor and materials, further accentuated the desire of the railway managements to increase the number of one-man cars operated, in order that full service might be given and the lines kept on a paying basis. With the direction that at least two men should be in charge of every car, electric railways in Saskatchewan were not in a position to take any steps towards its adoption on their lines.

In 1917, the legislature was asked to amend the act by authorizing municipalities to pass bylaws authorizing the operation of one-man cars within their limits, and a bill was introduced and referred to a special committee. The municipalities of Regina, Saskatoon and Moose Jaw were represented before the committee, and favored its adoption, but owing to the attitude of labor organizations, the committee did not make a report, and the session ended without any action being taken. The matter, however, was not allowed to drop by representatives of the three electric railways in the province: the Regina Municipal Ry., the Saskatoon Municipal Ry. and the Moose Jaw Electric Ry., with the result that a bill was introduced at the legislature's recent session, and after passing through its earlier stages was referred to the standing committee on railways. This committee met representatives of the companies, the municipalities and others interested on Jan. 28, and on Jan. 29 reported the bill without amendment. It was given its final reading Jan. 30, and was assented to Feb. 5. By its final section it is to come into force May 1. The act adds a new section to the Railway Act, numbered 237a, as follows:—

"The council of any city or town may pass a referred bylaw declaring that the preceding section shall cease to apply to any street railway, tramway or electric railway operating within the municipality; and from the time when such bylaw comes into force the said section shall cease to apply to the operations of any such street railway, tramway or electric railway, whether within or without the municipality, until repealed as hereinafter provided.

(2) The council of any city or town shall also have power to pass a referred bylaw repealing any bylaw passed in ac-

## Negotiations for Purchase of Ottawa Electric Ry. by the City.

Ahearn & Soper, Ltd., wrote the Mayor of Ottawa towards the end of January as follows:—"Your favor of Dec. 13, 1918, advising us that the board of control would be pleased to have us place a price upon the street railway property, was received upon the eve of the civic elections at which the question of the city owning and operating the street railway was submitted to the ratepayers. Pending an expression by the ratepayers, we postponed replying to your communication, believing that an adverse opinion would render further negotiations unnecessary.

"It was our desire, as stated to your board, that the franchise should be renewed, and we have only decided to make a recommendation to the traction company's shareholders because of the refusal by your board to consider a renewal of the franchise and because of the expressed wish of a majority of the Ottawa ratepayers at the recent municipal election that the city should own and operate the road.

"Therefore, subject to approval by the shareholders of the Ottawa Traction Co., and to acceptance by the City of Ottawa on or before May 1 next, we will agree to assign to the corporation all the street railway properties at a price equal to par for the Traction Co.'s stock, which consists of 56,307 shares of \$100 each. The corporation to assume the unexpired portion of the franchise and such liabilities of the company as may exist at the date of the corporation taking possession of the property. Payment to be made by the corporation by any one of the following options:—1. Cash. 2. 5-year 5½% City of Ottawa bonds. 3. 10-year 5½% City of Ottawa bonds. 4. 20-year 5½% City of Ottawa bonds. 5. 30-year 5½% City of Ottawa bonds.

"The price submitted is in accordance with your letter of Dec. 4. You wrote: 'You will understand that if the company fixes a price, it must be a real price. There is no room under the circumstances for any haggling. The price would either have to be accepted or rejected.'

"In our reply of Dec. 6 we wrote: 'We are fully in accord with your view as expressed above. The price to be named will be explicit and final.'

"The terms of this letter are without prejudice to the price of the street railway assets if assumed by the city at the termination of the company's franchise."

The city's board of control then asked for further information as to the liabilities to be assumed by the city should the offer be accepted, to which Ahearn &

Soper replied as follows:—

"The financial liabilities of the company today are: Bonds, 4%, \$400,000; current loans, \$370,000. The bond issue is being reduced by drawings from time to time. Current loans vary according to the needs of the company's business.

"The business will be conducted during the period of the option in accordance with the company's established practice. No large capital expenditures are planned for the next three months, and we are advised by the acting Secretary-Treasurer that the item current loans will be approximately \$350,000 on May 1.

"The company's dividends at the rate of 5% a year will not be exceeded during the period of the option. The company will permit inspection of its books and properties by your representatives."

The city council authorized the board of control to engage engineering, financial and legal assistance in connection with the matter, and it was announced subsequently that Thos. Bradshaw, Finance Commissioner of Toronto, had been retained in this connection.

### Hydro Electric Railway Project from Toronto to Niagara Falls Revived.

The dispute between the Hamilton Radial Electric Ry. and the Town of Burlington and adjacent municipalities respecting fares, which has been fully dealt with in previous issues, and also in this one, revived the question of railway construction under the Ontario Hydro Electric Ry. Act. As a result the Hamilton city council decided to resubmit to a vote the bylaw which was defeated Jan. 1, 1917. Some discussion took place as to whether the bylaw should be amended in any way before resubmission, but Sir Adam Beck, Chairman, Hydro Electric Power Commission of Ontario, stated it would have to be resubmitted as it was originally. Hamilton ratepayers are asked to vote Mar. 15 on the question whether or not the city council shall enter into an agreement with the Hydro Electric Power Commission of Ontario, for the construction and operation of an electric railway from Toronto to Niagara Falls, Ont., under the provisions of the Hydro Electric Railway Act of 1914, and amendments thereto. The bylaw sets forth the route of the projected line, the total construction cost, the apportionment among the various municipalities interested, the annual cost to be provided by



cordance with the preceding subsection, and after such repealing bylaw comes into force the said section 237 shall again apply to every street railway, tramway or electric railway operating within the municipality.

"(3) Every bylaw provided for by this section shall receive the assent of the majority of the persons voting thereon.

"(4) The persons qualified to vote upon any such bylaw shall be the persons whose names appear on the last revised voters' lists of the municipality.

"(5) All the provisions of The City Act or The Town Act, as the case may be, respecting bylaws requiring the assent of the electors shall, in so far as they are not inconsistent with the provisions of this section, apply mutatis mutandis to the proceedings upon a vote under the provisions of this section."

### Electric Railway Projects, Construction, Betterments, Etc.

**British Columbia Electric Ry.**—Geo. Kidd, General Manager, is reported to have informed the Point Grey municipal council, Feb. 4, that if the authorities of the two municipalities interested would get together and open up the Alma Road through, and place it in good condition for laying track, the company would lay the track and operate its cars from Kerrisdale to Fourth Ave. and return, provided that no action be taken by landowners in the district. The matter is under consideration. (Dec., 1918, pg. 505.)

**Grand River Ry.**—We are officially advised that the new construction between Preston and Hespeler, Ont., consists of a revision of 2 miles of the branch line between those towns. Each spring the high water of the Speed River floods the roadbed, making necessary the closing down of operations for anything from 3 to 10 days at a time, with consequent damage to roadbed. It was thought best, in order to overcome these conditions, to relocate the line above all highwater marks, at the same time reducing gradients and curvature. On the new location there will only be 3 curves, whereas on the present line in the same distance there are 9, varying from 3 to 8 degrees each. The heaviest gradient on the new location will be 0.40%, and the sharpest curvative 4 degrees. The revision work starts at mileage 0.7 from Preston and connects with the present line at George Forbes & Co.'s mills at Hespeler.

The company owns Idylwild Park, on a stretch of the Speed River, which is equipped with a dancing pavilion, refreshment booths, baseball diamonds, swings, etc. A road from the new line to the park will be provided.

The work of clearing and fencing the new route is being proceeded with and the grading will be started as soon as weather permits. The overhead work will be of catenary construction, with a 7/16 steel messenger, using 3/0 copper trolley insulated for 1,500 volt operation. All the work is being done by the company's own forces, under the supervision of F. H. Midgley, Resident Engineer. (May, 1918, pg. 211.)

**Levis Tramways Co.**—A bill for the incorporation of the Levis Tramways Co. is being considered by the Quebec Legislature. The petitioners are Senator Raoul Dandurand, S. H. Ewing, J. A. Ewing, of Montreal; E. A. Macnutt, Westmount, and J. C. Blouin, who are to be

provisional directors. The office is to be in Levis, and the authorized capital is to be \$1,500,000, which may be divided by the directors into ordinary and preferred stock. The company is being incorporated to acquire the railway owned by the Levis County Ry. Co., as it now exists, and to operate thereon any kind or kinds of cars by electricity or otherwise in the City of Levis, the parish of St. Romuald d'Echemin, the village of Bienville, and the town of Lauzon; and it may also acquire all the Levis County Ry.'s other property, with all rights, agreements, franchises, etc., with all amendments to the same. Further alterations in the terms of the agreements with municipalities may be made by mutual consent. The applicants ask authority to extend the present railway in Levis, and in or between any of the various municipalities of the counties of Levis, Bellechasse, Dorchester and Beauce, subject to agreements with the municipalities, for periods not exceeding 40 years; and authority to build branches not exceeding 15 miles in any one case, from the main line. The applicants also ask power to enter into agreements for extending the line as far as the Quebec Bridge, and over the same, and also on the north shore of the River St. Lawrence, and to connect at some point with the Quebec Ry., Light, Heat & Power Co.'s electric railway.

The new legislation means a reorganization of the present Levis County Ry. Co., with more extensive powers, and a new title.

**Moose Jaw Electric Ry.**—The Moose Jaw, Sask., City Council was informed by the company, Jan. 28, that until the city decided to take over the company's line, or to render it such help as would enable it to operate, the company did not see fit to take any responsibility for any part of the repairs of the Fourth Ave. bridge. The matter was referred for consideration to the works committee. (Dec., 1918, pg. 505.)

**Saskatoon Municipal Ry.**—A press report states that the Saskatoon, Sask., city council contemplates making some extensions to the city's electric car lines during this year at an estimated cost of \$46,000. (June, 1917, pg. 244.)

**St. Thomas St. Ry.**—The question of the repaving of Talbot St., one of the streets on which the St. Thomas St. Ry. operates, is before the City Council. The railway is not a paying proposition, and it is reported that the ratepayers will be asked to vote on the question of continuing to operate it, before the repaving matter is settled. It was reported, Feb. 19, that it would take about \$75,000 to repair and improve the line to meet traffic conditions.

**Sudbury-Copper Cliff Suburban Electric Ry.**—The Ontario Legislature is being asked to amend the company's act of incorporation, by authorizing an increase in the capital stock from \$250,000 to \$500,000, and by empowering the company to sell its unissued ordinary shares. (Aug., 1917, pg. 324.)

**Toronto & York Radial Ry.**—The switch connecting the company's Metropolitan Division and the Grand Trunk Ry. at Aurora, Ont., was reported to have been opened for traffic Feb. 2. The object is to give the T. & Y. R. R. access to the factories in the western end of the town. (Jan., pg. 40.)

**Toronto Suburban Ry.**—The City of Toronto is asking the Ontario Legislature to confirm a city bylaw passed Mar. 5, 1917, requiring the company to con-

struct and operate lines upon certain streets in Ward 7, north of Dundas St., on or before Oct. 1, 1917, and to declare that the city had authority to pass such a bylaw. (Aug., 1918, pg. 348.)

### Electric Railway Notes.

The Hydro Electric Power Commission of Ontario has received a double end, double track, snow plough from Canadian Car & Foundry Co.

The Montreal & Southern Counties Ry. has asked tenders for two 50-ton electric locomotives equipped with four 175 h.p. box type interpole 600 volts meters.

The Fort William, Ont., utilities committee has directed A. L. Farquharson, Manager of the municipal railway, to make a report on capital charges against the railway and to suggest of what charges, if any, the railway should be relieved.

The City of Niagara Falls, Ont., application to the Board of Railway Commissioners, for an order directing the Niagara, St. Catharines & Toronto Ry. to lay its rails down the center of Queen St., and to construct a new crossing at intersection of Queen St. and Erie Ave., has been dismissed.

The matter of the price to be paid by the City of Toronto for the Toronto and York Radial Ry.'s Metropolitan Division came before the Ontario Railway and Municipal Board, Feb. 4, and on the company's application that it was impossible to get certain important witnesses, the hearing was postponed to Feb. 25.

The Toronto City Council has retained I. F. Hellmuth, K.C., to deal with the city's case in the Toronto Ry. appeal against the fine of \$24,000 imposed for non-compliance with the Ontario Railway and Municipal Board's order to place 100 additional cars in service by Jan. 1, 1918, which is scheduled to be heard by the judicial committee of the Imperial Privy Council shortly.

The Hamilton City Council's street railway committee had a conference with the Dominion Power & Transmission Co.'s General Manager, Feb. 17, with reference to a general improvement of the service given by the Hamilton St. Ry. The basis of the conference was the recent report of the city's special railway committee, which will be considered by the company's officers, and a further conference will be held at an early date.

At a recent public meeting in Edmonton, Alta., complaints were made as to the service given on the Edmonton Radial Ry. The city council took up the matter a few days thereafter and turned it over to the Utilities Committee for consideration. The committee, after discussing the complaints, referred the whole matter to Superintendent Moir and the commissioners, with power to make whatever remedies they deem to be necessary having regard to the suggestions made by the South Side Community League.

**Service at Cost.**—Sir Adam Beck, Chairman, Hydro-Electric Power Commission of Ontario, in speaking at Hamilton recently, declared himself in favor of "service at cost." In answering a question as to rates on the proposed hydro electric railway from Burlington to Hamilton, he said that "the operation would be at cost" and that "he did not think there would be any serious competitor to a quick, efficient, radial service provided at cost to the people."



## Acquisition of Portion of Toronto & York Radial Railway by City of Toronto.

On Feb. 25, the arbitration proceedings before the Ontario Railway and Municipal Board, to determine the amount to be paid by the City of Toronto, for the Toronto & York Radial Ry.'s franchise, property, etc., on Yonge St., within the city limits, were adjourned indefinitely, it being announced that the city and the company had arrived at a settlement. Particulars of the arrangement are given in a report to the City Board of Control, dated Feb. 21, by R. C. Harris, Works Commissioner; T. Bradshaw, Finance Commissioner, and W. Johnston, City Solicitor, in which it is stated that they had been negotiating with the T. & Y. R. R. for 22 months, for the acquisition by the city of the portion of the company's Metropolitan Division within the city limits. With the report they submitted an agreement between the company and the city, providing for the acquisition by the city of all the company's rights, franchises and privileges, within the limits of the city, the company having executed the agreement, which is held in escrow, pending execution by the city. The principal points of the agreement are as follows:

The city to pay \$590,000, for the company's rights, franchises and privileges within the present limits of Toronto, and other property and assets as per schedule attached to the agreement, which includes all the company's track and appurtenances, overhead work, etc., on Yonge St. within the city limits, from Farnham Ave. to the north city limits, 3.394 miles, and all sidings and switches, making a total of 4 miles of track, together with the 8 local motor cars now operated within the city.

On the completion of the agreement, the company is to cease operating its cars over the portion of Yonge St. within the city limits, and is to establish a terminal station, abutting Yonge St., at or near the north city limits.

The company may establish receiving and forwarding stations, within the city limits, upon sites to be agreed on between the company and the city's Works Commissioner. A piece of land in the North St. Lawrence Market, on which the company may erect a building, may be used as one of such stations, for which the company shall pay a rental of \$2,000 a year and taxes, for a 5-year period, renewable. Until the city acquires the Toronto Ry., the city is to provide cars to carry the company's package, freight and express goods, between the company's terminal, at the north city limits, and a terminal station to be established by the company on the west side of Yonge St., between Farnham and Woodlawn Aves. The city to consent to the Toronto Ry. carrying, during the term of its franchise, the T. & Y. R. R.'s package, freight and express goods, and the city is to permit the Toronto Ry. to take the city's cars, used for the Toronto & Y. R. R.'s package freight and express goods, from that company's terminal, between Farnham and Woodlawn Ave., to and from the T. & Y. R. R.'s receiving and forwarding stations. When the city acquires the Toronto Ry., it is to furnish and operate cars to transfer the T. & Y. R. R.'s freight and express goods, from the terminal station at the north city limits, to the company's receiving and forwarding stations in the city, the transferring of such freight and express to be done by the company's employees. The company is to

pay the city monthly, for carriage of package freight and express goods, the depreciation and maintenance charges upon cars provided by the city exclusively for such carriage, and interest at 6% a year on their cost, the actual cost of conductors and motormen, and the actual cost to the city of electric power used in the carriage of goods, but no charge is to be made for power from midnight to 6 a.m. Should the city in the future operate any car line to points of contact with the company's Mimico and Scarborough divisions, the provisions of the agreement relative to carriage of package freight and express goods shall apply to those divisions also.

Until the city acquires the Toronto Ry., it is to permit the T. & Y. R. R. to use 6 pins on cross arms, fastened to the city poles, on Yonge St., between Farnham Ave. and the north city limits, to carry two 500,000 circular mils electric power cables, and 4 telephone wires, for the company's use in the operation and dispatch of cars on its railway outside the city limits, the company to pay the city 30c a year per pin per pole. After the city acquires the Toronto Ry., the city shall continue to carry the telephone wires to the company's dispatching office on Yonge St., at the same rental, but the power cables are to be then removed by the company.

The company is to give the city, for 6 months from the agreement becoming effective, a lease of its car barns and premises on Yonge St., south of St. Clair Ave., together with such machinery and fixtures as the company shall not require for the remainder of its system, the city to pay \$1 therefor.

The city officials say in their report that if the agreement becomes effective, it will enable the city to lay its rails at the city gauge, and operate a car line from a short distance south of Farnham Ave. to the north city limit, which means that in 1921, after the acquisition of the Toronto Ry., the city will be in a position to give a through service without transfer. The officials strongly recommend that the city approve the agreement and join in application to the Ontario Legislature to ratify it. They also recommend that they be authorized to apply for legislation to enable the city to raise funds, without submitting a bylaw to the ratepayers, and to do everything necessary to enable the city to construct and operate a civic railway on North Yonge St., at the earliest date possible.

The company originally asked the city for \$2,250,000 for its franchise rights, property, etc., within the city, but as shown above, has agreed to accept \$590,000 and the package freight and express goods rights as outlined.

Edmonton Radial Ry. motormen and conductors have evidently been making complaints of the noisy and boisterous conduct of young people on the cars going to and from the East End Park, as the City Solicitor's department is looking into the matter with a view of taking steps to protect the employes and the general public.

The Vancouver, B.C., City Council received notification, Feb. 10, that the British Columbia Court of Appeal had sustained Justice Gregory's judgment in favor of the constitutionality of the by-law eliminating jitney traffic in the city.

## Electric Railway Finance, Meetings, Etc.

British Columbia Electric Ry. and allied companies.—

	6 months to Dec. 31, 1918		6 months to Dec. 31, 1917	
Gross	\$691,065	\$555,555	\$3,418,095	\$2,923,660
Expenses	451,760	388,222	2,644,178	2,223,863
Net	239,305	167,333	773,917	599,797

Cape Breton Electric Co.—

	12 months to Nov. 30, 1918		12 months to Nov. 30, 1917	
Gross	\$49,235.47	\$42,612.67	\$507,951.52	\$458,245.61
Exp.	37,074.51	28,255.79	382,583.70	293,236.68
Net	12,160.96	14,356.88	125,367.82	165,008.93

	12 months to Dec. 31, 1918		12 months to Dec. 31, 1917	
Gross	\$51,173.79	\$46,120.31	\$513,005.00	\$464,081.53
Exp.	37,181.60	27,356.11	392,409.19	298,246.60
Net	13,992.19	18,764.20	120,595.81	165,834.93

Hamilton Radial Electric Ry.—A press report says that at the Dominion Power & Transmission Co.'s annual meeting in Hamilton, Ont., Feb. 24, it was stated that the Hamilton Radial Electric Ry. deficit for 1918 was \$53,000.

Hamilton St. Ry.—A report submitted by the city treasurer to the Hamilton, Ont., City Council recently showed that the receipts of the Hamilton St. Ry. for the three months ended Dec. 31, were \$188,003.70, against \$201,748.21 for the same three months in 1917. The city's percentage and mileage for the three months was \$16,920.26.

Ottawa Electric Ry.—The annual report for the calendar year 1918 of the Ottawa Traction Co., which owns the Ottawa Electric Ry. Co.'s stock, appears in full on page 105 of this issue.

St. John's (Newfoundland) St. Ry.—The Reid Newfoundland Co. is reported to have advised the St. John's, Nfld., City Council that the St. John's St. Ry. earned \$52,257.80 during 1918, against \$48,617 for 1917. The number of passenger carried during 1918 was reported to be slightly in excess of 1,000,000.

Toronto Civic Railway.—

	1919		1918	
	Receipts	Passengers	Receipts	Passengers
Jan.....	\$32,232	1,950,461	\$26,903	1,565,269

Toronto Railway.—

	1919		1918	
	Receipts	City %	Receipts	City %
Jan.....	\$588,923	\$88,338	\$562,707	\$84,406

Winnipeg Electric Ry.—The Winnipeg City Treasurer reporting to the city council Jan. 31, stated that the Winnipeg Electric Ry. earnings for 1918 were \$2,163,389.35. The city percentage on this at 5%, is \$108,169.46, in addition to which the city receives \$20 for each of the 317 cars in use, bringing the total receivable by the city to \$114,509.46. This amount, the city treasurer stated, was \$8,009.46 in excess of the amount placed in the city estimates for 1918. The car earnings for December were \$240,075.95, the largest for the year; while May, with car earnings of \$158,219.80, was the lowest.

Quebec Railways Bonds and Interest.—

Article 6474 of the Quebec Railway Act deals with the powers of railway companies, and sec. 16, as it stood in the Revised Statutes of 1909, authorized the companies to borrow money not exceeding the legal rate of interest, and that the bonds to be issued should be in currency or in sterling. In 1911 this section was amended by authorizing the issue of bonds in francs, or in the currency of any country, in addition to currency or sterling. A bill is before the legislature having for its object the striking out of the words "legal rate," and inserting in lieu thereof the words "seven per cent."



### Toronto Railway Co's Annual Report.

Following are extracts from the report presented at the annual meeting in Toronto, Feb. 5.

The operations for the year do not show the usual increases, the main reason for such condition being the higher wages paid to employes and to the high cost of materials.

The gross earnings were.....\$6,526,302.37  
Charges for operating, maintenance, etc., including judgments and fines given against company but still unpaid, other than injuries and damages ..... 4,509,651.23

Net balance from operation.....\$2,016,651.04  
Distributed as follows:—  
Dividends paid.....\$480,000.00  
Bond interest, etc..... 138,660.47  
War and provincial government taxes..... 75,155.27 693,815.74

Payments to city:  
Percentage on earnings..\$1,046,495.24  
Pavement charges..... 98,817.20  
General taxes..... 155,953.74 1,301,266.18

Balance carried forward..... 21,569.12  
\$2,016,651.04

The earnings, which amounted to \$6,526,302.37, show an increase of \$234,543.31 over 1917. The various charges against the earnings for operation, maintenance, etc., include provision for judgments and fines given against the company but still unpaid. The payments made to the City of Toronto amounted to \$1,301,266.18, which amount when compared with payments made during 1917, shows an increase of \$114,234.86.

The large increase in wages granted to employes in June, 1917, was paid throughout the year. Notwithstanding that this increase was granted under a binding agreement which does not expire until June, 1919, the employes asked for a war bonus of from 11c to 16c an hour, to date from Oct. 1, 1918. The government, at the request of the employes, appointed a conciliation board, which awarded an increase of 2½c an hour to employes in their first six months service and 2c an hour to all other employes covered by the agreement.

The eighth drawing of the company's currency and sterling bonds, under the terms of the mortgage deed, took place on June 21. The company draws annually during the last 10 years of its franchise, 5% of the amount of bonds issued, thus reducing during the 10 years mentioned, the outstanding bonds to 50% of the original issue, and all bonds so drawn are to be redeemed on or after the 31st day of August following the date of drawing, from which date no interest is payable on bonds so drawn. There has been drawn to date a total of \$1,819,466.64.

At a meeting of directors held immediately after the close of the annual meeting on Feb. 6, 1918, it was deemed advisable to increase the number of directors from 7 to 9, when a bylaw was enacted accordingly, which was confirmed at a special meeting of shareholders on May 6, 1918, on which date Hugh Mackay, K.C., of Montreal, and H. H. Pitts, of Ottawa, were elected directors.

The directors declared out of the accumulated surplus earnings 4 quarterly dividends of 1%, all of which were paid on the several dates set for payment.

#### Revenue Statement for Year 1918.

Gross earnings .....\$6,526,302.37  
Operating, maintenance, etc., including judgments and fines given

against company, but still unpaid, other than i. & d. ....\$4,509,651.33  
Interest on bonds, etc.... 138,660.47  
Percentage on earnings.. 1,046,495.24  
Pavement, taxes..... 329,926.21 6,024,733.25  
\$ 501,569.12

#### Profit and Loss Account, Dec. 31, 1918.

Balance from 1917 (all re-invested in company's property).....\$5,543,683.55  
Surplus earnings after payment of all expenses, interest, taxes, etc..... 501,569.12  
\$6,045,252.67

Dividends, 4 of 1% each on paid-up capital .....\$ 480,000.00  
Balance carried forward..... 5,565,252.67  
\$6,045,252.67

#### Comparative Statement.

	1918	1917
Gross income.....	\$6,526,302.37	\$6,291,759.06
Operating, maintenance, etc. ....	4,509,651.33	3,815,277.82
Net earnings.....	2,016,651.04	2,476,481.24
Passengers carried..	166,510,326	158,087,984
Transfers .....	63,176,397	62,301,636
Percentage of charges, etc., to passenger earnings. ....	71.7	61.5

The directors, all of whom were re-elected, are as follows:—Sir Wm. Mackenzie, President; Hon. Frederic Nicholls, Vice President; Sir Henry M. Pellatt, Hon. C. P. Beaubien, Geo. H. Smithers, E. R. Wood, Hugh Mackay, K.C., H. H. Pitts, Frank W. Ross.

### Mainly About Electric Railway People.

**Capt. F. D. Burpee**, Superintendent, Ottawa Electric Ry., who has been overseas since early in the war, was expected to return to Ottawa by the end of February.

**Sir Rodolphe Forget**, President, Quebec Ry., Light, Heat & Power Co., died at Montreal, Feb. 19, after a long illness. He was born at Terrebonne, Que., Dec. 10, 1861, and during the greater part of his business life was associated with transportation companies. He was connected with Sir Herbert S. Holt in the present organization of the Montreal, Light, Heat & Power Co., and also with his uncle, the late Senator L. J. Forget, one time President, in the electrification of the Montreal St. Ry., now the Montreal Tramways Co. He was, at one time, President of the Richelieu & Ontario Navigation Co., now part of Canada Steamship Lines, Ltd., and was, for many years, a director of the Toronto Ry. Co. He was also associated with the Quebec & Saguenay Ry., a partially constructed road, which was acquired by the Dominion Government recently, and incorporated in the Canadian Government Rys. He was elected to the House of Commons as member for Charlevoix, Que., in 1904, and also for Montmorency, Que., in 1911, holding both seats until 1917, when he resigned owing to poor health. He was made a Knight Bachelor Jan. 1, 1912.

**A. H. Foster**, heretofore Manager, Guelph Radial Ry., has been appointed Manager, Brantford Municipal Ry., at Brantford, Ont.

**Jas. D. Fraser**, a director and Secretary-Treasurer, Ottawa Electric Ry., who died Dec. 17, 1918, left an estate valued at \$131,931.97, including real estate, \$9,700; mortgages, \$38,150; war loan and other bonds, \$43,045; bank and other stocks, \$45,445. After leaving \$1,000 to the County of Carleton Protestant Hospital, of which he was a director, and dividing his household effects equally between his three sisters and his late brother's widow, he left the residue as follows: One fifth to a sister, one tenth

each to two other sisters, three tenths to his late brother's widow, for life or widowhood, with reversion to her children, and three tenths to his late brother's children.

**Capt. F. R. Glover**, who returned from France after two years service with the C.E.F., and has for the last year acted as Superintendent of the Military Police in British Columbia under the Military Service Act, is reported to have returned to his position as General Executive Assistant, British Columbia Electric Ry., Vancouver.

**J. W. Hagenah**, of Chicago, who was acting for the City of Toronto, in connection with the arbitration proceedings respecting the value of the Toronto & York Radial Ry., Metropolitan Division's franchise within the city, has been notified that his services are no longer required, the city having decided to secure another expert.

**G. F. Henderson**, K.C., has been elected a director of Ottawa Electric Ry. Co., Ottawa Traction Co. and Ottawa Car Manufacturing Co. to succeed the late Jas. D. Fraser.

**A. W. McLimont**, heretofore General Manager, Winnipeg Electric Ry., has been elected Vice President, succeeding Sir Augustus Nanton, elected President. He also retains his title as General Manager. He was born at Quebec, Que., and was for some time in the Bell Telephone Co.'s service. He was subsequently Electrical Engineer for the Public Service Commission of the First District, New York, N.Y.; Vice President and General Manager, Michigan United Rys.; General Manager and Treasurer, Chicago and Milwaukee Rd.; Vice President and General Manager, San Francisco-Oakland Terminal Ry., and Vice President and General Manager, Georgia Power Co. He has also served for the General Electric Co. in the construction and operation of electric systems in Brazil, the Argentine Republic, Peru, Costa Rica and Mexico. He was appointed General Manager, Winnipeg Electric Ry., in Sept., 1917.

**Sir Augustus Nanton**, heretofore Vice President, Winnipeg Electric Ry., has been elected President, succeeding Sir Wm. Mackenzie, who did not seek reelection. He was born at Toronto, May 7, 1860, and educated at the Model School there. He became a junior partner in the brokerage firm established by E. B. Osler (now Sir Edmund Osler), in 1884, and was sent to Winnipeg to establish a branch office, where he remained. He was President of the Board of Trade there, in 1898; President of the Winnipeg Stock Exchange and Manitoba Cartage Co.; Director Winnipeg Electric Ry., Dominion Bank, and several other industrial, financial and insurance companies. He was Managing Director of the Alberta Ry. and Irrigation Co., to the time of its absorption by the C.P.R., of which company he is a director, and he was Receiver, representing the English bondholders, Manitoba & Northwestern Ry., in 1898. He was created a knight bachelor June 4, 1917.

**R. Robertson**, chief dispatcher, Niagara, St. Catharines & Toronto Ry., died at St. Catharines, Ont., Feb. 15, aged 44, after a short illness.

**E. F. Seixas**, heretofore Manager, Niagara, St. Catharines & Toronto Ry., who was appointed General Manager and Official Representative, Monterey Ry., Light & Power Co., recently, left St. Catharines, Ont., Feb. 17, to assume his new duties at Monterey, Neuvo Leon, Mexico.



# Marine Department

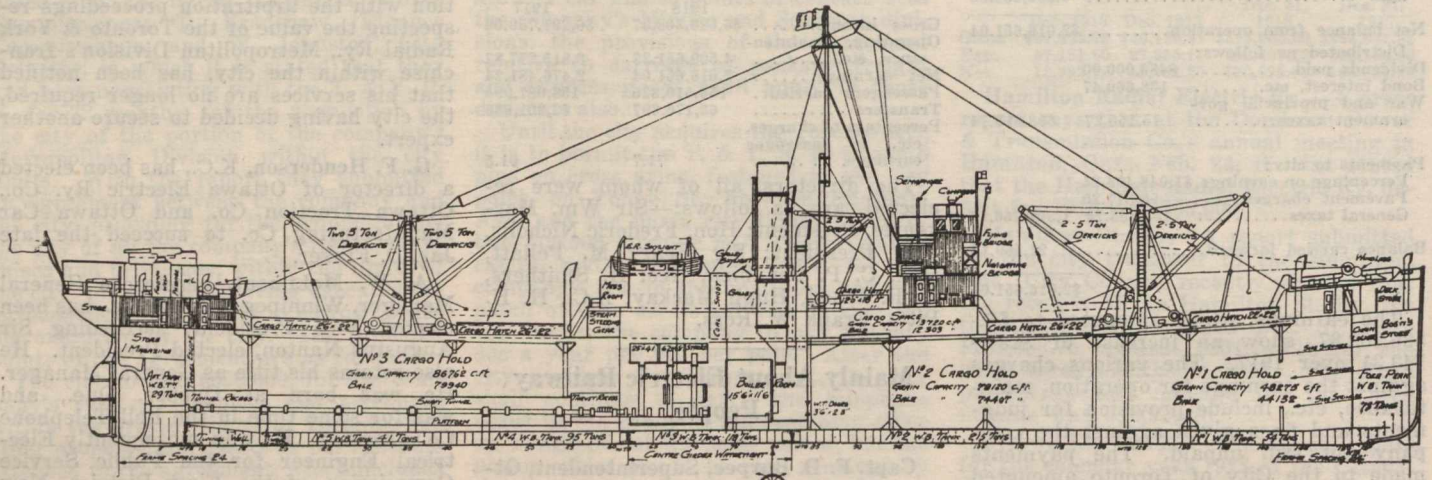
## Specification for 4,300-ton Steel, Screw, Cargo Steamships for Canadian Government Merchant Marine Ltd.

The Marine Department, in pursuance of the Dominion Government's shipbuilding programme, has ordered 45 steel screw cargo steamships, aggregating 263,850 tons d.w. Of these, 6 are of 4,300 tons d.w. each, the orders having been

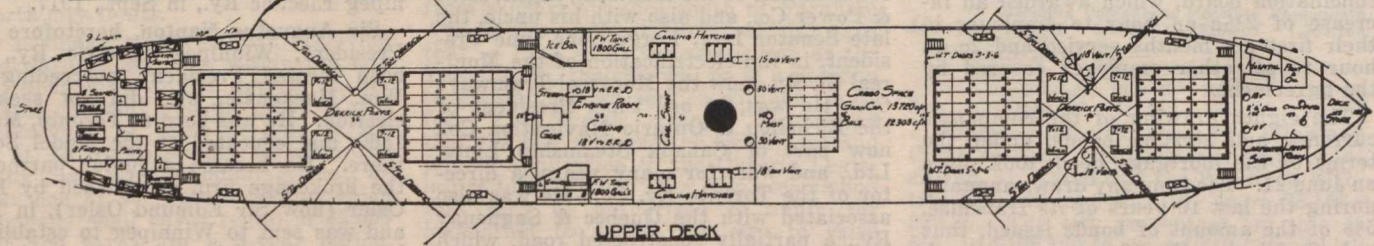
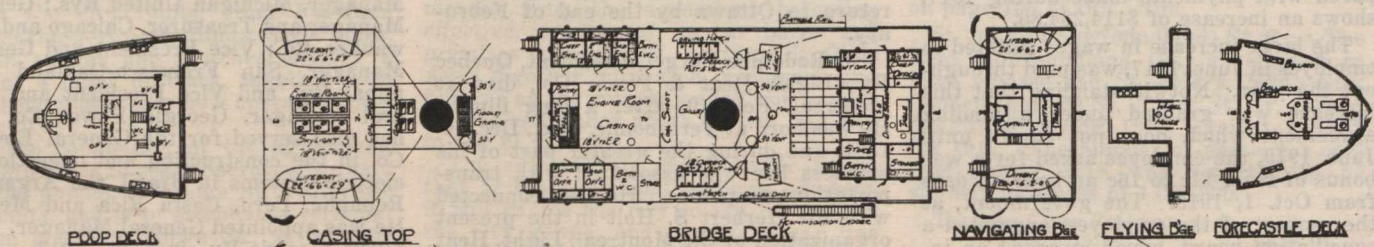
where she was completed, and sailed thence Jan. 21, 1919, for Halifax, arriving at the latter port Feb. 4, after a difficult voyage owing to ice conditions in the St. Lawrence.

Other keels have been laid as follows:—

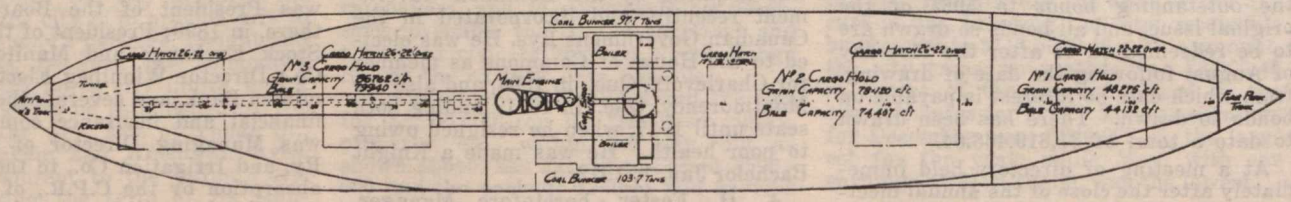
Breadth moulded ..... 44 ft.  
 Depth moulded ..... 25 ft.  
**2. Erections:**  
 Poop, about 41 ft. long by 7½ ft. high.  
 Bridge, about 96 ft. long by 7½ ft. high.  
 Forecastle, about 34 ft. long by 7½ ft. high.  
 The height in each case being measured from top of beam to top of beam.



INBOARD PROFILE



UPPER DECK



SECTION THROUGH HOLD

Plans of steel, screw cargo steamship, Canadian Voyageur, 4,300 tons d.w., for Canadian Government Merchant Marine, Ltd.

divided as follows:—Canadian Vickers, Ltd., Montreal, 2; Wallace Shipyards, Ltd., Vancouver, 2; Port Arthur Shipbuilding Co., Port Arthur, Ont., 2. Orders for 2 steamships of 4,350 tons d.w. each have been given the British American Shipbuilding Co., Welland, Ont.

Canadian Vickers, Ltd., laid the keel for department contract 1, builder's yard no. 66, June 10, 1918, and launched her Nov. 23, 1918, when she was named Canadian Voyageur. She left Montreal Dec. 11, 1918, under her own steam, for Quebec,

Contract 4, Wallace Shipyards, Ltd., builder's yard no. 100, Oct. 1, 1918; contract 5, Wallace Shipyards, Ltd., builder's yard no. 106, Nov. 15, 1918.

A technical description of the 4,300-ton steamships was published in Canadian Railway and Marine World for August, 1918. Following are the complete hull specifications for the first one of this type, the Canadian Voyageur, built by Canadian Vickers, Ltd.

**1. Dimensions:**  
 Length between perpendiculars..... 320 ft.

Sheer forward, 8½ ft.; aft, 4 ft. 1½ in.

**3. General Description.**—The vessel to be constructed by the builders to plans approved by Classification Society, in accordance with this specification and to a general arrangement plan, approved and signed by the purchasers before the work is commenced.

**4. Accommodation** for saloon, captain, officers, engineers, engineers' mess room, steward, pantries, bathroom, w.c.'s, store-room, with usual lockers, galley, etc., to be in accordance with general arrange-



ment plan. Seamen and firemen berthed aft under the poop, with separate mess rooms. Two closets for seamen and firemen; washroom with shower baths, as required by British Board of Trade Regulations. Paint and oil room, carpenter's shop and deck stores under fore-castle. Hospital with two cot beds under fore-castle. Gunners to be accommodated in wood house under bridge.

To have a straight stem and elliptical stern. Engines to be placed about amidships. To be rigged with one mast amidships. The vessel to have an estimated gross deadweight of about 4,300 tons, with Lloyd's summer freeboard, which will allow of a mean draft of about 21 ft. 2 in. in salt water.

5. **Engines.**—To be fitted with engines built by Goldie & McCulloch, Galt, Ont., and boilers built by Canadian Vickers, Limited, or as may be approved. Cylinders 25, 41, 67 in., stroke 45 in.

6. **Boilers.**—Two in number, of the multitubular type, of steel, 15½ ft. diameter by 11½ ft. long. Working pressure 180 lb. per sq. in. All in accordance with specifications and plans. Boilers to work under forced draft.

7. **Speed.**—The vessel to be capable of a speed of not less than 11½ knots, in fully laden condition, at a draft of approximately 21 ft. 2 in. mean, in sea water.

8. **Plans, etc.**—The builders are to supply the owners with the following as soon after completion of the vessel as possible:—Photo prints of the general arrangement plan, cargo capacity plan, also ballast pipe plan, showing ballast pump suction, air and sounding pipes, and Downton type pump connections. Docking plan to be provided. A sheet showing the deadweight capacity at various drafts, the cubic content of each cargo space, and the capacity of each bunker and water ballast tank.

9. **Tonnage.**—Care is to be taken to ensure a reduction of 32% for propelling space and a proper allowance for crew space, as prescribed by regulations. Spaces under bridge deck and fore-castle to be exempted from tonnage if possible.

10. **Class and Certificates.**—The vessel to be constructed in accordance with plans approved by Classification Society, the builders paying all classification and certificate fees. Vessel to be classed 100 A1 at Lloyd's. The following certificates to be supplied if required:—Classification of hulls and engines, freeboard, anchors and cables test, life saving and fire appliances, lights and fog signals, compass certificate, tonnage certificate.

11. **Hull.**—Steel and iron work: The scantlings, quality of materials, and workmanship to be in accordance with Lloyd's 100 A1 class, and the vessel is to be built under their special survey. Material to be of steel, all to be of the best ship quality.

12. **Stem.**—To have a straight stem of rolled steel bar to Lloyd's requirements, with scarphs efficiently fitted.

13. **Stern frame** of cast steel, in one piece, to be of scantlings, as required by Lloyd's rules. Heel of rudder post to be raised above line of keel. Connection to heelplate and transom to be efficiently and satisfactorily made. Gudgeons of stern frame to have lignum-vitae or steel bushing.

14. **Rudder** of the single plate type, according to approved plans. Rudder frame being of forged steel, with arms shrunk to main piece. Rudder stock to be forged steel. To have at least 5 pintles fitted. Pintles of steel, fitted in gudgeons with taper and secured by nut and check

pin. Brass liners to be fitted on rudder pintles. Locking head to be fitted on upper rudder pintle. Rudder trunk to be of sufficient size to allow of the easy shipping or unshipping of the rudder. To have a quadrant of sufficient size, properly keyed to the rudder head. The rudder stuffing box to be fitted in halves, of cast iron with hardwood chocks. Horizontal coupling to be fitted on rudder.

15. **Shell Plating.**—Thickness of shell plating to be according to Lloyd's approved midship section and profile plans, plates being scarphed and overlapped. The edges and butts of outside strakes of shell plating to be planed. Plates to be joggled at builders' option. Shell plating around hawse pipes to be doubled or increased in thickness, as approved by Lloyd's. Eyeplates to be fitted on the stern for lifting the rudder and propellers.

16. **Deck and tank top plating** to be joggled, or beams and reverse frames joggled at builders' option.

17. **Keels.**—To have a flat plate keel with butts overlapped.

18. **Keelson.**—Center keelson formed of plates and angles and made watertight according to approved midship section and profile plans.

19. **Frames** to be of channel steel, or bulb angle, amidships, in accordance with approved midship section and profile plans. Frames to be joggled at builders' option. Frames joggled from 25 to 145.

20. **Double Bottom.**—To have a cellular double bottom, fitted right fore and aft in accordance with plans approved by Lloyd's Society, being divided sectionally for water ballast, having all the necessary piping and valves, so arranged that each compartment may be filled and pumped out independently. Tanks under machinery space to be divided fore and aft so that each side can be used separately. To have a sufficient number of manhole doors fitted where necessary and made watertight. Manholes to be fitted with stud bolts and gasket. To have the necessary air and sounding pipes fitted to each section of the ballast tanks, with a doubling plate under each sounding pipe. All air and sounding pipes to have deck pieces neatly fitted to deck, and to be cased in with wood in the holds. To be led up inside frames if possible. All suction pipes in tanks to be of cast iron and lead bends securely fastened, and to have cast iron rose boxes at the end of the pipes. Center suction pipes to tanks, and wing suction to be as approved by Lloyd's. No. 2 tank to be entered from boiler room. Fore and aft peaks arranged to carry water ballast; to have the necessary air and sounding pipes and to be pumped out by connection to the tank suction.

21. **Watertight bulkheads** to be in number and position as shown on plan. All to be constructed of steel, with scantling and stiffening, as approved by Lloyd's Society. If required, forward side of boiler room bulkhead to be cleaded with 1½ in. wood on face of stiffeners and ventilated by 2 goosenecks on fore side of casing on upper deck. Provision to be made on bulkheads for shifting boards.

22. **Riveting.**—To be in accordance with Lloyd's requirements. Rivets to be of mild steel.

23. **Deck plating** to be in accordance with approved midship section and profile plans. Deck plating to be joggled at builders' option. Upper deck of steel. Fore-castle deck of steel. Bridge deck of steel.

24. **Bulwarks.**—3½ ft. high. To be fitted between the poop and bridge and

bridge and fore-castle and suitably stayed. Stays to be riveted to bulwark and main rail. To have a sufficient number of water ports and scuppers to comply with the British freeboard tables. Steel bulwarks 3 ft. 3 in. high to be fitted across front and 12 ft. alongside of bridge deck. Mooring pipes of cast iron to be fitted in bulwarks where shown on general arrangement plan. Opening in bulwarks to be of ample area and to have 2 rods across, no ports to be fitted.

25. **Bollards and fairleads** of cast iron, securely through bolted, the number and position being as shown on the general arrangement plan. Extra pair of bollards on poop. Fairleads on fore-castle and poop to have rollers. Small bollards and fairleads on bridge deck.

26. **Hawse pipes**, of cast iron, one on each bow, of sufficient size and strength to suit stockless anchors, with deck pieces fitted with plate slide covers on the fore-castle deck.

Engine room to be arranged with a view to obtaining the 32% allowance off the gross tonnage for propelling space.

28. **Floors** to have floor plates fitted in accordance with approved midship section and profile plans, having the usual water courses to allow water to pass freely to the pumps.

29. **Beams** spaced as per plan.

30. **Caulking.**—Shell, tanks, deck, bulkheads, etc., to be planed or chipped and caulked in the usual manner.

31. **Hatches.**—All coamings of hatchways on deck to have cope iron moulding riveted on the top edge, with angle iron rest inside. The hatch corners to be square web plates of sufficient strength shipped into strong shoes riveted on inside of coaming.

No.	Length.	Breadth.
1. fore hatch.....	22 ft.	22 ft.
2. main hatch.....	26 ft.	22 ft.
3. bridge deck hatch.	12 ft.	18 ft.
4. after main hatch..	26 ft.	22 ft.
5. after hatch.....	26 ft.	22 ft.

Bunker hatches as shown on plan. A sufficient number of wrought iron cleats to be riveted on the outside of the coamings, and flat bars for securing the tarpaulins with wedges. The hatch covers on weather decks to be of spruce, 2½ in. thick, with iron handles for lifting. No. 1 hatch covers to be 3 in. thick. Hatch webs to have lifting gear. Strong bridles to be supplied to each hatch with hooks.

32. **Chain lockers** to be fitted of steel or wood, at builders' option, securely built, and of sufficient size to hold the cables, and kept well up, so that the cables will run out easily.

33. **Bunkers.**—All available space in engine and boiler room (consistent with obtaining 32% reduction for propelling space off the Board of Trade measurement for gross tonnage) to be arranged for bunkers. Plan of bunkers to be submitted to owners' representative for approval. Center coal shoot to be provided. Bunkers to be coated with Canadian Vickers bitumastic enamel. Two watertight doors to be arranged on boiler from bulkhead, so that aft end of no. 2 hold can be used for reserve bunker.

34. **Engine and Boiler Casing.**—Casing enclosing the engine and boiler space, as shown on general arrangement plan. Steering engine placed in the after end of the engine casing open to the engine room.

35. **Engine and Boiler Seating.**—The girders under tank top in engine and boiler room to be arranged to Lloyd's requirements. Thrust seating of ample strength. Thickness of tank top under boilers to be increased as per Lloyd's requirements.



36. **Pillaring** of solid round bar or built section at builders' option, in accordance with approved midship section and profile plans. Pillars to be reeled for shifting boards.

37. **Engine Room Skylights.**—To be strongly made of steel, and the top to be made in flaps, fitted with circular lights to lift up, with strong iron quadrants. Strong beam for lifting cylinder covers, etc. Small skylight for the galley, having steel frames and steel or wood flaps. Rods to be fitted on top of engine room skylight for fastening flaps.

38. **Shaft Tunnel** as per approved plan, built of steel plates and increased in thickness under hatches in lieu of wood sheathing. A 9 in. ventilator to be fitted on top of tunnel escape and carried up to weather deck. Thrust recess to be in engine room, and passage built at one side into tunnel. Plank platform fitted for engineers. Ring bolts fitted at after

of 7½ x 3 in. bulh angle.

45. **Watertight Doors.**—The stokehold bulkhead to have a cast iron sliding door fitted on each side, and worked with a rod and wheel from the boiler room platform; a watertight door also to be fitted to the tunnel. All doors to be operated from deck level.

46. **Poop.**—A full poop to be fitted aft, being about 41 ft. long. Crew berthed in poop in separate rooms as shown on general arrangement plan.

46a. **Gun Seating.**—Arrangements to be made for mounting one 4.7 gun aft on poop, complete with firing platform, magazine, ammunition trunk and hoisting gear. Gun on top of poop deckhouse at center of ship. Platform to suit. Structure in way of guns to be suitably stiffened. Hatch on ammunition trunk to be hinged cover.

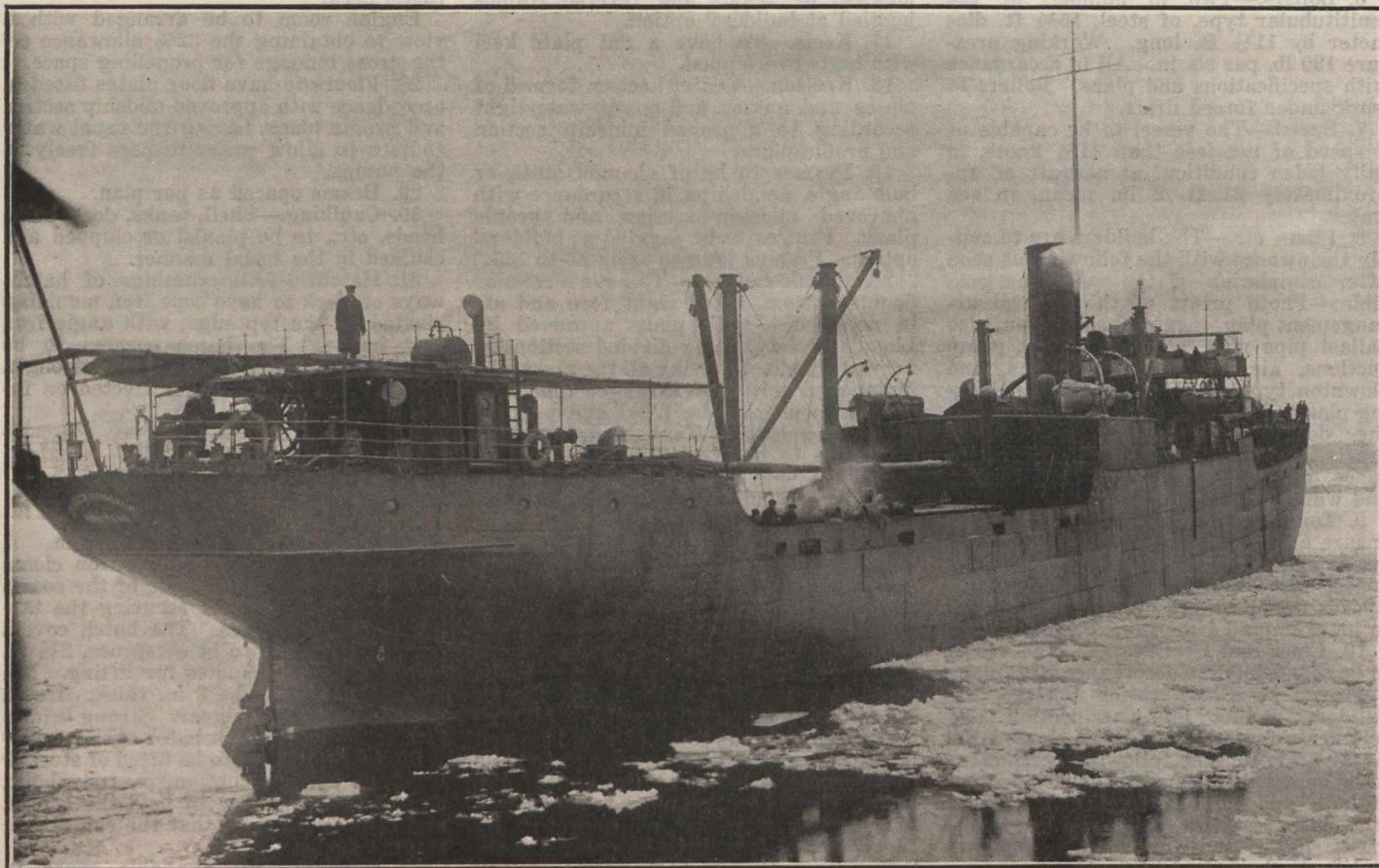
47. **Bridge** to be fitted amidships, being about 96 ft. long, as shown on general

modation to be cork cemented; 1 coat anti-corrosive, 1 coat anti-fouling.

50. **Cementing.**—Inside of ballast tanks and peaks, to be coated with cement wash. Tank top under E. & B. to be coated with Vickers bitumastic enamel 1 in. thick. The shell to be coated with a mixture of Portland cement and sand, in double bottom tanks under machinery space and in tank wing bilges. The remaining spaces in double bottom to have a triangular fillet of cement at the seams only, other parts to be coated with a good cement wash.

51. **Tanks.**—Two fresh water tanks of 1,800 gall. capacity each, having manhole door in each tank, to be strongly built, having necessary hand pump, stays, plug, filling and air pipes, and washed out with cement. To be placed in the bridge.

52. **Cargo battens** of 2 in. spruce to be fitted as shown on midship section. Battens to be hung in cleats and not bolted



Canadian Government Merchant Marine, Ltd., steel screw cargo steamship, Canadian Voyageur, 4,300 tons d.w.

end to assist in drawing tail shaft. Portable plate in tunnel recess bulkhead to withdraw tail and shaft. Tunnel escape trunk fitted at aft end of tunnel.

39. **Ventilators** to pass British Board of Trade rules and Lloyd's requirements. Hold vents to be 18 in. diameter.

40. **Panting Arrangements.**—The hull to be stiffened where and as required by Lloyd's rules to prevent panting.

41. **Bilge keels**, 10 in. deep, to be fitted for about 120 ft. amidships, of 10 x ¾ in. plate and 6 x 4 x 10/20 or 7/16 T bar, 3 x ¾ flat bar on edge of bilge keel.

42. **Stringers.**—To have panting and deck stringers in accordance with plans approved by Lloyd's Society.

42. **Scuppers.**—As necessary on each side. Scuppers to be also fitted on bridge, and deck houses where necessary. Wash ports for freeing as required.

44. **Rails.**—Bulwark rail to be formed

arrangement plan. Accommodation for officers and engineers, baths and w.c. in sidehouses on bridge deck. Deck house at fore end, containing dining saloon, wireless room, chief officer's room, steward's room, pantry and bath and w.c. Deck house on upper bridge, containing captain's room, with stairway to dining saloon below. Small chart house at fore end of captain's room.

48. **Forecastle.**—To have a topgallant forecastle about 34 ft. long, arranged as shown on general arrangement plan.

49. **Painting.**—The whole of the steel and iron work of the vessel to have 2 coats inside of best red lead and 3 coats outside of good oxide paint. Steel work on deck and inside bulwarks to be painted and neatly finished. Berths to be tastefully painted and varnished. Midship accommodation to be enamelled where required. Steel work in stores and accom-

modation to be cork cemented; 1 coat anti-corrosive, 1 coat anti-fouling.

53. **Ceiling** of spruce, 2½ in. thick, laid over tank limbers, being portable as required. Ceiling laid on flanges of wing brackets. Ceiling in bunks to be of spruce, 2½ in. thick, caulked and payed. Tank top plating under hatches increased 0.08 inch in thickness in lieu of ceiling.

54. **Galley.**—Placed in position shown on general arrangement plan. Galley furnishings to be to satisfaction of owners' representative. Door to be in halves. To have a dresser, seat, locker, shelves, etc. Floor to be cemented and tiled. Wrought iron grating pan rack. Range to be 6 ft. long with 1 fire and 2 ovens, complete with firing tools.

55. **Decks.**—Where wood decks are fitted, they are to be reasonably free from dead knots, sap and shakes, and securely fastened with galvanized iron bolts and



nuts, carefully doweled. To be thoroughly caulked, payed, scraped, and planed smooth. Poop deck to be of 5 x 3 in. British Columbia fir; deck over saloon and engineers' and officers' accommodation to be of 5 x 2½ in. B.C. fir. The beams to be extended to the ship's sides, and fitted with B.C. fir, forming boat decks. The deck over the saloon to form the upper bridge, and to extend to ship's side. All to be caulked and payed.

**Captain's House.**—Chart house top to be of 5 x 2½ in. B.C. fir, carried full width of captain's house, wings extended to form flying bridge. Steel decks inside of accommodation to be covered with 2 in. flooring deals, caulked and payed with pitch.

**56. Deck Fittings.**—To have all necessary cleats, ring and eyebolts.

**57. Ladders.**—To have two ladders fitted at the poop front, at each end of the bridge, front of forecandle, and to the upper bridge, formed of steel, having wrought steel treads, and iron hand rails, also ladder to be fitted in the fore and after peaks. Ladders to flying bridge of hard wood. Ladders to upper bridge to be fitted portable. Accommodation ladder of pitch pine to be fitted complete with grating of hardwood. Fittings for both sides of ship. Iron ladder to be formed at one end of the hatch to each hold, the rungs spaced about 11 in. apart. One shore gangway.

**58. Rail Stanchions.**—To have rails fitted all around, and across the poop and forecandle, formed of stanchions with 3 rods. Bridge deck rails to be formed of 3 rods, and upper bridge and flying bridge rails 3 rods. Rails to be portable in way of the bunker hatches on bridge. Pine cleading across front and forward sides of navigating and flying bridges. Rails and stanchions to be galvanized. Top rods ¾ in., others ¾ in. Steel bulwark across front of bridge deck and extended aft to fore side of accommodation ladder gangway. Double half ovals on top to form rail. Portable rails in way of cargo hatch, hinged stanchions, chains and screws.

**59. Lamp locker** to be arranged where shown on plan; built of steel, with all usual and necessary fittings.

**Cold storage** to be fitted with refrigerating plant if desired, to be arranged at aft end of bridge. All work in connection with refrigerating plant will be charged extra.

**60. Name, etc.**—Name on bow and stern, port of registry of stern, and draft marks on stem and stern to be cut in and painted. The official freeboard disc and deck mark to be also cut in and painted.

**61. Bilge Pumping Arrangement.**—5 in. Downton type pump in steering gear space to be fitted in lieu of hand pumps, as required by Lloyd's rules. Steam suctions to be fitted to draw from the hold wells and engine room well, and tunnel well, to be of diameter and thickness as required by Lloyd's rules.

**62. Steam Winches.**—To have 11 horizontal steam winches of approved make, with cylinders 7 in. diam. by 12 in. stroke, and all necessary pipes and fittings as usual. All clutches to be on square shafts, not keyed. All the winch steam pipes to be of steel or iron, exhaust pipes to be of galvanized steel and led to exhaust tank, and where on deck to be supported on wrought iron chocks and strongly and neatly covered with iron plating or angle bars, but to be carried alongside coamings or casings where practicable. Steam top valve to be arranged so that forward and after winches may be used separately or

together. Stop valve at forward winch to shut off steam from windlass when winches are working.

**63. Windlass.**—To have a patent steam windlass of approved make, with quick warping ends, securely through-fastened to the deck plating. Bow stoppers and lashing screws to be fitted for stockless anchors. Steam pipe of steel or iron, being a continuation of winch steam pipe. To exhaust overboard, through galvanized wrought iron pipes; change cock on windlass exhaust pipe to take steam over either side of ship. To be bedded on B.C. fir planks 10 x 3¼ in.

**64. Steering Apparatus.**—Steam steering engine, by an approved maker, to be fitted in after end on engine casing, and connected by shafting and gearing to a stand and wheel amidships. Steering engine to be placed athwartships, with drum on aft side of casing, and connected with quadrant on rudderhead by all necessary rods, chains, blocks, etc. To have separate exhaust to main condenser, and up waste pipe. Spring buffers to be fitted to relieve strain on steering gear. A strong screw gear is to be fitted aft, with teak wheel of suitable diameter, to be easily connected or disconnected to rudderhead. Open rail and stanchions round quadrant, hardwood grating in way of wheel.

**65. Electric Lighting Installation.**—A complete installation of electric lighting to be fitted, comprising in all about 120 16-c.p. lamps, including 5 6-light clusters and 4 navigating lights. The whole installation to be of the very best description, and to conform to Lloyd's requirements for a ship of this class. A continuous current, 10 k.w., steam driven generating set of 110 volts, capable of supplying the necessary current for the whole installation, to be supplied. Metal filament lamps to be fitted in accommodation spaces and cabins, elsewhere carbon filament lamps to be fitted. Standard compass and telegraphs to be fitted with electric light. The lamps and fittings throughout to be of best quality. All lamps screw socket pattern.

**66. Switchboard.**—A main switchboard, complete with instruments and switches, fuses, etc., mounted on a slate panel, to be fitted in engine room. Wiring to be on the 2-wire (lead and returns) system and to be rubber insulated and lead covered in the accommodation spaces; in engine room, boiler room and up the masts, the wires to be lead covered and armored. The whole system to conform to Lloyd's requirements. Morse lamps to be fitted in approved position. Shipbuilders to arrange for a supply for direct current from main switchboard to double pole switch in wireless room.

**67. Electric Bells.**—One from saloon to pantry, one from captain's room to pantry.

**68. Davits** of sufficient length and outreach to swing the boats clear of the ship's side and to lift them clear of the chocks. To be fitted complete with blocks, falls, etc. Small anchor davit fitted aft for working stream anchor.

**69. Sidelights.**—Where fitted in cabins, through ship's side, to be 9 in. diam. in seamen's and firemen's accommodation; all to have galvanized iron deadlights, and brass frames. All sidelights in deck-houses to be 10 in. diam. with brass frames and no deadlights. Fixed lights in saloon entrance and crews entrance doors. Sidelights across front of saloon to be 12 in. diam.

**70. Wash deck pipes,** of 2½ in. iron, carried well fore and aft, having nozzles at intervals for hose attachment. Three

25-ft. lengths of 2 in. canvas rubber lined fire hose, with couplings and conductor to be supplied.

**71. Saloon Cabins.**—To be arranged as shown on general arrangement plan, panelled with polished wood, neatly and tastefully furnished. Dining table of mahogany, fitted with movable racks, also settees and 2 mahogany sideboards. Mirror in polished hardwood frame. Brass rails fitted on top of sideboards. Six chairs at saloon table. A steam radiator to be fitted, the woodwork being efficiently protected. The bottoms and backs of the settees in saloon and sofa pillows to be stuffed with hair suitably upholstered. To have a set of holland slip covers for the saloon cushions neatly bound at the edges. The saloon floor to be covered with linoleum. Curtains for sidelights in saloon of durable material hung on brass rods. All beds in officers' accommodation to have brass lee rail and spring mattress. Floors cemented.

**72. Pantry** to be fitted where shown on general arrangement plan, having dresser, lockers, plate-racks and brass cup hooks as required. Dresser covered with lead, and to have strong edging in the front, the sink being fitted with plug and chain complete, and to discharge overboard. Supply from sanitary tank, fitted with brass tap and deck filling pipe. Spaces lined with tin for barley, rice and peas, etc. Pantry floor to be cemented.

**Cabin and Officers' Accommodation.**—Generally to be as shown on general arrangement plan. Rooms to be plainly fitted up in tongued and grooved lining. Ceiling and deck beams in rooms and saloon not to be covered.

**73. Berths, etc.**—Berth for captain, with telescopic bed, having drawers underneath; bookcase, with set of drawers in lower part; wardrobe, small table, sofa, chronometer stand, hat and coat hooks, etc. Bottom, back and sofa pillow in captain's room to be stuffed with hair and covered with Utrecht velvet, and to have a set of holland covers. Floors to be covered with carpet. Curtain for sidelights and for bed, fitted on brass rods. Berth for officers, engineers and steward; each room fitted up with bed, sofa seat, washstand with plug basin, toilet rack, wardrobe, mirror, and hat and coat hooks. The chief officer's and chief engineer's beds to have drawers fitted underneath; these 2 rooms to be also fitted with a separate chest of drawers, desk, wardrobe, and book rack. The berths for the other officers, engineers, and steward to have drawers fitted underneath the beds, but in case where 2 are fitted in one room, a separate chest of drawers also to be fitted. Bed front boards, drawer fronts, toilet rack and washstand tops to be of polished wood. Each berth lighted and ventilated as required by Board of Trade regulations. The bottom of the sofa seats in the officers' and engineers' berths to be stuffed with hair, and covered with repp. Curtains of durable material fitted on brass rods, for all sidelights and beds in the above accommodation, and for sidelights in messroom. The floors of all officers', engineers' and stewards' berths and pantry to be cemented; passage and messroom to be covered with linoleum. Messroom to be fitted for engineers where shown on plan, having cupboard, table, seats, rack for bottles and two glasses and hat and coat hooks. Spurred seat to be formed of wood laths. Bathroom and cistern closet for saloon to be fitted, where shown on general arrangement plan, at a convenient height, the bathroom being furnished with seat, dress hooks, etc. Bath of cast iron with waste



pipe and valve fitted to the shell of the ship. Bath heater to be fitted. Washstand with plug basin, toilet rack and mirror to be fitted in saloon bathroom. Saloon bathroom and w.c. floors to be cemented and tiled. Also baths and w.c.'s, etc., to be fitted for officers and engineers, where shown on general arrangement plan, the floors being cemented. Bath heater jet led into baths. Filling tank for baths to be fitted on top of deck house. Cabins for 3 gunners to be fitted up in temporary wood house under bridge deck.

74. **Chartroom.**—To be built of steel, having teakwood doors and fitted with round lights. To have a chart table, set of drawers, sofa seat. Curtains of durable material, fitted on brass rods at the lights. Bottom and back of seat to be stuffed with hair, and covered with repp. Floor to be covered with linoleum.

Wireless cabin to be fitted up to approval. Wood wheel house on flying bridge, fore end open, with glazed wood screen on rail and sliding doors at sides in line with flying bridge wings.

75. **Steam Heating.**—Installation of steam heating to be provided for each living room in amidship accommodation on bridge deck. Heaters to have steam and exhaust regulating valves, the exhausts being returned to exhaust tank in engine room. Steam heating plan to approval of owners' representative. Steam heating to crew space aft.

76. **Water and Trough Closets.**—Closet to be fitted for the saloon, also closets for use of the officers and engineers. Trough closets to be fitted for seamen and firemen, as required by Board of Trade regulations. All soil pipes in connection with water closets to discharge through ship's side, and to be properly fitted to shell of ship with cast iron storm valves. Sanitary tanks for captain's closet; engineers', officers' and crew to be filled through wash deck service pipe.

77. **Speaking Tubes.**—One speaking tube from captain's room to wireless room, one speaking tube from chief engineer's room to engine room, one speaking tube from bridge to engine room, of brass.

78. **Storeroom.**—To have a storeroom as shown on general arrangement plan, having all necessary shelves and bread locker.

79. **Sundries.**—Flag locker; teakwood case for night glass; 2 wood hold ladders; 2 rope side ladders; foot gratings for wheels and chartroom doors; locker for medicines to be fitted in saloon bathroom, with supplies according to British Board of Trade; galvanized iron cage for masthead and stern lights; screens for sidelight lamps; lockers for navigation stores and life belts.

80. **General.**—Plates are to be scarphed, where necessary, butts overlapped, and flanged plates to be fitted, instead of angles, wherever practicable. All materials and workmanship, deck and cabin fittings, furniture, rigging, and outfit as specified herein, to be strong, and of good quality and make, as usually specified to cargo steamers of this class.

Bedding, napery, provisions, wireless installation and refrigerating plant and fittings, fresh water paints, oils and other consumable stores are excluded. All survey fees are to be paid by builders, who are to hand the purchasers the classification certificates. Delivery of vessel to be made as per contract.

Marine insurance, other than war risks, for trial trip, to be paid by builders. All liability on part of builders in respect of this contract shall cease from the date of transfer of the vessel, except as specified

in clause 63 of engine specification.

81. **Outfit, Masts and Derricks.**—To have one fitted pole top mast. After flagstaff to be fitted, and masthead and flagstaff to have a truck with sheaves for signal halliards. Steel lower mast plump. Topmast fidded on fore side of lower mast; fitted for wireless. Topmast of p.p. Two steel combined derrick and ventilating posts, with mushroom ventilator tops, to be fitted as shown on general arrangement plan, with derricks, cargo blocks, tipping lifts, and wire runners and hooks as necessary; 10 p.p. derricks in all. Derricks and fittings all to be capable of lifting 5 tons safe load. All necessary smithwork to be fitted on masts and spars, and derricks to be fitted with strong hoops and goosenecks. The necessary crutches, standards, stays and other fittings for derricks to be provided and fitted. Two large cleats for each topping lift tackle. Four steel derrick posts complete. Special stiffening under derrick posts.

82. **Blocks.**—All rigging blocks to have inside bindings.

83. **Standing and Running Rigging.**—Standing rigging as per plan to be of galvanized wire rope, of suitable sizes, and served with Hambroline, say 6 ft. above rigging screws. Running rigging to be of manilla. Derrick topping lifts to be wire tackle with double sheave blocks. Funnel painting boards to be supplied complete, with blocks and tackle.

84. **Boat Sails.**—Each lifeboat to be fitted with a lug sail, as required by British Board of Trade regulations.

85. **Covers.**—The following covers to be supplied:—2 tarpaulins to weather deck cargo hatches, 1 being tarred; 2 tarpaulins for weather deck coaling hatches, 1 being tarred; 1 canvas cover for each boat; 1 canvas cover for binnacle; 1 canvas cover for steering standard; canvas covers for hold ventilators, wire reels, and windlass.

86. **Awnings** to be fitted over flying bridge, navigating bridge and poop deck, with all necessary stanchions, ridge poles and ropes.

87. **Bridge Cloths.**—Weather screens for front of navigating bridge and the usual dodgers.

88. **Anchors and Cables.**—In accordance Lloyd's rules and tests: 3 stockless anchors, 1 stream anchor, 1 keedge anchor, stud chain cable. Wire hawser, with geared winch, instead of stream chain, manilla hawsers as per midship section, approved by Lloyd's. Stream wire and topline, mounted on double purchase reels.

89. **Boats.**—Vessel to be provided with boats fitted to meet requirements of British Board of Trade regulations: One 20 x 6½ x 2½ ft.; one 22 x 6½ x 2¾ ft.; one 22 x 6½ x 2¾ ft.; one dinghy, 20 x 5½ x 2 1/3 ft. All to be constructed of pine and clinker built, having American elm gunwale, copper fastened throughout. Boats to have blocks with falls, spans, guys, etc., complete as per Board of Trade requirements. Lifeboats to be fitted with yellow metal airtight cases, and all boats to have galvanized wrought iron gripes and lashings, galvanized rowlocks, fitted with ¼ in. plate let flush into gunwale, fishback ridge poles with stays, rudder, oars, boat hooks, and outfit as per British Board of Trade regulations.

90. **Compasses.**—One 10 in. standard compass amidships, on top of wheelhouse, with brass rail and access ladders, with stand and binnacle; one steering compass forward, 10 in. card; one 10 in. compass aft, with stand and binnacle. Each binnacle to have lamps, etc., complete. All compasses fitted on vessel to be tested

and accurately adjusted by a competent adjuster and deviation cards supplied. All to be in accordance with British Board of Trade regulations.

91. **Sundries.**—1 aneroid barometer; 1 pr. binocular glasses in case; 1 telescope; 1 timepiece for saloon; 1 timepiece for chart room; 1 timepiece for wireless room; 1 sounding machine, Chadburn's or equal.

92. **Flags.**—2 ensigns—red, 3 yards and 1½ yards; 1 house flag to owners' sketch; 1 blue peter, 1 quarantine flag, each 6 x 4 ft., as per British Board of Trade regulations; 1 set commercial code; 1 signal book. All flags to be of bunting. Three Canadian ensigns, 4¼ ft. and 1½ yds.; 1 Union Jack, 3 yds.; 1 burgee with ship's name.

93. **Signal Lamps.**—British Board of Trade regulations: 1 set masthead and sidelights (dioptric lenses) of galvanized iron, 10 x 8. Masthead light on signal pole or fore side of flying bridge, to hinge down semaphore on flying bridge supplied by carpenter. Flash lamp on top semaphore supplied and fitted by shipbuilders. One anchor light, 8 x 6; 2 red globe lamps; 2 black balls; 1 stern light; 1 spare set to be supplied, suitable for burning colza or paraffin. Spare colored slides in brass frames for port and starboard lights.

94. **Oil Tanks.**—Four 25-gall. galvanized iron tanks with taps, etc., complete.

95. **Boatswain's Outfit.**—Each derrick to be supplied with wire guys, topping lift, iron leading block, cargo block, cargo wire and hook; one set tackle and blocks at each mast for lifting derricks; 4 chain hooks; 4 cork fenders and lanyards; 4 wood roller fenders, iron bound, and lanyards; 2 iron snatch blocks; 4 coal gins; 2 crowbars; 1 set of iron relieving blocks for tiller; lifebuoys and belts to meet Board of Trade requirements; 2 coir brooms; 3 paint scrubbers; 2 deck scrubbers and handles; 2 paint scrubbers and handles; 2 mops and handles; 1 grindstone, spindle and trough; 2 scrapers; 1 branding iron with ship's name; 2 marline spikes; 1 padlock to each door where necessary; 2 oil feeders; 1 12 in. bell, with name of the vessel engraved thereon, hung in a wrought iron belfry; bells as per British Board of Trade regulations; 1 6 in. binnacle bell; 1 patent foghorn; 1 megaphone; 1 taffrail log and line with governor, Cherub or equal; 2 log glasses, 14 and 28 secs.; 2 log slates; 1 deep sea lead, reel and line; 1 hand lead and line; signal halliards to each mast; 2 oak buckets; 2 sounding rods and lines; a sufficient quantity of wood wedges for hatches; tightening screws for stockless anchors; keys for all cocks, valves and deck pieces.

96. **Cooking Range and Outfit.**—A first class cooking range to cook for officers and crew, to be supplied and fitted with utensils as follows: 1 galvanized boiler, with steamer; 1 kettle, cast iron, 8 pints; 1 kettle, copper, 8 pints; 2 oval pans, 2 saucepans, 1 oval stew pan and cover, 1 fish pan, 1 gridiron, 2 frying pans, 1 slicer, 1 colander, 1 grater, 1 pepper box, 1 dredger, 1 basting spoon, 1 cook's ladle, 1 tormentor, 1 meat saw, 1 chopper, 1 mincing knife, 1 cook's knife, 1 pudding dish, 1 baking tin, 6 skewers, 1 sea pie tin, 1 poker, 1 rake, 1 shovel.

97. **Outfit, Stores, Lamps, etc.**—1 saloon lamp, 1 engineer's mess room lamp, 1 lamp for each berth, with smoke shades; 1 pantry lamp, 1 chart-room lamp, 1 gallery lamp, 1 dark lantern, 2 cargo lanterns, 1 steward's hand lamp, 2 lamps for fore-castle, 1 lamp for carpenter and boatswain, 1 lamp for buoys, 1 pair lamp scis-



sors, 1 cabin table bell, 1 long cabin brush, 1 short cabin brush, 1 set shoe brushes, 2 black lead brushes, 1 serving tray, 1 bread tray, 1 corkscrew, 1 filter, 1 knife box, 1 inkstand, 1 plate basket, lined; 1 coffee canister and 1 sugar canister, 1 register box and lock, ship's name printed on; 1 cash box, 2 spittoons, 1 steward's water can, 1 dust pan, 1 toasting fork, 1 knife board, 1 spring balance, 28 lbs.; 4 coir mats, 4 camp stools, 1 tapestry table cover for saloon, 1 American leather cover for saloon, 1 tapestry cover for table in captain's room, 1 American leather cover for the mess room table, japanned jug and receiver for each plug wash basin.

99. **Engineers' Mess Room Stores.**—1 hand brush, 1 hand shovel, 1 inkstand, 1 filter.

100. **Ware and Glass, Cabin.**—2 qt. decanters, 12 small tumblers, 12 large tumblers, 2 salts, 12 meat plates, 10 in.; 12 soup plates, 10 in.; 12 cheese plates, 6 in.; 3 dinner dishes, assorted; 3 cover dishes, 1 water jug, 12 breakfast cups and saucers, 12 teacups and saucers, 1 slop basin, 1 cream jug, 1 butter boat, 1 sugar basin, 12 egg cups, 1 water bottle for each cabin and officer's berth and 2 glasses. All crockery to have Canadian Government badge.

101. **Engineers.**—2 water bottles and glasses, 6 tumblers, 6 breakfast cups and saucers, 6 teacups and saucers, 6 dinner plates, 10 in.; 6 soup plates, 10 in.; 6 pudding plates, 8 in.; 3 egg cups, 1 slop basin, 1 cream jug, 1 sugar basin, 1 butter pat, 1 water jug, 1 salt cellar, 2 dinner dishes, 2 cover dishes. All crockery to have Canadian Government badge.

102. **Electro Plate and Cutlery, Cabin.**—12 table forks, e.p.; 12 dessert forks, e.p.; 12 tablespoons, e.p.; 12 dessert spoons, e.p.; 12 teaspoons, e.p.; 6 egg spoons, e.p.; 2 salt spoons, e.p.; 1 mustard spoon, e.p.; 1 teapot, b.t.; 1 cruet frame, e.p., 6 bottles; 1 soup ladle, e.p.; 3 dish covers, b.t.; 1 soup tureen, b.t.; 12 table knives, white handles; 12 dessert knives, white handles; 1 pair of carvers, white handles; 1 steel, white handle; 1 sugar basin and tongs, e.p.; 1 cream jug, e.p.; 1 small cruet, e.p., with 4 bottles. All to have Canadian Government badge.

103. **Engineers.**—6 table knives, black handles; 6 tea knives, black handles; 6 forks, n.s.; 6 tablespoons, n.s.; 6 teaspoons, n.s.; 6 dessert spoons, n.s.; 1 pair carvers, black handles; 1 steel, black handle; 1 soup tureen and ladle, b.t.; 1 cruet frame, b.m., 4 bottle; 1 mustard spoon, n.s.; 1 coffee pot, b.t.; 1 teapot, b.t. All to have Canadian Government badge.

Anything twice mentioned in this specification to be only once supplied.

Following are particulars of the vessel's various capacities:—

Cargo Hatches Capacities.	
No. 1 hatch.....	1,369 cu. ft.
No. 2 hatch.....	1,618 "
No. 3 hatch (on upper deck).....	120 "
No. 4 hatch.....	1,618 "
No. 5 hatch.....	1,618 "
No. 8 hatch (on bridge deck).....	540 "
Total .....	6,883 "

Bale Capacities.		
Holds (including hatches)	Between frames	Cu. ft.
No. 1 hold.....	123-151	44,132
No. 2 hold.....	84-123	74,407
No. 3 hold.....	8-61	79,940
Between upper and bridge decks	84-105	12,303
Total bale capacity (including hatches)		210,782

Grain Capacities.		
Holds (including hatches)	Between frames	Cu. ft.
No. 1 hold.....	123-151	48,275
No. 2 hold.....	84-123	78,120
No. 3 hold.....	8-61	86,762
Between upper and bridge decks	84-105	13,720
Total grain capacity (including hatches)		226,877

Water Capacities.			
Tanks (s. w.)	Frames	Cu. ft.	Tons
Fore peak .....	151-f.p.	2,568	73
No. 1 w. b. ....	123-151	1,873	54
No. 2 w. b. ....	82-123	7,540	215
No. 3 w. b. (p. & s.)....	62-82	4,136	118
Hold well .....	18-20	72	2
No. 4 w. b. ....	41-62	3,519	100
No. 5 w. b. ....	20-41	1,420	41
Aft peak .....	0-8	1,003	29
Total water capacity.....		22,131	632

Coal Capacities.			
Bunker	Frames	Cu. ft.	Tons
Port bunker .....	68-84	4,106	98
Starboard do. ....	67-84	4,355	104
Coal shoot .....	72-74	757	18
Bunker (under bridge deck)	84-105	13,720	327
Port bunker (under bridge deck)	69-84	2,730	65
Starboard bunker (under deck)	69-84	2,730	65
Total coal capacity.....		28,398	677

## Naval Service Vessels to be Sold.

Following is a list of vessels of various types, utilized by the Naval Service Department for coast patrol and other purposes during the war, for the purchase of which tenders were received to Feb. 20:

Six patrol steamships, named Festubert, Messines, St. Eloi, St. Julien, Vimy and Ypres, built in 1917, by Polson Iron Works, Toronto. They are of iron, and have these dimensions: length 130 ft., breadth 23.5 ft., depth 13.5 ft.; tonnage, 320 gross, 204 register; equipped with fore and aft compound engines of 59 n.h.p.

Forty-five steel steam trawlers, to Class C; length between perpendiculars, 125 ft.; breadth, extreme, 23½ ft.; depth, moulded, 13½ ft.; speed 10 knots; bunker capacity 155 tons; coal consumption, for 10 knots, 9 tons, and for 7½ knots, 7 tons; equipped with triple expansion, surface condensing engine, 61.6 n.h.p., with cylinders 12¼ x 21½ x 35 in.; reversing gear; air, circulating and other pumps; electric lighting, large trawl winch, steam windlass for anchor, bilge syphon, etc.; boiler, Scotch type, 13½ x 10½ ft.; 3 plain furnaces, 180 lb. working pressure under natural draft.

Fifty wooden steam drifters, equal to Lloyd's 100 A1 for this class of vessel. Length between perpendiculars, 84 ft.; breadth, extreme, 18 ft. 3 in.; depth, moulded, 10 ft. 11½ in.; bunker capacity 25 tons, equipped with compound, surface condensing engine with cylinders 12 and 24 in. diam., by 16 in. stroke, 24 n.h.p., for a speed of 9 knots an hour, supplied with steam by 2 Scotch boilers 9 ft. long by 9½ ft. diam., at 140 lb., with plain furnaces and natural draft; air, circulating, feed and bilge pumps working from main engine, duplex donkey pump, injector and bilge syphon; fuel consumption 4½ tons a day.

Steamship Constance, owned formerly by Customs Department, built at Owen Sound, Ont., in 1891, of steel and wood; length 115½ ft., breadth 19½ ft., depth of hold 11.2 ft.; tonnage, 185 gross, 126 register, displacement 400, draft loaded 11½ ft.; equipped with 4½ compound engine, 330 i.h.p., with cylinders 18 and 36 in. diam. by 24 in. stroke, supplied with steam by a single boiler 12 ft. 4 in. by 11 ft. 2 in., at 140 lb. working pressure; bunker capacity 46 tons; average speed 9 knots an hour.

Steamship Curlew, built at Owen Sound, Ont., in 1892, with composite hull; length 116½ ft., breadth 20 ft., depth of hold 11.3 ft.; tonnage, 158 gross, 96 register, 415 displacement, draft loaded 11 ft.; equipped with fore and aft compound engine, 350 i.h.p., with cylinders 18 and 36 in. diam. by 24 in. stroke, and supplied with steam by a single boiler 10 ft. 7 in. by 10 ft. 9 in.; bunker capacity 40 tons; average speed 9 knots an hour.

Steamship Grib, owned formerly by Canadian Whaling Co., Seven Islands, Que., and built in 1907, at Sandefjord, Norway, of steel; length 94.5 ft., breadth 18.7 ft., depth of hold 10.2 ft.; tonnage, 140 gross, 78 net, 185 displacement; draft

loaded 10.2 ft.; schooner rigged and equipped with vertical triple expansion engine, 350 i.h.p., with cylinders 11, 18 and 29½ in. diam. by 18 in. stroke, supplied with steam by a single boiler at 100 lb. working pressure; bunker capacity 75 tons; average speed 11 knots.

Steamship Lady Evelyn, formerly owned by Post Office Department; built in Great Britain in 1901, and originally named Deerhound. She is of steel, with bunker capacity of 90 tons; length 189 ft., breadth 26 ft., depth 9½ ft.; tonnage, 483 gross, 192 register; equipped with engine of 1,500 i.h.p. driving a screw; ordinary speed 12½ knots an hour.

Steamship P.V. IV, formerly Martin J. Marran, bought from Seaboard Fisheries, Inc., New York, for \$105,000; built in 1911 of wood; length between perpendiculars 149 ft., length over all 160 ft. 10 in., beam 22½ ft., depth of hold 9 ft.; tonnage, 323 gross, 145 net, deadweight capacity 350 tons; draft, light, 12½ ft.; draft, loaded, 14 ft.; equipped with triple expansion engine, with cylinders 12½, 13¼ and 36 in. diam. by 24 in. stroke, 600 h.p., located about 29 ft. from the stern post, and supplied with steam by a single Scotch boiler 12½ by 16¼ ft., at 180 lb., and also with 7 k.w. electric lighting plant; bunker capacity 75 tons; speed about 12 knots an hour, with a consumption of 18 tons a day. There are two hatchways to the hold, one 18 x 12 ft., the other 12 x 9¼ ft.

Steamship P.V. V, formerly Rollie E. Mason, bought from Seaboard Fisheries, Inc., New York, for \$105,000; built in 1911, and of similar type to the foregoing; length between perpendiculars 149 ft., length over all 167 ft. 10 in., beam 23 ft., depth of hold 8¼ ft.; tonnage, 323 gross, 145 net, deadweight capacity 350 tons; 2 hatchways, one 17 ft. 9 in. x 11 ft. 11 in., the other 12 ft. x 9½ ft.

Steamship P.V. VI, formerly Leander Wilcox, bought from J. W. Wilcox Co., New London, Conn., for \$85,000; built in 1907; length 126 ft., beam 22¼ ft., draft 11 ft., gross tonnage 205; compound engine with cylinders 15 and 30 in. diam. by 23 in. stroke, supplied with steam at 150 lb.; one hold of 150 tons capacity; speed 12 knots; complete equipment, including electric lighting throughout, and hoisting machinery.

Steamship P.V. VII, formerly Roland H. Wilcox, bought from J. W. Wilcox Co., New London, Conn., for \$85,000; built in 1911; length 132 ft., beam 22¼ ft., draft 10 ft. 7 in.; tonnage, 247 gross, 119 register; one hold with capacity for 170 tons; bunker capacity 40 tons; speed 12 knots; compound engine with cylinders 15 and 30 in. diam. by 23 in. stroke, supplied with steam by a single ended Scotch boiler 12 ft. by 12 ft. 2 in., at 160 lb.; all complete, including electric lighting throughout, and hoisting machinery.

Steamship Speedy II, owned formerly by Public Works Department, and built in Scotland in 1896 of steel; length 125 ft., breadth 20 ft., depth of holds 10½ ft.; tonnage, 252 gross, 154 net, displace-



ment 420 tons; draft loaded 11 ft.; equipped with 2 triple expansion engines with cylinders 10, 16 and 30 in. diam. by 18 in. stroke (6 cylinders), 500 i.h.p., and sup-

plied with steam by 2 cylindrical marine and return boilers, 9½ by 10 ft., at 200 lb.; bunker capacity 40 tons; average speed 10 knots an hour.

## The s.s. Canadian Voyageur's Trip from Quebec to Halifax.

As stated in Canadian Railway and Marine World for February, the steel cargo steamship Canadian Voyageur, the first vessel built under the Dominion Government's shipbuilding programme, which was launched by Canadian Vickers, Ltd., at Montreal, Nov. 23, 1918, completed at Quebec, and delivered to the Marine Department there Jan. 17, left there Jan. 20, in charge of Capt. R. Aikman, for Halifax, to be delivered there to the Canadian Government Merchant Marine, Ltd., for operation. She was accompanied from Quebec by the Dominion Government icebreaking s.s. Montcalm, the latter being intended to go as far as ice conditions might necessitate. The trip to Halifax took 16 days, owing to trouble with ice. As Jan. 20 is said to be the latest date at which an ocean going vessel ever left Quebec for the sea, the following extracts from the Canadian Voyageur's log will be of considerable interest:

Jan. 20, 10 a.m., left Quebec, 10.50 a.m., started snowing, wind increasing from eastward; 11 a.m., turned ship around; 1.10 p.m., made fast Quebec pier, snowing.

Jan. 21, 9 a.m., left Quebec, following C.G.S. Montcalm; 11.50 a.m., passed Bellechasse; 1 p.m., Crane Island; 2.55 p.m., Lower Traverse; 6 p.m., stopped in heavy ice; 8.20 p.m., full speed ahead; 10.50 p.m., Cape Salmon; midnight, fine, moderate ice.

Jan. 22, 8.45 a.m., Bic Island; 10 a.m., Father Point, C.G.S. Montcalm took off two pilots and Canadian Vickers, Ltd., engineer; 1.50 p.m., Bersimis Point; 5 p.m., stopped in heavy ice; 8 p.m., ice pressing against ship side heavily, dull and overcast.

Jan. 23, 7 a.m., C.G.S. Montcalm broke ice around us; we proceeded, making for north shore; 4 p.m., stopped in heavy ice, wind increasing from eastward; midnight, strong e.n.e. gale with heavy snow.

Jan. 24, heavy easterly gale blowing all day; drifting with ice; 10.30 p.m., cast 48 fathoms, midnight cast 50 fathoms, high easterly gale, blinding snow storm.

Jan. 25, 2 a.m., sighted Portneuf light abeam, sky clearing, cast 28 fathoms; 8.30 a.m., cast 50 fathoms; 10.30 a.m., full speed ahead; 11.45 a.m., stopped and coaled Montcalm alongside; finished coaling 11.45 p.m.; midnight, full speed ahead.

Jan. 26, midnight to 4 a.m., bucking heavy ice; 4 to 5.30 a.m., loose ice; 6 a.m., clear water following north shore; 12.45 p.m., Pointe Des Monts; 4 p.m., heavy ice, light snow; 6 p.m., Carousel Island light; 10 p.m., stopped.

Jan. 27, 5.15 a.m., full speed ahead; 7.40 a.m., West Point light, Anticosti, moderate ice; 10 a.m., bucking heavy ice; 2 p.m., clear, no ice; 4 p.m., heavy slack ice; 8 p.m., stopped in heavy ice.

Jan. 28, stuck in heavy, close packed ice, 5 miles off Table Head, strong north wind with snow flurries, no open water in sight, drifted 3 miles s.e.

Jan. 29, stuck in heavy, close packed ice, 4 miles off Table Head, fine clear weather, light northerly wind, freezing hard, no open in sight, drifted 4 miles s.e.

Jan. 30, stuck in heavy close packed ice,

2 miles off Table Head, fine clear weather, fresh n.w. wind, freezing hard; 2 p.m., ice opening in seams to eastward; 8 p.m., drifting s.s.e.

Jan. 31, stuck in heavy close packed ice, half mile off shoal at Fox Bay, fine clear weather, fresh n.w. wind, drifting to south, ice spreading in seams and cracking slowly.

Feb. 1, stuck in heavy close packed ice, 4 miles off shore, East Point, Anticosti, fine and clear, moderate westerly wind, drifting s.e.; 9 a.m., C.G.S. Montcalm came alongside, took tow line and pointed steamship's head east; 10.10 a.m., full speed ahead, bucking heavy ice, slight westerly wind, snow flurries; 4 p.m., passing snow showers, fresh southwesterly wind, running through slob ice; 10 p.m., encountered heavy ice field; 11.45 p.m., St. Paul's Island light; 3 p.m., proceeded slowly through heavy ice.

Feb. 2, 8 a.m., ice thinning out, light n.w. wind, snowing hard at intervals; 9.35 a.m., passed Glace Bay; 11.20 a.m., Sow Point; 11 a.m., took pilot aboard; 11.20 a.m., anchored off North Sydney, snowing until midnight.

Feb. 3, 8 a.m., fine and clear, light n.w. wind; 11.40 a.m., raised anchor and proceeded; 12.45 p.m., Lowe Point; 3.12 p.m., Scatarie, fresh n.w. wind; 8 p.m., St. Esprit; 10.10 p.m., Cranberry Island, strong northwest wind.

Feb. 4, 1.40 a.m., Country Island; 3.35 a.m., Liscomb; 5.50 a.m., Sheet Harbor; 7.25 a.m., Egg Island; 8.10 a.m., Jeddore Head; 10.10 a.m., Chebucto Head, took pilot; 11.15 a.m., anchored in Halifax harbor, 12 fathoms water, draft 6½ ft. forward, 18 ft. aft.

Feb. 5, light southerly wind, fine and clear, anchored in stream.

Feb. 6, moderate north wind, clear, then overcast, anchored in stream.

Feb. 7, fresh n.n.w. wind, clear, then overcast; 1 p.m., proceeded to no. 4 pier, south side, assisted by tug.

Feb. 8, fresh n.w. wind; lying at no. 4 pier.

Feb. 9, light n.w. wind; lying at no. 4 pier.

Feb. 10, light north wind; commenced taking coal from no. 4 hold to bunkers, lying at no. 4 pier.

Feb. 11, light north wind; shifting coal to bunkers, lying at no. 4 pier.

Feb. 12, fresh north wind; shifting coal to bunkers, lying at no. 4 pier.

Feb. 13, light west wind; shifting coal to bunkers till 6 p.m.

Feb. 14, 8 a.m., left pier 4 and proceeded, with assistance of 2 tugs, to Halifax drydock; 9.30 a.m., in dock; 5 p.m., water pumped out of drydock.

The Canadian Voyageur did not suffer any material damage from the ice, an examination in the drydock showing that only one or two plates had been slightly dented and these were straightened out without any difficulty, and, of course, some painting had to be done.

The Canadian Voyageur took on cargo at Halifax for the West Indies, and was expected to sail about Feb. 28. Her return cargo for Halifax probably will consist of sugar from Demerara and San Domingo.

## Toronto Shipbuilders and the Dominion Government Shipbuilding Programme.

A deputation representing the various shipbuilding companies in Toronto, the city council, the board of trade, and other local organizations, waited on the acting Premier and other members of the Dominion Government at Ottawa, Feb. 13, to protest against the position in which Toronto has been placed regarding orders for vessels for the Government Merchant Marine, and urging that the programme be proceeded with, by the placing of further orders, in which a due proportion should be placed in Toronto. The shipbuilders were represented by J. B. Miller, President, and H. G. Miller, Vice President, Polson Iron Works, Ltd.; L. Dahlgren, Vice President and General Manager, and A. C. McMaster, Counsel, Dominion Shipbuilding Co., and Chas. Boone, Vice President, Toronto Shipbuilding Co.

The position was clearly outlined by the representatives of the shipbuilding companies, who referred to the large expenditures they had made in the organization and equipment of their plants, and the prospects held out to them that the yards would be kept busy on government orders. Of the orders placed by the Dominion Government none have been placed in Toronto.

Sir Thomas White, in replying, stated that the government, having placed orders for 45 vessels, had now to consider what its future policy was to be, and it would be the government's duty to take the unemployment question into consideration in reaching a decision whether or not it should place further orders. The cost of construction would also be considered.

Of the three shipbuilding companies concerned, two are builders of steel vessels, and the third is equipped for building wooden vessels. Polson Iron Works has carried out a number of contracts for government vessels of various types, and at present is engaged on the completion of orders for the British Government, placed by the Imperial Munitions Board, and which, it is expected, will be completed by August. The Dominion Shipbuilding Co., which acquired Thor Iron Works, Ltd., and laid out and equipped a large, up to date yard, has built several steel steamships, chiefly for its own account, with a view to chartering, or selling them as occasion arises. It has received no orders from the Imperial Munitions Board, or from the Dominion Government. The Toronto Shipbuilding Co. is equipped for wooden shipbuilding, and has completed contracts for two wooden steamships for the British Government, under orders from the Imperial Munitions Board.

Canadian Fishing & Transport Co. Ltd., has been incorporated under the Dominion Companies Act, with \$1,500,000 authorized capital and office at Toronto, to carry on a general fishing and transportation business, and in connection therewith to own and operate steam and other vessels, and other transportation facilities.

Losses on Great Lakes in 1918.—The total of losses on the Great Lakes throughout 1918, was 93 lives and approximately \$8,000,000 worth of shipping. The heavy loss of life is accounted for by the foundering of two French mine sweepers, with their crews, during a gale on Lake Superior, Nov. 24.



# Canadian Government Merchant Marine, Ltd., Shipbuilding, Operation, Etc.

**Orders for Vessels.**—On another page is a complete table showing the number and type of all vessels ordered by the Dominion Government for Canadian Government Merchant Marine, Ltd., together with information concerning contract no., contract date, builders name and address, builders yard no., tonnage deadweight, type, classification, sea speed, price per ton d.w., total price, approximate delivery date, date of laying of keel, date of launching and name of vessel, so far as obtainable. This information will be added to from time to time, as construction progresses, or when any changes take place. This matter has been got together after a considerable expenditure of time, and has been classified and arranged in such a form, that all the information available can be obtained easily and expeditiously by reference to it. Canadian Railway and Marine World is the only medium which has dealt thoroughly with the shipbuilding development throughout the Dominion, and especial pains are being taken to place before its readers accurate and up to date information as to the Dominion Government's actions in connection with the shipbuilding industry in Canada, which means so much for the future of the country. Following is a summary of the orders placed, classified according to builders:—

	No.	Tons each	Total tonnage
British American Shipbuilding Co., Welland, Ont. . . . .	2	4,350	8,700
Canadian Vickers, Ltd., Montreal . . . . .	2	4,300	8,600
Canadian Vickers, Ltd., Collingwood Shipbuilding Co., Collingwood, Ont. . . . .	4	3,750	15,000
Collingwood Shipbuilding Co., Kingston, Ont. . . . .	1	3,750	3,750
J. Coughlan & Sons, Ltd., Vancouver, B.C.	4	8,100	32,400
Davie Shipbuilding & Repairing Co., Lauzon, Que. . . . .	2	5,100	10,200
Halifax Shipyards, Ltd., Halifax, N.S. . . . .	2	8,100	16,200
Halifax Shipyards, Ltd., Halifax, N.S. . . . .	2	10,500	21,000
John L. Mullen Construction Co., Prince Rupert, B.C. . . . .	2	8,100	16,200
Nova Scotia Steel & Coal Co., Ltd., New Glasgow, Ont. . . . .	2	2,800	5,600
Port Arthur Shipbuilding Co., Port Arthur, Ont. . . . .	4	3,400	13,600
Port Arthur Shipbuilding Co. . . . .	2	4,300	8,600
Tidewater Shipbuilders, Ltd., Three Rivers, Que. . . . .	4	5,100	20,400
Victoria Machinery Depot, Victoria, B.C.	2	8,100	16,200
Wallace Shipyards, Ltd., Vancouver, B.C. . . . .	2	4,300	8,600
Wallace Shipyards, Ltd.	2	5,100	10,200
<b>45</b>			<b>263,850</b>

**Contracts Signed—Dates of Contracts.**—Referring to the table published in Canadian Railway and Marine World for February, and repeated in more complete form in this issue, some misapprehension has arisen apparently in the public mind in reference to contract dates given. These dates are those on which the contracts were signed respectively, and as will be seen by the table in this issue, some of the contracts had not been signed up to the date of our latest advice, though orders in council authorizing the giving of the contracts were passed some time previously. Since the publication of the table in our February issue, giving full particulars of contracts which the Marine Department had been authorized by order

in council to place, the following contracts have been signed on the dates named.

Contracts 15 and 16, Jan. 24, 1919, Tidewater Shipbuilders, Ltd., Three Rivers, Que., yard nos. 7 and 8, two steamships 5,100 tons d.w. each, at \$200 a ton, or \$1,020,000 each.

Contracts 29 and 30, Jan. 24, 1919, Victoria Machinery Depot Co., Victoria, B.C., yard nos. 1 and 2, two steamships 8,100 tons d.w. each, at \$198 a ton, or \$1,603,800 each.

Contracts 44 and 45, Jan. 23, 1919, British American Shipbuilding Co., Welland, Ont., yard nos. 4 and 5, two steamships 4,350 tons d.w. each, at \$215 a ton, or \$935,250 each.

For fuller details, see table published on another page in this department.

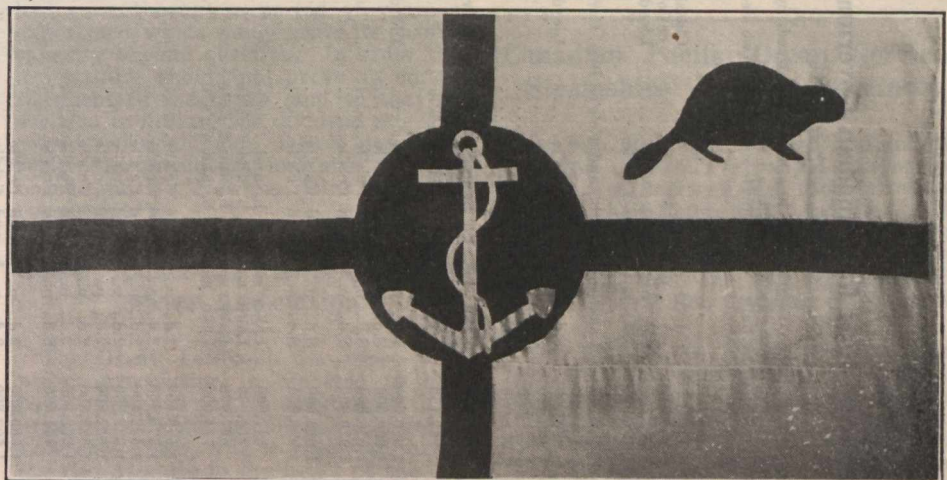
**Names of Vessels.**—In addition to the names Canadian Voyageur, Canadian Pioneer and Canadian Warrior, given to the first three steamships launched under orders from the Marine Department as shown in Canadian Railway and Marine World for February, the following names have been decided on.

Contract 4, builders yard no. 100, Wallace Shipyards, Ltd., Vancouver, Canadian Volunteer.

steamship, Canadian Pioneer, 8,100 tons d.w., which left Montreal, Dec. 6, 1918, in tow, for Quebec, had been completed there, and was ready for handing over to the Marine Department, subject to a few minor details, which cannot be completed at Quebec owing to climatic conditions.

As stated in Canadian Railway and Marine World for February, the keel of builders yard no. 68, 8,100 tons d.w., was laid Aug. 26, 1918, and it was expected to launch her Jan. 15. Canadian Vickers, Ltd., advised us Feb. 19 that the hull had been ready for launching for about a fortnight, but that it had not been put into the water, owing to the river level being abnormally high, reference to charts showing it to be higher than for the past six years. The vessel will be named Canadian Ranger.

**Halifax Shipyards, Ltd., Halifax, N.S.**—In an interview given to a Halifax newspaper at the end of January, J. W. Norcross is reported to have stated that the first keel of the four steamships to be built for Canadian Government Merchant Marine, Ltd., will be laid as soon as the material arrives at the yard. The ground is pretty well prepared and it was expect-



**House flag, Canadian Government Merchant Marine, Ltd.**

The illustration above is from a photograph of the house flag which has been adopted by the Marine Department for vessels of the Canadian Government Merchant Marine, Ltd. The flag is 12 x 6 ft., the design consisting of a Greek cross, with a ball 18 in. diam. in the center, carrying an anchor, and a representation of a beaver in one of the quarters. The cross and ball are blue on a white ground, and the anchor is yellow.

Contract 5, builders yard no. 106, Wallace Shipyards, Ltd., Vancouver, Canadian Trooper.

Contract 10, builders yard no. 62, Collingwood Shipbuilding Co., Collingwood, Ont., Canadian Recruit.

Contract 11, builders yard no. 63, Collingwood Shipbuilding Co., Canadian Signaller.

Contract 12, builders yard no. 64, Collingwood Shipbuilding Co., Canadian Gunner.

Contract 24, builders yard no. 69, Canadian Vickers, Ltd., Montreal, Canadian Ranger.

**British American Shipbuilding Co., Welland, Ont.,** advised us Feb. 10 that it was making some extensions to its building berths, which were necessary before keels could be laid for the 2 steel steamships of 4,350 tons d.w. each, for which it has orders from the Dominion Government. It then expected to have the keel for department's contract 44, builders yard no. 4, laid early in March.

**Canadian Vickers, Limited, Montreal,** advised us Feb. 19 that the steel cargo

ed to have all the buildings under erection by Mar. 1. The keel blocks are already laid for two vessels. The company has contracts for 2 steamships of 8,100 tons each, and 2 of 10,500 tons each.

**Harbor & Marine Co., Ltd.,** is stated to be the name of a company which is establishing a plant at Victoria, B.C., to build 2 steel steamships of 8,100 tons d.w. each, for the Dominion Government. The head of this company is stated to be C. J. V. Spratt, of the Victoria Machinery Depot, Ltd., which has a contract for 2 steel cargo steamships of 8,100 tons d.w. each, at \$198 a ton. The contracts for these vessels were signed Jan. 24, and the approximate delivery dates are Jan. 31 and Nov. 20, 1920. It is stated that plans for the buildings to be erected on the site of the new shipyard, including mould loft, mill, plate shop, blacksmith shop, building ways and offices, have been completed, and construction was expected to commence towards the end of February. The site selected, at Hospital Point, has been prepared and a wharf built for landing

(Continued on page 155.)



### Orders for Steel Cargo Steamships for Canadian Government Merchant Marine Ltd.

The following is a complete list of steel cargo steamships which the Dominion Marine Department has been authorized, by order in council, to place orders for, and which orders are to be carried out. Where a contract date is not given the contract had not been signed at the time of our latest official advice. The following contractions are used in the column giving the type of the vessels to be built:—s.d., single deck; 2.d., two deck; 3.d., three deck; lake, lake type; p., poop; b., bridge; f'c's'le, fore-castle.

Contract no.	Contract date	Builder	Yard no.	Tons d.w.	Price per ton d.w.	Total price	Type	Classification	Speed, knots	Approximate delivery date	Keel laid	Launched	Name	
1	Mar. 4, 1918	Canadian Vickers Ltd., Montreal	66	4,300	\$207.	\$ 890,100	S.d., p., b. and f'c's'le.....	Lloyd's	11	Dec. 31, 1918	June 10, 1918	Nov. 23, 1918	Canadian Voyageur	
2	May 22, 1918	" "	67	8,100	180.	1,458,000	2.d., p., b. and f'c's'le.....	"	11	Jan. 31, 1918	July 17, 1918	Dec. 3, 1918	Canadian Pioneer	
3	May 18, 1918	Collingwood Shipbuilding Co., Collingwood, Ont.	61	3,750	205.	768,750	Lake, s.d., p., b. and f'c's'le	Brit. Corp.	9	May 1, 1919	.....	Dec. 21, 1918	Canadian Warrior	
4	Mar. 15, 1918	Wallace Shipyards Ltd., Vancouver, B.C.	100	4,300	207.	890,100	S.d., p., b. and f'c's'le.....	Lloyd's	11	Mar. 31, 1919	Oct. 1, 1919	.....	Canadian Volunteer	
5	Nov. 25, 1918	" "	106	4,300	217.	933,100	S.d., p., b. and f'c's'le.....	"	11	May 31, 1919	Nov. 15, 1918	.....	Canadian Trooper	
6	Nov. 25, 1918	" "	101	5,100	210.	1,071,000	S.d., p., b. and f'c's'le.....	"	11	July 31, 1919	.....	.....	.....	
7	Nov. 25, 1918	" "	102	5,100	210.	1,071,000	S.d., p., b. and f'c's'le.....	"	11	Sept. 30, 1919	.....	.....	.....	
10	July 5, 1918	Collingwood Shipbuilding Co., Collingwood, Ont.	62	3,750	205.	768,750	Lake, s.d., p., b. and f'c's'le	Brit. Corp.	9	May 15, 1919	June 3, 1918	.....	Canadian Recruit	
11	Oct. 17, 1918	" "	63	3,750	205.	768,750	Lake, s.d., p., b. and f'c's'le	"	9	July 15, 1919	.....	.....	Canadian Signaller	
12	Oct. 17, 1918	" "	64	3,750	205.	768,750	Lake, s.d., p., b. and f'c's'le	"	9	July 1, 1919	.....	.....	Canadian Gunner	
13	Aug. 9, 1918	Tidewater Shipbuilders Ltd., Three Rivers, Que.	5	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	Lloyd's	11	Aug. 1, 1919	Jan. 8, 1919	.....	.....	
14	Aug. 9, 1918	" "	6	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Sept. 1, 1919	Jan. 10, 1919	.....	.....	
15	Jan. 24, 1919	" "	7	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Nov. 15, 1919	.....	.....	.....	
16	Jan. 24, 1919	" "	8	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	May 15, 1920	.....	.....	.....	
17	Sept. 4, 1918	Davie Shipbuilding & Repairing Co., Lauzon, Que.	459	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Nov. 1, 1919	.....	.....	.....	
18	Sept. 4, 1918	" "	460	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Nov. 8, 1919	.....	.....	.....	
19	Sept. 4, 1918	Port Arthur Shipbuilding Co., Port Arthur, Ont.	39	3,400	205.	697,000	Lake, s.d., p., b. and f'c's'le	"	9	June 1, 1919	Dec. 9, 1918	.....	.....	
19a	.....	" "	41	3,400	210.	714,000	Lake, s.d., p., b. and f'c's'le	"	9	Sept. 30, 1919	.....	.....	.....	
20	Sept. 4, 1918	" "	40	3,400	205.	697,000	Lake, s.d., p., b. and f'c's'le	"	9	July 1, 1919	Dec. 10, 1918	.....	.....	
20a	.....	" "	42	3,400	210.	714,000	Lake, s.d., p., b. and f'c's'le	"	9	Oct. 31, 1919	.....	.....	.....	
21	Sept. 13, 1918	Halifax Shipyards, Ltd., Halifax, N.S.	1	8,100	195.	1,579,500	2.d., p., b. and f'c's'le.....	"	10	Dec. 19, 1919	.....	.....	.....	
22	Sept. 13, 1918	" "	2	8,100	195.	1,579,500	2.d., p., b. and f'c's'le.....	"	10	Apr. 1920	.....	.....	.....	
23	Oct. 11, 1918	Canadian Vickers Ltd., Montreal	68	8,100	188.	1,522,800	2.d., p., b. and f'c's'le.....	"	11	May 1, 1919	Nov. 30, 1918	.....	Canadian Ranger	
24	Oct. 11, 1918	" "	69	8,100	188.	1,522,800	2.d., p., b. and f'c's'le.....	"	11	June 1, 1919	Nov. 30, 1918	.....	.....	
25	Oct. 11, 1918	" "	70	8,100	188.	1,522,800	2.d., p., b. and f'c's'le.....	"	11	July 1, 1919	Dec. 2, 1918	.....	.....	
26	Oct. 11, 1918	" "	71	8,100	188.	1,522,800	2.d., p., b. and f'c's'le.....	"	11	Aug. 1, 1919	.....	.....	.....	
27	Oct. 11, 1918	" "	72	8,100	188.	1,522,800	2.d., p., b. and f'c's'le.....	"	11	Sept. 1, 1919	.....	.....	.....	
28	Oct. 11, 1918	" "	73	4,300	215.	924,500	S.d., p., b. and f'c's'le.....	"	11	May 27, 1919	.....	.....	.....	
29	Jan. 24, 1919	Victoria Machinery Depot, Victoria, B.C.	1	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	Jan. 31, 1920	.....	.....	.....	
30	Jan. 24, 1919	" "	2	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	Nov. 30, 1920	.....	.....	.....	
31	Dec. 11, 1918	Collingwood Shipbuilding Co., Kingston, Ont.	15	3,750	205.	768,750	Lake, s.d., p., b. and f'c's'le	Brit. Corp.	9	Nov. 1, 1919	.....	.....	.....	
32	.....	Port Arthur Shipbuilding Co., Port Arthur, Ont.	43	4,300	215.	935,250	S.d., p., b. and f'c's'le.....	Lloyd's	11	Nov. 1, 1919	.....	.....	.....	
33	.....	" "	44	4,300	215.	935,250	S.d., p., b. and f'c's'le.....	"	11	Nov. 15, 1919	.....	.....	.....	
34	Nov. 22, 1918	J. Coughlan & Sons, Vancouver, B.C.	11	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	July 31, 1919	.....	.....	.....	
35	Nov. 22, 1918	" "	12	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	Aug. 31, 1919	.....	.....	.....	
36	Nov. 22, 1918	" "	13	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	Sept. 30, 1919	.....	.....	.....	
37	Nov. 22, 1918	" "	14	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	Oct. 31, 1919	.....	.....	.....	
38	Dec. 10, 1918	Halifax Shipyards Ltd., Halifax, N.S.	3	10,500	197½	2,073,750	3.d., p., and f'c's'le.....	"	12	Aug. 1, 1920	.....	.....	.....	
39	Dec. 10, 1918	" "	4	10,500	197½	2,073,750	3.d., p., and f'c's'le.....	"	12	Nov. 1, 1920	.....	.....	.....	
40	.....	Nova Scotia Steel & Coal Co., New Glasgow, N.S.	5	2,800	210.	588,000	S.d., p., b. and f'c's'le.....	"	8½	Oct. 1919	.....	.....	.....	
41	.....	" "	6	2,800	210.	588,000	S.d., p., b. and f'c's'le.....	"	8½	Nov. 1919	.....	.....	.....	
42	Feb. 21, 1919	Prince Rupert Shipbuilding & Engineering Co., Prince Rupert, B.C.	1	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	Feb. 1920	.....	.....	.....	
43	Feb. 21, 1919	" "	2	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	June 1920	.....	.....	.....	
44	Jan. 23, 1919	British American Shipbuilding Co., Welland, Ont.	4	4,350	215.	935,250	S.d., p., b. and f'c's'le.....	Brit. Corp.	10	Nov. 1919	.....	.....	.....	
45	Jan. 23, 1919	" "	5	4,350	215.	935,250	S.d., p., b. and f'c's'le.....	"	10	June 1920	.....	.....	.....	
					263,850	\$52,691,450								



(Continued from page 153.)  
 construction supplies, and a temporary yard office and foreshore tracks have been laid down. Mr. Spratt is reported to have announced that construction of the 2 vessels will commence immediately on the arrival of the steel, the keel plates being expected early in March. J. S. Clark is reported to have been appointed Superintendent Engineer.

**The Port Arthur Shipbuilding Co.,** Port Arthur, Ont., as stated in Canadian Railway and Marine World for February, has contracts from the Marine Department for 4 steel cargo steamships, of 3,400 d.w. each, and for 2 of 4,300 tons d.w. each. It laid keels for 2 or 3,400 tons each as follows: Builders yard no. 19, Dec. 9, 1918; builders yard no. 20, Dec. 10, 1918. The approximate launching dates for these are about April 15. The company advised us Feb. 19 that it expected to lay keels for 2 more, of 3,400 tons each, about Mar. 15.

**Prince Rupert Shipbuilding & Engineering Co.,** Prince Rupert, B.C. As stated in previous issues, the Marine Department was authorized by order in council to give contracts to John L. Mullen Construction Co. to build 2 steel cargo steamships of 8,100 tons d.w. each at Prince Rupert, B.C., the company having leased the Grand Trunk Pacific Ry.'s shipbuilding and drydock there. The Prince Rupert Shipbuilding Co. has been incorporated under the British Columbia Companies Act by persons interested in the John L. Mullen Construction Co. and others, as stated in Canadian Railway and Marine World for February, and contracts for the 2 vessels have been given to it and were signed Feb. 21.

**Tidewater Shipbuilders, Ltd.,** Three Rivers, Que., has advised us that it has laid keels for two, out of the four, 5,100-ton steel cargo steamships for which it has orders from the Marine Department as follows: Contract 13, builders yard no. 5, keel laid Jan. 8; contract 14, builders yard no. 6, keel laid Jan. 10. It is expected to launch these two steamships about the latter part of August. Contracts 15 and 16, for builders yards nos. 7 and 8, were signed Jan. 24, and keels will be laid immediately after launching builders yard nos. 5 and 6.

### Canada Steamship Lines, Ltd., Dividend, Official Changes, Etc.

The Canada Steamship Lines, Ltd., directors, on Feb. 11, declared a quarterly dividend on the common stock, at the rate of 4% for the year, the first quarterly payment to be made Mar. 15. At the same time it was announced that the President, Jas. Carruthers, and another director, J. C. Newman, Manager, McClary Mfg. Co., Montreal, had resigned, being opposed to paying a dividend on the common stock. J. W. Norcross, Vice President and Managing Director, was elected to succeed Mr. Carruthers as President, and retains the title of Managing Director. He stated that the company was in a strong position financially, that a dividend was justified by earnings, and that the 4% rate decided on was an indication of a conservative policy.

C. A. Barnard, K.C., Montreal, and M. J. Haney, Toronto, both directors and members of the executive committee, were elected vice presidents. F. S. Isard, a director and member of the executive committee, also Comptroller, was appointed Director of Finances, and Comptroller. W. E. Burke, a director and Assistant

Manager, was appointed Director in charge of Transportation, and a member of the executive committee. H. W. Cowan, a director and Operating Manager, was appointed Director in charge of Operations, and a member of the executive committee.

Mr. Carruthers left Montreal for the Pacific coast some time prior to the directors' meeting referred to above, and before doing so made the following reference to his opposition to paying a dividend on the common stock:—"I cannot admit the propriety of paying such a dividend, for several reasons, and in this attitude have received Mr. Newman's consistent sympathy and support. My principal reason for adopting the attitude described was that I considered the company's best interests were bound up in maintaining the dividend position of its premier capital issue, the preferred stock. In other words, this issue should be strengthened during a period of exceptional earnings, with such a reserve backing that the continuance of the regular rate would be assured for some years to come. My contention is that the disbursement should not be made until there is a strong liquid reserve behind the preferred. It was not the idea of the organizers of the company at its inception that the common should receive anything in the way of dividend until the company had gone through a period of years of experience, which would prove its earning capacity beyond question. In order that my attitude should not prove an embarrassment to the board, and so that the decision to declare the dividend might be considered unanimous, I have decided to resign the presidency and also from the board, and Mr. Newman joins me in my retirement."

### Great Lakes-St. Lawrence Tidewater Association.

The Great Lakes-St. Lawrence Tidewater Association is reported to have been organized in Washington, D.C., to urge the enlarged canalization of the St. Lawrence River, with the view of "bringing the Atlantic to the heart of the continent." The U.S. Government is to be asked to take such steps as may seem best and most expeditious, and to co-operate in what Canada is already doing, toward this end. The states said to be represented in the organization are: Wisconsin, Minnesota, North Dakota, Iowa, Illinois, Indiana, Michigan and Ohio.

A correspondent writes us in regard to the foregoing report as follows: "The association's purpose, as stated, is not likely to be fulfilled, as it would appear that engineers have pretty well decided that if the Great Lakes are to be connected with tide water, through the St. Lawrence River, for deep draft vessels, it will not be by enlarging the St. Lawrence canals, but by the use of dams to create a series of basins in the St. Lawrence channel, so as to obviate the need of excavation of the many existing difficult channels other than the canals. Canadians, who believe in making Toronto, Fort William and Port Arthur ocean ports, will no doubt welcome the idea that Washington is waking up to the importance of the St. Lawrence route, and may possibly make up its mind to join with the Dominion Government in utilizing the river for navigation, at the expense of the power barons. Doubtless, if the two governments did join hands on such a rational scheme, the public would get plenty

of power and the only losers would be those who have heretofore been permitted to exploit the natural resources of the river largely for their own benefit."

### Casualties on the Great Lakes, Etc.

The Canadian Lake Protective Association's bulletin 1 for 1919 to masters of vessels enrolled in the association gives a list of the casualty reports received during 1918 subsequent to the issue of the last bulletin and dealt with at a meeting of the association's committee at Montreal, Feb. 5. Masters and engineers are warned that there is but one authorized set of engine signals, and that, notwithstanding any unauthorized practice to the contrary in some quarters, 2 bells or 2 whistles must be accepted as a signal to go astern, no matter how the engines are turning at the time. If these signals are to be taken as "one to stop", followed by "one to go ahead", there must be a distinctly appreciable pause between them. Non-observance of this rule, or failure to understand it, has led to more than one casualty during 1918, and the same comment has been made upon the record of previous years. Officers will be able to avoid misunderstanding only by using and obeying these signals in the way indicated above.

### Canadian Pacific Ocean Services Steamships' Atlantic Terminus.

On Feb. 23 it was reported in Montreal that the C.P.O.S.'s principal steamships would make Portland, Me., their terminus, instead of St. John, N.B., that the C.P.R. would contribute to the building of a new state pier at Portland, and would make connection with its own line over the Maine Central Rd., probably at Newport, Vt.

On Feb. 24, G. M. Bosworth, Chairman, C.P.O.S., was reported to have said to an interviewer: "It is possible that the C.P.O.S. steamships may go to Portland."

Later, on Feb. 24, E. W. Beatty, President, C.P.R., was reported as saying that the company had no such intention at that time.

The American-Canadian Corporation is reported to have been organized under Delaware law, with office at 30 Church St., New York, and authorized capital of \$5,000,000, to carry on a general shipping business between North and South America and Europe. It is stated that contracts amounting to \$30,000,000 have been placed for the construction of turbine steamships, and that exclusive foreign selling agencies have been arranged with well known Canadian and U.S. manufacturers, and also for the handling of cattle and coal. It is also stated that contracts will shortly be closed for the construction of six passenger steamships of approximately 18,000 tons each, of a similar type to the White Star steamships. Some of the freight steamships said to have been purchased are stated to be of 1918-19 construction, some having been launched recently, and others still on the ways. These are said to have been purchased from the United States Steamship Co., and include the s.s. Tilland, 8,800 tons, and the s.s. Dutton Hall, 9,400 tons, both of which have been chartered for voyages to Greece and Italy. The management will be under Carl O'Ruddy, of the Italian Shipping Co.



**Mainly About Marine People.**

**Andrew A. Allan**, formerly of the Allan Line Steamship Co., and at one time, President, Shipping Federation of Canada, died at the Royal Victoria Hospital, Montreal, Feb. 11, aged 58, following an operation for cancer of the throat. He entered the Allan Line service in 1881, and was later elected Vice President. He was elected President of the Shipping Federation of Canada in 1910, and was also Chairman of the Quebec Salvage & Wrecking Co., and of the Marconi Wireless Telegraph Co. of Canada. He was at one time a member of the Montreal Harbor Commission, and was associated with many industrial and financial concerns, and charitable institutions.

**Lieut.-Col. William Patrick Anderson**, C.M.G., C.E., Chief Engineer, Marine Department, Ottawa, who has applied for superannuation, is taking a holiday at La Jolla, San Diego County, California, and is not expected to return to Ottawa until towards the end of April. He was born at Levis, Que., Sept. 4, 1851, and educated at Bishop's College, Lennoxville, Que., passed the preliminary examination for Provincial Land Surveyor for Quebec in Jan., 1873, and on taking employment exclusively engineering, he neglected to pass the final examination. He was employed in surveying and engineering in the Northwest and Manitoba from 1872 to 1874. He entered the Marine Department in Oct., 1874, as draftsman and assistant engineer, and was appointed permanent Assistant Engineer in May, 1875, and Chief Engineer in Feb., 1880. During his occupancy of that position he had charge of all works executed by the Department, and as General Superintendent of Dominion Lighthouses, all plans of lighthouses, piers, lanterns and illuminated apparatus, were made under his supervision. He is a member of the executive committee of the Geographic Board of Canada, member of the Lighthouse Board of Canada, a councillor of the Institution of Civil Engineers, Eng., a Fellow of the Royal Geographical Society, and was one of the charter members of the Canadian Society of Civil Engineers, of which he was President in 1904. He was connected with the volunteer militia for a long period, and served in the Fenian Raid, and became Lieut.-Col. commanding the 43rd Regiment, in 1888, transferred to the active forces in recognition of services in encouraging rifle shooting, and commanded the Bisley team in 1904. He founded the Canada Militia Gazette, and edited it for two years. During his absence his duties are being discharged by B. H. Fraser, Assistant Chief Engineer.

**Hon. C. C. Ballantyne**, M.P., Minister of Marine and of the Naval Service, who has been absent from his office in Ottawa since Dec. 24, as stated in Canadian Railway and Marine world for February, is recovering slowly. In addition to being operated on Dec. 30 for appendicitis, which was followed by peritonitis, he developed typhoid fever. At the date of our last advice he was expected to be able to leave the Royal Victoria Hospital, Montreal, by the end of February, and it was stated that he would then probably go to some southern watering place for a few weeks, accompanied by Mrs. Ballantyne. It is expected that he will return to his departmental duties at Ottawa early in April, and also that he will be able to take his seat in the House of Commons.

C. A. Barnard, K.C., Montreal, and M.

**J. Haney**, Toronto, directors and members of the executive committee, Canada Steamship Lines, Ltd., have been elected vice presidents.

**W. E. Burke**, Assistant Manager, Canada Steamship Lines, Ltd., who is also a director, has been appointed Director in charge of Transportation and a member of the executive committee.

**E. L. Cousins**, Chief Engineer and Manager, Toronto Harbor Commissioners, gave an address before the Hamilton branch of the Engineering Institute of Canada, Jan. 20, on harbor improvements.

**H. W. Cowan**, a director and Operating Manager, Canada Steamship Lines, Ltd., has been appointed Director in Charge of Operations and a member of the executive committee.

**D. E. Eason**, heretofore Principal Assistant Engineer, Trent Valley Canal, has been appointed Superintending Engineer, Trent Valley Canal, succeeding A. R. Grant, appointed Superintending Engineer, Welland Ship Canal.

**M. J. Haney**, director, and **W. E. Burke**, Director and Assistant Manager, Canada Steamship Lines, paid a brief visit to Bermuda during the latter part of January and early in February.

**F. S. Isard**, Comptroller, Canada Steamship Lines, Ltd., who is also a director and member of the executive committee, has been appointed Director of Finance.

**Capt. G. McLeod**, a Great Lakes mariner of about 50 years standing, died at Owen Sound, Ont., Feb. 2, after a long illness. For some 20 years, he was in service with the Pittsburg Steamship Co., and retired from active service, on a pension, about five years ago.

**B. Myers**, who is reported to have been appointed Superintendent of the Cholberg Ship Co.'s shipyard at Vancouver, B.C., has been connected with the shipbuilding industry for 26 years, and was with the Grays Harbor Motorship Corporation, and with the Standifer Construction Co., of Vancouver, Washin.

**J. W. Norcross**, heretofore Vice President and Managing Director, Canada Steamship Lines, Ltd., has been elected President, and also retains the title of Managing Director, **Jas. Carruthers**, President, having resigned.

**J. F. Paige**, General Manager, Port Arthur Shipbuilding Co., Port Arthur, Ont., is recovering from severe inflammation of the optic nerves. He was confined to his home for about three weeks.

**S. I. Preston** is reported to have been appointed Surveyor of Shipping for Lloyd's Register, at Quebec, Que. He is a native of Glasgow, Scotland, and served

his apprenticeship with John Brown & Co., shipbuilders, there. He enlisted with the Campbell Highlanders, and was in the retreat from Mons, and at various other battles in Flanders. He was recalled to industrial life by the Ministry of Munitions, and was, subsequently, Manager, Rose Steel Foundry & Engineering Co., Inverness, Scotland, building drifters and patrol vessels for war purposes. He was appointed a Lloyd's surveyor in Aug., 1918.

**W. G. Ross**, President, Montreal Harbor Commissioners, gave an address on harbor development, to members of the Board of Trade and other similar organizations, at Vancouver, B.C., Feb. 3.

**Thomas I. Thomson**, President, Farrar Transportation Co., Ltd., Toronto, and formerly of Collingwood, Ont., died at his home at Owen Sound, Ont., Feb. 9, aged 64.

**R. M. Wolvin**, Vice President and Managing Director, Halifax Shipyards, Ltd., accompanied by Mrs. Wolvin, sailed from Halifax, N.S., early in February, on the s.s. Aquitania, for England.

**British Shipyards Orders.**—London cablegram, Feb. 10:—British shipyards have booked orders recently for well over 100 vessels, representing a very large tonnage. This is probably a record. The Ellerman-Bucknall line alone ordered over 50 steamships on the northeast coast. The British India Co. is building 9 large liners; the Cunard 8, the Anchor-Donaldson and Donaldson Bros. 6, Elder and Fyfe 4, Shaw-Savill & Albion 3, Union-Castle, Commonwealth and Dominion Companies 2 each. The shipbuilding outlook is of the brightest, provided labor settles down.

**Marine Products, Limited**, has been incorporated under the Dominion Companies' Act to carry on a variety of business throughout Canada, among them being power to operate steamship and railway terminals, transportation, warehouse storage and cold storage facilities, yards, freight sheds, freight and passenger stations, tramways and tracks on lands owned by the company, grain elevators, etc.; power to act as vessel agents, wharfingers, warehousemen, forwarders and carriers by land or sea. The company's office is to be in Toronto, the authorized capital is \$500,000, and the provisional directors include E. W. Wright, barrister, Toronto.

**The Dominion Shipbuilding Co., Ltd.**, Toronto, incorporated under the Dominion Companies Act, has, by supplementary letters patent, been turned into a public company.

**Vessels Added to and Deducted From the Canadian Register During December, 1918.**

Added.	No.	Steam.—Tonnage—		No.	Sailing.—Tonnage—	
		Gross.	Registered.		Gross.	Registered.
Built in Canada.....	17	10,091	10,091	23	7,942	6,353
Purchased from foreigners	2	122	66	1	53	53
New registers.....	4	1,586	1,331	..	.....	.....
Total . . . . .	23	17,584	11,488	24	7,995	6,406
<b>Deducted.</b>						
Wrecked or otherwise lost	9	4,399	2,721	14	2,496	2,240
Unfit for use afloat.....	3	66	45	24	796	790
Used for lightships, etc..	4	5,291	3,109	6	2,615	2,541
Transferred to British possessions . . . . .	3	6,990	4,284	8	1,997	1,759
New registers . . . . .	..	.....	.....	2	1,491	1,385
Others, sunk by submarine	..	.....	.....	..	330	287
Total . . . . .	19	16,746	10,159	29	9,725	9,002



## Cargo Steamship Building in Canada for British Government.

**Imperial Munitions Board Shipbuilding Department.**—As stated in Canadian Railway and Marine World for February, this department's offices were removed from Ottawa, to Drummond Building, Montreal, in January, where the following officials are now located: W. I. Gear, Director of Steel Shipbuilding; W. Lambert, Assistant Director of Steel Shipbuilding; F. T. Green, Representative of British Ministry of Shipping, J. Livingston.

**Steamships Under Construction.**—The total orders placed by the Imperial Munitions Board for the British Government, covered 43 steel and 46 wooden steamships, and of these, at the time of writing, 13 steel and 1 wooden vessel remain to be

Easton, Greig & Co., Glasgow—War Haida, War Skeena, War Stikine, War Masset, War Babine, War Camchin, War Nanoose.  
H. Fernie & Sons, Liverpool—War Nootka, War Puget, War Yukon, War Songhee, War Selkirk, War Cariboo.  
Glover Bros., London—War Huron, War Erie, War Ottawa, War Niagara, War Mohawk, War Seneca, War Gaspe, War Matane.  
Hansen Shipping Co., Ltd., Cardiff—War Fundy, War Moncton, War Ontario, War Toronto, War Halifax.  
J. Hardie & Co., Glasgow—War Nicola, War Squash, War Tatla, War Casco, War Chiclat, War Tanoo.  
R. & J. H. Rea, London—War Tyee, War Comox.

**Launchings of Steamships.**—Following are particulars of cargo steamships ordered by the Imperial Munitions Board for the British Government, and which had been officially reported as launched up to Feb. 25, giving in each case the date

July 29, 1918	—War Charger, J. Coughlan & Sons, Vancouver, B.C.	8,800
Aug. 19, 1918	—War Chief, J. Coughlan and Sons, Vancouver, B.C.	8,800
Aug. 21, 1918	—War Weasel, British-American Shipbuilding Co., Welland, Ont.	3,500
Sept. 6, 1918	—War Witch, Collingwood Shipbuilding Co., Collingwood, Ont.	2,900
Sept. 19, 1918	—War Taurus, Polson Iron Works, Ltd., Toronto	3,500
Sept. 28, 1918	—War Faith, Canadian Vickers Ltd., Montreal	7,000
Sept. 28, 1918	—War Noble, J. Coughlan & Sons, Vancouver, B.C.	8,800
Sept. 28, 1918	—War Storm, Wallace Shipyards, Ltd., Vancouver, B.C.	4,600
Oct. 5, 1918	—War Horus, Port Arthur Shipbuilding Co., Port Arthur, Ont.	3,400
Oct. 15, 1918	—War Hydra, Polson Iron Works, Ltd., Toronto	3,500
Oct. 24, 1918	—War Fiend, Midland Shipbuilding Co., Midland, Ont.	3,400
Oct. 26, 1918	—War Karma, Port Arthur Shipbuilding Co., Port Arthur, Ont.	3,400
Oct. 29, 1918	—War Joy, Canadian Vickers, Ltd., Montreal	7,000
Dec. 18, 1918	—War Convoy, J. Coughlan & Sons, Vancouver, B.C.	8,800
Dec. 22, 1918	—War Hamilton, Polson Iron Works, Ltd., Toronto	3,500
Jan. 21, 1919	—War Badger, British American Shipbuilding Co., Welland, Ont.	3,500
Feb. 8, 1919	—War Timiskaming, Polson Iron Works, Ltd., Toronto	3,500

Total, 30 steel steamships.....144,800

**Wooden Steamships.**

Dec. 28, 1917	—War Songhee, Foundation Co., Victoria, B.C.	3,080
Jan. 4, 1918	—War Nootka, Western Canada Shipyards, Vancouver, B.C.	3,080
Jan. 24, 1918	—War Yukon, Cameron-Genoa Mills Shipbuilders, Ltd., Vic.	3,080
Feb. 16, 1918	—War Puget, Wm. Lyall Shipbuilding Co., Vancouver, B.C.	3,080
Mar. 6, 1918	—War Selkirk, Western Canada Shipyards, Vancouver, B.C.	3,080
Apr. 10, 1918	—War Caribou, Wm. Lyall Shipbuilding Co., Vancouver, B.C.	3,080
Apr. 11, 1918	—War Comox, New Westminster Construction & Engineering Co., New Westminster, B.C.	3,080
Apr. 11, 1918	—War Masset, Foundation Co., Victoria, B.C.	3,080
Apr. 13, 1918	—War Tyee, Pacific Construction Co., Coquitlam, B.C.	3,080
Apr. 25, 1918	—War Haida, Cameron-Genoa Mills, Victoria, B.C.	3,080
Apr. 27, 1918	—War Cayuse, Wm. Lyall Ship-	



Steel Cargo Steamship, War Badger, 3,500 tons d.w., for British Government, immediately after launching by British American Shipbuilding Co., Welland, Ont., Jan. 21.

launched. On the completion of these orders, which is expected in the spring, the operations of the Imperial Munitions Board, so far as vessel building is concerned, will cease.

**Steamship Management.**—As announced previously, the British Government has assigned all the steamships, which have been built, or are under construction in Canada for it, under orders from the Imperial Munitions Board, to various firms in Great Britain, who act as managing owners on the government's behalf. In our January issue, a list was given of the managing owners, to whom had been assigned the wooden steamships built in British Columbia. Following is a list of all the steamships, both steel and wood, which have been assigned to managing owners, and the names and addresses of the latter, for which we are indebted to the Director of Transports and Shipping, Ministry of Shipping, London, Eng.:

**Steel.**

Joseph Chadwick & Sons, Liverpool—War Wasp.  
J. Chambers & Co., Liverpool—War Dog, War Power, War Camp.  
R. B. Chellew, Truro—War Isis, War Osiris, War Hathor.  
E. C. Downing, Cardiff—War Wizard, War Fiend, War Magic, War Fury.  
Furness Withy & Co., Halifax—War Karma, War Horus, War Witch.  
Glover Bros., London—War Faith, War Joy.  
Harris & Dixon, Ltd., London—War Fish, War Dance, War Earl, War Duchess.  
Raeburn & Verel, Ltd., Glasgow—War Charger, War Chariot, War Chief, War Noble, War Storm, War Cavalry, War Convoy, War Column, War Company.  
J. Robinson & Sons, North Shields—War Weasel, War Badger, War Leveret, War Vixen, War Walaby, War Wombat, War Raccoon.  
Tyzack & Branfoot, Newcastle—War Bee, War Taurus, War Hydra, War Timiskaming, War Hamilton, War Algoma, War Halton.

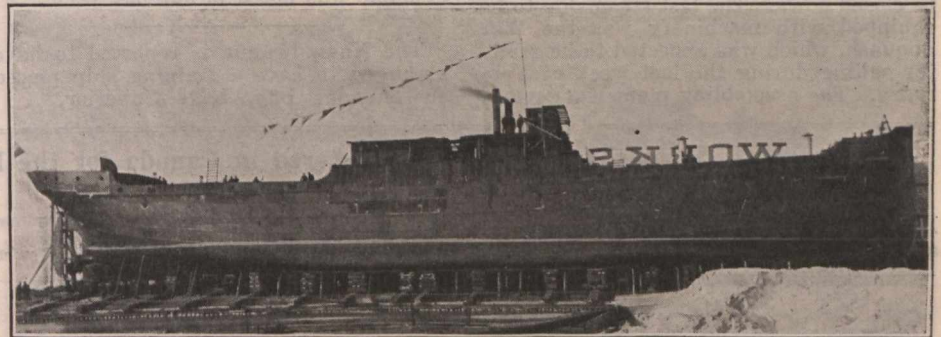
**Wood.**

Anning Bros., Cardiff—War Mingan, War Radnor, War Quebec, War Sorel, War Sioux, War Nipigon.  
J. Cook & Sons, Aberdeen—War Sumas, War Cayuse, War Atlin, War Edensaw, War Kitimat, War Ewen.

of the launching, the name of the steamship, the name and address of the building company and the deadweight tonnage:—

**Steel Steamships.**

May 18, 1917	—War Dog, Wallace Shipyards North Vancouver, B.C.	4,500
July 9, 1917	—War Wasp, Nova Scotia Steel & Coal Co., New Glasgow, N.S.	1,800



Steel Cargo Steamship, War Timiskaming, 3,500 tons d.w., for British Government, launched by Polson Iron Works Co., Ltd., Toronto, Feb. 8.

Aug. 19, 1917	—War Fish, Port Arthur Shipbuilding Co., Port Arthur, Ont.	4,300
Nov. 3, 1917	—War Dance, Port Arthur Shipbuilding Co., Port Arthur, Ont.	3,400
Mar. 16, 1918	—War Camp, J. Coughlan & Sons, Vancouver, B.C.	8,800
Mar. 23, 1918	—War Power, Wallace Shipyards, North Vancouver, B.C.	4,600
Apr. 3, 1918	—War Isis, Port Arthur Shipbuilding Co., Port Arthur, Ont.	3,400
May 8, 1918	—War Wizard, Collingwood Shipbuilding Co., Collingwood, Ont.	2,900
May 21, 1918	—War Bee, Nova Scotia Steel & Coal Co., New Glasgow, N.S.	2,400
May 27, 1918	—War Osiris, Port Arthur Shipbuilding Co., Port Arthur, Ont.	3,400
June 8, 1918	—War Earl, Canadian Vickers Ltd., Montreal	7,000
June 29, 1918	—War Duchess, Canadian Vickers, Ltd., Montreal	7,000
July 20, 1918	—War Hathor, Port Arthur Shipbuilding Co., Port Arthur, Ont.	3,400
May 11, 1918	—War Mohawk, Quinlan & Robertson, Ltd., Quebec, Que.	3,080
May 11, 1918	—War Sioux, Port Arthur Dredging Co., Port Arthur, Ont.	3,080
May 21, 1918	—War Atlin, Wm. Lyall Shipbuilding Co., Vancouver, B.C.	3,080
May 23, 1918	—War Tatla, Western Canada Shipyards, Ltd., Vancouver, B.C.	3,080
June 12, 1918	—War Skeena, Cameron-Genoa Mills Shipbuilders, Ltd., Victoria, B.C.	3,080
June 13, 1918	—War Seneca, Quinlan & Robertson, Quebec, Que.	3,080
June 14, 1918	—War Edensaw, New Westminster Construction & Engineering Co., B.C.	3,080
June 15, 1918	—War Babine, Foundation Co., Victoria, B.C.	3,080
June 24, 1918	—War Nicola, Wm. Lyall Shipbuilding Co., Vancouver, B.C.	3,080
June 28, 1918	—War Quebec, Quebec Shipbuilding & Repairing Co., Quebec, Que.	3,080



June 29, 1918	War Ontario, Toronto Shipbuilding Co., Toronto	3,080
July 5, 1918	War Huron, Fraser, Brace & Co., Montreal	3,080
July 5, 1918	War Erie, Fraser, Brace & Co., Montreal	3,080
July 6, 1918	War Casco, Western Canada Shipyards, Ltd., Vancouver, B.C.	3,080
July 12, 1918	War Sumas, Pacific Construction Co., Port Coquitlam, B.C.	3,080
July 24, 1918	War Suquash, Wm. Lyall Shipbuilding Co., Vancouver, B.C.	3,080
July 27, 1918	War Gaspe, Quinlan & Robertson, Quebec, Que.	3,080
July 27, 1918	War Ottawa, Fraser, Brace & Co., Montreal	3,080
Aug. 5, 1918	War Chilkat, Western Canada Shipyards, Vancouver, B.C.	3,080
July 29, 1918	War Stikine, Cameron-Genoa Mills Shipbuilders, Victoria, B.C.	3,080
Aug. 22, 1918	War Tanoo, Western Canada Shipyards, Vancouver, B.C.	3,080
Aug. 24, 1918	War Fundy, Grant & Horne, St. John, N.B.	3,080
Aug. 26, 1918	War Kitimat, New Westminster Construction & Engineering Co., New Westminster, B.C.	3,080
Aug. 31, 1918	War Camchin, Foundation Co., Victoria, B.C.	3,080
Sept. 7, 1918	War Sorel, Quebec Shipbuilding & Repair Co., Quebec	3,080
Sept. 8, 1918	War Nanoose, Foundation Co., Victoria, B.C.	3,080
Sept. 19, 1918	War Niagara, Fraser, Brace & Co., Montreal	3,080
Sept. 21, 1918	War Halifax, Southern Salvage Co., Liverpool, N.S.	3,080
Sept. 22, 1918	War Nipigon, Great Lakes Dredging Co., Port Arthur, Ont.	3,080
Sept. 23, 1918	War Matane, Quinlan & Robertson, Quebec, Que.	3,080
Sept. 26, 1918	War Ewen, New Westminster Construction & Engineering Co., New Westminster, B.C.	3,080
Oct. 15, 1918	War Mingan, Three Rivers Shipyards, Ltd., Three Rivers, Que.	3,080
Oct. 26, 1918	War Toronto, Toronto Shipbuilding Co., Toronto	3,080
Nov. 2, 1918	War Radnor, Three Rivers Shipyards, Ltd., Three Rivers, Que.	3,080

Total, 45 wooden steamships.....138,600  
Aggregate deadweight tonnage of 30 steel and 45 wooden steamships launched, 283,400 tons.

**Ogden Point Assembling Plant, Victoria, B.C.**—It was expected that all the work at this plant would be completed by the end of February, and that the place would be closed down. The last steamship to be equipped with machinery was the War Suquash, which was expected to be ready for sailing during the last week of February. The assembling plant was opened

in 1917 to equip the wooden hulls, which were being built in British Columbia, for the British Government under orders from the Imperial Munitions Board. During its operation, 18 of the 27 vessels built in this province were equipped at the plant, the balance being handled at private yards.

The s.s. War Charger, which was reported to have returned twice to Vancouver, B.C., when on her maiden trip across the Pacific, was announced to have arrived safely at Vladivostock, Jan. 27.

**J. Coughlan & Sons, Vancouver, B.C.**—The s.s. War Noble, 8,800 tons d.w., which was launched Sept. 28, was completed early in February, and sent through the bridges out of False Creek to the ocean, Feb. 13. She underwent her trial runs on Feb. 14. The hull of the s.s. War Company, a sister vessel, is expected to be launched about Mar. 6.

**Grant & Horne, Ltd., St. John, N.B.**—The s.s. War Fundy, the hull of which was launched from this company's yard Aug. 24, underwent her trial trips Feb. 17. This company has still one hull to launch, to complete the last of the orders for wooden hulls placed for the British Government by the Imperial Munitions Board.

**Polson Iron Works, Ltd., Toronto.**—The fourth of the 6 six steel cargo steamships of 3,500 tons each, which this company is building for the British Government, under orders from the Imperial Munitions Board, was launched Feb. 8, and named War Timiskaming, by Mrs. R. C. Taylor, Cobalt, Ont. The vessel has the following dimensions: length over all 261 ft., length between perpendiculars 251 ft., beam 43½ ft., depth moulded 22½ ft. She is being equipped with triple expansion, surface condensing engine of approximately 1,256 h.p.

Following the launch of the s.s. War Timiskaming, the sister vessel, which was launched Dec. 21, and named War Aquila, was renamed War Hamilton, by Mrs. H. L. Frost, Hamilton Ont. This change of name was noted in our last issue.

The Navy League is reported to have arranged to have a training ship placed on Thunder Bay, Lake Superior.

### The Australian Government's Merchant Marine.

D. H. Ross, Canadian Trade Commissioner in Australia, has reported on the Australian Government's experiment in the ownership of cargo steamships as follows:—

In June, 1916, the Australian Government purchased 16 cargo steamships at a cost of approximately £2,080,000. The first year's operations of this fleet showed surplus earnings of £986,382. A cable was received recently from the General Manager in London that the original cost of the steamships has been paid and that over £16,000 remained to the credit of the vessels. Two of them were torpedoed.

The Australian Government has also controlled the operations of a large fleet of enemy steamships interned in Australian ports at the outbreak of the war, two of which have been torpedoed. While the ruling rates of freight have been demanded by the Australian line of steamships on goods shipped at oversea ports, it is emphasized that they carried exports of Australian wheat and products at considerably less than war rates.

Through submarine action, some of the largest passenger steamships, withdrawn from the Australian coastal trade for transport purposes, have been lost and the water carriage facilities of the Commonwealth are now much curtailed. Quite a fleet of steamships formerly employed in the Australian-New Zealand trade have also been destroyed. The new steamship Avenger, of 15,000 tons, built for the Canadian-Australian Royal Mail Line for the Vancouver trade, was sunk while acting as an auxiliary cruiser.

Australian shipping companies are endeavoring to place orders for a considerable number of passenger and cargo steamships which are urgently required to make the coastal fleet again normal.

**Canadian Merchant Service Guild.**—Application is being made to the Dominion Parliament, for the creation of a body corporate, under this title, with the object of uniting in one body, captains, pilots and mates, operating out of any port in Canada.

### Steamships Built and Registered in Canada for the British Government.

Following is a list of steamships built in Canada, for the British Government, under orders from the Imperial Munitions Board, and which have been completed and placed on the Canadian register in the name of the Shipping Controller, London, Eng., and assigned by him to various managing owners, on government account. The letter following the name of each vessel indicates whether it is of wood or steel.

No.	Name	Port of Registry	Where Built	Length	Breadth	Depth	Gross tons	Registered tons	Engines and h.p.	Managing Owners
141127	War Atlin (w)	North Vancouver, B.C.	North Vancouver, B.C.	249.7	43.5	22.8	2,338	1,434	Sc. 147	J. Cook & Sons, Aberdeen, Scotland
140939	War Camchin (w)	Victoria, B.C.	Victoria, B.C.	249.8	43.4	22.9	2,342	1,418	Sc. 147	Easton, Grieg & Co., Glasgow, Scotland
140936	War Babine (w)	"	"	249.8	43.4	22.9	2,339	1,418	Sc. 147	"
141036	War Cariboo (w)	North Vancouver, B.C.	North Vancouver, B.C.	249.6	43.4	22.8	2,330	1,429	Sc. 151	H. Fernie & Sons, Liverpool, Eng.
141118	War Casco (w)	Vancouver, B.C.	Vancouver, B.C.	249.7	43.3	22.9	2,319	1,425	Sc. 147	John Hardie & Co., Glasgow, Scotland
141037	War Cayuse (w)	North Vancouver, B.C.	North Vancouver, B.C.	249.5	43.4	22.8	2,346	1,438	Sc. 147	J. Cook & Sons, Aberdeen, Scotland
141128	War Charger (s)	Vancouver, B.C.	Vancouver, B.C.	410.5	54.1	27.5	5,703	4,145	Sc. 2650	Raeburn & Verel, Ltd., Glasgow, Scot.
141205	War Chilkat (w)	"	"	249.5	43.4	22.8	2,331	1,431	Sc. 147½	John Hardie & Co., Glasgow, Scotland
140979	War Comox (w)	New Westminster, B.C.	New Westminster, B.C.	249.1	43.7	23.0	2,338	1,436	Sc. 148	R. & J. H. Rea, Liverpool, Eng.
140987	War Edensaw (w)	"	"	249.6	43.5	22.8	2,336	1,424	Sc. 138	J. Cook & Sons, Aberdeen, Scotland
140940	War Haida (w)	Victoria, B.C.	Victoria, B.C.	249.8	43.4	23.0	2,345	1,418	Sc. 151	Easton, Grieg & Co., Glasgow, Scotland
141172	War Kitimat (w)	New Westminster, B.C.	New Westminster, B.C.	249.4	43.6	22.8	2,336	1,434	Sc. 143	J. Cook & Sons, Aberdeen, Scotland
138788	War Masset (w)	Victoria, B.C.	Victoria, B.C.	249.8	43.4	23.0	2,340	1,417	Sc. 147	Easton, Grieg & Co., Glasgow, Scotland
140949	War Nanoose (w)	"	"	249.8	43.4	22.9	2,285	1,405	Sc. 146	"
141125	War Nicola (w)	North Vancouver, B.C.	North Vancouver, B.C.	249.5	43.4	22.8	2,230	1,429	Sc. 111	John Hardie & Co., Glasgow, Scotland
141038	War Puget (w)	"	"	249.7	43.5	23.2	2,328	1,429	Sc. 111	H. Fernie & Sons, Liverpool, Eng.
141028	War Selkirk (w)	Vancouver, B.C.	Vancouver, B.C.	249.7	43.5	22.8	2,318	1,416	Sc. 151	"
140942	War Skeena (w)	Victoria, B.C.	Victoria, B.C.	249.8	43.4	23.0	2,342	1,417	Sc. 151	Easton, Grieg & Co., Glasgow, Scotland
140941	War Stikine (w)	"	"	249.8	43.4	22.9	2,335	1,416	Sc. 151	"
140982	War Sumas (w)	New Westminster, B.C.	Port Coquitlam, B.C.	249.4	43.6	22.5	2,305	1,415	Sc. 147	J. Cook & Sons, Aberdeen, Scotland
141195	War Suquash (w)	Vancouver, B.C.	Vancouver, B.C.	249.7	43.4	22.9	2,334	1,430	Sc. 147	John Hardie & Co., Glasgow, Scotland
141208	War Tanoo (w)	"	"	249.7	43.5	22.9	2,326	1,429	Sc. 147½	"
141113	War Tatla (w)	"	"	249.7	43.3	22.9	2,334	1,439	Sc. 148	"
140981	War Tye (w)	New Westminster, B.C.	Port Coquitlam, B.C.	249.8	43.4	22.6	2,302	1,413	Sc. 147	R. & J. H. Rea, Liverpool, Eng.



## General Shipbuilding Notes Throughout Canada.

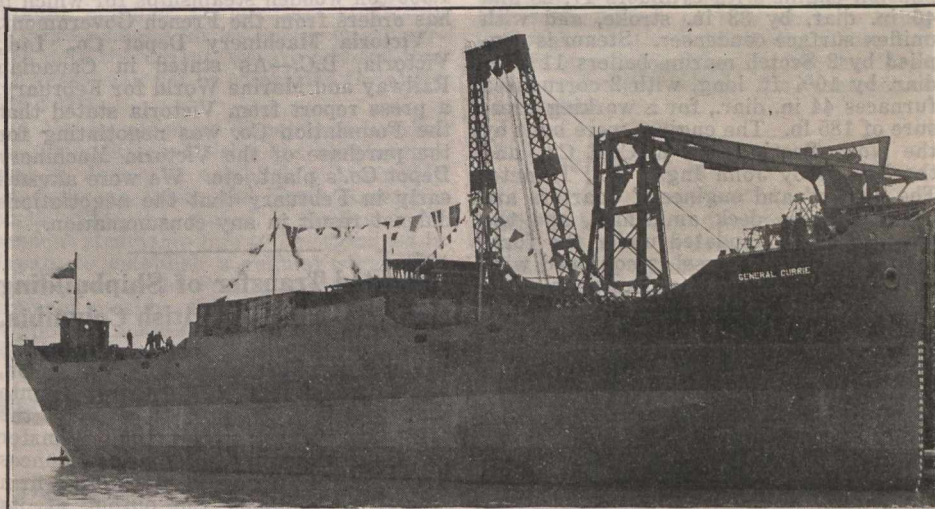
**British Columbia Shipbuilding.**—The approximate value of shipping launched in B.C. during 1918, is given as \$25,000,000, making the total for 1917 and 1918 \$32,500,000, and 186,700 tons. At the end of 1918 there were under construction, 5 wooden schooners, 16 wooden steamships and 6 steel steamships, totalling 87,000 tons, and valued at \$15,300,000. The shipbuilding industry employed about 6,000 men directly. Further contracts are

Porsgrund, Norway. A similar vessel is also under construction for the same party, and will be named Vancouver. A third vessel, schooner rigged, is to be named Gunn. All vessels are being built for classification in Lloyd's Register, and Det Norske Veritas. The deck machinery, comprising donkey boilers and cargo sail hoisting and anchor windlasses, has all been delivered.

**Dominion Shipbuilding Co., Toronto.**—

schooner rig, with two pole masts, with steel hull, and classed 100 A1 at Lloyd's for ocean service. The hull is divided by 4 watertight bulkheads and 1 screen bulkhead, and 2 holds, with grain capacity of 151,466 cub. ft. The propelling machinery, placed amidships, consists of triple expansion inverted engine, with cylinders 20, 33 and 54 in. diam. by 40 in. stroke, 1,300 i.h.p. at 87.5 r.p.m., and supplied with steam at 180 lb. by 2 Scotch boilers, each 14½ ft. diam. by 11 ft. long, under forced draft, supplied by John Inglis Co., Ltd., Toronto. The heating surface is 2,730 sq. ft. in each boiler, and there is approximately a consumption of 20 1/10 tons of coal per 24 hr., for a speed of 10.2 knots an hour. The bunkers are arranged to carry 526.75 tons of coal. The propeller is 13¼ ft. diam., and is of cast iron with 4 blades 12 ft. 8 in. pitch. Accommodation for a crew of 35 officers and men is arranged on the bridge and in the poop. The vessel is to be equipped with steam steering gear, 7 x 7 in., and 8 reversible single drum, 2 speed, 7 x 12 in., cargo winches, and anchor windlass 8 x 8 in. She was launched Jan. 25, and is expected to be ready for sea by April 15.

**Foundation Co., Victoria, B.C.**—It is anticipated that the launch of the first of the 20 wooden steamships under construction for the French Government will take place early in March. The construction of these vessels is divided between the company's two yards. According to the last advice, it was the company's expectation that 8 of the vessels would be launched by Apr. 1, and a second 8 by Aug. 1, and the balance about Nov. 1. The contract calls for the completion of the vessels, ready for sea, by Jan. 1, 1920.



Steel Cargo Steamship, General Currie, 3,500 tons, immediately after launching by Dominion Shipbuilding Co., Toronto, Jan. 25, 1919.

in hand for 33 wooden and 12 steel steamships, totalling 181,000 tons, and valued at \$31,000,000.

**Shipbuilding Wages.**—Representatives of the boilermakers' and shipbuilders' unions met in Toronto, Feb. 26, for the discussion of wage matters and the preparation of a new schedule, which it is intended to present to all shipbuilding companies on the Great Lakes, Apr. 1.

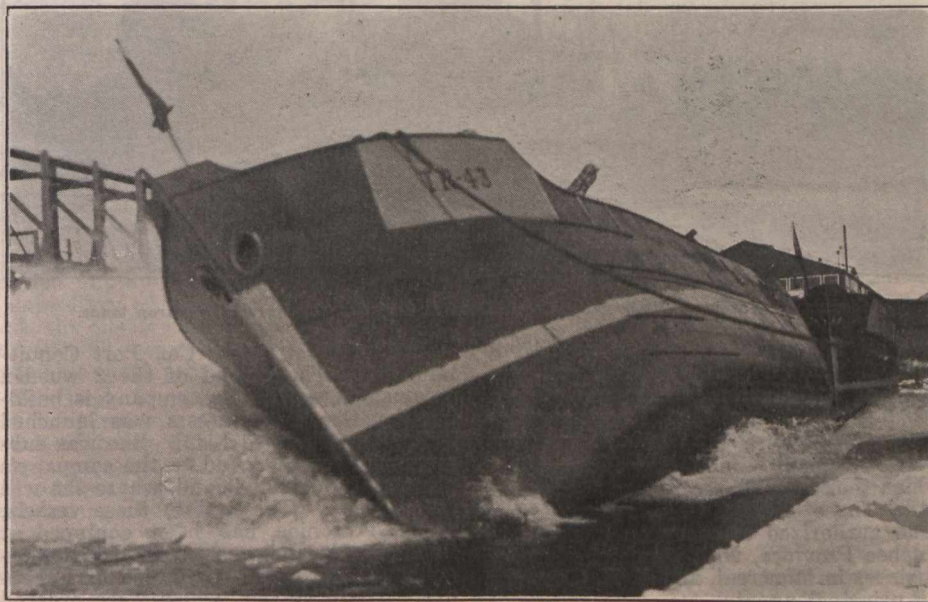
**Royal Commission on Pacific Coast Shipbuilding Dispute.**—The Dominion Government has appointed Mr. Justice D. Murphy, of the British Columbia Superior Court; H. H. Watson, financier, Vancouver; and F. W. Welch, Secretary Metal Trades Council, Vancouver, as commissioners to enquire into the differences between J. Coughlan & Sons, shipbuilders, and their employees, with a view to endeavoring to securing a satisfactory working agreement from Feb. 28.

**Canadian Chicago Bridge & Iron Co.**—It was reported some little time since that this company would establish a shipbuilding plant at Bridgeburg, Ont., and that coaling scows for the United States Navy would be built. It is now said that the U.S. Navy Department has cancelled all such contracts since the armistice was declared.

**Canadian Vickers, Ltd., Montreal,** is reported to have a contract from some French interests, for the construction of a steel cargo steamship of 8,300 tons d.w. capacity, for the coal and nitrate trade between France and Chili, the vessel to be ready for service in June.

**Cholberg Ship Co., Victoria, B.C.**—The first of the 9 auxiliary powered sailing vessels which this company is building for Norwegian interests, is expected to be launched during March, or early in April. This first vessel will probably be barquentine rigged, and named Washington. She is being built for H. F. Hansen,

The s.s. General Currie, the launching of which was announced in our last issue, is one of six similar vessels to be built by the company for private ownership.



Launching Steel Steam Trawler 43, by Port Arthur Shipbuilding Co., Feb. 8, 1919. Steel Steam Trawler 44, launched a few days previously, shown in background.

The ceremony was performed by Mrs. Edmund Bristol, on behalf of Mrs. Alex. Johnston, wife of the Deputy Minister of Marine. The vessel is of the single deck type, with poop, bridge and fore-castle, with steel texas on bridge, with wing deckhouses, chart room and pilot house above, built on the transverse system of construction. There are three decks, main, bridge and boat, arranged on the three island type, and there are four cargo hatches, 22 x 18 ft. She is of the

A full description of them was given in our Dec., 1918, issue.

**International Shipbuilding Corporation, Ltd., Newcastle, N.B.**—As announced in our last issue, a petition for the winding up of this company was heard at St. John, N.B., recently, and an order made, the matter now being in the hands of the liquidators. Under the court's order, tenders are being received for the purchase of a partially constructed 4-masted schooner, 155 ft. keel, 37 ft. beam, 13 ft.



deep, estimated 535 net tons, lying at the company's yard at Nordin, near Newcastle. This vessel is in full frame, with keelsons, assistant keelsons, clamps and 10 strakes of ceiling in place fully fastened, and is also fitted with second stern post and shaft log. She is being built under the American Bureau of Shipping to be classed A1 for 12 years. Tenders are also being received for a quantity of shipbuilding material. The purchaser will have the right to a lease of the shipyard, mill and other buildings and lands, and of the machinery and tools connected with the plant, for the purpose of completing the vessel, at a rental of \$200 a month.

**Marine Construction Co. of Canada, Ltd., St. John, N.B.**—The four-masted schooner *Randfontein* was launched at this yard, Feb. 4, and christened by Mrs. J. M. Densmore, wife of the designer and superintendent of construction. The keel was laid July 1. She is of similar type to the schooner *Dornfontein*, which was lost during a flying visit of German submarines to the coast. She is double decked, with a speed of about 8 knots, and is registered A1 for 13 years. Her dimensions are: length, keel, 204 ft.; length

engineer.

This vessel was built by the company for its own coal and iron ore trade. She loaded her first cargo of coal for Newfoundland, and then went to Halifax, taking on cargo for France, making the trip across the Atlantic in 15 days, a very good passage for a vessel of her size, especially during the winter. She is built to Lloyd's highest class, with raised quarter deck, and 4 large hatches serving 2 cargo holds, one forward and one aft, both clear of all stanchions. The propelling machinery consists of triple expansion engine with cylinders 17, 28 and 46 in. diam. by 33 in. stroke, and with uniflex surface condenser. Steam is supplied by 2 Scotch marine boilers 11¾ ft. diam. by 10¾ ft. long, with 2 corrugated furnaces 44 in. diam., for a working pressure of 185 lb. The engines were built by the Nova Scotia Steel & Coal Co., and the boilers by John Inglis Co., Toronto. The officers' and engineers' quarters are on the bridge deck amidships, and the crew are accommodated under the fore-castle deck. The vessel is equipped with all cargo discharging appliances, electric lighting and wireless telegraphy.

wrecked on her maiden trip early in 1918; and the other will be of 1,240 tons, similar to the *Edgewood*, built at the Louise docks during 1918.

**S. J. Soley, Fox River, N.S.**, launched the schooner *Northcliffe* recently, which has since been taken to St. John, N.B., to take cargo for Newfoundland, where she will be loaded with dried fish for Brazil. She is 291 tons net, and is operated for Newfoundland owners by Nagle & Wigmore, St. John, N.B.

**Three Rivers Shipyards, Ltd., Three Rivers, Que.**, has laid keels for the ten 1,500-ton wooden steamships for which it has orders from the French Government.

**Victoria Machinery Depot Co., Ltd., Victoria, B.C.**—As stated in Canadian Railway and Marine World for February, a press report from Victoria stated that the Foundation Co. was negotiating for the purchase of the Victoria Machinery Depot Co.'s plant, etc. We were advised early in February that the negotiations did not result in any consummation.

### Reported Transfer of Shipbuilding from Scotland to British Columbia.

The following cablegram from London, Feb. 3, was published by the *Toronto Globe*:—"Under the heading 'From the Clyde to Vancouver—Gradual Transfer by Messrs. Yarrow,' the Times announces that this widely known shipbuilding firm intends to diminish the output at its works in Scotstown, near Glasgow, and to increase the production of its smaller works at Vancouver. The main impelling reason appears to be the incessant labor troubles."

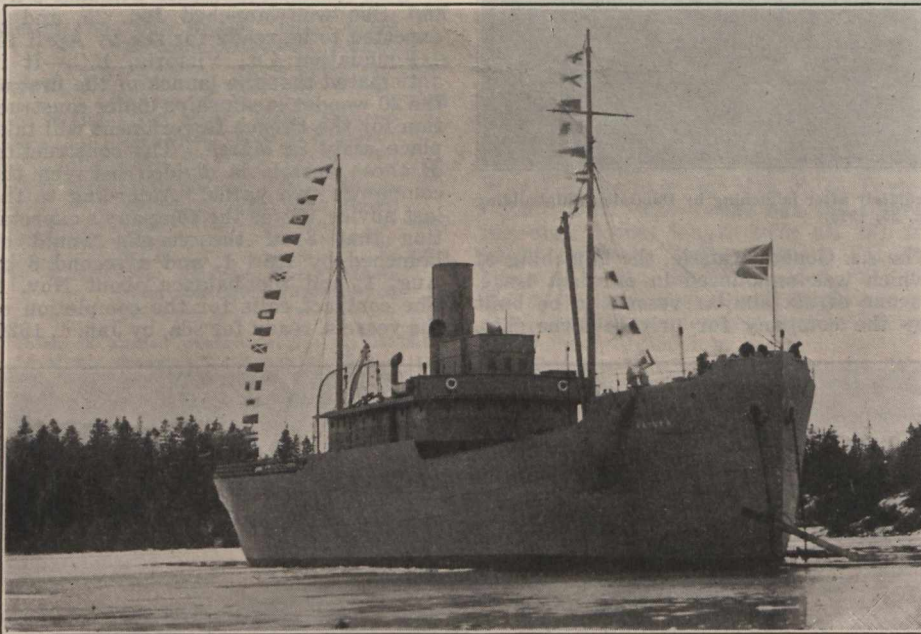
The mention of Vancouver was an obvious mistake, as Yarrow, Ltd., plant is at Victoria, B.C., not Vancouver.

A Victoria paper of Feb. 4 quoted Norman A. Yarrow as stating there that the report cabled was without foundation. On Feb. 10 Yarrow, Ltd., wrote Canadian Railway and Marine World from Victoria as follows: "We have no statement to make in this connection, and would also mention that we have made no plans regarding the extending of our plant."

**Caution re Mines.**—The British Admiralty has issued a general warning to navigators, that a certain number of mines have been sunk without exploding, and it is possible that some of these, lying on the bottom in shoal water may be dangerous. Mariners therefore should arrange, whenever possible, to have a clear depth of at least 6 ft. between the keels of their vessels and the bottom, when in the vicinity of shoal water, or in the approaches to ports and harbors which were subjected to mining operations during the war.

**Transatlantic Steamship Co., Ltd.**, has been incorporated under the Dominion Companies Act, with \$1,000,000 authorized capital and office at Montreal, to own and operate steam and other vessels, and other navigation facilities, and to carry on a general navigation and transportation business. C. A. Sara, Montreal, is interested in the project, which, it is said, is concerned with British interests.

**Pacific Coast Piers Transferred to Canadian National Rys.**—The Dominion Government has transferred its dock at Vancouver, between the extremities of Commercial and Salisbury Roads; and its piers 2 and 3, at Ogden Point, Victoria, to the Canadian National Rys., which will operate them in future.



Steamship *Watuka*, built by Nova Scotia Steel & Coal Co., for its coal and iron trade.

over all, 230 ft.; beam, 37½ ft.; depth of hold, 18 ft. She has a deadweight tonnage of 2,200. She is equipped with a 400 h.p. engine and Scotch boiler, which were in position at the time of launching.

**The National Shipbuilding Corporation**, which took over Three Rivers Shipyards, Ltd., Three Rivers, Que., recently, has been authorized to carry on business in Quebec Province, with its chief place of business in Montreal, and A. H. Chave as its principal agent.

**Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.**—The s.s. *Watuka*, which was scheduled to sail with a general cargo for France, early in February, was built at this company's yard at Trenton, N.S., and launched early in December. Her dimensions are: length 248 ft., breadth 35 ft., depth 21 ft. The hull is of steel, and the holds are clear of all beams. The engines and auxiliary equipment have all been made by the company. She is 1,700 tons gross, 1,067 tons net, and has a deadweight capacity of 2,400 tons. Capt. J. B. Mackenzie has been appointed master, and John Somers chief

**Pacific Construction Co., Port Coquitlam, B.C.**—The second of the 2 wooden steamships which this company is building for Grecian interests was launched Feb. 18, and named *Erini*. She was subsequently towed round to the company's plant at Industrial Island, where she will be equipped. The first of these vessels, named *Antonios*, has been equipped at False Creek, and was expected to undergo her trials towards the end of February. These vessels, which were ordered by N. Galanos, New York, are of 2,800 tons d.w. each.

**The St. John Dry Dock & Shipbuilding Co., St. John, N.B.** is applying to the St. John City Council for the acquisition of the Almshouse water lots. The council has appointed a special committee to deal with the matter.

**The Quebec Shipbuilding & Repairing Co.** is reported to have decided to build two more four-masted schooners in its shipyard at the Louise docks, Quebec. One of these vessels will be of 2,200 tons, similar to the *M. P. Connolly*, which was built at the Isle of Orleans plant, and



## Atlantic and Pacific Ocean Marine.

The Cunard, Anchor and Anchor-Donaldson Lines have opened an office at Washington, D.C., in charge of G. W. Moss and T. J. Stead.

The Canadian Pacific Ocean Services' s.s. *Empress of Asia* was handed over by the Admiralty, to her owners, at the end of January, after considerable service under war conditions. She is being overhauled and refitted by Wallace Shipyards, Ltd., Vancouver.

With reference to a press report that Canadian Pacific Ocean Services, Ltd., intends building a "palatial" steamship of large tonnage for its Pacific Ocean service with the Orient, we are advised that the vessel will not be completed for about two years.

A Vancouver press dispatch states that the *Taiyo Kisen Kaisha* has been organized in Japan to establish a steamship line between Japan and North American ports. This, it is stated, is the first independent steamship line to be organized in Japan, to establish a regular steamship service across the Pacific, without a government subsidy, such as is granted to the *Nippon Yusen Kaisha*, the *Osaka Shosen Kaisha* and the *Toyo Kisen Kaisha*.

## Maritime Provinces and Newfoundland.

The name of the schooner *Jessie L. Fauquier*, owned by Fauquier & Porter, Halifax, N.S., has been changed to *Avon Queen*.

The Dominion Public Works Department will receive tenders to Mar. 18, for repairs to the breakwater pier at Cape Bald, N.B.

The Naval Service Department advises that the wreck of the s.s. *John of St. John's*, Nfld., is reported adrift in lat. n. 45 deg., long. w. 48 deg. 28', and is a menace to navigation.

The Dominion Steel Corporation is reported to have claims against the British Admiralty, approximating \$20,000,000, arising out of the requisitioning of its coal vessels during the war.

The Eastern Steamship Corporation recommenced its Yarmouth-Boston service, Feb. 1, with the s.s. *Aranmore*, and it is expected that the s.s. *Northland* will be added to the service about Mar. 1. It is announced that, about Apr. 1, this service will be replaced with vessels plying between St. John, N.B., Eastport, Me., and Boston, Mass.

The s.s. *Magdalen*, owned by W. G. Leslie, Grindstone Island, Que., while on the marine slip at Dartmouth, N.S., for repairs, was gutted by fire, Feb. 13. She was built at Shelburne, N.S., in 1906, and was screw driven by engine of 28 n.h.p. Her dimensions were, length 98.6 ft., breadth 21.6 ft., depth 8.8 ft.; tonnage, 135 gross, 92 register.

The s.s. *Julienne* was offered for sale by public auction, as she lay at Campbells' wharf, Halifax, N.S., Feb. 22, by order of the sheriff, as a result of an action in the Exchequer Court, at the instance of John Mitchell. She was built at Southbank on Tees, Eng., in 1914, her dimensions being, length 202 ft., breadth 39 ft., depth 15 ft. tonnage, 955 gross, 790 net.

A Halifax, N.S., press report states that the great scarcity of seamen that prevailed at that port for some time has disappeared, and that practically two men are

offering for every one required, though there is a demand for seamen for sailing vessels for the West Indies and South American ports. It is also stated that the very high wages and the bonuses, paid during the war, have disappeared, the rate for seamen and firemen being about \$55 to \$60.

The St. John Dry Dock & Shipbuilding Co., which has the contract for harbor development work in Courtenay Bay, St. John, N.B., is stated to be preparing for the season's work, by overhauling a number of the vessels and other equipment, which the former contractors had been utilizing prior to their abandonment of the work. Most of this work is being undertaken at the Driscoll slip, where new boilers are being supplied to the large suction dredge, which the contractors have taken over.

## Province of Quebec Marine.

The Public Works Department received tenders to Feb. 25 for the reconstruction of the wharf superstructure, and repairs to the wharf approach, at Vercheres.

Capt. Jos. Bernier, of the St. Lawrence Shipping & Trading Co., Quebec, is stated to have gone to Great Britain to buy steel vessels suitable for the Gulf of St. Lawrence service.

J. G. Scott, President, Quebec Board of Trade, wrote recently to Lord Pirrie, who was born in Quebec, and who is now the head of Harland & Wolff, Ltd., shipbuilders at Belfast, Ireland, and placed before him the possibilities of steel shipbuilding in Canada, and the natural advantages offered by the port of Quebec.

The Quebec Harbor Commissioners waited on the Dominion Government at Ottawa, Feb. 5, in connection with the proposed additional equipment to be provided at the Louise docks, and in the port generally. The chief matter dealt with was the provision of extensive cold storage capacity, to care for the expected increased export of provisions of all classes.

The Quebec Legislature has amended the City of Three Rivers' charter, confirming the city's bylaw respecting the purchase and transfer of certain land to favor the erection of dwelling houses by Canada Steamship Lines, Ltd. In connection with this project, which is being carried out by Tidewater Realities, Ltd., a subsidiary of Canada Steamship Lines, Ltd., the city is authorized to issue bonds for \$80,000, bearing interest at 6%, redeemable in 30 years.

The Levis Maritime & Industrial Co., which operates a ferry service with its two steamboats, *Champion* and *Frontenac*, between Quebec and the Isle of Orleans, has advised the residents on the island that during the forthcoming season, the ferry service will be carried on by one vessel, the *Champion*, and that consequently the number of trips will be reduced. It is reported that a new company may be organized to handle the traffic, unless the present company continues the two-vessel service.

## Ontario and the Great Lakes.

The Walkerville & Detroit Ferry Co., incorporated in Michigan, U.S., has been authorized, under the Ontario Act respecting mortmain, etc., to acquire and hold lands in mortmain in Ontario.

Canada Steamship Lines, Ltd., expect to reopen navigation on Lake Ontario,

about Mar. 1, when it is hoped to sail the s.s. *Macassa* from Hamilton to Toronto.

The s.s. *Compton*, owned formerly by the Canada Shipping Co., and which ran on the rocks near the Crossover light, about 5 miles west of Brockville, and was abandoned to the underwriters, is reported to have been sold. It is stated to be the intention to release her as soon as weather and other conditions permit.

The Montreal Transportation Co. has closed its Kingston elevator temporarily. L. L. Henderson, Vice President and General Manager, is reported to have stated that the elevator has been operated at a loss for several years, chiefly owing to the large elevator capacity at Port Colborne. It is probable that the elevator will be reopened in the not distant future.

The United States Lake Survey reports the levels of the Great Lakes in feet above mean sea level for January, as follows:—Superior, 602.26; Michigan and Huron, 580.80; Erie, 572.19; Ontario, 246.09. Compared with the average January levels for the past ten years, Superior was 0.27 ft. above; Michigan and Huron, 0.95 ft. above; Erie, 0.63 ft. above, and Ontario, 0.81 ft. above.

Tenders will be received to Mar. 3 for the purchase of the Public Works Department's steam tug *Fashion*, as hauled out at the Victoria Island shipyard at Ottawa. She was built at West Bay City, Mich., in 1893, and is equipped with compound engine with cylinders 14 and 24 in. diam. by 13 in. stroke, 24 n.h.p., supplied with steam by a boiler 70 in. diam. by 105 in. long, jet condenser, duplex feed pump and 6 in. propeller. Her dimensions are: length 52 ft., beam 16 ft., draft 7½ ft.; tonnage, 43 gross, 27 register. The hull has been condemned.

Representations are being made to the Dominion Government by the town of Dunnville, the Dunnville Board of Trade and the Haldimand county council, urging the investigation of the advantages of utilizing Port Maitland as the Lake Erie entrance to the Welland Ship Canal, instead of Port Colborne. The canal feeder, which now runs from Port Maitland to Welland, about 18 miles, could, it is claimed, be brought into use by deepening and widening, at a much less cost than the present channel between Port Colborne and Welland, 7 miles, the former channel being through a clay section, and the latter through rock. It is also claimed that the harbor at Port Maitland would be safer during a storm than that at Port Colborne.

## British Columbia and Pacific Coast.

The Union Steamship Co. of British Columbia has been authorized to change the name of its steamship *British Columbia*, to *Chilliwack*.

The Dominion Public Works Department has awarded a contract for the reconstruction of the dockyard wharf at Esquimalt, to McDonald & Watson, Victoria, for \$52,924.07.

The Canadian Robert Dollar Steamship Co. is reported to have purchased the San Francisco sailing vessel *Jane L. Stanford*, and to have placed her in the lumber trade between Vancouver and the Orient.

The C.P.R. appropriations for this year for the B. C. coast, lake and river steamship work cover maintenance and general repairs, as well as the purchase of a new tug for the coast service, and a transfer barge for lake service.



The enquiry into the loss of the C.P.R. s.s. Princess Sophia, with all passengers and crew, in the Lynn Canal, Oct. 24, 1918, was adjourned at Victoria, Feb. 11, to Feb. 26, when further evidence was to be taken at Juneau, Alaska.

In connection with the loss of the C.P.R. s.s. Princess Sophia in the Lynn Canal, Oct. 25, 1918, when all passengers and were also lost, two actions for damages through loss of life have been entered against the C.P.R., one for \$50,000 and the other for \$20,000.

The North Vancouver City Council has sold the ferry steambot North Vancouver no. 1, to B. Gilbert, North Vancouver, for \$2,100. It is said that she is to be used as a tugboat. She was built at Vancouver in 1900, and is screw driven by engine of 19 n.h.p. Her dimensions are: length 73.4 ft., breadth 20.1 ft., depth 6.7 ft.; tonnage, 104 gross, 71 register.

The C.P.R. s.s. Princess May, which was completely overhauled and repaired by Yarrows, Ltd., at Victoria, recently, is stated to have been laid up, and it is announced that she will not be operated, at least for several months, and that she is for sale. She was built at Newcastle, Eng., in 188, and was then named Hating. Since she was acquired by the C.P.R. and placed on the B.C. coast run, she has been almost continuously in service, and latterly has been used more or less as a relief vessel.

The steam yacht Stadacona, now at

Halifax, N.S., is, according to a Victoria, B.C., report, to be sent to the Pacific coast, to replace the s.s. Galiano, lost recently, in the fishery patrol service. It is also stated that three steam trawlers, named Armentiers, Thiépvál and Givenchy, which were used in Atlantic patrol service during the war, will, at the same time, be transferred to the Pacific coast fishery patrol service. It is said that the vessels will leave the Atlantic coast during March, and proceed to Esquimalt via the Panama Canal.

The Cunard Steamship Co. is reported to have made arrangements with the London & South Western Ry. (England), under which Southampton will be a port of call for the company's large passenger vessels plying between America and England.

The return of requisitioned steamships to their respective owners, it is announced, is expected to be completed by Mar. 1. In this connection, a prominent Montreal shipping man is reported to have stated that shipping rates will be considerably lowered immediately the vessels are returned for their owners' operation, and that there will be no difficulty in obtaining tonnage space.

The World's Shipbuilding in 1918.—A London, Eng., dispatch states that Lloyd's summary of mercantile shipbuilding throughout the world, in 1918, shows that the total mercantile tonnage turned

out by allied and neutral countries, was 5,447,444 tons, this total never having been approached in any previous year. It is 62% higher than in 1913, the highest previous year, which also included figures from Germany and Austria-Hungary, which, if any, are not included in those for 1918. The United Kingdom launched 301 vessels, totalling 1,348,120 tons, which was about two-thirds of the tonnage launched in 1913. Outside the United Kingdom, 1,565 steamships were launched, totalling 4,099,324 tons, of which Canada, the United States and Japan were responsible for 92%.

Naval Service Qualifications for Masters and Mates.—We are officially advised that the Marine Department, in connection with the time to be served at sea by applicants for masters' and mates' certificates, has made the following arrangement:—"As a general rule, service performed on naval ships will be accepted as sea service, as qualifying for examination, and will be estimated by the same rules as if performed on merchant vessels. As regards service on naval vessels counting as officers' service, no fixed rule has been laid down, but every case will be dealt with on its own merits, and the department will be prepared to consider sympathetically the case of any certificated man who left the merchant service during the war, and joined the navy, to see, if possible, that he suffers no disadvantage by his service in the navy."

Vessels Registered in Canada During December, 1918.

In compiling the following lists of vessels registered, steamboats and motor boats, operated by engines of less than 10 n.h.p. are eliminated, as also are sailing vessels of less than 100 tons register.

STEAM.

No.	Name	Port of Registry	Where and when built	Length	Breadth	Depth	Gross Tons	Reg. Tons	Engines, Etc.	Owners or managing owners
141173	Masset	New Westminster, B.C.	New Westminster, B.C., 1918	115.1	23.5	12.5	245	91	Sc. 56	Imperial Munitions Board, Ottawa, Ont.
141171	Moresby	"	"	114.7	23.6	12.4	243	98	Sc. 31	"
141207	Prospective II	Vancouver, B.C.	Vancouver, B.C., 1918	69.3	18.2	8.2	85	39	Sc. 13	Progressive Steamboat Co., Vancouver, B.C.
141198	Prosperative (a)	"	Benicia, Cal., 1891	71.8	20.6	8.2	89	44	Sc. 16	"
137909	St. Mihiel	Toronto	Toronto, 1918	251.0	43.7	26.0	2,742	1,670	Sc. 147	Maple Leaf Shipping Co., Toronto
141205	War Chilkat	Vancouver, B.C.	Vancouver, B.C., 1918	249.5	43.5	22.8	2,331	1,431	Sc. 147½	Shipping Controller, London, Eng.
141172	War Kitimat	New Westminster, B.C.	New Westminster, 1918	249.4	43.6	22.8	2,336	1,434	Sc. 143	"
141195	War Suquamish	Vancouver, B.C.	Vancouver, B.C., 1918	249.7	43.4	22.9	2,334	1,430	Sc. 147	"
141208	War Tanoo	"	"	249.7	43.5	22.9	2,326	1,429	Sc. 147½	Imperial Munitions Board, Ottawa, Ont.

(a) formerly Royal, U.S. register.

SAILING.

No.	Name	Port of Registry	Where and when built	Length	Breadth	Depth	Gross Tons	Reg. Tons	Owners or managing owners
141192	A. T. No. 1	Vancouver, B.C.	1911 Vancouver, B.C.	80.6	26.2	6.5	115	115	Hilda M. Hind, Vancouver, B.C.
138595	Ada A. McIntyre	St. John, N.B.	1918 Moss Glen, N.B.	147.9	35.1	12.7	460	423	P. McIntyre, St. John, N.B.
138425	Annie M. Nadeau	Paspebiac, Que.	1918 Port Daniel, Que.	104.6	25.6	9.1	148	148	C. H. Nadeau, Port Daniel, East Que., and C. R. Tyrer, Halifax, N.S.
140869	Cape Race	Liverpool, N.S.	1918 Liverpool, N.S.	126.8	32.4	11.8	378	330	Cape Race Shipping Co., St. John's, Nfld.
138652	Cambrai	Pictou, N.S.	1918 River John, N.S.	165.7	35.8	13.0	557	529	The Shipping Syndicate, Ltd., Halifax, N.S.
141132	E. L. Comeau	La Have, N.S.	1918 Meteghan River, N.S.	169.0	37.4	13.2	673	591	Fraser Gray, M.O., La Have, N.S.
140956	Edgewood	Montreal	1918 Quebec, Que.	191.1	36.8	15.5	792	699	Edgewood Shipping Co., Montreal
141165	Eugenie Owen Mac-Kay	Parrsboro, N.S.	1918 Diligent River, N.S.	67.0	36.0	13.0	601	560	W. N. Reinhardt, La Have, N.S.
141083	Flowerdew	Shelburne, N.S.	1918 Shelburne, N.S.	111.9	31.9	12.3	392	306	J. B. Patten, Grand Bank, Nfld.
141166	George Melville	"	"	"	"	"	"	"	"
	Cochrane	Parrsboro, N.S.	1918 Fox River, N.S.	183.5	37.0	18.9	886	820	"A" Shipping Co., St. John's, Nfld.
138594	Margery Austin	St. John, N.B.	1918 Harvey Bank, N.B.	86.2	27.8	8.1	124	112	C. W. Robinson, M.O., Moncton, N.B.
141002	Marie Lydia	Quebec	1918 Grande Bergeronnes, Que.	87.0	26.2	8.3	172	157	J. Dumont, Levis, Que.
140990	J. C. 23	New Westminster, B.C.	1918 New Westminster, B.C.	68.8	28.0	6.7	111	111	J. Crane, New Westminster, B.C.
138640	J. Miller	Maitland, N.S.	1918 Noel, N.S.	140.3	34.4	11.8	390	357	E. A. O'Brien, Noel, N.S.
141082	Martha Parsons	Windsor, N.S.	1918 Cheverie, N.S.	158.9	38.5	13.5	499	455	G. M. Parsons, Cheverie, N.S.
138762	Milnorine	Halifax	1918 Port Greville, N.S.	146.3	33.5	12.0	403	366	J. T. Moulton, Burgeo, Nfld.
141199	Whalen No. 1	Vancouver, B.C.	1913 Mill Creek, B.C.	80.1	28.0	7.2	297	297	Whalen Pulp & Paper Mills, Ltd., Vancouver, B.C.
141200	Whalen No. 2	"	"	77.7	28.5	7.4	137	137	"
141201	Whalen No. 4	"	Vancouver, B.C.	81.0	30.0	7.6	356	356	"
141202	Whalen No. 5	"	"	78.0	28.0	7.2	134	134	"
141203	Whalen No. 7	"	"	80.4	28.1	7.9	141	141	"



## Dominion Marine Association and Canadian Lake Protective Association Annual Reports, Meetings, Etc.

The Dominion Marine Association's annual meeting was held in Montreal, Feb. 5, the Vice President, W. J. McCormack, Algoma Central Steamship Line, Sault Ste. Marie, Ont., occupying the chair, in the absence of the President, J. T. Mathews, Mathews Steamship Co., Toronto, owing to illness. A letter from the President, regretting his inability to attend, having been read, the representatives present passed a resolution of sympathy.

A letter was read from C. H. Nicholson, Manager, Grand Trunk Pacific Coast Steamship Co., Vancouver, inviting general support in a movement for relief from alleged unnecessarily onerous customs requirements in the matter of coastwise clearances and entries. After some discussion, it was decided to write Mr. Nicholson, reporting fairly general satisfaction with existing conditions on the Great Lakes, in respect to the matters mentioned, and asking for particulars of difficulties experienced on the Pacific Coast.

A letter was read from the National Association of Marine Engineers' Secretary, enclosing a proposed wage scale for 1919, and it was decided to reply that individual members had received similar communications, and that as the matter was one for individual action, the association could not deal with it.

Letters were read from the Grain Commission, declining to make any order as to the shovelling charge, on the ground that "shovelling" was not considered to be included in the meaning of the word "handling", as to which the Grain Act confers jurisdiction upon the commission, and also giving notice of intention to take over the trimming, and to hold a conference on that subject this winter. The Secretary was instructed to take the question up with the Lake Carriers' Association, to ascertain its views, and to arrange for a meeting of the new executive committee before the public hearing proposed by the commission.

A letter from N. W. Gowan, patentee of the Gowan safety device for lock gates, recalled previous representations on the same subject, and urged further support from the association. The discussion confirmed the urgent desirability of effective means to prevent lock gates being forced out of miter, and attention was also called to previous requests made by the association for protecting devices, such as spring buffers, at entrances to locks. A. E. Mathews, A. A. Wright and the association's counsel, F. King, were appointed to take these questions up again with the Railways and Canals Department at Ottawa.

A suggestion was made for exchange of circulars between the association and the Lake Carriers Association, and the Secretary was asked to endeavor to arrange for the same.

The executive committee's annual report, as printed farther on in this issue, was presented, and was generally discussed and approved. The Secretary reported verbally that he was in communication with a number of the Public Works Department's district engineers, and hoped to include in next year's report a complete series of statements from them, and from other officers, reviewing public

works affecting navigation from the head of the lakes to Montreal.

It was recommended to the incoming executive committee that the next annual meeting be held in Ottawa, and that, as in pre-war days, an effort be made to have a general reunion and dinner, attended by interested cabinet ministers and departmental officers of the inside and outside service.

The following were appointed a committee on aids to navigation: W. J. Bassett, J. W. Greiner, A. E. Mathews, W. J. McCormack, H. N. McMaster, W. H. Smith, J. F. Sowards and Jno. Waller.

The four vacancies in the executive committee, occurring by the expiration of the terms of office of G. E. Fair, L. Henderson, J. F. M. Stewart and J. Waller, were filled by the re-election of Messrs. Henderson, Stewart and Waller and by the election of Lorne C. Webster, Webster Steamship Co., in place of G. E.



W. J. McCormack,  
General Manager, Algoma Central Steamship Line,  
and President, Dominion Marine Association.

Fair, retired. The vacancies caused by the retirement of C. B. Harris, W. J. Bassett and A. A. Wright, were filled by the election of W. H. Smith, A. L. Laroque and H. W. Cowan.

A. A. Wright was elected an honorary member of the committee, in recognition of his valuable services ever since the association's formation.

Notices of motion for amendment of the constitution were given as follows: by W. E. Burke, to give the executive committee power to add to its members, and to limit the voting power in general meetings to one vote for each member company; by A. A. Wright, to enable members of the committee to attend and vote by proxy.

The executive committee then met and elected the following officers:—President,

W. J. McCormack; 1st Vice President, A. E. Mathews; 2nd Vice President, H. W. Cowan.

The other members of the executive committee for 1919 are:—W. E. Burke, Montreal; L. Henderson, Montreal; A. L. Laroque, Montreal; J. T. Mathews, Toronto; W. H. Smith, Montreal; John F. Sowards, Kingston; J. F. M. Stewart, Toronto; John Waller, Montreal; Lorne C. Webster, Montreal; A. A. Wright, Toronto.

### Canadian Lake Protective Association's Annual Meeting.

The Canadian Lake Protective Association's annual meeting was held at Montreal, Feb. 5, after the Dominion Marine Association's annual meeting. The newly elected President of the Dominion Marine Association, W. J. McCormack, occupied the chair.

The Secretary reported verbally that no attempt had been made to compile statistics or prepare a printed report regarding the casualties of 1918, as only three casualty reports had been received since the last bulletin of 1918, issued in September, and because on account of the small number of reports, and particularly on account of the President's illness, no meeting had been called in December to review the year's work. It was considered that no comments of value could be made in a report based upon returns which appeared to be incomplete. Attention was called to the notices sent members in this connection, and particularly to the resolution of the last annual meeting circulated in the printed report of the proceedings of that meeting. Reference was also made to the action of the executive committee at its meeting which had just adjourned, and particularly to the recommendations to be mentioned in bulletin 1 of 1919, requiring members to procure the execution of agreements by masters and engineers on association forms, fresh supplies of which are to be furnished. After discussion and some comment on the general understanding that the season had been without many serious accidents, on resolution moved by Messrs. Henderson and Wright, the committee's action was approved.

W. E. Burke gave notice of motion for amendment of the constitution and by-laws to confer power on the executive committee to add to its numbers, and to enable members to attend and vote by proxy, and also to limit the voting power in meetings of the association to one vote for each member company.

The following were elected unanimously as the committee for 1919: W. J. McCormack, Chairman, Sault Ste. Marie; W. J. Bassett, Toronto; W. E. Burke, Montreal; H. W. Cowan, Montreal; J. W. Greiner, Montreal; L. Henderson, Montreal; A. E. Mathews, Toronto; J. T. Mathews, Toronto; H. N. McMaster, Kingston; W. H. Smith, Montreal, John Waller, Montreal; A. A. Wright, Toronto.

### Dominion Marine Association's Executive Committee Report.

The report of the executive committee is once more presented as a brief summary of various items of work which have come directly under the attention of the committee during the year, without regard to the wide field of questions in which the association has been indirectly



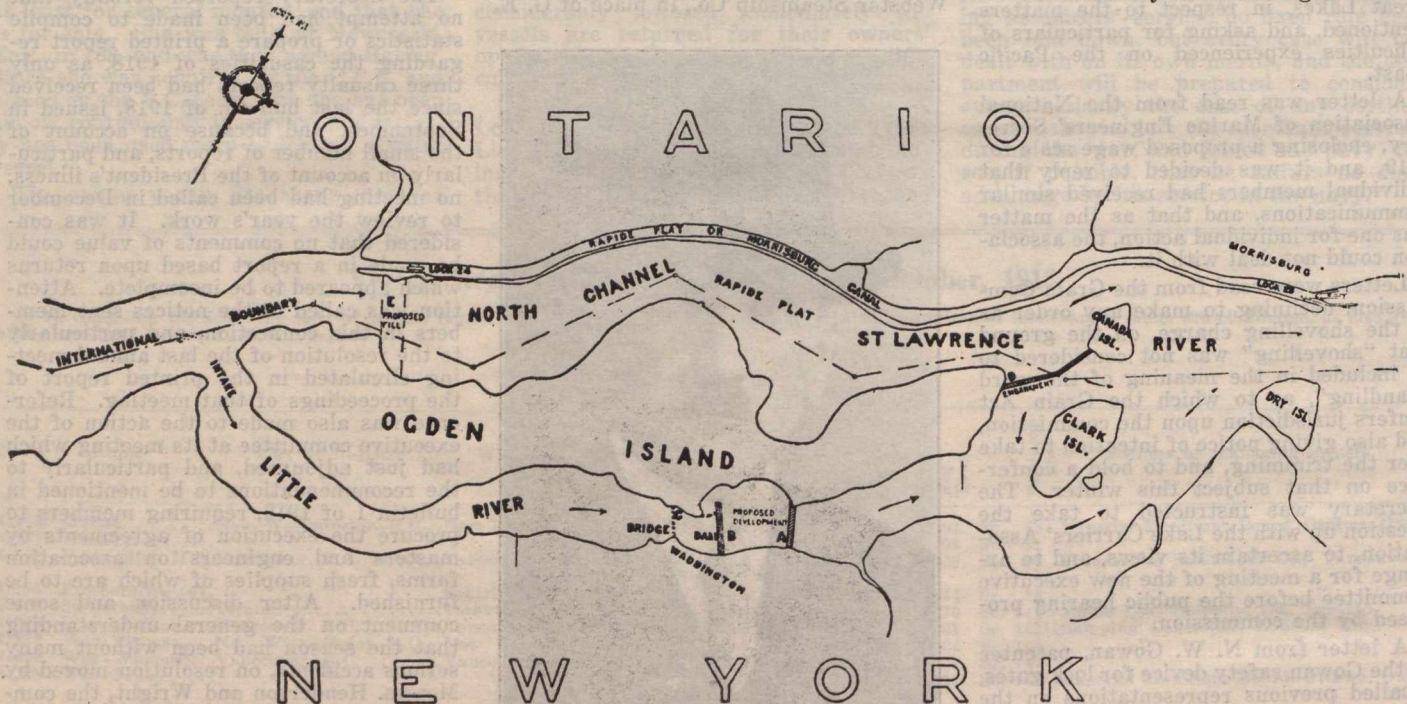
interested. It was suggested towards the close of the year that the report might properly include some general review of public works in the waters in which the association is interested, together with other matter of a similar nature relating to transportation. But at the late date at which the suggestion was made it was found impossible to arrange for the necessary reports from all the district engineers of the Dominion Public Works Department and it has therefore been determined to allow the report to issue this year in the usual brief form.

**Legislation.**—Once more, on account of the exigencies of the war, the Dominion Parliament has confined its attention to questions of pressing importance, excluding controversial matters as far as possible, and the session of 1918 saw no legislation of importance directly affecting shipping interests, other than certain amendments of minor importance to the Navigable Waters Protection Act.

Only two orders in council relating to the Marine Department and of interest to this association adopted in 1917 are published with the 1918 Dominion Statutes.

tional Joint Commission for approval of its plans, and a preliminary hearing, at which this association was represented by counsel, took place at Atlantic City, Aug. 12, 1918. Counsel for the applicants presented some evidence at that session of the commission, and opposition was made by counsel for the Dominion Government, for the State of New York and for this association. The commission then adjourned, in order to examine the location of the proposed works in the River St. Lawrence, and on Oct. 1 met again at Ottawa for final hearing. Your association, with the approval of the Dominion Government, had in the meantime filed a separate answer to the company's application, and your counsel took part in all the proceedings, which at the final hearing lasted four days. Evidence of master mariners was adduced by him on behalf of the association, to substantiate certain contentions against the proposed works as prejudicial to the interests of navigation. The U.S. Government, through its counsel, Judge Koonce, expressed willingness to agree to the plans if the commission were satisfied. Counsel for the Do-

Odgen Island some 30,000 cu. ft. a second (alleged to be the natural flow) instead of a present flow of about 6,000 c.f.s. Compensating works to retain levels in the main channel were to consist of a dam from Ogden to Canada Island, the alleged effects of which would be to restrain the flow, and by its backwater effect to conserve or improve the levels in the Rapide Plat, while incidentally it would also do away with the cross current now running between the islands named; and also a submerged weir from Ogden Island under the main channel to a little below the head of the Morrisburg Canal, this weir being designed to maintain levels in the canal. A conflict of evidence arose as to the efficacy of the proposed compensating works and the principal objections raised for the association were: the increased current developed north of Canada Island, probably sufficient to bar upbound navigation; the doubtful results in the already difficult Rapide Plat, and the dangerous menace to present navigation and positive obstacle to future development which would be constituted by the submerged weir if



Plan. 1. New York & Ontario Power Co.'s Proposed Development on St. Lawrence River.

One provides regulations and a tariff of tolls for the use of government wharves and the other prohibits transfer of registry of a British ship from a port of registry in Canada to a port of registry outside of Canada without the written consent of the Minister of Marine.

The bill designed to bring lake carriers under the jurisdiction of the Board of Railway Commissioners, defeated in 1917, was again introduced, in an amended form, by J. A. Armstrong, M.P. for East Lambton, but did not get beyond its first reading and a reference to committee. Leading commercial bodies again filed protests against the proposed legislation and your committee continued the association's opposition until the house adjourned. It is understood that this bill will be introduced again at the coming session and the subject will require further careful attention.

**New York & Ontario Power Co.**—The proposals of this company were briefly referred to in the report of your committee for 1917. In due course application was made by the company to the Interna-

tion Government opposed, largely on the ground that the consent of the Public Works Department should have first been obtained, and that nothing should be done pending development of a more comprehensive scheme of improvement affecting the whole river; and counsel for the State of New York opposed on general grounds, but particularly with reference to the limitations imposed upon the rights of the applicants by the legislation of New York State under which they claimed title. Certain other public bodies, notably the Conservation Commission of Canada, also appeared in opposition to the scheme. The commission took the matter into consideration and has not yet rendered a decision. Since the hearing P. B. Mignault, K.C., of Montreal, one of the three members of the Canadian section, has been elevated to the Supreme Court of Canada.

Briefly, the proposals of the company were for the improvement of the Little River and the building of a power house at Waddington, N.Y., with a view to withdrawing down that channel south of

built of a height and a width sufficient to serve its avowed purpose. The accompanying plan No. 1 shows the location of the works proposed.

**The St. Lawrence River Power Co.**—At the session of the International Joint Commission at Atlantic City on Aug. 12, 1918, counsel for the U.S. Government asked for an immediate hearing and special consideration of an application of St. Lawrence River Power Co. for approval of its undertaking in connection with its power plant at Massena, N.Y., alleging as a special reason the urgent desirability of securing an additional supply of aluminum for war purposes from the Aluminum Co. of America, which company would utilize the additional power the applicant company would be able to develop. Strong opposition was made to this request by counsel for the Dominion Government, for the State of New York, and for this association, but an order was ultimately made suspending rules and fixing an early date for hearing at Montreal. With the consent of the Dominion Government, an answer to the



application was prepared and filed on behalf of this association and your counsel joined in the general opposition to the proposals at the hearing at Montreal at the end of Sept., 1918.

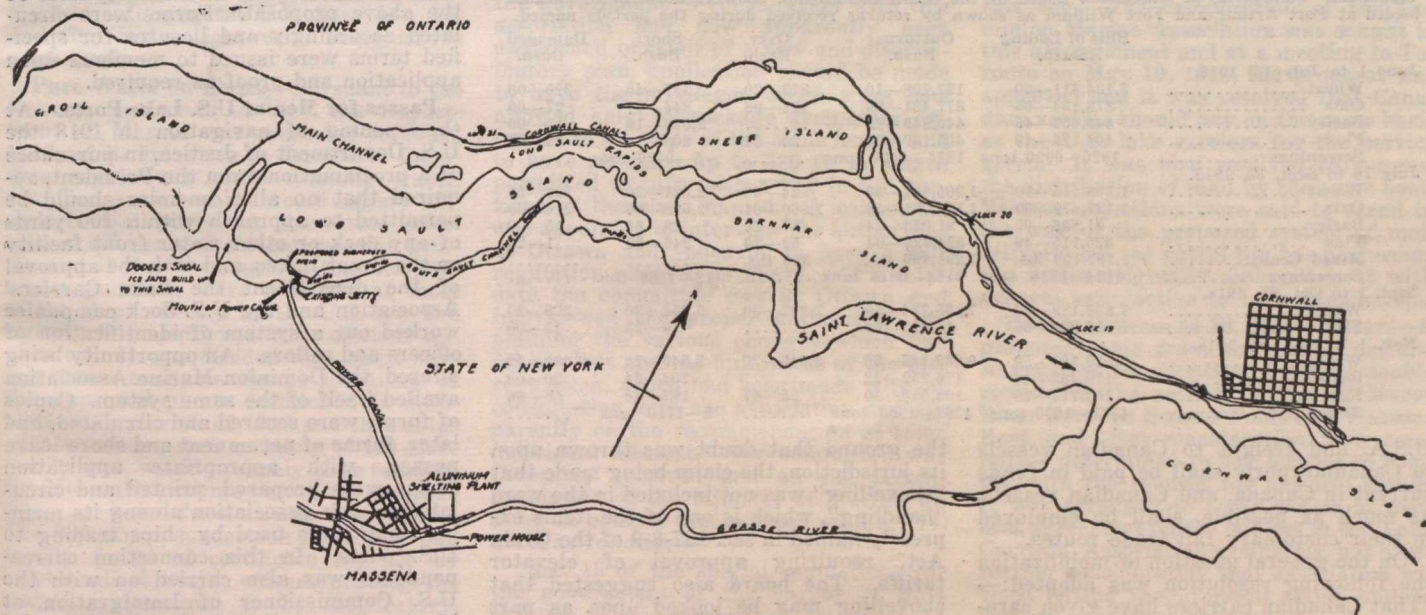
The plans included a dam or weir completely across the South Sault channel—nominally designed to improve winter ice conditions—and the dredging of the shoal in the St. Lawrence above the intake of the power canal to Massena. The dredging had already been done—with some adverse effect upon levels on the Canadian side; and it developed that the combined effect of the dredging and the dam, alleged to be intended to overcome winter ice conditions and maintain efficiency of the Massena plant throughout the year, would incidentally make about 114,000 h.p. available at the power house at Massena, in addition to the normal amount. The opposition to the undertaking was largely based upon the objection to damming the South Sault, which by the Ashburton treaty was to remain free and open for all time for the vessels of both countries; and the Canadian Solicitor-General argued that parliament alone had the power to act in view of the treaty.

a general agreement appearing impossible without conference, the commission met all interested parties at Montreal on Mar. 25. The whole question was then argued at length, but the terminal elevators strenuously objected to the agreement of the previous year. In the end the matter was left to the commission, on the general understanding that their decision would be accepted by all parties.

At a meeting of the grain section of this association in Toronto on May 10, on a report of the failure of the commission to take action it was agreed to bill freights in the same way as in 1917 and to make no further allowances than those provided in the regulations then in force, and also to advise the commission of this intention on the part of lake carriers. Notices were sent out accordingly. At another meeting in Toronto on June 12 conditions remained unchanged and members reported that settlements were held back until the announcement of a decision. Further correspondence followed and on June 27 the Grain Commission issued the following letter, signed by its Secretary: "I have to advise that definite arrangements have now been made whereby the

a delegation of three members attended a conference at Cleveland to discuss the subject. Mr. Barnes, representing the U.S. Grain Corporation, addressed the meeting, and Dr. Magill, Chairman of the Canadian Board of Grain Supervisors, also expressed his views. A proposal for complete mobilization of all tonnage, with general submission to the Lake Carriers' Mobilization Committee, received general support, but was declined by the Canadian delegates on the ground that separate mobilization with co-operation would be preferable, and as Canadian owners proposed to take prompt measures to submit their tonnage to proper control in their own country.

On July 30, Dr. Magill called a meeting of shippers, carriers, millers, and others in Toronto and by arrangement Canadian lake carriers met in a separate room at the same time in the same building. Acting independently of the general meeting the carriers discussed the situation fully and, after calling in, in turn, Mr. Stoddart of the Wheat Export Company, Mr. Young of the Lake Shippers Clearance Association and Dr. Magill, and discussing the matter with them separately, re-



Plan. 2. St. Lawrence River Power Co.'s Proposed Development.

He invited discussion between the two governments with a view to finding a solution that would preserve control of the river.

The commission reserved its decision, and subsequently made an order reserving the general question for later argument and consideration, but declaring the urgent need of the work as a war measure and permitting the building of the proposed dam or weir and its maintenance until the expiration of five years or the termination of the war, whichever should last occur; and providing also a right to apply to the commission within one year of the expiration of the period for an order approving the continuance of the weir on such terms as might then be deemed appropriate. The location of the weir and of the dredging are indicated by arrows in the accompanying plan 2.

**Grain Trade: Regulations as to Outturns of Cargoes.**—Correspondence early in the year developed the fact that loading elevators would renew their objections to the 1917 regulations. The commission was informed of the willingness of the members of this association to accept a renewal of these regulations, but

Wheat Export Co., Ltd., has agreed to insure against shortage on grain cargoes shipped by them from Fort William and Port Arthur to Canadian ports, under a similar arrangement to that already in force at Buffalo. This arrangement, so far as Canadian ports is concerned, is to be effective as from June 11, 1918, and is intended to remain in force for the duration of the war. The Board of Grain Commissioners is taking the necessary steps towards adjustment of shortages which occurred between the opening of navigation and June 11."

The outturns of cargoes from Fort William and Port Arthur for several periods between June 1 and Nov. 20, 1918, as made up from returns received by the Grain Commission between those dates appear in the tabulated statement which appears as appendix to this report. Doubtless the question will again come before the commission for determination at or before the opening of navigation in 1919.

**Allotment of tonnage and control of freights.**—In July, 1918, upon invitation from the Lake Carriers' Association and upon instructions from this association,

sumed discussion in private session and finally adopted the following resolution:

"That Canadian lake carriers, recognizing the obligation imposed on them of furnishing efficient aid to the transportation of the grain crops of Canada and the U.S.A., agree as follows:—That Lake Superior shall be served in preference to Lake Michigan and only surplus grain tonnage sent to Lake Michigan. That Lake Superior wheat will be served in priority to any other grains. That all tonnage to Duluth-Superior shall be allotted through the U.S. Grain Corporation office there: all tonnage for Lake Michigan ports through the U.S. Grain Corporation office at Chicago, and tonnage to Fort William and Port Arthur through the Winnipeg Chartering Committee, under the same conditions as prevailed in the fall of 1917, but under such instructions as to allotments as may be acceptable to Wheat Export Co. and the Canadian Government, and subject to insurance by the shipper against any grain shortage on outturn, in accordance with the present arrangement in the Buffalo trade. That all unloading at Buffalo shall be directed by the U.S. Grain Corporation



office at Buffalo. That the Canadian Lake Carriers will provide tonnage for the grain movement at rates not exceeding basic rates of wheat Lake Superior to Lake Erie, 4c a bush. until Sept. 1, and 4½c a bush. thereafter until Nov. 30, and wheat Lake Michigan to Lake Erie 3½c a bush. until Nov. 30, with alternative and relative rates as follows: To Georgian Bay and Goderich, ½c under Lake Erie rates; to Port Huron, ¼c under Lake Erie rates; to Collingwood, ½c under Lake Erie rate; but terms of discharge at Collingwood to be the same as hereafter provided for discharge at Lake Erie side ports; to side ports other than Buffalo and Port Colborne, including Detroit, same rates as Buffalo, but with special agreement as to discharge, allowing two working days free, but thereafter vessel to receive ½c a bush. additional on entire cargo for each running 8 hours or fraction thereof, until fully discharged; to ports of light draft, vessel to be allowed freight calculated on its Buffalo capacity. Other grains than wheat to net the vessel the equivalent of wheat cargo. Freight to Canadian vessels for carriage to U.S.A. ports shall be paid in funds current in

Winnipeg Chartering Committee and apparently to the satisfaction of all concerned.

**Shovelling Charges at Grain Elevators.**—At a meeting of the association's grain section in Toronto early in the summer instructions were given to call the attention of the Board of Grain Commissioners to the charges of \$4.35 per 1,000 bush. which certain elevators were then making for shovelling; and to advise the commission of the association's opinion that in view of the limitation now imposed upon the lake freight rate any increase in fixed charges should not be permitted to fall upon the carrier. No action was taken by the commission during the summer, but this item was placed on the agenda paper at a session held at Toronto on Oct. 10, and after argument the board then intimated that the association had made out a good case for the retention of the \$4.00 rate and asked elevator representatives to agree to that figure as a maximum at least until the end of the 1918 season. Thereafter certain elevators continued to bill charges at the increased rate, and the board when again appealed to by this association refused action, on

**Loading from Private Elevators.**—Early in the season the Fort William and Port Arthur Grain Exchange asked the support of the Dominion Marine Association in its petition to the Board of Grain Supervisors for suspension of the rule prohibiting the mixing of grain from a private elevator with any other grain in the same hold of a vessel. A lengthy correspondence developed differences of opinion as to the advisability of the change proposed and at a meeting of the association's grain section in May it was resolved to take no action.

**Licenses for Bunker Coal and Supplies.**—After the promulgation of regulations by the U.S. War Trade Board requiring ships to procure licenses before taking coal or supplies, an appeal was made on behalf of this association for recognition of its enrolled tonnage on the same basis as that of the Lake Carriers' Association and for their inclusion in a special system providing for a general license for the season to obviate need of constantly repeated application to the U.S. authorities. Correspondence took place with various parties and organizations and early in July the Director of Transportation advised the association of the acceptance of the above proposal. Forms were circulated accordingly and licenses for specified terms were issued to members upon application and proof as required.

**Passes for Men at U.S. Lake Ports.**—At the opening of navigation in 1918 the U.S. Department of Justice, in pursuance of a proclamation from the President, required that no alien enemies should be permitted to approach within 100 yards of any dock or other water front facility on the Great Lakes, and with the approval of the department the Lake Carriers' Association and the U.S. dock companies worked out a system of identification of officers and sailors. An opportunity being offered, the Dominion Marine Association availed itself of the same system. Copies of forms were secured and circulated, and later, forms of permanent and shore-leave passes, with appropriate application forms were prepared, printed and circulated by this association among its members and were used by ships trading to U.S. ports. In this connection correspondence was also carried on with the U.S. Commissioner of Immigration at Montreal regarding the regulations devised in his department, and local officers of immigration were also consulted in order to co-ordinate the requirements of the Immigration and Justice Departments. The system adopted greatly facilitated the movement of officers and men to and from their ships while in port.

**The Military Service Act, 1917,** generally and cordially approved in principle and application, was found to press heavily upon shipping interests in many instances, and early in the season an effort was made by your committee to secure some special recognition of the business of lake and river transportation, so that ships might be manned with their full crews without serious delays and might be freed from the risk of losing certificated officers or men on short notice. Interviews were held at Ottawa with the assistants of the Central Appeal Judge and with the Central Public Representative, and much correspondence also took place, in all of which the needs of various classes of vessels were explained and a general ruling was sought that would bring certain officers and men definitely within the exemption clauses of the statute by declaring their services in transportation to be in the national interest.

**Appendix.**—Summaries of statements issued by the Grain Commission showing outturns of cargoes loaded at Port Arthur and Fort William as shown by returns received during the periods named.

	Bills of Lading Bush.	Outturns Bush.	Over Bush.	Short Bush.	Damaged Bush.
<b>June 1 to July 15, 1918.</b>					
Wheat .....	5,124,611—30	122,298—10	879—20	3,192—40	320—00
Oats .....	878,154—05	877,431—06	121—08	844—07	27—00
Barley .....	443,402—45	440,849—26	.....	2,553—19	13—00
Flax .....	405,326—40	405,139—24	20—54	208—14	12—00
Screenings .....	1820—0990 tons	1815—0400 tons	.....	5—0590 tons	.....
<b>July 16 to Sept. 30, 1918.</b>					
Wheat .....	1,308,445—10	1,305,932—30	24—40	2,537—20	222—50
Oats .....	3,127,479—09	1,126,771—10	1,960—01	2,668—00	210—00
Barley .....	91,896—02	91,953—24	87—20	29—46	15—00
Flax .....	325,115—49	324,929—04	59—20	246—09	1—28
Mixed Grain.....	1,291,100 lbs.	1,291,990 lbs.	890 lbs.	.....	.....
Screenings .....	3124—0816 tons	3124—0816 tons	.....	12—1566 tons	.....
<b>Sept. 1 to Oct. 31, 1918.</b>					
Wheat .....	7,838,139—50	7,835,234—50	2,397—30	5,352—30	378—20
Flax .....	15,972—55	15,713—32	.....	79—23	75—00
<b>Nov. 1 to Nov. 20, 1918.</b>					
Wheat .....	9,036,738—50	9,033,145—50	2,247—20	5,840—20	2,382—10
Barley .....	176,463—46	176,259—22	.....	204—24	30—00
Flax .....	103,717—29	103,545—30	25—47	197—46	69—06
Screenings .....	4571—1670 tons	4562—1960 tons	.....	8—1710 tons	.....

U.S.A. and freight to Canadian vessels to Canadian ports shall be paid in funds current in Canada, and Canadian vessels, as much as possible, shall be employed in their customary fall trade routes."

On the general question of mobilization the following resolution was adopted:—"That Canadian carriers have given careful consideration to the proposal for mobilization of all their tonnage, either jointly with that of the U.S. lake carriers, or separately, but after full discussion and after having heard the opinions of those interested in the trade from all points of view, have come to the conclusion that they can best serve the prime object of all such proposals, viz., the contribution of the most effective assistance in the present unfortunate situation due to the war, by supporting a continuance of the arrangement which prevailed during the fall of 1917, an arrangement which gave general satisfaction and effectively met all requirements. Canadian carriers are influenced to some extent by the fact that in Canada there is no centralization of vessel management in any one locality and, in consequence, an almost insuperable difficulty would be at once encountered in an attempt to manage the trade through a committee, yet, nevertheless, as already stated, this objection was subsidiary to the main question which was determined with reference to the general satisfaction expressed with the 1917 arrangement."

Throughout the remainder of the session allotment of tonnage was made in accordance with these resolutions by the

the ground that doubt was thrown upon its jurisdiction, the claim being made that "shovelling" was not included in the word "handling", which is one of the items expressly named in sec. 137-8-9 of the Grain Act, requiring approval of elevator tariffs. The board also suggested that shovelling may be looked upon as part of the duty of those in charge of the ship. This view is not shared by your committee, but if doubt is at all reasonable it would appear that amendment of the statute to expressly include the word "shovelling" should be brought about.

**Trimming.**—During the year correspondence regarding this subject, including a number of communications from the President of the International Longshoremen's Association, received consideration at meetings in Toronto and in Montreal. The longshoremen's union proposed a new trimming arrangement under their auspices and some investigation was made as to the degree of support their proposal was receiving in the U.S. Early in the season, however, it was decided by your committee to take no action upon this proposal, and when the question was revived at a later meeting it was decided to await developments. In Dec., 1918, the Grain Commission determined to take over the trimming and to make rules and regulations, and a notice of this intention has been sent out intimating that a conference of all interested parties will be called prior to the opening of navigation. The action of the Grain Commission accords with the recommendation of this association made some years ago.



Later, on resolution of the committee, a request was made for application of the rule adopted in the U.S. whereby all bona fide members of crews received certificates that exempted them from other service so long as they continued to sail. It was pointed out, however, that the statute and its method of operation differed materially in the U.S. and that no fair comparison could be made, and it was determined by the Central Appeal Judge that each case must be dealt with on its own merits. Accordingly a great number of appeals accumulated on the files in the offices at Ottawa; and the justice of the claims in a great majority of these cases was apparently recognized. The mere withholding of a decision served the required purpose and left the men in the work of transportation. No doubt if the war had continued some other arrangement might have been required, but fortunately for everyone a happy solution of the difficulty has arrived. In this connection representations were made to the Department of Commerce and Labor at Washington as to the difficulty experienced in manning ships and the association received cordial assurance that the greatest possible leniency would be exercised in enforcing the U.S. Seamen's Act and that instructions were being issued accordingly.

**Pure Water on Ships.**—Pursuant to the arrangement made in 1917, the Department of Marine was reminded in Mar., 1918, of its intention to formulate Canadian regulations as to drinking water, compliance with which would satisfy officials in U.S. ports. A committee interviewed officers of the department at Ottawa and it was then agreed that no general regulations were required, as most of the ships affected by the U.S. law had already been equipped with efficient apparatus. It was decided that ships having steam available should adopt one of the approved plants mentioned in association circular 62 of 1917 and that ships without steam, such as many of the river tow barges, would probably have to adopt the alternative course permitted and take water on board from an approved source. The department undertook to prepare and supply forms of certificate for use by local medical health officers proving the water so procured to be satisfactory. These forms, procurable from any collector of customs, after proper signature would be accepted by U.S. port authorities. All this was intimated to members of the association by circular letters and in due course the forms mentioned were made available and were used.

**Boiler Inspection.**—At the annual meeting in 1918 it was resolved to ask for a less rigid enforcement of the Canadian regulations for computing permissible steam pressure for boilers brought in from the U.S. which were not open for inspection during the whole period of construction. At the first opportunity the subject was discussed with the Chairman of the Inspection Board at Ottawa and it was arranged that the practice of meeting special petitions by granting a reduction of the factor 1.65 in sec. 25 (a) under letter Y of the rules to a figure as low as 0.5 should be made more general, and that steamboat inspectors would receive instructions to make their computations accordingly in cases where no circumstances appeared to exist which would render a more rigid application of the rule advisable. The use of the lower factor gives the desired result.

**New Life Jackets.**—By circular S. I. 7 issued by the Chairman of the Inspection

Board, it was announced that after April 1, 1918, all life jackets must be of special nature and have the board's approval in accordance with the terms of the circular. A committee of this association took the first opportunity to examine the various styles of jackets and witnessed a practical demonstration of their advantages over the form previously in use. The requirements of the board were communicated to all members. The new regulations proved a hardship to owners recently equipped with a new stock of the old style jackets, and it is understood that permission was given later in special cases for installation of enough of the new jackets to supply the crews and the average number of passengers rather than the full complement, on the understanding that further replacements later would be from the approved styles.

**Navigation of the Kaministikwia River.**—At the annual meeting in 1918 correspondence was read with regard to the regulations governing turning of vessels in this river, fully referred to in the executive committee's printed report for 1917, and after discussion it was resolved that inasmuch as the principle adopted by the government in consultation with this association had now apparently been abandoned in favor of a new and discriminatory plan, application should be made to have the privileges which were now allowed only to package freighters extended to all ships of the same length and to have all ships up to 330 ft. in length permitted to turn with a tug in the portions of the river named. A committee was appointed to interview the authorities at Ottawa and endeavor to have a fair regulation adopted as above. At a later date the committee met at Ottawa and interviewed the proper authorities, explaining the various changes which had taken place and the unfairness of the last regulation, which had been made without consultation with the association and apparently on the recommendation of some individual interest. The committee was favorably received and on the recommendation of the Minister of Marine, an order in council was adopted on Mar. 14, 1918, as follows:—

"Sec. 15 of the special regulations for the government of the harbor of Fort William, Ont., established by order in council of Nov. 7, 1917, is hereby cancelled and the following section is substituted in lieu thereof:—

"Sec. 15. Steam vessels not exceeding 200 tons gross may turn in any part of the Kaministikwia River, McKellar Channel, or the Mission Channel, under their own power, excepting in the immediate vicinity of any bridge crossing said river or channels. Steam vessels exceeding 200 tons gross are prohibited from turning in the local harbor, excepting at the turning basins constructed for that purpose at West Fort above the G.T.P. Ry. bridge, at the confluence of the Kaministikwia River with Mission Channel, at the confluence of the Kaministikwia River with McKellar Channel and at the G.T.P. Ry. turning basin near the mouth of Mission Channel, provided, however, that steam vessels exceeding 200 tons gross, but not exceeding 330 ft. in length, may turn in that section of the Kaministikwia River lying between the bend above the C.P.R. elevator D and the westerly limit of the G.T.P. Ry. dock and in that section of said river lying between C.P.R. slip 1 and elevator C, but the turning of such vessels in the said sections of this river shall not take place without the use of a tug, unless sanctioned by the harbor master."

**Customs Clearances at Port Arthur and Fort William.**—Considerable correspondence took place with regard to the requirements for double clearances at these ports, and certain complaints were reported on the part of U.S. tonnage. Correspondence followed with the retiring Minister of Railways and Canals, but at the general meeting in February last a *modus operandi* was reported which seemed to give general satisfaction and no further action was taken.

**Shipping Registry at Toronto.**—Upon request from the Upper Canada Tract Society for a further grant, and after consideration of reports regarding the use made of the registry established by the society at Toronto, \$200 was voted by the general meeting of the association in February last and was paid.

**Patrol Service Above Sault Ste. Marie.**—Early in the season, with a view to facilitating the passage of vessels through the locks at Sault Ste. Marie, by avoiding congestion at any lock, the U.S. Lake Carriers' Association arranged for a patrol tug, and members of that association agreed that their ships should act upon directions to be given them from this tug. The co-operation of the Dominion Marine Association was sought in this arrangement and at a meeting in Toronto on May 10, 1918, the proposal was approved and it was resolved that Canadian vessels should pay on the same basis as the U.S. lake carriers for the service given. It was also resolved to suggest the distribution of mail by the same boat. Various objections were said to stand in the way of the proposed system of mail delivery, but the patrol tug has performed the duties originally assigned to it with general satisfaction to both associations.

**Double Courses in St. Marys River.**—A proposal came from the Lake Carriers' Association for adoption of certain double courses in the section of the St. Marys River between Sweets Point and Watsons Reef, and after consideration, your committee determined to ask owners to comply with the request for uniform action. It was arranged to await notice of general agreement on the subject in the Lake Carriers' Association's bulletins, but after further consideration that association advised letting the proposal stand, and no further action has been taken.

**Canadian Lock at Sault Ste. Marie.**—Considerable correspondence has taken place with reference to the landing facilities for vessels both above and below this lock. Arrangement has been made for additional help in taking lines. Special consideration has been given to the difficulties arising from the new currents developed above the lock, by the opening of the new power canal belonging to the Great Lakes Power Co. and the closing of the compensating dam above the rapids. A number of vessels grounded just west of the north pier, because the current which formerly flowed around the south pier now flowed around that on the northern side of the entrance, nearer the canal and where the approach is narrower. Improvements were suggested by dredging the approach above the power canal so as to reduce the side current and by placing detached buffer-cribs in proper locations. In the meantime the association advised owners by circular how all masters might best avoid danger.

**Mullen Coal Dock at Sandwich.**—An injunction order having been obtained by certain Sandwich residents against the continued use of the Mullen Coal Dock, an appeal was made by this association to the Marine Department for interven-



tion as a war measure, with a view of making continued operation of the dock permissible. Colonel Anderson, Chief Engineer of the department, visited the locality, and reported upon the situation and before the close of April the Deputy Minister of Marine advised this association that it had now been arranged, as a war measure, to keep the dock in commission.

**Aids to Navigation.**—On account of the general reduction of expenditures for all purposes other than those connected with the war, it has been impossible for some time to obtain provision for additional aids to navigation except in very urgent cases. The committee having these questions in charge has, for this reason, made no formal list of recommendations to the Lighthouse Board during the past year. Only two meetings of the board have been held, and these have been attended by A. E. Mathews, representing the President. An appendix to this report in its first part mentions the various items affecting the eastern inland division with which the board has dealt during 1918, and it may be noted that the votes for this division amount altogether to only \$1,015, of which \$750 was for the range in the St. Marys River asked for by this association. The second part of the appendix sets out the other changes effected departmentally, or as the result of the above mentioned decisions of the board or of decisions in previous years.

Several items came directly before your committee and received special attention; notably the change in the position of Snake Island light to Simcoe Island, Lake Ontario—now confirmed by the authorities for various reasons expressly stated, and the dredging of the cross-over cut at the foot of Wolfe Island, delayed for want of a suction dredge, but now promised for the season of 1919. The range lights in the St. Marys River mentioned above were considered at a meeting of your committee in Toronto on May 10, when it was resolved to ask for the establishment of a range on the Canadian shore above Sault Ste. Marie, to mark the turning point for vessels leaving the main channel upbound to make the Algoma Steel Co.'s docks. The U.S. lighthouse inspector had already recommended two spar buoys on that side to mark a shoal in the vicinity. The improvement would obviate need of proceeding above the Vidal shoals to make the turn. This request was considered by the Lighthouse Board at Ottawa on Oct. 31, and after consideration of all the facts the board agreed to establish the range.

As usual, matters requiring immediate attention, including complaints of unlit lights or misplaced buoys, have been dealt with promptly by your officers as occasion arose.

**Transportation Under War Conditions.**—Under another heading in this report special reference is made to the voluntary submission of all Canadian lake tonnage in the grain trade to control as to allotment by authority acceptable to the Dominion Government and the Wheat Export Co., and to the voluntary fixing of a maximum freight rate in this trade. The purpose and the result of this action was to facilitate to the greatest extent possible the movement of grain for the allies. The Military Service Act bore heavily upon shipping interests and the association was compelled to take action to satisfy the officials in charge of the enforcement of the statute that ships could not be run without certain certificated officers and a certain minimum crew

and that transportation was of prime importance in the national interests. A good deal of inconvenience also arose by reason of the pressure of stringent regulations affecting shipping and crews in port, but in all directions there was loyal submission to the requirements of laws designed primarily to further the one great cause, and traffic continued to move with surprising freedom from unusual accidents or delays.

**General Business, Membership and Tonnage.**—In addition to the special items set out above, the work of the association during 1918 included the usual general correspondence with representatives of various branches of the Governments of Canada and the U.S. and of sister organizations, as well as with members of the association and other parties.

The steam tonnage enrolled in 1918 was 138,458 net registered tons, against 160,417 in 1917; and the barge or sailing tonnage 21,710 net registered tons, against 25,808 in 1917; a total of 160,167 tons, to compare with 186,226 tons in the previous year. This continued decrease appears to be due to the war conditions which removed vessels from inland waters. The understanding is that members have continued to enroll their ships, irrespective of location, but losses and sales have been continuous, and wooden barges of Canada Steamship Lines, Limited, have not been enrolled. A fair comparison with tonnage of previous years is therefore impossible.

### Projected Harbor Work for Toronto in 1919.

The Toronto Harbor Commissioners' budget for this year contemplates an expenditure of \$3,300,000. It does not, however, mean that all the work covered by this amount will be carried on through the year, but it is anticipated that work will be done involving an expenditure of approximately \$2,000,000. Much will depend on general financial conditions, and the opportunities offered for placing the commissioners' bonds on the market. It is intended to continue what is known as the industrial harbor development, in an easterly direction from the point where it now ends between John St. and Spadina Ave., through to York St., and also to reclaim about 90 acres of additional land for industrial purposes, and possibly some park reclamation work in addition. It is also the intention, providing the city's approval is obtained, to top dress and complete the park and amusement areas between Sunnyside and the Humber River, but this cannot be completed for the present, owing to the unfinished condition of the Dominion Government breakwater. Provision will also be made for roadways and sidewalk construction, sewers, etc.

So far as the Dominion Government work in the harbor is concerned, it is expected that some 4,400 ft. of crib work on the western breakwater will be completed, and also the turning basin in the eastern section, thus providing for about 4,000 ft. of dock wall, with concrete superstructure. The circulating channel will also be completed, providing for dockage construction for another 1,800 ft. of wall.

**Submarines for Canada.**—The British Admiralty has offered, as a gift to the Canadian Naval Service, two submarines, now at Bermuda, and Sir Robert Borden has accepted the offer on behalf of the Dominion Government.

### Wireless Telegraph Restriction Modified.

The Naval Service Department announces that all censorship regulations restricting the use of wireless telegraphy to and from ships in the West Atlantic and in the Pacific are now completely removed. All ships will now be permitted to exchange wireless messages anywhere in the Pacific and west of 40° west in the Atlantic; messages may also be exchanged with Canadian commercial coast stations. The previous restrictions forbidding code and cypher message to ships at sea are also eliminated and the wireless service will henceforth resume its pre-war freedom. All restrictions regarding inter-station messages, that is, messages between wireless stations on shore, are also removed.

The regulations limiting the trans-Atlantic wireless service to press and government messages are still in effect. This service will not be thrown open for private messages until the British Government restrictions on this class of business have been removed.

The restrictions regarding amateur wireless stations are still in effect. The Naval Service Department advises that no licenses are being issued for this class of station as yet. It is probable, however, that this regulation will be modified in the near future. In the meantime, any persons desirous of then operating an amateur station should file their application for license with the Naval Service Department. Application forms can be had on application to the Deputy Minister of the Naval Service, Ottawa. Licenses can only be issued to British subjects.

### Telegraph, Telephone and Cable Matters.

The C.P.R. will, it is stated, complete the stringing of an additional copper telegraph wire between Halifax and Montreal, during March.

The hearing by the Board of Railway Commissioners of the Bell Telephone Co.'s application for increased rates for telephone service, was concluded at Ottawa, Feb. 21, after 8 days sittings.

Judgment in the Newfoundland Government's claim against the Commercial Cable Co. for taxation for the landing of four cables in the colony, has been given in favor of the Government, by the Newfoundland Supreme Court. The amount to be paid is \$112,000 with interest and costs, and is made up by the charges on four cables at \$4,000 each per annum from July 1, 1910.

A bill providing for the taxation of certain companies, which has passed the Saskatchewan Legislature, includes every telegraph company and every railway or other company which owns, leases or operates telegraph lines, and carries on a general commercial telegraph business in the province. The tax is fixed at 1% of the gross earnings for the preceding year in case such percentage does not exceed \$2,000, but, if on such a basis the tax collectible should exceed \$2,000, the maximum tax shall be \$2,000. Companies are required to make a return to the Provincial Treasurer, for the purpose of levying the tax.

Charts of the River St. Lawrence, from Pointe des Monts to Father Point, and of Sydney Harbor, have been issued by the Hydrographic Survey, Department of Naval Service.



# Ottawa Traction Company, Limited

## Fifth Annual Report for Year Ending December 31, 1918.

Your directors have much pleasure in submitting their fifth annual report for the year ending December 31st, 1918.

The amount received from The Ottawa Electric Railway Company during the year was \$260,040.00, with which was paid the usual quarterly dividends of one per cent., and a bonus of one per cent.

The progress of The Ottawa Electric Railway Company during the past year has been consistent with the Company's established record.

During the period of the influenza epidemic, when theatres and churches were closed and the hours for business in stores were limited, the Company's receipts were affected. As soon as the restrictions were removed the receipts steadily increased. At the outbreak of the epidemic the Company began the fumigation of its cars under the supervision of its medical officers, and maintained the cars in a safe and sanitary condition.

The prospects for the coming year are very encouraging, and your directors look forward with confidence to continued success.

The Board of Directors wish to place on record the high esteem and affection in which the late Mr. James D. Fraser, Director and Secretary-Treasurer, was held by them. His ability, his high ideals, his deep interest in the affairs of the Company, and the sin-

cerity and cordiality with which he cooperated with his fellow directors and officers made him a colleague whose loss is keenly felt.

All of which is respectfully submitted.

T. AHEARN,  
President.

Ottawa, February 3rd, 1919.

### OTTAWA TRACTION COMPANY, LIMITED. STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST DECEMBER, 1918.

<b>Expenditure.</b>	
To net income transferred to profit and loss appropriation account..	\$ 260,040.00
	<u>\$ 260,040.00</u>
<b>Income.</b>	
By dividends received from The Ottawa Electric Railway Company.....	\$ 260,040.00
	<u>\$ 260,040.00</u>
<b>Profit and Loss Appropriation.</b>	
To Dividend No. 16 paid April 2nd, 1918—1% . . . . .	\$ 52,008.00
To Dividend No. 17 paid July 2nd, 1918—1% . . . . .	52,008.00
To Dividend No. 18 paid Oct. 1st, 1918—1% . . . . .	52,008.00
To Dividend No. 19 payable Jan. 2nd, 1919—1% and bonus 1%..	104,016.00
	<u>\$ 260,040.00</u>
By balance transferred from profit and loss account.....	\$ 260,040.00
	<u>\$ 260,040.00</u>

### BALANCE SHEET AS AT DECEMBER 31ST, 1918.

<b>Assets.</b>	
Accounts receivable, The Ottawa Electric Railway Company.....	\$ 900.00
Dividend receivable, The Ottawa Electric Railway Company.....	\$ 104,016.00
17,333 shares of The Ottawa Electric Railway Company, par value \$100 each .....	5,199,900.00
	<u>\$5,304,816.00</u>
<b>Liabilities.</b>	
Dividend No. 19 payable 2nd January, 1919, 1% and bonus 1%...	\$ 104,016.00
Capital stock issued.....	5,200,800.00
	<u>\$5,304,816.00</u>

**Auditor's Report to the Shareholders.**  
I have audited the accounts of your company for the year ended December 31st, 1918, and certify that the foregoing Balance Sheet and Income and Expenditure Account are properly drawn up so as to exhibit a true and correct view of the state of the company's affairs according to the best of my information and as shown by the books of the company.  
I have received all the information and explanations required by me.  
ARTHUR A. CRAWLEY,  
Chartered Accountant of Arthur A. Crawley & Co.  
Ottawa, February 3rd, 1919.

### OTTAWA TRACTION COMPANY, LIMITED. Directors.

- T. AHEARN - - - President
- WARREN Y. SOPER, Vice-President
- T. F. AHEARN. GEO. P. MURPHY.
- E. N. SOPER. J. F. SMELLIE.
- T. WORKMAN. A. J. DAWES.
- GEO. F. HENDERSON, K.C.
- G. L. SNELLING, Acting Sec.-Treas.

### Trade and Supply Notes.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers distinctly to understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

**Metal and Thermit Corporation.**—Arthur F. Braid has been appointed Sales Manager of this corporation's metal and alloy department. He went to the company seven years ago as a travelling salesman, and after a few years in that capacity was appointed Assistant Superintendent of the Jersey City plant, in charge of the manufacture of carbonfree metals and alloys. When the United States entered the war, he assumed active charge of the metal sales at the com-

pany's New York office. He is a member of the American Iron and Steel Institute, the British Institute of Metals and many other societies and scientific organizations.

Edward A. Miller has been appointed Assistant Superintendent of the corporation's Jersey City plant. He was one of the pioneers in autogenous welding and cutting, having established the first oxy-acetylene shop in New York, N.Y., early in 1908. In addition, he has had long and varied experience in pattern shop, foundry, machine shop, blacksmith shop and boiler shop practice, and in manufacturing and marine work. Among his notable jobs were the removal of the abandoned sheet metal piling encountered under the pneumatic foundations of Dry Dock 4 in the Brooklyn Navy Yard in 1910 and 1911, and the demolition of the old Equitable Building ruins in New York in 1912.

**Brown Hoisting Machinery Co.,** Cleveland, Ohio, has issued catalogue K, 1919, describing and illustrating Brownhoist

locomotive cranes. Among the numerous illustrations are the following:—30-40-ton steam locomotive crane, used on construction work for all miscellaneous hoisting, by M. P. & J. T. Davis, Montreal; locomotive crane doing switch work, as well as hoisting, at McGregor & McIntyre, Ltd., Toronto; locomotive crane and special bucket, handling nickel ore from the roast beds, at Mond Nickel Co.'s plant at Conniston, Ont.; 15-ton steam locomotive crane, and 54 cu. ft. bucket, unloading coal from boats, for Price Bros. & Co., Chicoutimi, Que.; wharf crane, unloading pig iron with magnet, and carrying coal, coke and stone with bucket, for Canadian Car & Foundry Co., at Fort William; steam wharf crane handling package cargo, for Quebec Harbor Commission at Quebec; two 10-ton locomotive cranes, mounted on coal barge, used by Dominion Coal Co. at Montreal; 3-5-ton crane, and contractors type bucket, used on construction of King's Highway, between Montreal and Quebec.



# For Sale and Classified Advertising

Under this heading Canadian Railway and Marine World will place advertisements for Positions Wanted, Positions Vacant, Equipment for Sale, Tenders Wanted, Dividend, Annual Meeting, Legal Notices, etc.

### ADVERTISING RATES.

Rates for advertisements set in uniform style in six point under  
 Positions Wanted and Positions Vacant, 2c per word.  
 Equipment for Sale advertisements, 3c per word.  
 Allow five words where replies are to be sent to a box number. Minimum order—\$1.  
 Rates under other headings and for display advertisements on application.



## FOR SALE

A Miscellaneous Lot of

- General Contracting and Road Building Equipment.
- Steam and Gasoline Road Rollers.
- Stone Crusher.
- Trench Pumps
- Gasoline Engines.
- Mill Machinery.

For full particulars, please apply to

### IMPERIAL MUNITIONS BOARD

Aviation Department 58 Wellington St. East, Toronto

## FOR SALE

Six new double cylinder, single deck winches, 8 in. x 10 in., reversible link motion, compound gear, four winch heads, limiting capacity seven tons on single line, shipping weight seven thousand three hundred pounds; immediate shipment.

Price—Fifteen hundred dollars each.

Further information on application

### The National Shipbuilding Co., Ltd.

Goderich - - - Ont.

FOR SALE—2—360 H.P. Duesenberg Marine Engines, new, 8 cylinders, 6 3/4 in. x 7 3/4 in.; each \$5,000. Also a 72-foot new motor boat, equipped with three of these engines, speed 35 miles an hour; cost \$52,000; our price \$35,000. Box 117, Canadian Railway and Marine World.

### THE VICTORIA ROLLING STOCK & REALTY CO., OF ONTARIO, LIMITED.

NOTICE is hereby given that the Annual Meeting of the Shareholders of the Victoria Rolling Stock & Realty Company of Ontario, Limited, will be held at the offices of Messrs. Osler & Hammond, 21 Jordan Street, Toronto, on Wednesday, March 5, 1919, at twelve o'clock noon, for the reception of the Annual Report and election of Directors for the ensuing year.

By order,  
 H. F. MARRIOTT,  
 Secretary.

Toronto, February 20, 1919.

### CANADIAN PACIFIC RAILWAY COMPANY.

#### Dividend Notice.

At a meeting of the Board of Directors today the following dividends were declared:

On the Preference Stock, two per cent. for the half-year ended 31st December last;

On the Common Stock, two and one-half per cent. for the quarter ended 31st December last, being at the rate of seven per cent. per annum from revenue and three per cent. per annum from Special Income Account;

Both dividends are payable 1st April next to Shareholders of record at three p.m. on 28th February instant.

By order of the Board,  
 ERNEST ALEXANDER,  
 Secretary.

Montreal, 10th February, 1919.

## FOR SALE

### MACHINERY USED BY THE ROYAL AIR FORCE AT REPAIR PARKS



All in first-class condition, much of it absolutely new and never uncrated.

MACHINE TOOLS: Lathes, Millers, Drill Presses, Grinders, Buffers, Stamping Presses, Power Saws, Hardening Furnaces, Rotary Shears, Punch and Shears.

TINSMITHS' MACHINERY: Shears, Rolls, Folders, Burring and Wiring Machines.

WOODWORKING MACHINERY: Band Saws, Trim Saws, Rip Saws, Shapers, Buzz Planers, Sand-Stones, Lathes.

BLACKSMITHS' TOOLS: Forges, Tools, etc.

MISCELLANEOUS: Parker Rust Proofing Outfit, Electric and Acetylene Welding Outfits, Surface Plates, Tool Tables, Tool Trays, Power Sewing Machines, Cranes, Pipe Bending Machines.

SMALL TOOLS: Reamers, Drills, Taps, Dies, Chasers, Cutters, Files, Emery Wheels, Chucks, Micrometers, Calipers, Gauges, etc., etc.

Price Lists will be forwarded on application to

### IMPERIAL MUNITIONS BOARD

Aviation Department 58 Wellington St. East, Toronto, Ont.

Power Specialty Co., 112 Broadway, New York, N.Y., has issued bulletin M2, "Foster Waste Heat Type Marine Superheaters; General Instructions," 32 pgs., with illustrations of the superheater, and of a number of steamships in which it has been installed.