

Canadian Railway and Marine World

June, 1919

Shops, Yard, Etc., Canadian National Railways, at Leaside, near Toronto.

Rapid progress is being made towards the completion of the Leaside shops, yard, etc., which the Canadian National Rys. are building for the handling of their Toronto traffic. In 1911, Canadian Northern Ry. interests acquired a large tract of land adjoining the C.P.R. Leaside Jct. station, the intention being to build large terminals there. The intention then was to make Leaside not only a railway terminal, but also to build there a railway town, and for that reason, the property acquired was considerably in excess of that needed for terminal purposes. The Town of Leaside was incorporated by the Ontario Legislature in May, 1913, and about the same time, much of the land was subdivided for building purposes, and a considerable number of dwellings were put up, but no railway development took place.

The terminal site is immediately to the east and north of Leaside Jct. station, where the C.P.R. Montreal-Toronto line divides, one line running to Toronto union station, and the other to the North Toronto joint station in which the C.P.R. and the Canadian National Rys. have equal rights. On the latter line, the Canadian Northern Ontario Ry. acquired running rights, and also the use of the joint North Toronto station. The Canadian Northern had no immediate connections to this line, but in 1913, authority was granted for to build a short connecting line from Duncan, on the Toronto-Sudbury line, to the C.P.R. line, some 1,200 yards east of the new terminal, and this line was built shortly afterwards. Authority was also granted for a connecting line from the Toronto-Ottawa line, to connect with the C.P.R. near the same point as the Duncan cut-off, but this line has not been built. The Canadian National Rys. have not commenced using the North Toronto station, but are still using the Toronto union station. Should it be decided to use North Toronto station for Ottawa and Montreal trains, it will be necessary to build the second cut-off line mentioned above.

The present Canadian National Rys. terminals adjoining their Rosedale station, in the Don Valley, 3.8 miles from Toronto union station, and some 3 miles south of where the Toronto-Sudbury and Toronto-Ottawa lines diverge. This site is very lowlying, being only slightly above river level, and each spring considerable trouble has been experienced by floods tying up traffic. In addition, the site, being practically surrounded by the high slopes of the Don Valley, is incapable of any considerable expansion, and the economical handling of motive power and car equipment has been impossible due to the congestion. The handling of traffic has been further made more difficult by the Don River, which runs through the center of this terminal. In consequence, it became necessary to look out for a site with better natural advantages, and which would also be capable of expansion as traffic required. For these reasons Leaside was selected, a big determining factor being the new joint sta-

tion at North Toronto, into which it is expected all Canadian National passenger trains will run ultimately and the proximity of Leaside to it, 2.3 miles.

The Leaside site required very little grading, only 150,000 yds. in all. A start was made in the autumn of 1917, but it was not until May, 1918, that rapid progress was made, and the grading was completed the same year by Franceschini & Co. A general plan of the terminal layout is given herewith. Adjoining the C.P.R. double track line on the south, there is a C.P.R. freight yard. The whole area to the north required a certain amount of grading, a slight rise at the west end being despoiled to fill in the other end. This, and a side cutting for the west end approach track, were all the grading required. The soil is of a sandy nature, easily worked, but has a clay sub-base, which holds the water, and necessitated considerable draining to keep the site dry.

To the immediate north of the C.P.R. freight yard, provision is made for a 15-track freight classification yard, with capacity for 617 cars. With the exception of the west ladder and part of the second track, none of these tracks are being laid for the present, but the site is completely graded.

At the west end of the main part of the yard, is the locomotive house, the first unit of which, for 10 locomotives, is complete. It is solid brick construction, on concrete foundations, with stalls 14 ft. wide in front, 30 ft. wide at the rear, and 100 ft. long, and with tracks arranged for dropping locomotive and tender wheels. It will be steam heated, from a steam plant of 4 stationary Babcock and Wilcox boilers in an adjoining building. This boiler room is of the same type of construction as the locomotive house. A small adjoining building accommodates the locomotive foreman's office, and petty stores. There is also a small 12-bunk rest house adjoining, which is being used as the local office during construction. This is a one-story frame structure, 24 x 32 ft. on post foundations, and will be equipped with washroom, showerbaths, lavatories, and sitting and bedrooms.

All the leads to the turntable are not installed, but it is the present intention to put in five, two ingoing, two outgoing, and a coaling track between. Along these five tracks are the coal, water and ash handling facilities. The coal and water plants are complete, and the ash plant soon will be. The turntable, which is installed, is of steel, with an 80-ft. span, operated by an air motor. The coal handling plant is Fairbanks-Morse type, with a capacity for 200 tons, and is located adjoining the south outgoing track. The water tank is of wood on concrete foundations of a 60,000 gal. capacity, supplying a standpipe between the two outgoing tracks. The ash plant will be mechanically operated, and is located on the north incoming track.

The locomotive house is capable of extension to a 45-stall capacity, but pend-

ing this extension, it is the intention to put in 8 spurs from the east ladder track, for car repair work, and for storing snow ploughs, ditchers, etc.

To the north of the locomotive house are the locomotive shop, blacksmith shop, passenger car shop, and auxiliary buildings. The locomotive shop is completed, and is now having the machinery installed. It is a brick building, 151 x 300 ft., on concrete foundations, with a gallery for the lighter machinery along one side, and contains 12 pits, one of which will be equipped with a 200 ton electric pit jack for lifting a locomotive free from the drivers. The machinery will be laid out in groups, for the efficient handling of the repair work. The shop tracks are long enough to take a complete locomotive and tender.

In front of the locomotive shop, and running its full length, is a transfer table, 372 ft. long, with an 80-ft. span, electrically driven. The leads to this transfer table are at either end of the table pit, two to the south, and one to the north, both of which are being completed.

The passenger car shop also adjoins the transfer table, and is also served by it. It is also a brick structure on concrete foundations, and is 140 x 283 ft. with 12 tracks. It is complete, except for the machinery installation.

Back of the locomotive shop is the blacksmith shop, also a brick structure on concrete foundations, and is 70 x 100 ft. It is nearing completion, but none of the machinery is installed.

To the east of the passenger car shop, is the passenger car yard, of 15 tracks, with a capacity for 140 eighty-ft. cars. Only 4 of these tracks are being completed at present. There is a small store in connection with these yards, at the rear of the passenger car shop, and to the south of the yard, a small wheel shop and drop pit for passenger car work. These buildings are completed. The yard also contains a 2000-ton ice house, of frame construction, 176 x 30 ft., with ice doors along the side.

The stores and office building, between the locomotive house and locomotive shop, is nearing completion. It is of brick on concrete foundations, and is 60 x 180 ft. with a large storage platform at the east end. The stores part is two stories high, and the office section, three stories high. This office will accommodate the shop and stores officials.

At the east end of the yard are the operating offices, a two-story frame structure, 36 x 60 ft., on concrete foundations. The basement will contain a boiler room, coal room, vault, locker room and lavatories for train crews. On the first floor will be the yardmaster's office, agent's office, local office, supervisor's office, lunch room, officers' and men's lavatories, and on the upper floor will be offices for the superintendent, assistant superintendent, chief and other train dispatchers, general office, rest room, and women's lavatories.

To the north of the present projected

buildings, provision is made for a freight car repair shop, 100 x 200 ft., and a planing mill, 100 x 100 ft., both with the necessary trackage as shown on the plan.

As mentioned above, only a small portion of the projected tracks have been laid. The accompanying plan shows in varying lines the tracks laid, those which it is the intention to lay as soon as possible and those which it is proposed to lay to complete the yard. A further development is also under consideration, but what additional tracks will be laid will doubtless depend upon whether the G.T.R. is taken over by the Dominion Government and made part of the Canadian National Rys. system, in which case the G.T.R. yards at York and Mimico would become available for the consolidated lines.

The terminals have been planned under the direction of A. F. Stewart, Chief Engineer, Eastern Lines. The plans for

the buildings were prepared by G. C. Briggs, Supervisor of Buildings, and were built by the C.N.R., directly under his supervision. The yard construction is under the supervision of R. A. Baldwin, Assistant Engineer, Eastern Lines; W. Huffman, being the Resident Engineer on the work.

It is expected that the whole operating staff of the Toronto Division, including the Superintendent, Assistant Superintendent, Chief Dispatcher, Supervisors of Track, Bridge and Building Supervisors, Trainmaster, Yardmaster and Storekeeper, will move into the Leaside offices, sometime after July 1. The mechanical staff that will be located at Leaside has not yet been decided on. To meet the requirements of the staff and workmen who will have to live in Toronto for want of convenient housing, a special train will be operated between North Toronto station and Leaside.

Traffic Manager, Western Lines, C.P.R., Winnipeg, born at Chatham, Ont., June 7, 1861.

W. R. MacInnes, Vice President, Traffic, C.P.R., Montreal, born at Hamilton, Ont., June 7, 1867.

J. R. C. Macredie, Engineer, Saskatchewan District, C.P.R., Moose Jaw, born at St. John, N.B., June 13, 1880.

James Manson, Assistant to Vice President, C.P.R., Montreal, born at Thurso, Scotland, June 8, 1863.

J. D. Morton, General Auditor, Canadian National Rys., Toronto, born at London, Ont., June 15, 1857.

L. Mulkern, Division Freight Agent, C.P.R., St. John, N.B., born at London, Ont., June 18, 1871.

R. P. Ormsby, Secretary, Canadian National Rys., Toronto, born at Arklow, Ireland, June 26, 1869.

J. E. Pinault, General Superintendent Canada & Gulf Terminal Ry., Matane, Que., born at Rimouski, Que., June 24, 1884.

F. R. Porter, Assistant General Freight Agent, Grand Trunk Pacific Ry., Winnipeg, born at Stratford, Ont., June 13, 1875.

F. Price, Superintendent of Car Service, G.T.R., Montreal, born there, June 11, 1864.

Allan Purvis, General Superintendent, Ontario District, C.P.R., Toronto, born at Batavia, Java, June 29, 1878.

L. J. Reycraft, Solicitor, Manitoba and Saskatchewan Districts, C.P.R., Winnipeg, born in Orford Tp., Kent County, Ont., June 20, 1868.

W. F. Sawyer, Assistant Superintendent, Division 5, Quebec District, Canadian National Rys., Edmundston, N.B., born at Drummondville, Que., June 13, 1883.

J. R. Shaw, General Agent, Passenger Department, Canadian Pacific Ocean Services, Ltd., Hong Kong, China, born at Montreal, June 28, 1871.

J. L. Simpson, agent, C.P.R., Port Mc-

Birthdays of Transportation Men in June.

Many happy returns of the day to:

Jas. Anderson, Vice President, Sandwich, Windsor & Amherstburg Ry., Windsor, Ont., born at Ayr, Ont., June 20, 1851.

F. F. Backus, General Manager, Toronto, Hamilton & Buffalo Ry., Hamilton, Ont., born at Rochester, N.Y., June 4, 1860.

W. C. Bowles, General Freight Agent, Western Lines, C.P.R., Winnipeg, born at Montreal, June 3, 1875.

J. H. Boyle, Superintendent, Brownville Division, New Brunswick District, C.P.R., Brownville Jct., Me., born at Waterloo, Que., June 26, 1869.

F. P. Brady, General Manager, Eastern Lines, Canadian National Rys., Montreal, born at Haverhill, N.H., June 22, 1853.

H. W. Brodie, General Passenger

C.P.R., Calgary, Alta., born at Gorrie, Ont., June 26, 1884.

J. M. R. Fairbairn, Chief Engineer, C.P.R., Montreal, born at Peterborough, Ont., June 30, 1873.

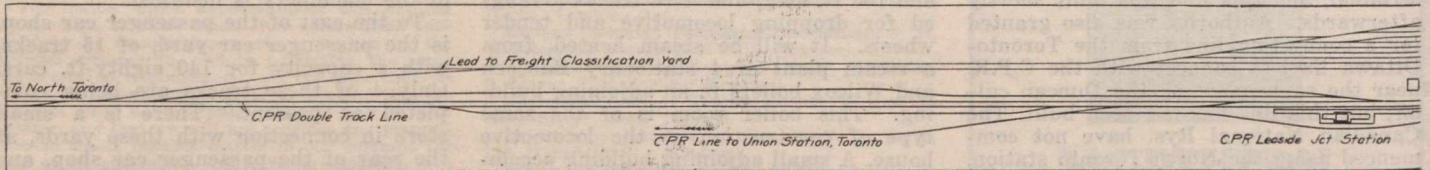
W. E. Foster, Solicitor for Ontario, G.T.R., Montreal, born at Belleville, Ont., June 27, 1866.

A. A. Goodchild, General Storekeeper, Eastern Lines, C.P.R., Montreal, born at Peckham, London, Eng., June 3, 1866.

L. R. Hart, General Agent, Passenger Department, C.P.R., Boston, Mass., born at Fairport, N.Y., June 3, 1877.

J. A. Heaman, Assistant Chief Engineer, Grand Trunk Pacific Ry., Winnipeg, born at Memphis, Tenn., June 3, 1874.

L. K. Jones, I.S.O., Assistant Deputy Minister, Department of Railways and Canals, Ottawa, born at Port Hope, Ont., June 9, 1849.



Leaside Terminals, Canadian National Railways, West End.

Agent, lines west of Revelstoke, C.P.R., Vancouver, B.C., born at Fredericton, N. B., June 8, 1874.

J. A. Clancey, Trainmaster, Districts 27 and 28, Detroit Division, Grand Trunk Western Lines Rd., Durand, Mich., born at Walkerton, Ont., June 8, 1884.

G. W. Coburn, Resident Engineer, C. P.R., Brandon, Man., born at Upper Melbourne, Que., June 24, 1877.

E. P. Coleman, General Manager, Dominion Power & Transmission Co., Ltd., Hamilton, Ont., born at Taunton, Mass., June 14, 1867.

W. S. Cookson, General Passenger Agent, G.T.R., Montreal, born at Port Jervis, N.Y., June 12, 1871.

E. L. Cousins, Manager and Chief Engineer, Toronto Harbor Commission, Toronto, born there, June 11, 1883.

A. Craig, City Passenger Agent, C.P.R. Hamilton, Ont., born there, June 5, 1884.

A. E. Doucet, Quebec, ex-District Engineer, National Transcontinental Ry., born at Montreal, June 9, 1860.

Knowlson Elliott, City Freight Agent,

M. W. Kirkwood, General Manager, Grand River Ry., and Lake Erie & Northern Ry., Galt, Ont., born at Cheltenham, Ont., June 8, 1877.

L. Lavoie, Assistant General Purchasing Agent, Canadian National Rys., Toronto, born at Rimouski, Que., June 22, 1879.

A. C. Lytle, Assistant Superintendent of Construction, Montreal Tramways Co., Montreal, born at Hemmingford, Que., June 6, 1854.

J. D. McAuley, Commercial Agent, Grand Trunk Pacific Ry., and Grand Trunk Pacific Coast Steamship Co., Ltd., Prince Rupert, B.C., born at Plantagenet, Ont., June 11, 1884.

R. S. McCormick, Chief Engineer and General Superintendent, Algoma Central & Hudson Bay Ry., Sault Ste. Marie, Ont., born at Quaker City, Ohio, June 22, 1873.

S. J. McLean, Dominion Railway Commissioner, Ottawa, born at Quebec, June 14, 1871.

C. E. McPherson, Assistant Passenger

Nicoll, Ont., born at Mount Forest, Ont., June 9, 1866.

H. H. Smith, Car Accountant, Canadian National Rys., Toronto, born at Quebec, Que., June 14, 1872.

N. Van Wyck, Purchasing Agent, Canada Steamship Lines, Ltd., Montreal, born at Hamilton, Ont., June 29, 1883.

V. G. R. Vickers, ex-Manager, Foreign Department, and Superintendent, Atlantic Division, Dominion Express Co., now Vice President, The Holden Co., Ltd., Montreal, born at Toronto, June 1, 1866.

A. E. Warren, General Manager, Western Lines, Canadian National Rys., Winnipeg, born at Taunton, Eng., June 9, 1874.

Walter White, Trainmaster, G.T.R., Palmerston, Ont., born at Toronto, June 4, 1866.

The Victoria and Island Development Association is raising a special fund of \$7,000 for publicity purposes to direct tourist travel to Vancouver Island.

Amended Regulations for Payment of Transportation Charges.

The Canadian Railway War Board's circular 97, issued Feb. 3, also supplemented 1 thereto, both of which were published in Canadian Railway and Marine World for March, have been cancelled by circular 107, issued by the board May 7. We are advised that the change has been made in deference to numerous requests from representative sections of the shipping public in various parts of the country. While the original instructions were formulated after lengthy investigation and consideration, and obviously would have had the effect of removing certain objectionable features of railway transportation credit arrangements, which have existed in the past, by placing of railways and shippers on the same level, many shippers objected strongly to giving bonds as a matter of principle, their contention being that in many instances they are stronger financially than the surety company from which they would require to get a bond.

receipt of the attached form of application from financially responsible firms for credit, may extend credit to such firms under the arrangement described hereunder:

(a) All bills or accounts rendered by the carrier to consignor or consignee, as the case may be, from the 1st to the 7th of each month (both dates inclusive), shall be paid on or before the 14th of that month.

(b) All bills or accounts rendered by the carrier to consignor or consignee, as the case may be, from the 8th to the 14th, of each month (both dates inclusive), shall be paid on or before the 21st of that month.

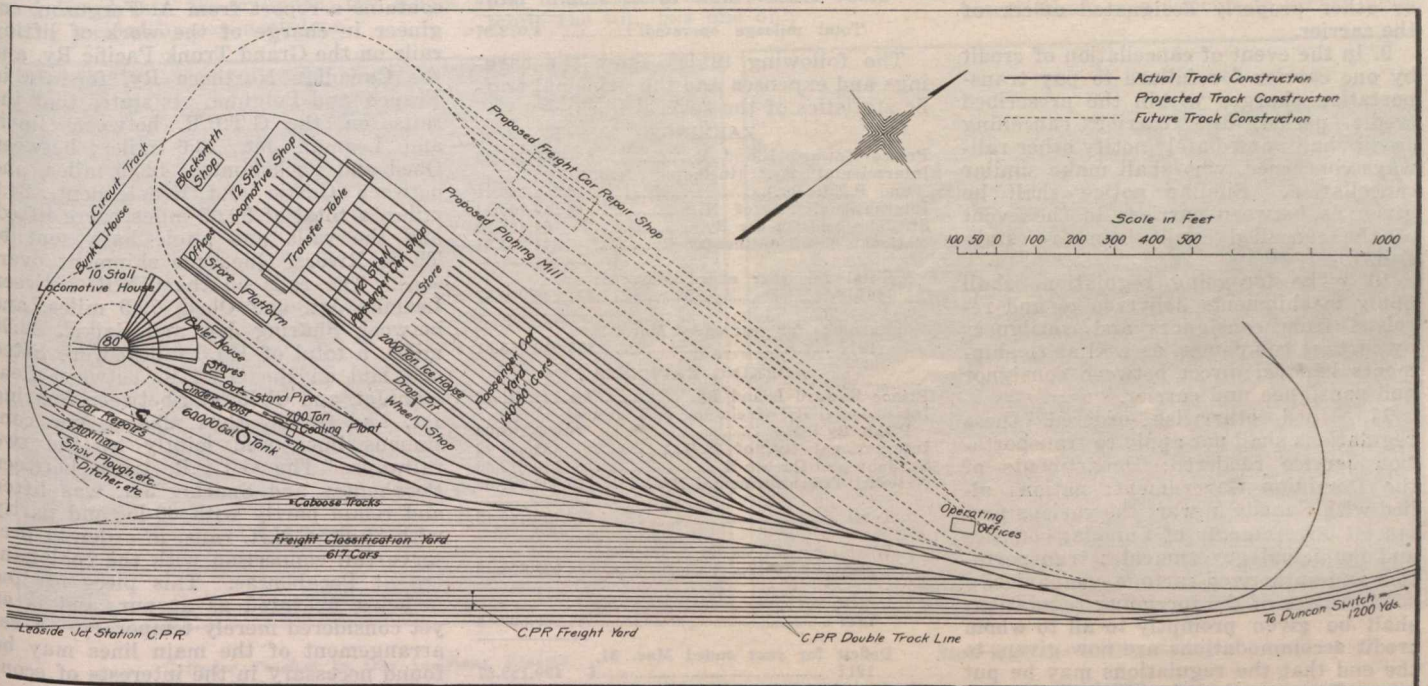
(c) All bills or accounts rendered by the carrier to consignor or consignee, as the case may be, from the 15th to the 21st of each month (both dates inclusive), shall be paid on or before the last day of that month.

(d) All bills or accounts rendered by

sufficient cause for cancellation of credit.

4. When application for weekly credit has not been filed and the literal application of the terms of this order would involve undue delay to traffic or the congestion of facilities on account of holding shipments, either collect or prepaid, until cash is actually in the hands of railways, the carrier's agent may be authorized to grant 48 hours credit to responsible parties.

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. Where acceptance of draft



Leaside Terminals, Canadian National Railways, East End.

The new rules were worked out after several conferences between representatives of the board and the shippers, and it is believed they will prove satisfactory to all concerned. The new regulations are as follows:

Effective June 1, the collection of transportation charges (including demurrage, storage, and all charges incidental to transportation) 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, upon

the carrier to consignor or consignee, as the case may be, from the 22nd to the last day of each month (both dates inclusive), shall be paid on or before the 7th of the month following.

In all cases bills are payable within the prescribed period at the designated office of the carrier. Unless otherwise arranged between the interested parties the designated office shall be that of the carrier's agent from whom notice of charges due is received.

3. Credit arrangements shall be made with the treasurer or other duly authorized officer of the carrier, which officer shall state the amount of credit to be allowed and shall designate the nature of surety required, if any.

Upon completion of arrangement for credit as above, a carrier may accept and forward prepaid shipments or may deliver collect consignments in advance of payment of all charges thereon to the amount covered by the credit arrangement.

Failure to pay such charges within the time prescribed shall be considered

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. 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 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.

7. 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 representa-

tive 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. 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 under-charges and over-charges. Consignor or consignee should make the change in red ink, and the tariff authority for the change should be indicated upon the bill.

8. 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 agent 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.

9. 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.

10. 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.

11. 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; counties and municipal governments; transportation and authorized cartage companies.

12. 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.

Application for Credit.

..... Railway
To (agent of railway).....
Application is hereby made for credit accommodation in settlement of freight charges at.....
.....
Full name of applicant.....
Location of principal office.....
Reference: Bank with which business is transacted

Amount desired

It is understood and agreed that all bills will be paid in accordance with the following regulations:—

(a) All bills or accounts rendered by the carrier to consignor or consignee, as the case may be, from the 1st to the 7th of each month (both dates inclusive), shall be paid on or before the 14th of that month.

(b) All bills or accounts rendered by the carrier to consignor or consignee, as the case may be, from the 8th to the 14th of each month (both dates inclusive), shall be paid on or before the 21st of that month.

(c) All bills or accounts rendered by the carrier to consignor or consignee, as the case may be, from the 15th to the 21st, of each month (both dates inclusive); shall be paid on before the last day of that month.

(d) All bills or accounts rendered by the carrier to consignor or consignee, as the case may be, from the 22nd to the last day of each month (both inclusive), shall be paid on or before the 7th of the month following.

In all cases bills are payable within the prescribed period at the designated office of the carrier. Unless otherwise arranged between the interested parties the designated office shall be that of the carrier's agent from whom notice of charges due is received.

Failure to pay bills as prescribed by the foregoing shall be considered sufficient cause for cancellation of credit.

..... Applicant

To the (vice president, treasurer or other designated officer).

To the best of my knowledge and belief credit as applied for by as above may be extended without risk or loss, and I recommend that it be granted.

The average amount of freight bills for credit period is

..... Agent.

Canadian Government Railways Operating Results.

The report of the Railways Department, issued recently, contains information as to the operation of Dominion owned railways for the year ended Mar. 31, 1918. The lines then operated as the Canadian Government Railways were as follows:

	Miles.
Prince Edward Island Ry.....	276.23
Intercolonial Ry.	1,521.44
Vale Ry. (leased from Acadia Coal Co.)	5.95
New Brunswick and P.E.I. Ry.....	36.05
International Ry. of New Brunswick.....	111.30
St. John and Quebec Ry.....	119.87
National Transcontinental Ry.	1,811.28
Lake Superior branch, leased from Grand Trunk Pacific Ry.....	191.75

Total mileage operated..... 4,073.87

The following tables show the earnings and expenses and the principal traffic statistics of the several lines:

EARNINGS

Prince Edward Island Ry.....	\$ 656,227.22
Intercolonial Ry. (including N.B. and P.E.I. Ry.).....	18,758,186.41
International Ry. of N.B.....	140,900.44
St. John and Quebec Ry.	64,438.29
National Transcontinental Ry.....	7,621,204.51

Total for year ended Mar. 31, 1918\$27,240,956.87

Earnings for year ended Mar. 31, 1917\$23,539,758.61

WORKING EXPENSES

Prince Edward Island Ry.	\$ 1,123,291.12
Intercolonial Ry. (including N.B. and P.E.I. Ry.).....	21,090,298.09
International Ry. of N.B.....	385,508.92
St. John and Quebec Ry.....	140,972.43
National Transcontinental Ry.....	10,660,389.89

Total\$33,400,460.45

Working expenses for year ended Mar. 31, 1917.....\$24,029,398.48

Deficit for year ended Mar. 31, 1918\$6,159,503.58

Deficit for year ended Mar. 31, 1917\$ 490,139.87

TRAFFIC STATISTICS.

	P.E.I.	Inter-colonial	Inter-national	St. John and Quebec	Nat. Trans-continental
Loco. mileage	482,433.	11,299,693.	167,848	86,018	4,203,467
Train mileage	334,165	8,477,349	154,213	75,491	3,505,576
Car mileage	2,212,178	132,310,931	1,152,061	468,691	33,041,501
Ratio of expenses to gross earnings %	171.17	112.43	273.60	218.77	139.83
Earnings per mile of lines....	\$0.99	\$1.64	\$0.84	\$0.75	\$1.81
Earnings per train mile.....	\$1.43	\$2.18	\$0.91	\$0.85	\$2.17
Expenses per train mile.....	c.269.95	c.246.69	c.249.98	c.186.74	c.304.10
Expenses per mile of line.....	\$3,265.69	\$13,376.04	\$3,463.69	\$1,176.04	\$5,322.42
Passengers carried	417,570	4,578,783	35,034	48,785	942,663
Total mileage	10,698,269	287,984,379	1,483,746	1,249,885	52,220,476
Total freight, tons	244,521	7,837,310	156,013	66,930	3,900,920
Freight mileage	10,292,005	2,070,196,937	11,036,566	2,508,458	1,381,246,552

The following interest charges or rentals were charged in the operating accounts of the railways mentioned:—

Intercolonial Ry. :—	
Interest on purchase price New Brunswick and P.E.I. Ry.....	\$ 2,692.60
Rental Vale Ry.	1,200.00
International Ry. of N.B. interest.....	90,000.00
National Transcontinental Ry. :—	
Rental Lake Superior branch.....	600,000.00
	\$693,662.60

In addition to the deficiency on operating account there was charged to income account \$16,769.13 paid to the St. John and Quebec Ry. under the operating agreement with the New Brunswick

Government for the April-Sept. half year, and there is \$18,497.81 due the company for the Sept.-March half year, thus making a total deficiency of \$111,801.08 on this line for the fiscal year.

Rails Lifted From Canadian Northern and Grand Trunk Pacific Railways for War Work.

The Dominion Railways Department's report for the year ended Mar. 31, 1918, contains a report from A. Ferguson, engineer in charge of the work of lifting rails on the Grand Trunk Pacific Ry. and the Canadian Northern Ry. for use in France and Belgium. It states that the rails on the G.T.P.R. between Imrie and Leaman Jet., 13.6 miles; between Obed and Pochahontas, 42.25 miles, and between Geikie and Resplendent, 34.8 miles, a total of 90.65 miles, were lifted, and the rails and angle bars sent to Three Rivers, Que., for shipment overseas. The rails on the C.N.R. between Leaman Jet. and Obed, 79.9 miles, and between Snaring Jct. and Geikie, 22.05 miles, a total of 101.5 miles, were lifted and laid on the G.T.P.R. between Leaman Jct. and Obed, and between Snaring Jct. and Geikie, thus making one continuous line, used jointly by the two railways. The G.T.P.R. track between Pochahontas and Snaring Jct. was lifted and relaid partly with 60-lb. and partly with 80-lb. C.N.R. rails, in order to preserve rail connection with the coal miners at Pochahontas. This piece of line is being operated as a spur, and is as yet considered merely temporary. A rearrangement of the main lines may be found necessary in the interests of econ-

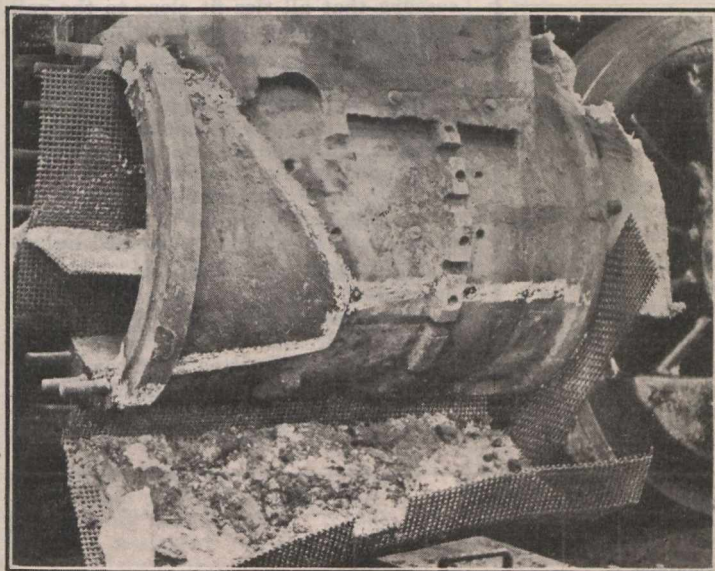
omy. The first shipment of the released rails left Edmonton for Three Rivers, June 17, 1917, and the last Oct. 26, 1917. The total shipment amounted to 23,408 gross tons of rails, and 1,110 gross tons of angle bars.

Interswitching, Etc., at Owen Sound.—A press report states that W. F. Tye, consulting engineer, Montreal, has been making an investigation into the most feasible means of securing interswitching between the C.P.R. and the G.T.R. at Owen Sound, Ont., and the building of a union station there.

Railway Mechanical Methods and Devices.

Welding Broken Cylinder at Canadian National Railways Winnipeg Shops.

An interesting instance of the usefulness of the oxy-acetylene process in the locomotive shop, has been supplied by L. Wedge, General Foreman, Locomotive Shop, Canadian National Rys., Winnipeg. One of the locomotives had developed a crack, extending from about the center of the cylinder, in a nearly straight line, towards the rear, and bifurcating towards the front, as shown along the patched lines in the accompanying illustration. This crack had been welded several times, but apparently, from the double nature of the crack, the weld did not prove a success. In consequence, the V-shaped piece shown was entirely removed, and a pattern made of the same shape, from which a casting was made and fitted into the cylinder, the whole being welded by oxy-acetylene.



Cylinder Patched by Oxy-Acetylene Process.

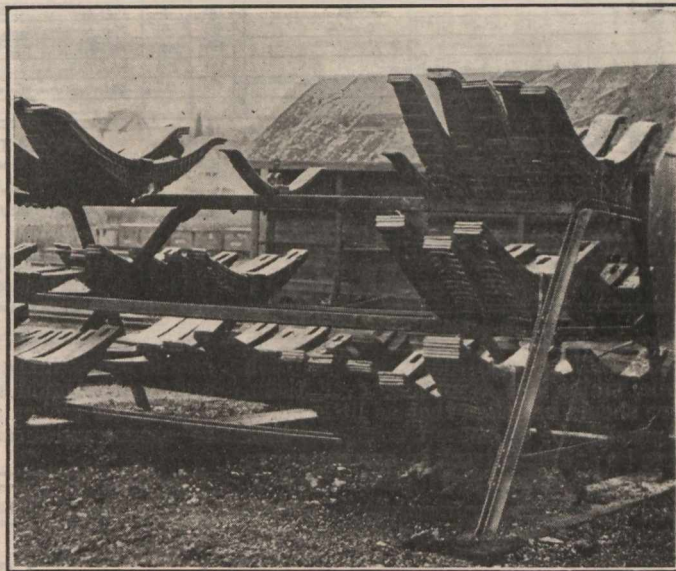
The mating edges of the new piece, and the single crack in the other end of the cylinder, were grooved in the approved manner. A charcoal fire was built under the cylinder, and the welding commenced on the rear end inside, continuing along towards the front, the welding edges meanwhile being maintained at a cherry red heat by the charcoal fire. On the completion of the inside welding, a charcoal fire was built inside on the wire netting framework shown, and the outside edges welded. The fire on the outside was rebuilt, and both fires maintained for about 12 hours, when the whole mass was allowed to cool off slowly by allowing the fire to extinguish, and the cylinder to cool down in the remaining ashes. After cooling for about 24 hours, the boring bar was applied, and the inside trued out.

National Tie and Timber Co. Ltd. has been incorporated under the Ontario Companies Act, with \$20,000 authorized capital, and office at Sudbury, Ont., to carry on the business of lumbermen. G. J. Valin, F. Woods and A. J. Manley, Sudbury, Ont., are provisional directors.

Spring Storage Rack at C.P.R. Shops, Nelson, B.C.

A simple steel rack of novel design is used at the C.P.R. shops, Nelson, B.C., for storing locomotive and car springs, a wide assortment of which it is necessary to always have on hand at such divisional points. The construction and use are exemplified in the accompanying illustration.

The end frames are A-shaped, 4½ ft. high, of 2 in. angles, resting on ties buried in the ground. At intermediate points, there are 2 cross bars of the same section. Between these end frames, are 5 shelves, 12 ft. long, made up of 2 in. angles, the legs of which are inwards and upwards, supporting between them a wooden plank, 6 in. wide. These shelves are braced at the ends and midway in the manner shown. The lower and middle tiers have each two shelves, while the top, has one only.



Steel Rack for Storing Springs.

The springs, being symmetrical, balance at their bands on these narrow 6 in. platforms. This is one of the special features of the rack, as it is possible to place a truck in front of the rack, and by a slight effort, upset a spring into it, for conveyance to the locomotive house or car rip tracks.

This rack was built by F. D. Warner, Locomotive Foreman, to whom we are indebted for the foregoing particulars.

A Railway Coal Freight Case—Judgment was given in the Ontario Court of Appeal May, 13, in Niblock vs. G.T.R. The original action was for \$24,053.51 for coal sold, but the New York Central Rd. intervened with a claim for freight. On Mar. 20, Justice Falconbridge directed the payment into court of \$19,283.17 with interest, less \$60 cost of an interpleader action, the plaintiff to notify the New York Central Rd. before applying for payment out. After hearing arguments, the court on May 13, allowed the appeal and gave judgment for the plaintiff, but gave leave to the G.T.R. to apply for a new trial in respect of the claim for freight.

Reclaiming High Speed Steel.

All the tool steel over the entire Atchison, Topeka and Santa Fe Railroad is reclaimed, all such steel being returned to the Topeka shop for general inspection, the portion considered serviceable being held in reserve to be made up into small tools.

The practice with regard to short lengths of high speed steel is to make tips for lathe and planer tools, although a certain part can be used with patented tool holders. The tools on which the high speed steel tips are applied, are of ordinary tire steel. The tips are faced with Norway iron, and welded to the recessed tool ends by the oxy-acetylene process. These tools are said to have proved very satisfactory in service, and made possible the continuous operation of many of the tools which would have had to close down for want of the tool steel which was difficult to secure under

war conditions.

These tipped tools are made not only in the plain forms, but also for form cutters, such as those used in wheel lathes, formed to give the finished contour of the wheel.

G.T.R. Bridge Assessment.—The G.T.R. international bridge across the Niagara River at Bridgeburg, Ont., has heretofore been assessed in that municipality at \$300,000. The assessor is reported to have increased the assessment for this year to \$1,250,000, and it is reported that notice of appeal has been served upon the town clerk, by the G.T.R. on behalf of the International Bridge Co.

Steel Rails for Russia.—A press report of May 7, stated that 3,000 tons of steel rails, which had been stored at Vancouver, B.C., for the past two years, were being loaded on a steamship for Vladivostok, Siberia, their original destination. This is part of the large orders of railway material placed in America by the Imperial Russian Government, and help up in transit at the time of the revolution pending an understanding.

The Best Methods of Raising Railway Track.

At the Roadmasters and Maintenance of Way Association's last annual convention, Geo. Beckingham, Superintendent of Track, G.T.R., Montreal, presented the committee's report on the best method of raising track, which, after considerable discussion and some amendments was adopted was follows:

and night signals should be put on as soon as work actually commences, and at night where necessary.

All tie renewing should be done before ballast is unloaded. Track should be lifted against current of traffic 3 in. or 4 in., or sufficient to facilitate the removing of ties. Track should receive a general

6 jacks should be used depending on the number of men to the gang, but no less than 4 jacks should be used. Both rails should be lifted simultaneously and jacks should be placed two ties ahead of the ones that are to be tamped. The rear jack should not be lowered until track where the two forward jacks are, has been raised level.

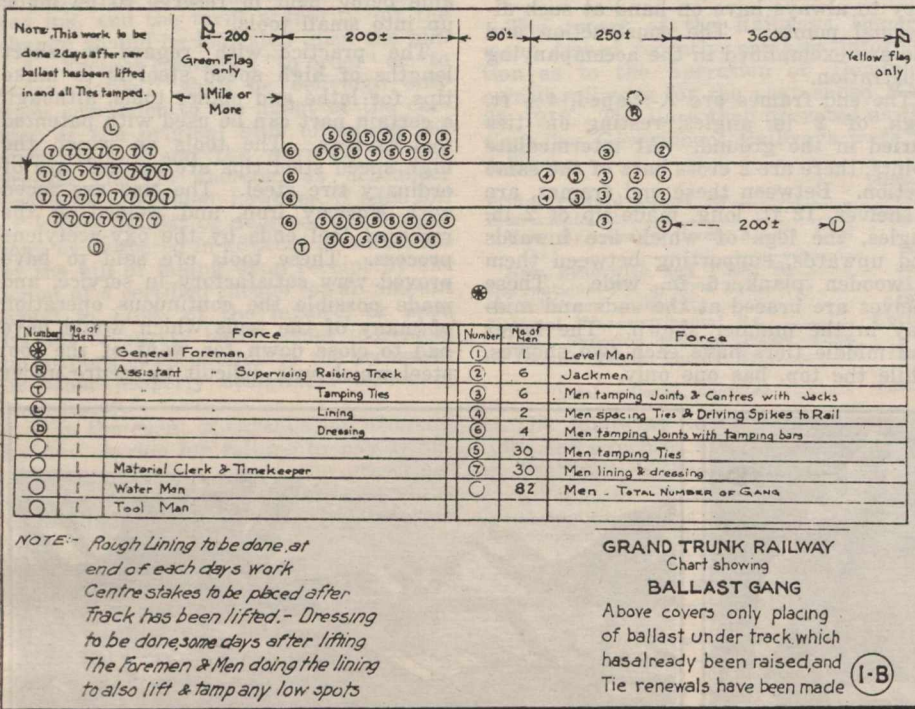
The raising of track should be done by sighting one rail and raising the opposite rail to a level. The same applied to elevation on curves. The elevation should be put in by placing the required size of block on the low side underneath.

Men should be assigned specially to the handling of jacks, also jack handles or levers. This, of course, applies to where there is a large gang of men, but the same can be followed with a small gang of, say, 30 men. Assigned men should tamp joints and centers, and a track jack should be used ahead of tamping to lift any low spots before dressing.

Before tamping the ties it is very necessary that all ties fit close to the rail, are spaced, and spikes properly driven.

Gravel and cinder ballast where track is being lifted 3 in. or more should be tamped with shovels and all joints tamped with a tamping bar, one foot inside and out. In stone ballast, the ties should be tamped with a tamping bar, tamping pick, or some approved mechanical device. The center of the tie for a space of 18 or 20 in. should be tamped lightly.

Gravel and cinder ballast should be dressed to slightly below top of tie as shown on appended print. Stone ballast should be dressed to 3 in. below top of tie and your committee is of the opinion when first placing stone ballast in track, there should not be less than 10 in. underneath the tie. The track should receive



Tracks in ballast pit should be put in good condition and maintained in such while trains are operating over them. Care should be taken that as little curve as possible be on these tracks, and that there be sufficient track to operate pit to the best advantage and its full capacity.

All equipment such as steam shovel, lidgerwood, ploughs, ballast levellers, cars, locomotives, etc., should be in first class condition.

Before commencing to haul ballast, supervisors, trainmasters and all concerned should get together, with a view to making plans and having them thoroughly understood in order to get the best results as to the manner in which the ballast should be hauled and unloaded. At the end of each day's work a telegraphic report should be forwarded to all concerned, stating the number of cars loaded, delays, etc.

Supervisor should have it thoroughly understood as to the manner in which ballast is to be unloaded, that is, so many yards per mile, taking into consideration the height track is to be lifted.

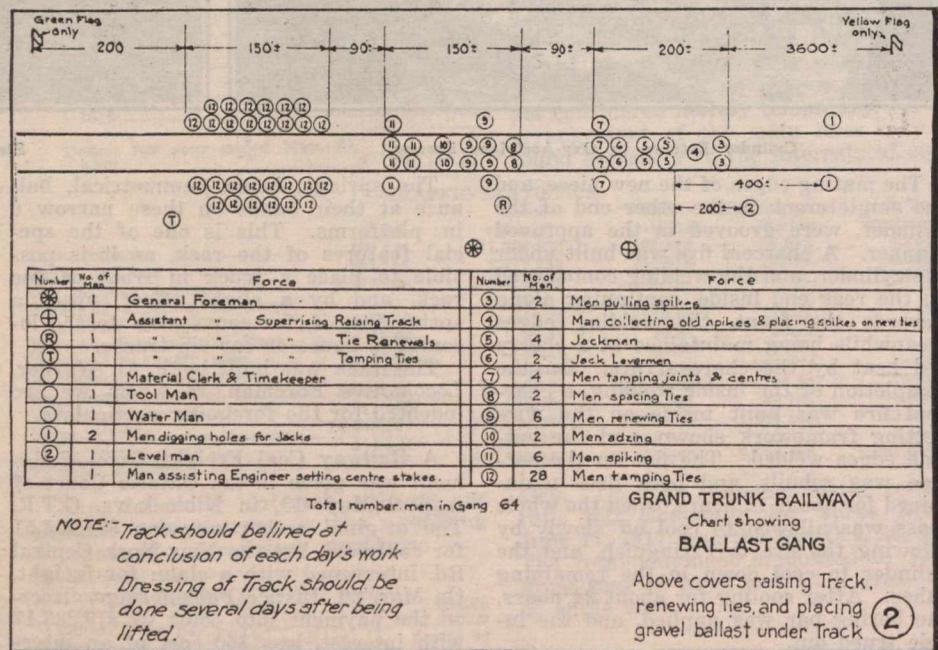
Care should be taken in securing competent foremen to do the lifting and furnishing sufficient men for the work. The number of men is largely governed by existing conditions; that is, amount of track to be lifted, location, traffic, etc. Supervisor should see to it that good and sufficient tools (more particularly track jacks, as there should be at least two spare jacks), and good boarding cars well equipped, be furnished the men.

Before distributing ballast, all drains, both surface and tile, should be properly made or laid.

Slow orders properly designated by day

good surface and remaining old ballast should be levelled evenly between the ties and used to build shoulder.

Shoulder stakes should be set in order to ensure uniformity in subgrade and



shoulder. Track should be put in good line in order that it be moved as little as possible after being lifted with new ballast. After ballast has been unloaded, stake levels should be set to lift track "to."

In lifting track over new ballast 4 to

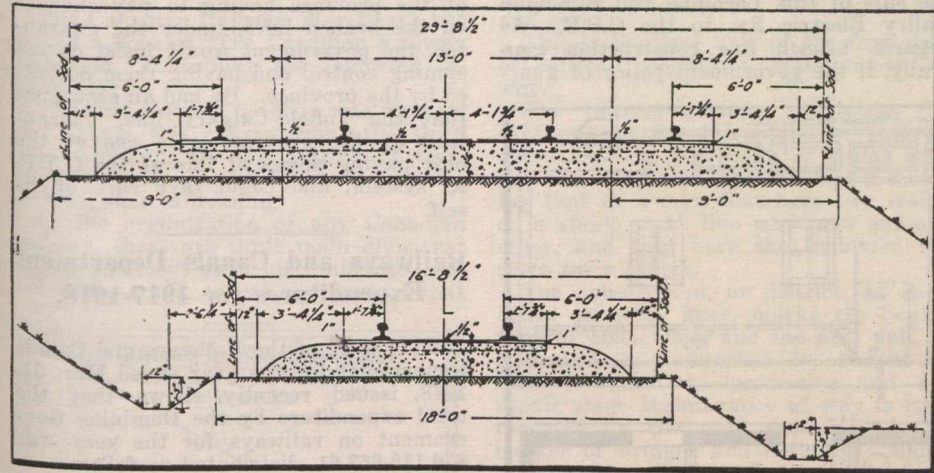
two lifts, one of 6 and one of 4 in. Track should be lined to center stakes and levelled before dressing.

Where there is a surplus of ballast after dressing, it can be moved by loading it on to push or flat cars, depending on the distance it is to be hauled.

Recommended Organization of Gangs.

After the committee's report had been adopted, as above, Mr. Beckingham sub-

mitted the following recommendations for the organization of track raising gangs:—



Proposed Standard Ballast Sections.

mitted the following recommendations for the organization of track raising gangs:—

Gang of 65 men raising track on high gravel ballast where ties are being renewed: 1 general foreman; 1 assistant foreman, raising track; 1 assistant foreman, supervising renewal of ties; 1 assistant foreman, tamping ties; 1 material clerk and timekeeper; 1 water man; 1 tool man; 2 men pulling spikes; 1 man collecting old spikes and placing spikes on new ties; 1 leverman; 2 men making jack holes; 1 or 2 flagmen; 4 jack men; 2 jack levermen; 1 man assisting engineer setting center stakes; 4 men tamping joints and centers; 2 men spacing ties; 6 men renewing ties; 6 men spiking; 2 men adzing; 28 men tamping ties.

Flagmen are not always required. Track should be lined at conclusion of each day's work. Dressing of track should be done several days after being lifted.

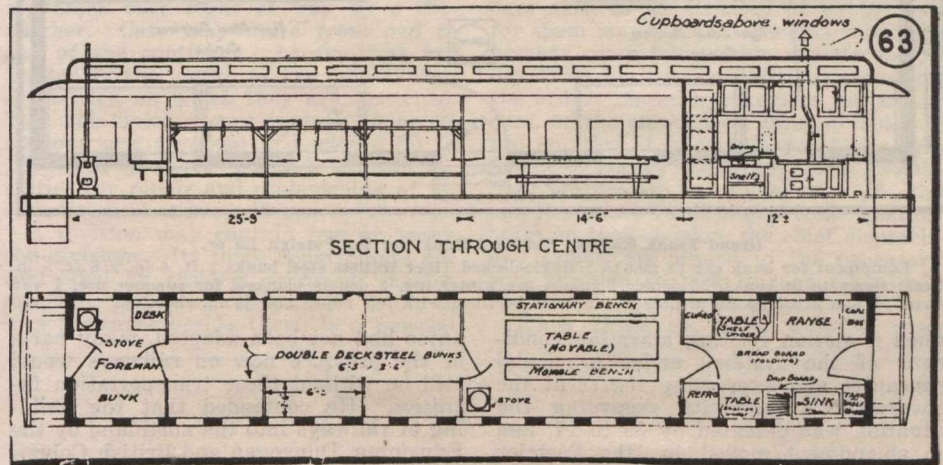
Gang of 65 men raising track on old gravel ballast, where ties are being renewed, building shoulder, etc: 1 general foreman; 1 assistant foreman, raising track; 1 assistant foreman, supervising

tie renewals; 1 assistant foreman, tamping ties; 1 material clerk and timekeeper; 1 tool man; 1 flag man; 1 water man;

1 level man; 4 men pulling spikes; 1 man collecting old spikes and placing on new ties; 6 men renewing ties; 6 men spiking; 6 jack men; 2 men spacing ties; 2 men adzing; 4 men tamping joints and centers with jacks; 29 men tamping and levelling old ballast between ties and shoulder.

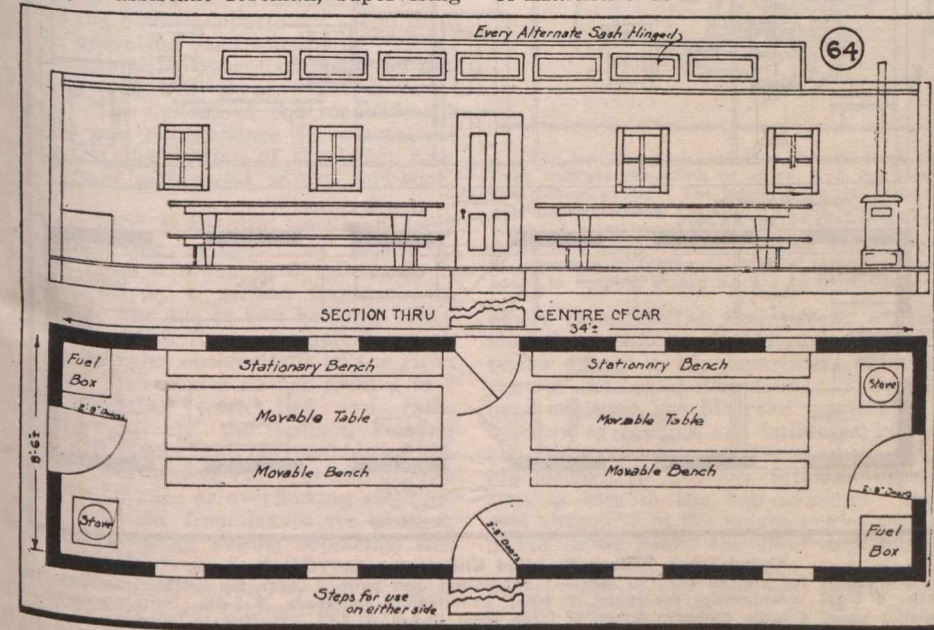
Old ties to be put in piles each day. Track to be lined at conclusion of each day's work.

Gang of 80 men raising track on high gravel ballast after track has been lifted on old ballast and tie renewals made: 1 general foreman; 1 assistant foreman, raising track, 1 assistant foreman supervising, tamping of ties; 1 assistant foreman, lining; 1 assistant foreman, dressing; 1 material clerk and timekeeper; 1 water man; 1 tool man; 1 level man; 6 jack men; 2 men spacing ties and driving spikes to rail; 4 men tamping joints and centers with jacks; 4 men tamping joints with tamping bars; 30 men tamping ties; 10 men lining and



Grand Trunk Railway Standard Combination Boarding Car for Regular Gang.

Equipment for combination boarding car for 12 men—2 galvanized iron pails, 1 large tea kettle, 1 small tea kettle, 2 2-gal. graniteware saucepans, 2 1-gal. graniteware saucepans, 2 2-gal. iron saucepans, 2 roasting pans, 1 1-qt. graniteware sauce pan, 1 large dishpan, 1 large pastry mixing pan, 2 steel frying pans, 1 tea pot, 1 coffee pot, 1 doz. pie plates, 1 1/4 doz. graniteware plates, 1 1/4 doz. graniteware cups, 1 1/4 doz. graniteware soup bowls, 2 doz. graniteware saucers, 2 sets salt and pepper shakers, 2 sugar bowls, 4 pudding dishes, 2 meat dishes, 1 1/4 doz. knives, 1 1/4 doz. forks, 1 dipper, 1 2-qt. pitcher, 1 1-qt. pitcher, 1 1/4 doz. teaspoons, 1 1/4 doz. dessert spoons, 1 large butcher knife, 1 bread knife, 1 pastry board, 2 scrub brushes, 1 rolling pin, 2 large iron spoons, 1 can opener, 1 large fork, 2 doz. hand towels, 2 doz. dish towels, 3 wash basins, 1 6-hole range, 2 van stoves, 2 brooms, 28 pairs blankets, 14 mattresses to fit bunk 2 ft. 6 in. x 6 ft. 5 in., 14 pillows, 7 Tiger boltless double deck steel bunks.



Grand Trunk Railway Standard Dining Car for Track Laborers.

Equipment for dining car (25 men)—2 1/2 doz. graniteware plates, 2 1/2 doz. graniteware cups, 2 1/2 doz. graniteware soup bowls, 4 doz. graniteware saucers, 2 1/2 doz. knives, 2 1/2 doz. forks, 2 1/2 doz. teaspoons, 2 1/2 doz. dessertspoons, 3/4 doz. tablespoons, 2 sets salt and pepper shakers, 2 sugar bowls, 2 van stoves. When fitted up for winter use, cars to be lined with felt paper and 3/8 in. sheeting.

lifting low spots; 20 men dressing.

Rough lining to be done at the end of each day's work, center stakes to be placed after track has been lifted. Dressing only to be done several days after lifting. The foreman and men doing the lining also to lift and tamp any low spots. See additional plans on pg. 296.

Ties for United States Railways.—

The U.S. Railroad Administration's purchasing department is ordering from Pacific coast tie lumbermen, 2,000,000 railway ties, aggregating 75,000,000 ft. b.m. Of these 500,000 ft. will be ordered from Oregon mills, while the remainder will be bought in the State of Washington. The ties will be no. 1 common lumber, running about 40 ft. to the tie. The purchase price is reported to be \$20 to \$21 per 1000 ft. b.m. The specifications require heartwood. The ties are to be used on the New York Central, Baltimore & Ohio, Pennsylvania and other eastern railways.

The Coquitlam Terminal Co. called a meeting of its bond holders to be held in London, Eng., May 28, to appoint the Colonial Trust Co. of Victoria, B.C., as trustee of its bonds, in the place of the British American Trust Co.

Alberta Provincially Aided Railways.

The annual debate in the Alberta Legislature on the provincial railway policy, was brought to a conclusion Apr. 17,

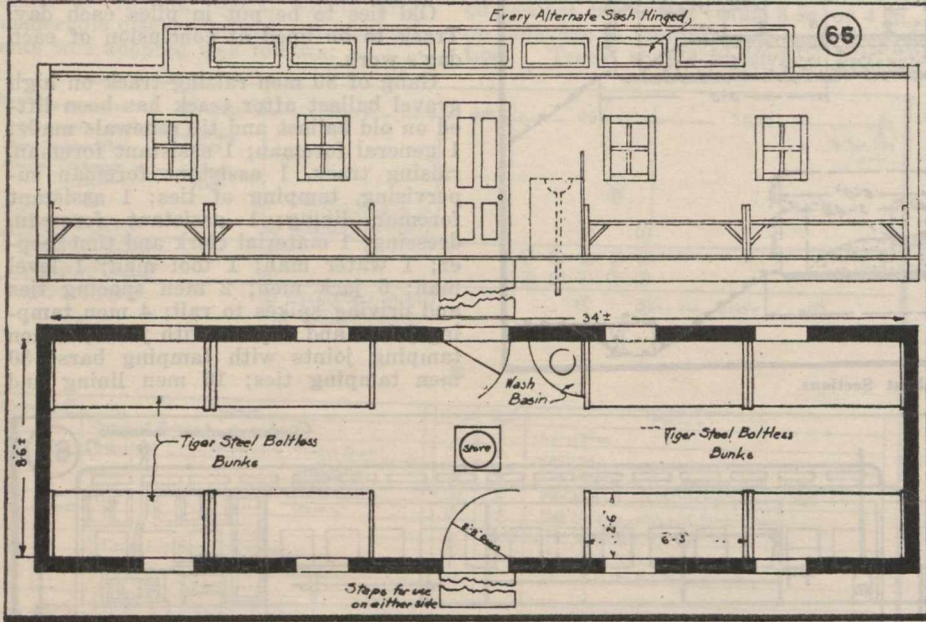
government, he was prepared to admit, could not successfully operate railways and negotiations were in progress for the sale of this Lacombe and Blindman Valley Electric Ry. to the C.P.R. As regards branch line construction generally, if the government policy of guar-

for a portion of the distance built the route was none of the best. As to the Grand Trunk Pacific Ry., in the event of the province having to pay charges on the branch lines, under the guarantee, the government would insist on assuming control and having them operated by the province. He had an assurance that the Tofteld-Calgary line, guaranteed by the province, was one of the best paying pieces of line of the G.T.P.R. system, and could take care of itself.

Railways and Canals Department Expenditures for 1917-1918.

The report of the Railways and Canals Department for the year ended Mar. 31, 1918, issued recently, shows that the total expenditure by the Dominion Government on railways for the year was \$70,113,667.61, distributed as follows:—

Capital account:—	
Rolling stock for C.G. Rys.....	\$24,892,985.80
Intercolonial Ry.	5,860,132.59
Prince Edward Island Ry.	378,433.29
New Brunswick and P.E.I. Ry.....	120,663.61
International Ry. of N.B.....	5,369.51
Quebec and Saguenay Ry.....	1,371,334.97
National Transcontinental Ry.....	690,543.19
Hudson Bay Ry.....	1,879,699.00
Miscellaneous	345.00
Total	\$34,699,416.96
Revenue account:—	
Working expenses	38,400,460.45
Miscellaneous	15,100.00
Income account	347,007.44
Subsidies	720,404.75
Total	\$70,113,664.61



Grand Trunk Railway Standard Bunk Car for Foreign La.or.

Equipment for bunk car (8 men)—8 single-decked Tiger boltless steel bunks 2 ft. 6 in. x 6 ft. 5 in. 8 mattresses to fit bunks, 16 double blankets for winter use, 8 double blankets for summer use, 1 van stove. When fitted up for winter use, cars to be lined with felt paper and 7/8 in. sheeting.

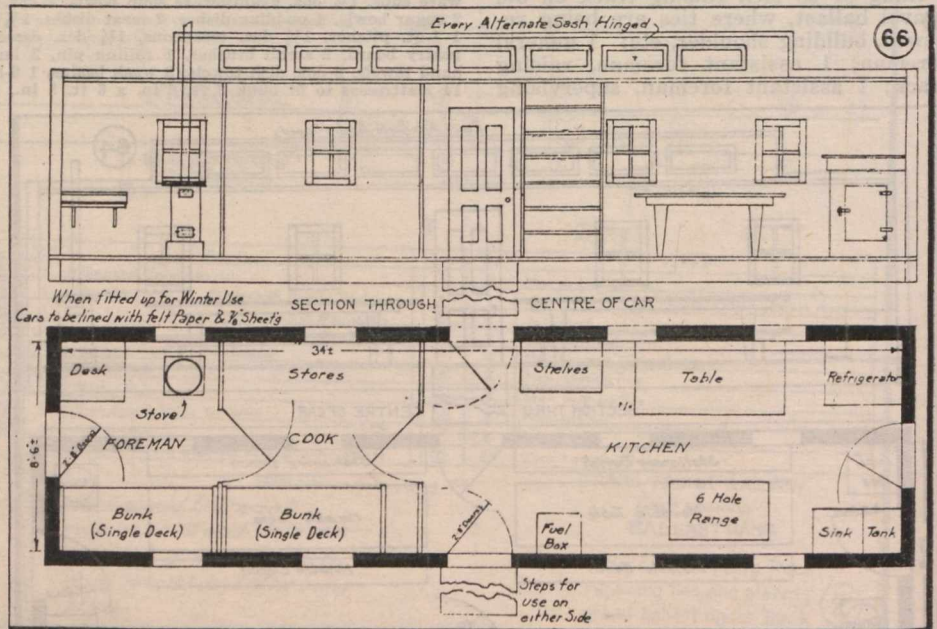
when a motion reciting alarming conditions of the systems under provincial guarantee and expressing regret at the government's inactivity regarding the situation was defeated by 29 to 17, and an amendment moved by the Premier commending the government for taking over the Lacombe and Blindman Valley Electric Ry., expressing satisfaction at the government's railway policy which extended to excellent, but remote, portions of the province transportation facilities so urgently needed and recommending to the Dominion Government that further financial assistance to the railways guaranteed by the province, was adopted on a similar vote.

The Premier referred to negotiations being carried on with the Dominion Government for the taking over of the Edmonton, Dunvegan and British Columbia Ry., and its allied lines, stating there was a proposal that the system be leased on certain terms. The Canadian railway systems are desirous of having connection with the northland, but no proposals would be considered by the government, but such as would protect the province in regard to its guarantees. The province has a splendid asset in the system, which is worth every cent of the guarantee. He would not guarantee that the operation of the line would merit the cost of operation and all fixed charges within the next year, but he did claim that it would prove to be a paying investment. He was not responsible for the initiation of the policy, but as a member of the legislature, he had endorsed it. Outlying districts were clamoring for railways and the government had taken the steps considered most advisable for giving this service. Without government aid the Blindman Valley area would still be without the measure of railway accommodation it had. The

antee had not been adopted, many parts of the province now on railways would still be without these transportation facilities. He contended that the building of railways into the northland by the Edmonton, Dunvegan and British Columbia Ry., and its two allied companies, was justified in every essential. The cost of construction had been largely increased on account of the war, and

The expenditure on canals and their earnings is referred to in our Marine Department, elsewhere in this issue.

The miscellaneous expenditure made by the department amounted to \$1,198,062.28, of which \$846,305.53 was spent on restoration of railway property destroyed in the Halifax explosion; \$350,545.35 for war appropriation, and \$1,211.40 for sundries.



Grand Trunk Railway Standard Kitchen Car for Track Laborers.

Equipment for kitchen car (25 men)—4 galvanized iron pails, 1 large tea kettle, 1 medium tea kettle, 2 2-gal. graniteware saucepans, 2 1-gal. graniteware saucepans, 2 2-gal. iron saucepans, 2 roasting pans, 4 large pudding dishes, 2 large meat dishes, 1 2-qt. graniteware saucepan, 1 large dishpan, 1 large pastry mixing pan, 2 large steel frying pans, 1 large tea pot, 1 large coffee pot, 1 1/2 doz. pie plates, 1 dipper, 2 large butcher knives, 2 bread knives, 2 large iron spoons, 1 pastry board, 2 scrub brushes, 1 rolling pin, 1 can opener, 2 large forks, 2 doz. dish towels, 2 doz. hand towels, 1 6-hole range, 1 van stove, 2 brooms 4 pairs blankets, 2 mattresses to fit bunks 2 ft. 6 in. x 6 ft. 5 in., 2 pillows, 2 single deck Tiger boltless steel bunks.

The Canadian Railway War Board on the Canadian Railway Situation.

The Canadian Railway War Board has issued a booklet "The Canadian Railway Situation," containing the following information:—

The first railway problem was finance; the second was construction; the third was salesmanship—the getting of traffic; the fourth, forced by the exigencies of war, was railroading.

In the organization of any Canadian railway, there are three main divisions: One department stirs up, builds up, and persuades traffic to use the lines of that

and cars.

This is the first unit of the first part of railroad operation: maintenance of way.

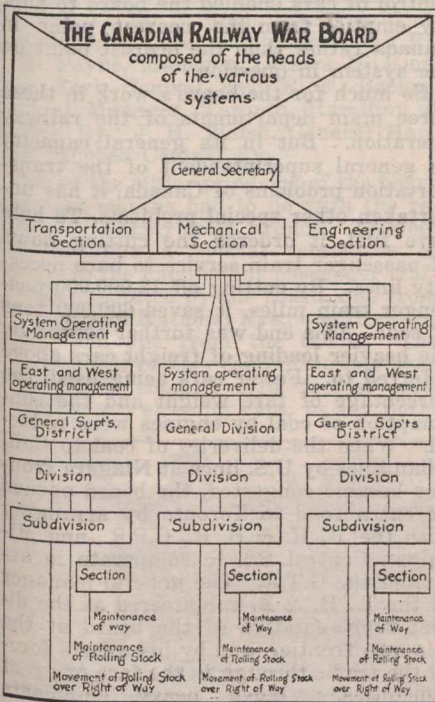
The railway station symbolizes the first unit of the third part of railway operation—the movement of trains over the line. It is less significant as a building that as a sign that here two trains on a single track line may pass one another, and that here the trainmen receive their orders.

The sub-division, or district, as it is called on some lines, marks the beginning of officialdom, and the first unit of command in the second department of railway operation—locomotive and car repair shop. Maintenance of way is represented by the road master and the master of bridges and buildings; maintenance of rolling stock by the locomotive and car foremen; movements of rolling stock over right of way by a dispatcher. Cars may move from end to end of the continent. Locomotives are limited to the length of the sub-division or district, on which they are stationed. This sub-division may contain 15 or 20 stations and sections, and extend 90 to 120 miles or more. At each end are facilities for repair and replenishing of locomotive and car supplies.

A division may contain few or many sub-divisions. Its three departments are controlled by resident engineer, master mechanic and chief dispatcher. Over, or in some cases beside them, is a general

his constantly changing family of cars—freight and passenger. In his office he has deputies, the dispatchers and telegraphers. Along the line, on subdivisions, are his outer deputies, the station agents and their telegraphers. On his train sheets are recorded the respective positions of the locomotives as he and his staff move them and their cars one after another, and one past another, between the ends of the division. These sheets show passenger trains dropping and taking up travellers, mail, luggage, and express. They show, also, the way freights setting out full cars to be unloaded or empties to be filled, or leaving l.c.l. shipments on the station platform, or picking up full cars to be forwarded to the next division. There the chief dispatcher will pass them to the next, who will pass them to the next, and so on as far as that car must go. So emptied cars also, to be disposed of as the call for them may dictate. To this chief dispatcher come telegraphic reports once a day from his outside deputies, recording the orders placed by shippers for empty cars, or the empties on hand, or both. If the empties at a certain point are sufficient to supply the orders, local switching movement is sufficient. If the empties must be brought from another point on that division, the chief dispatcher's orders are issued to the necessary way freights to pick up and move said empties to the designated point.

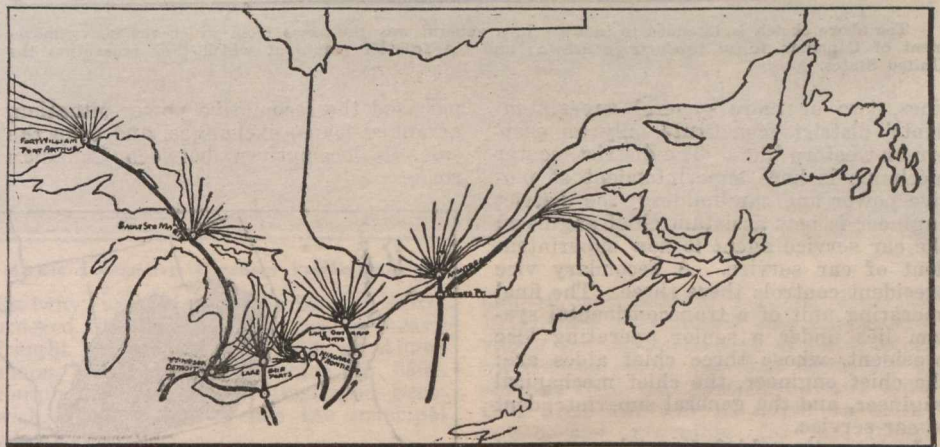
When there are more empties than



company. It advertises, sends solicitors, and by various means, fosters new industries on its lines. It is called the traffic department. Next stands the department that keeps books, counts cash and arranges loans or investments. It is called the finance department. The third is the operating department.

The actual movement of traffic on any railway requires three main kinds of work: The upkeep of the roadbed; the supply and maintenance of locomotives and cars; the moving of the latter over the former with speed, safety, and economy.

Here, then, is the first unit of railway operation—the section. It varies in length from 4 miles to 6 miles. It is commanded by a section foreman. In winter he has one or two helpers. They watch the track for major defects, weak or broken rails, obstructions on the right of way. In summer he has from 4 to 7 men, replacing worn ties and rails, "shouldering up" the ballast, keeping grass and weeds from encroaching on the ballast, maintaining culverts and ditches to carry off rain or overflowing streams. As soon as the frost leaves the ground, the section gang begins replacing ties—a tie lasts from 6 to 10 years only. Low spots are forced up, by driving thin, flat pieces of wood (shims) between rail and tie. New rails replace worn rails. The precise spread between the rails is checked and corrected. The outer rail on a curve is kept properly lifted (aligned) so as to offset the side-thrust of engines



The movement of coal into Canada from the United States is shown roughly above. The heavy lines indicate the ports of entry, and the light lines the general area covered by each main coal distributing center. The heaviest traffic crosses the frontier at Niagara, a strategic point which was ably protected from congestion in the winter of 1917-18 by the personal efforts of one of the members of the Administrative Committee, appointed for the purpose, F. F. Backus, General Manager, T., H. & B. The heavy movement of coal comes in the hardest operating season—winter. The co-operation of importers in taking delivery of their stock in the summer of 1918, was of great assistance to the board in keeping a safe margin of track room.

officer co-ordinating their work: a divisional superintendent. Here is the first senior official in the department of train control—the chief dispatcher. The resident engineer has his road masters and masters of bridges and buildings in the sub-divisions. The master mechanic has his locomotive and car foremen representing him in the sub-divisions. But real authority in the movement of trains is not found below the chief dispatcher.

A chief dispatcher finds and distributes, collects and disposes, passes out to the next divisions, or receives from them in turn—cars. The resident engineer having provided the right of way, the master mechanic having contributed the engines, the chief dispatcher moves, by means of the latter over the former,

orders for them within any division, or vice versa, the chief dispatcher is supplied or relieved, as the case may be, by the authorities outside his district.

The superintendent is meantime patrolling his division, co-ordinating and directing the work of resident engineer, master mechanic, and his chief dispatcher.

Next above the division comes a general division, or general superintendent's district. Here the master mechanic has become district master mechanic, the engineer is district engineer, and the chief dispatcher is now car service agent or superintendent of transportation. The latter is a magnified chief dispatcher. The actual movements of trains do not concern him now, but the juggling of

cars has here become a very serious matter. Just as the chief dispatcher receives reports of cars wanted and cars available from the stations on his division, so the car service agent or superintendent of transportation receives reports from his chief dispatchers. If he can balance his empty cars with his cars wanted, so much the better. Otherwise he obtains extras or disposes of his surplus at the direction of the next highest order of car control official.

Two or more general divisions or general superintendents' districts may constitute a system. If it is called a system, the three main departments are controlled now by a general superintendent of motive power and car building, a chief engineer, and a general superintendent of transportation. A vice president, or two vice presidents, co-ordinate the three. In the case of transcontinental

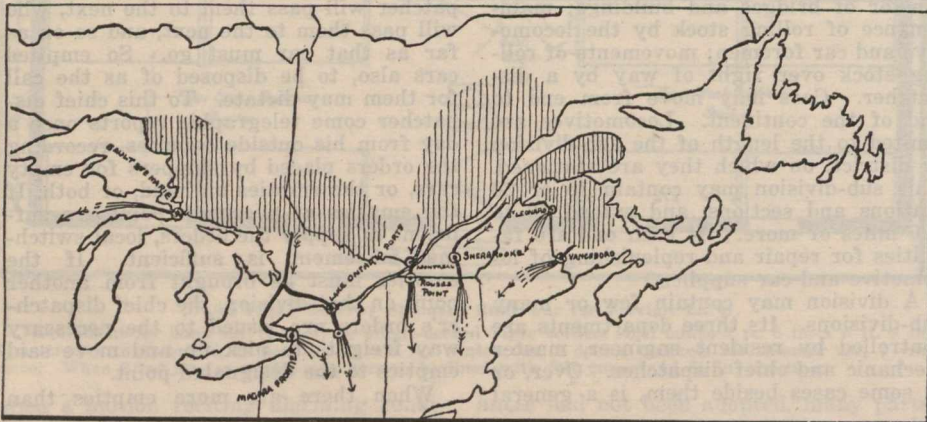
eye a clear picture of the economic machinery of the Dominion.

The final unit of railway operation in Canada is the Canadian Railway War Board. Consider Canada as a railway division. The Canadian Railway War Board is the superintendent of the division. A special committee takes the place of the resident engineer and deals with questions of maintenance of way. For example, take the matter of a supply of rails for renewal purposes. The board was finally able to obtain an order from the Dominion Government for sufficient steel to renew the sections of line in greatest need.

Another committee represents the master mechanic, whose concern is chiefly with locomotives and other rolling stock. The board has provided locomotives to lines or parts of lines lacking power to carry special loads. It has su-

pulpwood or other materials, could not replace Canadian cars as grain carriers—the Canadian standard of repair being higher and better observed. Vigorous measures were taken to effect the return of Canada's 22,000 "lost" cars from the congested U.S. lines. In a few months the number "lost" had dwindled and it is normal today. The board undertook to persuade shippers to pack cars more skilfully, and thereby make better use of car space. As a result, the average load per car rose from 21.74 tons in Jan. 1917, to 26.71 tons in Nov., 1918. This represented a saving in cars, in track room, in tractive effort, in locomotive, and in fuel. The centralized control of cars enabled the board to supply empties from the nearest point in Canada rather than the nearest point on the system in question.

So much for the board's work in these three main departments of the railway operation. But in its general capacity as general superintendent of the transportation problems of Canada, it has undertaken other special problems. To help save fuel, it ordered the cutting down of passenger train service to bare necessity lines. By cutting off 12,000,000 passenger train miles, it saved 600,000 tons of coal. This end was further served by the heavier loading of freight cars above referred to. Fewer cars being used, the percentage of tare weight and the consumption of coal by engines were reduced. When the deliveries of coal to Canadian lines by U.S. lines at Niagara frontier became congested, the board opened an extra road to Toronto by arranging with the T. H. & B. R., C.P.R., and Michigan Central Rd. to co-operate in assisting the G.T.R. The general manager of the T. H. & B. volunteered as the direct representative of the board at the Niagara frontier, and by his efforts forced the traffic through in the face of great difficulties. When heavy shipments threatened to overwhelm one line be-



The above sketch is intended to indicate in a general way the areas from which the heavy movement of Canadian forest products is drawn; and the frontier points at which they cross into the United States.

lines, two or more general superintendents' districts constitute only an eastern or western lines. The district master mechanic is here superintendent of motive power and car building; the district engineer is now assistant chief engineer; the car service agent is now superintendent of car service. A secondary vice president controls these three. The final operating unit of a transcontinental system lies under a senior operating vice president, whose three chief aides are: the chief engineer, the chief mechanical engineer, and the general superintendent of car service.

Just as the chief dispatchers report their car supply to the car service agent, and the car service agent or superintendents of transportation, report these reports to the superintendent of car service, or general superintendent of transportation, so these in turn pass on the car situation every day to the general superintendent of car service. This is a complex and difficult office. Knowledge of trade conditions, of weather, of probable developments of traffic, influences this high officer in the strategic disposition of his empty cars. Loaded cars have definite moves to make. The empties must be shifted to let the loaded cars pass to the points where they are most likely to be wanted. He must decide whether to allow more cars to leave his lines for foreign lines. He must observe where they are bunching, and where they are thinly scattered. He must work his empties westward in the summer to be ready for the grain in the fall. So with the overseas export freight movement, and the movement of mine and forest products. He must have in his mind's

pervised the locomotive power situation, arranged loans, exchanges, and even the sale of locomotives between Canadian roads.



The movement of wheat across Canada begins in the late summer and proceeds throughout the winter. It will be seen from the above map that indirect routing is practically impossible in this as in all other Canadian traffic.

The chief dispatcher of a division, or general superintendent of car service on a system, has his counterpart on the board in its transportation section. Like the dispatcher supplying cars to the stations in his division, the board's transportation section protects the car supply of the Dominion. The first measure taken in 1917, when car shortage was felt severely for the first time in recent years, was to stop the drain on the Canadian supply by refusing to allow Canadian goods for the United States to be loaded into Canadian cars. The shipper was supplied instead with returning U.S. empties. These, while sound enough for

tween Toronto and Montreal, or on any other route, the board instructed the sister lines to share the load. In the west, a breakdown in the service from the Drumheller coal fields was minimized by sending prompt assistance from the other railways; and the chance of this embarrassment recurring was removed by adding special trade facilities in the summer of 1918.

In the labor field, trouble was prevented by the prompt application of the so-called McAdoo scale of wages (the U.S. scale), practically as soon as it was applied in the U.S.

To ensure the amicable adjustment of

the details of this scale, and of all other railway labor disputes, the board formed, with the consent of the labor unions concerned, the Canadian Railway Board of Adjustment No. 1, in which six officials from various railways meet six railway labor leaders and settle all questions.

To protect the country's transportation interests, the board obtained from Toronto University a free supply of anti-flu vaccine, for 45,000 western railway employes, and the same was administered through railway physicians.

The board's chief business is dealt with by the administrative committee, consisting of Grant Hall, Vice President, C.P.R. (chairman); M. H. MacLeod, Vice President, operation, etc., Canadian National Rys.; W. D. Robb, Vice President, transportation and maintenance, G.T.R.; S. R. Payne, Manager, Ottawa Division, New York Central Ry.; F. F. Backus, General Manager, Toronto, Hamilton & Buffalo Ry.; J. H. Walsh, General Manager, Quebec Central Ry.

One of the major problems of the board in recent months had to do with the return of the army from France. To meet this situation a special committee of experts in the handling of passenger traffic was appointed by the board, one from the Canadian National Rys., one from the C.P.R. and one from the G.T.R. The first problem of this committee has been to assemble colonist cars, tourist cars, and standard sleeping cars, to say nothing

This committee has handled about 30,000 returning soldiers every month since the winter commenced. The rate in summer time will probably be as high as 45,000 per month. The seriousness of this task may be judged, perhaps, by the fact that 14 shiploads, including some of the world's greatest ships such as the Aquitania and the Olympic, were handled between Nov. 27 and Jan. 4, involving 1123 locomotive trips and scores of special trains.

Railway Rolling Stock Orders and Deliveries.

The G.T.R. has received 7 six-wheel switching locomotives from its Montreal shops, leaving 7 of an order of 20 still under construction there.

Canadian National Rys. has received the following additions to rolling stock, 13 colonist cars, 9 Hart ballast cars, and 44 overhauled heater cars, and 25 repaired wooden box cars, from Canadian Car and Foundry Co.; 278 general service cars from Eastern Car Co.; 102 steel frame box cars from National Steel Car Co.; 18 cabooses from Preston Car and Coach Co.; 23 colonist cars from Pullman Co., and 6 six-wheeled switching locomotives from Canadian Locomotive Co.

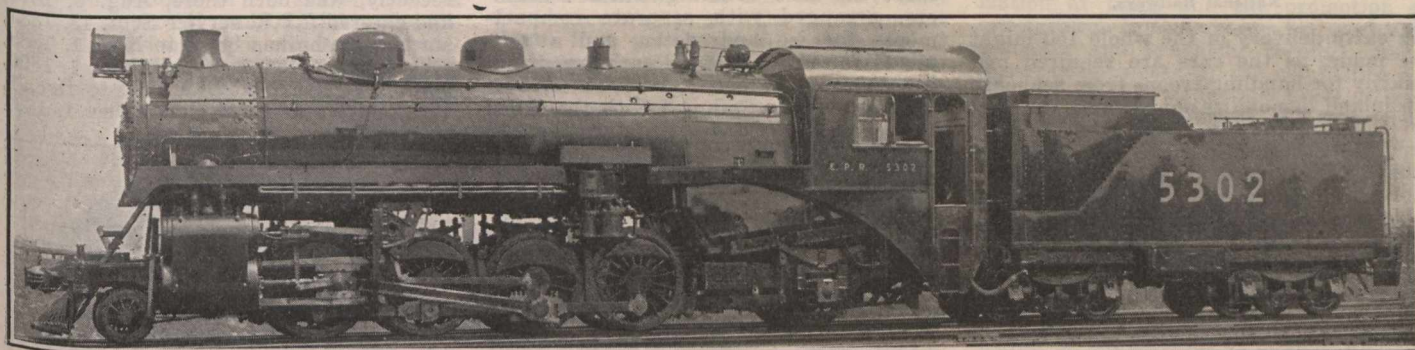
The C.P.R., as stated in Canadian

The Inverness Railway and Coal Co.'s Position.

The Nova Scotia House of Assembly passed the following resolution unanimously recently, and directed that copies be sent to the Dominion Minister of Railways and to A. W. Chisholm, M.P., for Inverness: "That in the opinion of this house it would be in the public interest, and would help to solve the transportation problems in the Province of Nova Scotia if the Dominion Government were to purchase or lease the Inverness Ry. and Coal Co.'s railway and extend it to Cheticamp and make other necessary extensions in the County of Inverness, and that these lines be part of the Canadian National Rys."

The Inverness Ry. and Coal Co. was the title under which the Inverness and Richmond Ry. and the Inverness-Richmond Collieries and Ry. Co. of Canada Ltd., were consolidated and amalgamated in 1902. The Inverness and Richmond Ry. was incorporated by the Nova Scotia Legislature in 1887, and the railway was completed and opened for traffic, June 15, 1901. The line extends from Point Tupper to Inverness, 61 miles, with a total of 65.5 miles of track laid with 56 lb. steel. The company owns and operates collieries at Inverness, the output of which is shipped over its line to several points for water shipment.

A meeting of the 5% first mortgage



Mikado Locomotive, Canadian Pacific Railway.

Railway and Marine World for April, ordered 10 mikado locomotives for heavy freight service, to be built at Angus shops, Montreal, one of which, no. 5302, completed recently, is illustrated herewith. The following are the principal dimensions:—

Boiler pressure.....	200 lbs.
Cylinders.....	25½ x 32 in.
Driving wheels, diam.....	63 in.
Tractive effort.....	54,000 lb.
Firebox, inside.....	120 x 84 in.
Boiler, diam., front end, 80 in.; back end.....	90 in.
Flues, no. and diam.....	40-5½ in.
Tubes, no. and diam.....	211-2¼ in.
Length over tube sheets.....	18 ft. 6 in.
Firebox heating surface.....	274 sq. ft.
Arch tube heating surface.....	37.5 sq. ft.
Tube and flue heating surface.....	3,847.78 sq. ft.
Superheating surface, approx.....	345 sq. ft.
Total equivalent heating surface.....	4,926.78 sq. ft.
Grate area.....	70.3 sq. ft.
Factor of adhesion.....	4.18
Weight on drivers.....	226,000 lb.
Weight on engine truck.....	25,000 lb.
Weight on trailing truck.....	49,000 lb.
Total weight, locomotive.....	323,000 lb.
Total weight, locomotive and tender.....	500,000 lb.
Total weight, tender loaded.....	180,000 lb.
Coal capacity, tons.....	12
Water capacity, imp. gals.....	8,000

The grates are moved by steam grate shakers. The cab is of the C.P.R. standard vestibule type, fitted with a 14 x 20 in locker for enginemen's clothes, meal pails, etc. The locomotives are being built under the direct supervision of W. H. Winterrowd, Chief Mechanical Engineer.

holders was held in Toronto, June 30, 1915, when a resolution was passed providing for the suspension of payment of interest on bonds and that payments of sinking fund be postponed until such time after the war as might be determined, and providing for the future operation of the property by the company. The company's general officers at that time were:—President, Sir William Mackenzie; Vice President, Sir Donald Mann; Secretary and Treasurer, L. W. Mitchell, Toronto; General Manager, J. McGillivray, Inverness, N.S. Mr. McGillivray was in July, 1915, appointed Receiver and Manager of the property under an order of a Nova Scotia Court, granted on the application of the bondholders' trustee.

The funded debt consists of 1st mortgage 5%, 20 year, \$500 gold coupon bonds, due May 1, 1922. The total issue was \$3,000,000, of which at June 30, 1913, \$869,000 was held in the treasury as security for outstanding loans.

F. L. Hutchinson, General Manager Hotels, etc., C.P.R., is reported to have stated in Victoria, B.C., recently, that the company believed in the future of Victoria as a tourist resort and is spending a large sum in a press campaign in the United States, specially directed to divert travel to Vancouver Island.

ing of commissary, dining, and baggage cars, at St. John, N.B., and Halifax, N.S., ready for the unloading of the ships. The second part of their work has been to ticket the home-comers to their respective demobilization areas—a long and complex clerical task which was made difficult by the scarcity of skilled ticketing clerks. Trains had then to be dispatched westward over whatever line could best handle them, the C.P.R. from St. John, or the Canadian National from Halifax. These trains had not only to be provisioned, "watered" at various divisional points, and provided with engines, but the empty equipment had then to be "worked back" ready for the next soldiers to arrive. Some cars could make the return trip in 3 or 4 days. Others must be absent 12 or even 20 days. Each train has to be slipped in, as it were, between the regular passenger and freight trains, whose schedules have to be maintained if the other vital business of the country is to be handled.

The chairman of the committee on demobilization is Walter Maughan, Assistant General Passenger Agent C.P.R. H. H. Melanson, Passenger Traffic Manager, and C. W. Johnston, Assistant General Passenger Agent, represent the interests of the Canadian National Railways and the Grand Trunk Railway respectively.

Colonist Cars, Canadian National Railways.

Deliveries are now being made of the 150 colonist cars under order by the Canadian National Rys., and which were briefly described in Canadian Railway and Marine World for Jan., 1919. Of these 100 were ordered from Canadian Car and Foundry Co., Montreal, and 50 from Pullman Co., Chicago, the order being divided in this way in order that



Seating Arrangements, Colonist Car, Canadian National Railways.

an early delivery of the whole 150 might be made, as the cars are required primarily for handling troops from seaboard to inland demobilization points. The first of the cars were delivered early in May and were placed in service immediately they arrived, so urgent is the need for troop equipment. It is expected that the balance will be delivered before July. They are of steel construction throughout, with the exception of the interior fittings, and have the following general dimensions:

Length over end sills	73 ft. 6 in.
Length between truck centers	57 ft. 6 in.
Length over buffers, approx.	82 ft. 4½ in.
Width over side sills	9 ft. 9½ in.
Width over all at eaves	10 ft. 1¼ in.
Width of clerestory	5 ft. 11¼ in.
Height, rail to roof	14 ft. 2 in.
Height, rail to eave moulding	11 ft. 2½ in.
Height, rail to sill at end	3 ft. 7⅞ in.

The steel construction embodies the Canadian National Rys. standard, 73½ ft. steel fish-belly underframe, which is to be a part of all steel passenger equipment for C.N.R. service. Along the top of the sides, is a very deep letter board, arranged for by dispensing with the usual oval windows above the main panes of glass. Part of this space is used to give a larger window depth than is normal, increasing the interior lighting arrangement. The roof is of the clerestory type, but without the usual narrow windows. In their places, are large ventilators, with air ducts along the sides, the ventilators being controlled from the interior. The windows have double sash, with provision on the outside for applying a third sash for winter service in the west.

The vestibules are also of all steel construction, embodying the U-shaped I beam section, which minimizes the tendency to telescoping in wrecks. They are equipped with the latest type of friction draft gear.

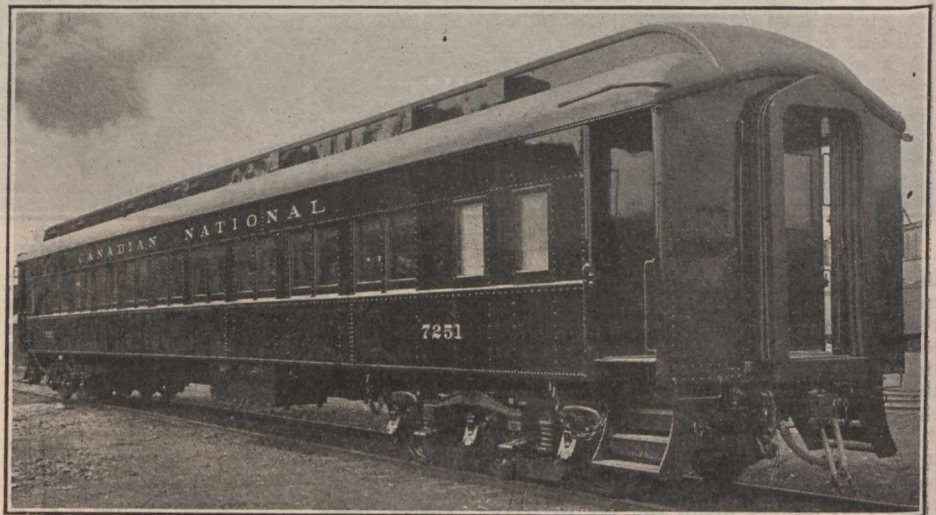
The cars are mounted on commonwealth all-steel 6-wheel trucks, equipped with clasp brakes. The trucks have the

safety center pin attachment, for preventing the bodies from parting from the trucks in case of derailment.

The seating arrangement is worthy of special note, the seats being arranged farther apart than usual, in order to give greater knee room, and incidentally a greater berth length. They have 18 sections, giving a berth accommodation of 72, with 2 persons in both the upper and lower berths. The berths are very similar to those in first class sleeping cars, but are not equipped with mattresses for this special service, the bedding being supplied by the Militia Department. The seats are upholstered with fabrikoid and pantasote, and filled with curled hair, which is an improvement on the usual colonist car wooden seats. The flooring is of flexolith composition. The interior finish of the cars is of birch-mahogany, with none of the steel work exposed on the inside. The clerestory is painted a light green shade.

At one end of the car is the men's water closet and lavatory, the latter equipped with three washbasins, of a superior type. The other end of the car has a women's lavatory and water closet on one side of the aisle, and on the other, a small cookstove room, for the preparation of meals en route. At both ends, there are also drinking water containers, arranged with separate compartments for ice and water, and attachments for new and used sanitary drinking cups.

The cars are equipped with the latest



Colonist Car, Canadian National Railways.

type of Vapor Car Heating Co.'s heating. In addition, the men's lavatory end is equipped with an auxiliary heating stove for use in case of emergency.

The 100 cars being built by Canadian Car & Foundry Co. are being lit by Safety Car Heating & Lighting Co.'s system with body hung generators. The 50 being built by Pullman Co. are being lit by the U.S.L. system, with a truck suspended generator under the car, and controlled by a panel at the end of the car. All the cars have storage batteries with a 300 ampere-hour capacity, which is sufficient for 8 hours service without operating the generator. Lights are so arranged that at night half the light may be cut off, or each individual light may be extinguished. In-

dividual berth lights are not applied, as they are not usual on this type of equipment.

The cars were designed under the direction of G. E. Smart, General Master Car Builder, Canadian National Rys., to whom we are indebted for the foregoing information.

London, Ont., Union Station Proposals—N. Cauchon, C.E., of Ottawa, addressed the Chamber of Commerce, London, Ont., May 12, on the railway situation in regard to town planning. The plan suggested so far as the railways are concerned is for the construction of a cross town line to link up the C.P.R. and the G.T.R., with a union station on Dundas St., the elevation of tracks and the erection of a purely industrial area wherein all the factories could be concentrated. An alternative plan is reported to have been suggested by Sir Adam Beck under which a union station would be provided in connection with hydro radial proposals, and in the event of the Dominion Government taking over the G.T.R., the electrification of the Huron and Bruce branch.

James Daniel Altimas, who was appointed Assistant General Superintendent of Car Service, C.P.R., Montreal, recently, was born there, Aug. 6, 1871, and entered C.P.R. service Sept. 13, 1887, since when he has been, to Nov. 1, 1889, record clerk; Nov. 1, 1889 to Nov. 1, 1890, statistical clerk; Nov. 1, 1890 to Dec. 1, 1891, chief statistical clerk; Dec. 1, 1891

to May 1, 1896, car tracer; May 18, 1896 to Feb. 1, 1903, chief clerk to Car Accountant; Feb. 14, 1903 to Mar. 23, 1909, chief clerk to Superintendent of Car Service; Mar. 22, 1909 to Nov. 1, 1918, Car Accountant, all at Montreal.

Herbert Gatje, who has been appointed Travelling Passenger Agent, C.P.R., San Francisco, Cal., was born at Willows, Cal., May 4, 1891, and entered transportation service in Sept. 1908, since when he has been, to Feb. 1909, report clerk; Feb. 1909 to May 1910, local ticket clerk; May 1910 to July 1912, Pullman ticket clerk, Southern Pacific Co., San Francisco, Cal.; July 1912 to Apr. 1913, agent, Pullman Co., San Francisco, Cal.; Apr. 1913 to Feb. 1919, interline ticket clerk, Southern Pacific Co., San Francisco, Cal.

Canadian Pacific Railway Co's Annual Meeting.

The C.P.R. Co.'s 38th annual meeting was held in Montreal, May 7. The company's chairman, Lord Shaughnessy, presiding, having on his right, E. W. Beatty, President, Grant Hall and I. G. Ogden, Vice Presidents, and on his left, E. Alexander, Secretary, Jno. Leslie, Comptroller, and H. C. Oswald, Assistant Secretary.

President Beatty, in moving the adoption of the directors' report, as published in Canadian Railway and Marine World for May, said:—

The results of the year's operations were, on the whole, and under the conditions which existed, satisfactory, notwithstanding the shrinkage in the net earnings of \$12,043,630, due to the extraordinary increase in wage scales and cost of materials of all descriptions. Over 77% of the total increase in operating expenses was due to increases in wages alone. The volume, both of freight and passenger traffic, decreased in comparison with 1917, the increase in gross earnings of \$5,148,363 being due to increases in rates granted in March and July, 1918. The fact that notwithstanding the heavy increases in the cost of operation there was a surplus after payment of all charges and dividends, is another satisfactory evidence of the foresight and wisdom of the shareholders in having approved substantial expenditures in previous years, which undoubtedly permitted the company's operations to be carried on with a cheapness which would not have been possible had such adequate facilities not been provided. A conspicuous example of the results of such foresight is found in the difference in the cost of rolling stock acquired during the years 1911 to 1914, and the approximate market value of an equivalent amount if required to be purchased in 1918. The rolling stock purchased during the former years, if required to be furnished at the 1918 prices, would have represented an increased cost of approximately \$96,000,000. After four years of war, and the existence of times of the most severe climatic conditions, I am happy to say that the physical condition of your property is excellent, and it will not require more than usual maintenance expenditure to ensure its usual efficiency. The results of the operations of the three months subsequent to the conclusion of the fiscal year have been disappointing, but not unexpectedly so in view of the falling off of general traffic during February and March and the inevitable heavy costs of maintenance and operation due to high prices of materials.

In view of the uncertain conditions which succeeded the conclusion of hostilities and the need of providing as much employment as possible, your directors did not think it wise to make drastic reductions in the number of men employed and the company's shops have been maintained at full pressure, always on necessary work, but in some cases on work which might have been postponed if the general conditions had warranted it.

The company's financial position at the end of the fiscal year, as indicated in the annual report, was, on the whole, extremely gratifying.

Your directors are of the opinion that a reasonable amount of additional branch line construction should be gone on with

as soon as conditions warrant, and the necessary statutory authority is obtained. Resolutions will be submitted for your approval for the construction of the lines which are most urgently required. In this connection, I should point out that in the matter of railway construction the country is faced with a condition quite unprecedented in the recent history of Canada, in that the Canadian National Rys. and your company are the only large companies with resources sufficient to enable them to provide additional railway facilities to any substantial extent. Serious and continuing blunders in railway policy have resulted in the government being required to assume the ownership at present of 11,400 miles of railway, with prospect of the acquisition of an additional 6,400 miles. When this acquisition has been accomplished, the principal competing systems in Canada will be your company and the Canadian National Rys. I have no apprehension as to your company's ability with its splendid facilities and equipment and loyal and efficient officers and men, to obtain a fair share of the traffic and to handle it expeditiously and well. I have no fear of government ownership, but government ownership apparently has some fear of private competition under equal conditions. It has recently been found necessary to give the Canadian National Rys. privileges in the matter of construction of railways not enjoyed by private companies and to exempt them from complying in other respects with the existing laws respecting railways. I sincerely trust that this policy of making one law for the Canadian National Rys. and one for the C.P.R. and other private enterprises will neither be continued nor extended, because nothing would, in my opinion, be calculated to destroy confidence in Canadian railway enterprise more than a policy which would confer exclusive and peculiar rights on the Canadian National Rys. designed to make the competitive conditions unequal.

The subject of government ownership has received much attention recently, but not nearly as much as the importance of the subject justifies. Notwithstanding our previous experience and that of the United States and Great Britain, government ownership and operation of railways is to be attempted on a large scale. The situation is full of danger, which cannot be avoided or even minimized except by rigorously independent and non-political administration, which is at least difficult of establishment under our system of government. This fact must, however, be obvious, that in no other way can the people of Canada obtain a correct appreciation of the results of government operation of the systems which are or which may hereafter come into its possession, than by their being administered in strict accordance with the laws of the country under which other companies have to operate, by their financial and accounting methods being made as precise and as accurate as the law now requires of private corporations, and by the exact financial results being submitted to parliament each year.

Different views may conceivably be held as to the wisdom of public ownership and operation of railways. My own views are sufficiently well known not to require repetition, but the fact is public

ownership is already here, and experience only will show whether the difficulties I have mentioned in securing efficient and non-political administration can be overcome, and the country receive an adequate service at a minimum of loss. I am satisfied the government recognizes these difficulties and that a sincere and determined effort will be made to meet the situation. It would seem, however, to be obviously wise that the assumption of further obligations should at least be deferred until the practicability of government administration, or administration under the aegis of the government (which is quite inseparable from government ownership) has been demonstrated. In the end, the burden of the enterprises must be borne by the people, and the people are entitled to know whether the method of administration provided and the results of that administration are such as warrant their approval of the continuance or extension of them in the interests of Canada.

The returns from sales of land during the year just closed have been the largest in your company's history, and it is a matter of great gratification to your directors, as no doubt it is to the shareholders, that the company's incessant activities in the matter of sale and colonization of lands and the promotion of immigration to Canada has had such far-reaching and beneficial results. As a direct consequence of the company's efforts, more than 21,000,000 acres of land have been sold to settlers, and more than half a million settlers induced to come to Canada and settle in the Canadian West. The contribution to the country's exchequer has been thereby increased by many millions. With return to peace conditions I should expect a considerable increase in immigration, and with the vigorous development of the country's natural resources and the necessary extension of the markets of Canada we have every reason for confidence in the future prosperity of the country, even though the present year may be one during which the commercial expansion may be only moderate.

Your directors look forward with confidence to the development of your company's trans-Atlantic and trans-Pacific steamship business, particularly the latter, and adequate provision for the needs of the immediate future has been made, as indicated in the annual report.

It would not be proper that I should conclude my remarks without a personal reference to your former President, Lord Shaughnessy, who retired from the presidency during the last fiscal year. It is perhaps not necessary that I should reiterate the inestimable value of his services to the company from the beginning of his connection with it, but more particularly during the last 20 years, during which time he occupied the position of chief executive officer. It will, however, be gratifying to the shareholders to know that, great as had been the success of Lord Shaughnessy's administration of the company's affairs, viewed from a purely commercial standpoint, greater still has been the influence and force of his personal character and ideals and his high sense of duty on the company's officers and men, with the result that the C.P.R. enjoys an esprit and an ambition for efficiency among all ranks which I

venture to think is unequalled and certainly not excelled, in any corporation in the world. It must be a source of great gratification to Lord Shaughnessy to know, on his retirement from the active work of the presidency to the more advisory work of chairman of the company, that not only was his administration extraordinarily successful, and that he leaves the property in excellent physical condition, but that he created during his tenure of office an organization the ambition of which, and every member of it, is to utilize that property in the closest co-operation and to the full extent of their powers for the benefit of the country and the shareholders.

The report was adopted unanimously.

Kaslo and Slocan Ry.—The shareholders approved a lease to the C.P.R. Co. for 99 years of branches which the K. & S.R. Co. has been authorized to construct, whether constructed or to be constructed, including the railway in operation from the junction with the N. & S.R. White-water Creek Branch at Retallack to Kaslo, 17.7 miles, and all such extensions, branches and additions to the railway as the K. & S.R. Co. is, or may be, hereafter authorized to construct, together with their appurtenances, at an annual rental of \$1 and in addition thereto an annual rental equal to the interest payable on the outstanding bonds or other securities issued or which may be issued hereafter by the K. & S.R. Co. with the C.P.R.'s consent, the total of all such bonds or other securities unpaid or unredeemed not exceeding at any time \$30,000 a mile, and to bear interest at not exceeding 5% payable half-yearly, the payment of such interest being guaranteed by the C.P.R.

Grand Trunk Pacific Ry.—The shareholders approved the agreement of Sept. 2, 1918, between the G.T.P.R. Co. and the C.P.R. Co. providing for the use by the G.T.P.R. Co. for 21 years, of the C.P.R.'s line from a point east of Sutherland to a point west of Saskatoon, together with the use of the C.P.R.'s passenger, express and freight facilities at Saskatoon station, which agreement amongst other things provides for the payment by the G.T.P.R. by way of rental of a sum equal to one-half the interest at the rate of 5% a year on the amount of the agreed value of the lands comprised in the joint section and of the improvements thereon and the payment of the maintenance and operation expenses on a wheelage basis as defined in the agreement, be and the same is hereby approved and the execution thereof by the President and Assistant Secretary ratified and confirmed.

Branch Lines Construction.—The following resolution was adopted:—

Whereas an extension of the Moose Jaw Southwesterly Branch has been constructed from mileage 35 to mileage 66, and it is in the directors' view expedient that the following other branch lines and extensions of branch lines be constructed in the near future, viz.:

1. An extension of the Bassano Easterly Branch from Empress Northeasterly to Milden, 132 miles;
2. An extension of the Langdon North Branch from Acme, to the projected extension of the Swift Current Northwesterly Branch near Empress, 132 miles;
3. A part of the Moose Jaw Southwesterly branch from Vidora easterly, 35 miles;
4. A branch of the Manitoba and North Western Railway from Russell northerly

known as the Russell North Branch, 15 miles;

5. A branch from Lanigan northeasterly and known as the Lanigan North-easterly Branch, 150 miles;

It is therefore resolved that the construction of the said extension of the Moose Jaw Southwesterly Branch from mileage 35 to mileage 66 is approved, and that the directors are authorized to proceed with the construction of the said other branch lines and extensions of branch lines when in their opinion conditions warrant and after statutory authority, where any be necessary, shall have been obtained therefor, and that to aid in the construction and equipment of all such railways the directors are authorized to issue and dispose of consolidated debenture stock to such an amount as they may deem expedient, but not exceeding in respect of any of said lines the amount which the company is or may be empowered by statute to issue.

Bylaws.—A bylaw passed by the directors amending the general train and interlocking rules, as required by the Board of Railway Commissioners, and amendments to several bylaws embodying verbal amendments made necessary by the separation of the positions of chairman of the company and president were approved.

Directors Elected.—R. B. Angus, Sir Herbert Holt, Brig.-Gen. F. S. Meighen, and Sir Edmund Osler, whose term of office as directors had expired, were re-elected for 4 years.

Tribute to Lord Shaughnessy.—H. R. Drummond, speaking on behalf of the shareholders, paid a tribute to the services rendered by Lord Shaughnessy during the term of his presidency, and proposed the following resolution, which was carried unanimously:—"That there is inscribed in the record of this meeting an expression of the shareholders' appreciation of the great service rendered to the company and to the Dominion of Canada by the Rt. Hon. Lord Shaughnessy, who has recently retired from the presidency and assumed the chairmanship of the company.

"The outstanding position held by the C.P.R., not only in the markets of the world, but also in the respect and affection of the Canadian people, provides the greatest of all tributes to the genius with which Lord Shaughnessy has directed the company's affairs; but the shareholders cannot let this occasion pass without the further tribute of their thanks for the services he has rendered during the 36 years with which he has been associated with this enterprise.

"Through Lord Shaughnessy's financial skill and executive ability, an immense transportation system has been built up and consolidated with such efficiency and economy that the Canadian people have enjoyed efficient service at moderate rates, have seen their resources developed beyond all expectation, and have been encouraged during normal years by a steady flow of immigration, while the financial returns of the company itself have amply justified the confidence placed by investors in Canadian industry and management.

"It is particularly gratifying to the shareholders that under Lord Shaughnessy's presidency the C.P.R. Co. should not only have rendered such signal services to the cause of the allies during the recent great war, but should also

have maintained its efficiency and financial standing in the face of the difficult conditions created by that war. The shareholders consider it due largely to his far-sighted policy that under such circumstances the C.P.R. Co. should not only have required no assistance from the Canadian Government, but should actually from its reserves have been able to provide substantial aid to that government in maintaining the high standard of Canadian credit.

"The shareholders deeply appreciate and honor the spirit of self-sacrifice with which Lord Shaughnessy maintained the arduous duties of the Presidency during the anxious years of the war, in spite of physical disabilities. They rejoice that these disabilities have been ameliorated, and that with renewed vision he can once more enjoy the beauties of that Canadian landscape which the C.P.R. has made accessible to the world.

"When the prospect of peace enabled him to hand over the more active duties of the presidency, with clear conscience to a younger man, it was with genuine pleasure that the shareholders heard of Lord Shaughnessy's decision to remain as Chairman of the Company, not only because they realized that the company would thereby continue to have the benefit of his counsel and advice, but also because they are proud to retain as their titular head one who is held in such universal honor.

"The shareholders trust that the indomitable spirit which has been so characteristic of Lord Shaughnessy's whole splendid career will be rewarded with many years yet to come of health, prosperity and happiness. That a copy of the foregoing resolution, suitably engrossed, and signed by the Secretary under the company's corporate seal, be forwarded to Lord Shaughnessy."

Lord Shaughnessy said:—I appreciate most heartily and thank you, Mr. President and fellow shareholders, for the complimentary remarks referring to myself in the President's address, and in the resolution adopted by the meeting. I would be lacking in candor if I failed to admit great pride in the company's progress during my presidency and in its present splendid position, physically and financially, and equal pride in the faith and confidence of the shareholders, who, with marvellous unanimity, responded to calls for new capital by subscribing for additional issues of stock, even on occasion when in deference to popular clamor the issue price was less favorable to the subscribers than it might properly have been. My predecessors, Lord Mount Stephen and Sir William Van Horne, who carried the responsibilities of the chief executive through the periods of construction and the first few years of operation, had a most difficult task, as is well known to our senior colleagues on the board of directors, Mr. Angus, Sir Edmund Osler, and Mr. Matthews, but it was my good fortune to become President just when the tide was turning and when Canada was coming into her own. The expansion in the country's business and the consequent increase of traffic compelled capital expenditure on a large scale, to furnish improved transportation facilities presently required and to anticipate the future, and the money for these purposes was provided year by year from 1900 to the outbreak of war. The policy of your directors was bold and forward. There

was never any hesitation, and looking back over that period they are justified in the conviction that few, if any, mistakes were made; and that conviction is, I am sure, shared by the great body of the Canadian people and of the company's shareholders.

It was fortunate, indeed, that when the time arrived to transfer the responsibilities of chief executive to younger and more vigorous shoulders, your directors had available for the post a man so capable, so energetic, so conscientious and so well versed in matters relating to the company's policy as the new President, Mr. Beatty. I shall not hurl back at him such compliments as he paid me in great profusion, but I may be permitted to say that he enjoys the complete confidence and respect of the directors and

of the Canadian people. The shareholders' interests could not be in safer hands. After so many years of business and personal association, it was somewhat of a wrench to my fellow directors, as it was to me, to alter our relations by permitting me to retire from the presidency, but they felt as I did, and as I hope you feel, that it was best for the company's future.

Executive Committee:—At a meeting of directors held immediately after the shareholders' meeting, Lord Shaughnessy, was elected chairman of the company; E. W. Beatty, President, and Grant Hall, Vice President, and the following were appointed the executive committee: R. B. Angus, E. W. Beatty, Grant Hall, Sir Herbert Holt, Sir Edmund Osler, Lord Shaughnessy.

Switching Locomotives, Grand Trunk Railway.

The 25 switching locomotives which the G.T.R. ordered about a year ago, to be built at its Montreal shops, were first referred to, and their general dimensions given, in Canadian Railway and Marine World for May, 1918. An illustration of one was published in our Apr., 1919 issue, but by an unfortunate mistake, the wrong dimensions were given, those used relating to locomotives built for the Canadian Government Rys. A few days after the May issue was published, G. Cavin, Chief Mechanical Engineer, Canadian Locomotive Co., very courteously called our attention to the error, and the correct dimensions, as originally published in our May, 1918 issue, were republished in our May, 1919 issue. Since then the following additional information has been supplied:—

These locomotives, which are of the A9 class, were designed under instructions from W. H. Sample, General Superintendent of Motive Power and Car Department, and a number of existing G.T.R. standards were embodied in the new design. Following is a comparison of the leading dimensions of these locomotives with previous designs, by which it will be seen that there is a considerable increase in the weight and power of these locomotives.

	Designs.	
	Present	Previous
Cylinders, inches.....	22 x 26	21 x 26
Driving wheels, inches.....	51	56
Steam pressure, lb.....	175	165
Grate area, sq. ft.....	50.62	27.44
Water heating surface, sq. ft.	1945	1423
Superheating surface, sq. ft.	408	268
Weight on drivers, lb.....	166,000	139,500
Tractive effort, lb.....	36,703	31,460

The boiler is of the extended wagon top type, designed for 175 lb. steam, with a front end diameter of 68 9-16 in., and 76 in., at the dome course. The courses are fitted together with sextuple rivetted joints. The boiler contains a 28-element Schmidt superheater, and the firebox is equipped with a brick arch, supported on four 3 in. tubes. The boiler accessories include a power operated firedoor and double turret valves for the convenience of the locomotive men and fireman. The inspirators are of the Hancock type, and two Okadee blowoff valves are fitted to the throat sheet of the firebox. The boiler also has 2 sand boxes with Hanlon air sanders.

The frames are of the most substantial design, with jaws fitted with adjustable driving box wedges. The frames are braced with cast steel crossbars and the front end has heavy cast steel deck

castings and cast steel bumpers, making it very substantial. The driving wheel centers are also of cast steel, with 3 1/2 in. tires shrunk on.

The smoke box has the M.M. Assoc. front end, with the exhaust pipe fitted with multiple nozzle. The cylinders have ample exhaust passages with easy bends. Hunt-Spiller iron is used for the cylinder and steam chest bushings, and for the packing rings in the piston heads and piston valves, and King metallic packing is used around the piston rods.

The cab is spacious and placed well back, providing ample deck space for the fireman, and special attention has been paid to the location of the cab fittings, in order to place brake valves, throttle handle, reverse lever, valves, etc., within easy reach of the crew, and the position of the steam, air, and water gauges is such that they can easily be read.

The tender is carried on two 4-wheel trucks of the equalizer design, with cast steel bolsters of ample proportion and is fitted with 5 1/2 x 10 in. journals and cast iron chilled wheels. The tender frame is made up of 10 in. outside channels and 13 in. inside, and well supported on ends and top with steel plates rivetted to these channels. The back end is provided with cast steel bumper.

The tender tank is of the water bottom type, of 6,000 gal. capacity, fitted with coal space of 9 tons capacity and placed well forward. This coal space is designed so as not to obstruct the view of the locomotive man and fireman when backing up. The top of the tank is provided with hand railing for the convenience of fireman when taking water. The buffer between the locomotive and tender is of the radial type.

The leading dimensions of these locomotives are as follows:—

Fuel	bituminous
Tractive effort	36,703 lb.
Weight in working order and on drivers	166,000 lbs.
Weight of locomotive and tender in work order	296,000 lbs.
Wheel base, driving and total.....	11 ft. 6 in.
Wheel base, locomotive and tender.....	45 ft. 9 1/2 in.
Weight on drivers—tractive effort	4.5
Total weight—tractive effort	4.5
Heating surface—grate area	38.42
Cylinders	22 x 26 in. simple
Valves	12 in. piston
Driving wheels, diam.	51 in.
Driving wheels, tire thickness	3 1/2 in.
Driving journals, all	9 1/2 x 12 in.
Working pressure	175 lbs.
Outside diameter of first ring.....	68 9-16 in.
Firebox	96 3/4 x 75 1/4 in.
Firebox plates—	
1/2 in. tube, 3/8 in. crown; side and back.	

Firebox, water space—	
Front	5 1/2 in.
Back	4 1/2 in.
Sides	4 1/2 in.
Tubes	178, 2 in.
Flues	28, 5 3/8 in.
Tubes and flues, length over sheets.....	12 ft. 4 in.
Heating surface, tubes and flues	1,751 sq. ft.
Heating surface, firebox, including arch tubes	194 sq. ft.
Heating surface, total	1,945 sq. ft.
Heating surface, superheater.....	408 sq. ft.
Grate area	50.62 sq. ft.
Tender weight	130,000 lbs.
Tender wheels	33 in.
Tender journals	5 1/2 x 10 in.
Tender water capacity	6,000 gal.
Tender coal capacity	9 tons

We were officially advised May 19 that 18 of 25 locomotives had been completed.

Steel Rails for Canadian Railways.

We are officially advised that, up to May 2, the Algoma Steel Corporation had rolled 90,070 gross tons, and the Dominion Iron and Steel Co., 71,837 gross tons, of steel rails, on orders placed by the Dominion Government in Nov., 1918, the Algoma Steel Corporation's order being completed. The rails were shipped to the following railways:

Algoma Steel Corporation.	
	Tons
Canadian National Rys.....	45,000
Canadian Pacific Ry.....	39,500
Kettle Valley Ry.....	2,670
Timiskaming and Northern Ontario Ry....	3,000
Toronto, Hamilton and Buffalo Ry.....	400
Total.....	90,070
Dominion Iron and Steel Co.	
	Tons
Canadian Government Rys.....	25,357
Canadian Northern Ry.....	1,519
Canadian Pacific Ry.....	30,878
Grand Trunk Ry.....	13,922
Timiskaming and Northern Ontario Ry.....	161
Total.....	71,837
Grand total.....	161,907

Collection of Freight Charges Over Several Lines—Victor Nadeau bought two carloads of apples in Nova Scotia to be delivered in Quebec Province. The cars went over four lines of railway, the Canadian Northern Quebec Ry. being the final carrier. In making delivery, that company charged \$144 as freight, but subsequently discovered that there had been an error of \$120 in the freight bill. The company brought an action to recover this amount, but a court, sitting at Joliette, held that the error was due to the company's fault, and it must therefore bear the consequences. The Court of Review at Montreal, Apr. 28, reversed this decision, holding that the company had not lost its right of action by the delivery of the goods, and the acceptance of the amount of freight, which was subsequently found not to have included all the charges. Judgment was given for the company for \$120.

Railway Lands Patented—Letters patent were issued during April, in respect of Dominion railway lands in Manitoba, Saskatchewan, Alberta and British Columbia, as follows:—

	Acres
Alberta and Great Waterways Ry.....	3.25
Canadian Northern Ry.....	790.22
Canadian Pacific Ry.....	.152
Canadian Pacific Ry. roadbed and station grounds	1.13
Edmonton, Dunvegan and British Columbia Ry.....	39.28
Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co.....	320.00
Total	1,154.032

The National Steel Car Co. is making delivery of an order of 750 box cars to Canadian National Rys. It is also delivering rolling stock material to the Federated Malay States Government, and forgings for the Paris, Lyons and Mediterranean Ry. and the Midi Ry. of France.

Mainly About Railway People Throughout Canada.

John F. Aitchison, who has been appointed Auditor of Disbursements, G.T.R. and Grand Trunk Pacific Ry., Montreal, was born at Edinburgh, Scotland, May 28, 1880 and entered railway service in 1897, since when he has been, to 1898 junior clerk G.T.R., London, Ont.; 1898 to 1906, clerk G.T.R., St. Thomas, Ont.; 1906 to 1914, travelling accountant, Wabash Rd., Detroit, Mich.; 1914 to Oct. 16, 1918, special auditor, G.T.R., Montreal; Oct. 16, 1918 to May 1, 1919, acting Auditor of Disbursements, G.T.R., and G.T.P.R., Montreal.

Albert Geo. Albertsen, who has been appointed General Agent, Passenger Department, C.P.R., Minneapolis, Minn., was born at Copenhagen, Denmark, Dec. 31, 1887, and entered transportation service Apr. 1, 1908, since when he has been, to Nov. 1, 1909, junior clerk, Thos. Cook & Son; Nov. 1, 1909 to July 1910, Passenger Agent, White Star Line; July 1, 1910 to Mar. 1, 1911, in Passenger Department, Pacific Mail Steamship Co.; Mar. 1, 1911 to Feb. 15, 1919, City Passenger Agent, Travelling Passenger Agent, and City Ticket Agent, C.P.R., all at San Francisco, Cal.

John D. Barnett, who presented the Western University, London, Ont., with a valuable collection of books and who has been given the honorary degree of LL.D., was at one time Master Mechanic, G.T.R., Stratford, Ont.

E. W. Beatty, K.C., President, C.P.R., has been elected a director of the Bank of Montreal.

Sir George McLaren Brown was invested by the King at Buckingham Palace, May 12, as Knight Commander of the Order of the British Empire.

Sir George Bury, formerly Vice President, C.P.R., who has been elected President, Whalen Pulp & Paper Mills, Ltd., Vancouver, B.C., was born at Montreal, Mar. 6, 1866, and entered C.P.R. service in 1883, since when he was, to 1877, clerk in Purchasing Department, and in General Manager's office; 1887 to 1889, Secretary to Vice President, and afterwards to President; 1889 to Mar., 1890, acting Superintendent, sleeping, dining and parlor car service; Mar., 1890 to Sept., 1899, successively, Assistant Superintendent, Chalk River, Ont., and Superintendent, North Bay, Ont.; Sept., 1899 to Feb., 1901, Superintendent, Fort William, Ont.; Feb., 1901 to Feb., 1902, Superintendent Crowsnest Pass Line, Cranbrook, B.C.; Feb. to May, 1902, Assistant General Superintendent, Lake Superior Division, North Bay, Ont.; May, 1902 to 1905, General Superintendent same division, North Bay, Ont.; 1905 to Feb., 1907, General Superintendent Central Division, Winnipeg; Feb., 1907 to Mar. 1, 1908, Assistant General Manager, Western Lines, Winnipeg; Mar. 1, 1908 to Oct., 1911, General Manager, Western Lines, Winnipeg; Oct., 1911 to Dec., 1912, Vice President and General Manager, Western Lines, Winnipeg; Dec., 1912 to Dec., 1914, Vice President in charge of Western Lines, Winnipeg; Dec., 1914 he was appointed Vice President of the company at Montreal and also elected a director and member of the executive committee, which positions he resigned Oct. 10, 1918. He was created a knight bachelor, on the recommendation of the British Prime Minister, June 3, 1917, subsequent to a visit to Russia in connection with the proposed improvement of railway lines

there. This work was nullified later by the revolution which commenced while he was in Petrograd. Sir George left Montreal for Vancouver at the end of May to take up his duties.

E. J. Chamberlin, formerly President, G.T.R., and Mrs. Chamberlin, returned to Ottawa towards the end of May, after spending most of the winter in California.

Frederick H. Clendenning, who has been appointed Assistant Foreign Freight Agent, C.P.R., Vancouver, B.C., 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



J. F. Aitchison,
Auditor of Disbursements, Grand Trunk Railway.

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 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 May 1, 1919, Division Freight Agent, Steamship Lines, C.P.R., Vancouver, B.C. From Nov. 1, 1918, he was loaned to the British Ministry of Shipping (Canada).

Percy Acton Clews, appointed recently as General Agent, Freight Department,

G.T.R. and Canadian Express Co., London, Eng., was born at Rock Ferry, Cheshire, Eng., Jan. 19, 1882, and entered transportation service in March, 1898, since when he has been, to Jan., 1907, with G. H. Fletcher Co., ship owners and forwarding agents, Liverpool, Eng.; Jan., 1907 to Jan., 1909, freight clerk, G.T.R., Liverpool, Eng.; Jan. to July, 1909, freight clerk, G.T.R., London, Eng.; July, 1909 to Apr., 1910, City Agent, G.T.R., London, Eng.; Apr., 1910 to Aug., 1914, acting Agent G.T.R., Antwerp, Belgium; Aug., 1914 to Dec., 1918, City Agent, G.T.R., London, Eng.

C. S. Cunningham, who died at Lansing, Mich., recently, aged 65, was in G.T.R. service from 1896 to 1913 and held the positions of Assistant Superintendent, London; Superintendent, St. Thomas, Ont., and Superintendent at Detroit, Mich. Latterly he occupied a position under the Michigan Board of Railway Commissioners.

Charles E. Dewey, Freight Traffic Manager, G.T.R., Montreal, died at Atlantic City, May 15, of Bright's disease, after a short illness. He was born at Cheshunt, Kent, Eng., Oct. 2, 1873, and entered railway service in Nov., 1888, since when he had been, to Apr., 1896, in G.T.R. service, Toronto; Apr., 1896 to Aug., 1897, chief clerk, Division Freight Agent's office, G.T.R., Stratford, Ont.; Aug., 1897 to Aug., 1899, chief clerk, Division Freight Agent's office, G.T.R., Hamilton, Ont.; Aug., 1899 to July, 1902, Division Freight Agent, G.T.R., Stratford, Ont.; July, 1902 to July, 1907, Division Freight Agent, G.T.R., Toronto; July, 1907 to Apr., 1908, Assistant General Freight Agent, G.T.R., Montreal; Apr., 1908 to May 1, 1911, General Freight Agent, Central Vermont Ry., St. Albans, Vt.; May 1, 1911 to 1913, General Freight Agent, Grand Trunk Pacific Ry., Winnipeg, and from 1913, Freight Traffic Manager, G.T.R. system, Montreal. A funeral service was held at Westmount, Que., May 18, and burial took place at Toronto, May 19, a large number of representatives of various departments of the G.T.R., Canadian Express Co., and other transportation companies, being present. The pallbearers were J. E. Dalrymple, Vice President, Traffic, G.T.R.; John Pullen, President, Canadian Express Co.; P. Paton, H. C. Martin, F. J. Watson, L. Macdonald. S. E. Dewey, General Eastern Freight Agent, G.T.R., New York, and F. E. Dewey of Robt. Reford Co., Toronto, are brothers.

Howard Alexander Dixon, who was appointed Chief Engineer, Western Lines, Canadian National Rys., Winnipeg, recently, was born at Sand Hill, Ont., Oct. 7, 1878. He was educated at Jarvis St. Collegiate School, Toronto, and School of Practical Science, Toronto University, graduating with the degree of B.A.Sc., with honors, in 1901. He qualified as Ontario land surveyor in 1903 and Manitoba land surveyor in 1906, and is a member of the American Railway Engineering Association. He entered Canadian Northern Ry. service in 1903, since when he has been, to 1904, draftsman, Winnipeg; 1904 to 1905, Resident Engineer, Winnipeg; 1905 to 1906, Resident Engineer, Fenton, Sask.; 1906 to 1910, Locating Engineer, Western Lines; 1910 to 1912, Division Engineer, Maryfield, Sask.; 1912 to 1915, District Engineer, Resplendent, B.C., 1915 to Apr., 1919, District Engineer, Vancouver, B.C.

Charles Flaherty, station master, G.T. R., Guelph, Ont., who completed 51 years of service with the G.T.R., May 7, is said to be the oldest employe of the company in point of continuous service. He will be 65 in August when he will be entitled to a pension. He and his wife have, for several years, had an annual pass over the entire G.T.R. system.

William H. Gordon, appointed recently as Trainmaster, C.P.R., Field, B.C., was born at Montreal, Sept. 21, 1875, and entered C.P.R. service Apr. 2, 1896, since when he has been, to 1901, carpenter and bridgeman, Field, B.C.; 1901 to 1905, Bridge Foreman and Shop Foreman, Calgary, Alta.; 1905 to 1907, Assistant Bridge and Building Master, Calgary, Alta.; June, 1907 to 1912, Bridge and Building Master, Medicine Hat, Alta.; June, 1912 to Oct., 1913, Trainmaster, Edmonton, Alta.; Oct., 1913, to Jan. 10, 1919, Trainmaster, Lethbridge, Alta.

C. R. Hosmer, of the C.P.R. directorate, who has been in the Royal Victoria Hospital, Montreal, for some three months, having had to undergo two operations, was reported May 26 to be improving satisfactorily and to have been able to go out for a couple of motor rides.

T. C. Hudson, who was recently appointed General Master Mechanic, Quebec District, Canadian National Rys., Joliette, Que., was born at Brockville, Ont., Feb. 20, 1873, and entered railway service May 1, 1886, since when he has been to Jan., 1887, messenger C.P.R., Carleton Jct., Ont.; Jan., 1887 to Jan., 1892, machinist apprentice, C.P.R., Carleton Jct., Ont.; Jan., 1892 to June, 1901, general machinist, C.P.R., Chapeau, Ont. and other points; June, 1901 to May, 1903, chargeman, C.P.R., Smiths Falls, Ont.; May, 1903 to Jan., 1906, Foreman General Repairs, C.P.R., Carleton Jct., Ont.; Jan. to Dec., 1906, Locomotive Foreman, C.P.R., Ottawa; Jan. to July, 1907, Shop Foreman, Canadian Northern Ry., Parry Sound, Ont.; July, 1907 to May, 1908, Master Mechanic, Canadian Northern Quebec Ry., Shawinigan Jct., Que.; May, 1908 to Aug., 1915, Master Mechanic, C.N.Q.R., and Quebec and Lake St. John Ry., Quebec Que.; Aug., 1915 to Dec., 1918, Master Mechanic, lines east of Ottawa, Canadian Northern Ry., Joliette, Que.

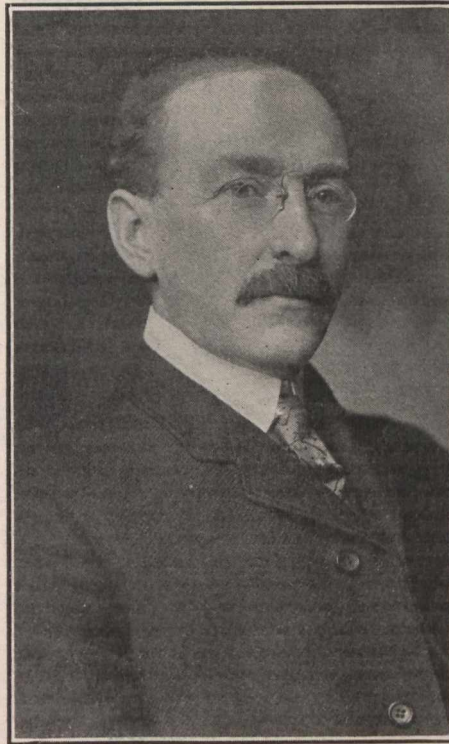
B. S. Jenkins, formerly General Superintendent, C.P.R. Telegraphs, at Winnipeg, returned there early in May, with Mrs. Jenkins, after spending the winter in California and British Columbia. He has resumed his farming operations in the Lake Manitoba district. His son, Major Roy Jenkins, Assistant Adjutant, 27th Battalion, is expected to return shortly from overseas.

George Frederick Knight, who has been appointed Superintendent St. Malo shops, Canadian National Rys., Quebec, Que., was born at Charlottetown, P.E.I., Apr. 3, 1879, and entered railway service Nov., 1896, since when he has been, to Nov., 1901, apprentice and machinist, Intercolonial Ry., Moncton, N.B.; Dec., 1901 to Sept., 1904, machinist, Albion Iron Works, Vancouver, B.C.; Apr., 1905 to 1908, draftsman, Intercolonial Ry., Moncton, N.B.; 1908 to 1909, engineer in charge of office staff equipping new I.R.C. shops, at Moncton, N.B., Riviere du Loup, Que., Halifax, N.S., and Charlottetown, P.E.I.; 1910 to 1911, draftsman, Mechanical Department, I.R.C., Moncton, N.B.; 1911, Mechanical Engineer, Chief Engineer's office, I.R.C., Moncton, N.B.; 1912 to 1914, Efficiency Engineer, Power

Plant, Canadian Government Rys., Moncton, N.B.; 1915 to 1918, Assistant Engineer, under Signal and Electrical Engineer, C.G.R., Moncton, N.B.; Sept., 1918 to May, 1919, engineer in charge of equipping St. Malo shops, C.G.R.

Mrs. E. H. Lingo, who died at Denison, Texas, May 10, was mother of Mrs. H. G. Kelley, wife of the President, G.T.R. and Grand Trunk Pacific Ry.

J. D. McDonald, who has been appointed General Passenger and Baggage Agent, Grand Trunk Western Lines Rd. (U.S.R.A.), Chicago, Ill., was born at Toronto, Aug. 27, 1885, and entered G. T.R. service in 1868, since when he has been, to 1870, messenger, Toronto; 1870 to 1875, Assistant Ticket Agent, Toronto; 1875 to 1896, Ticket Agent, Buffalo, N.Y.; 1896 to May, 1902, City Passenger and Ticket Agent, Buffalo, N.Y.; May, 1902 to Mar. 1, 1911, District Passenger Agent, Toronto; Mar. 1, 1911 to Oct., 1918, Assistant General Passenger Agent,



J. D. McDonald,
General Passenger and Baggage Agent, Grand
Trunk Western Lines Railroad.

Chicago, Ill.; Oct., 1918 to May, 1919, Assistant General Passenger Agent, Eastern Regional District, U.S. Railroad Administration, Chicago, Ill.

Hamilton Grant McMicken, who died in London, Eng., recently aged 72, was at one time engaged in private business at Windsor, Ont., and afterwards at Winnipeg, and owned and operated the first steamboat for hire on Lake Winnipeg, the first propeller steamboat on the Red River, and the first omnibus line at Winnipeg. He entered Great Northern Ry. service in 1885, and was appointed Canadian Traffic Agent in 1897. In 1898 he was appointed European Traffic Agent at London, Eng.

Miss Ethel Mackenzie, daughter of Sir Wm. Mackenzie, left Toronto early in May for France, to visit her sister, the Countess de Lesseps.

Wilmot D. Matthews, one of the C.P.R. directors, who died at Toronto, May 24, was born at Burford, Ont., June 22, 1850, and was engaged in the grain business since 1873. He was one of the promot-

ers of the St. Lawrence and Chicago Steam Navigation Co. in 1890, the Toronto and Montreal Steamboat Co. in 1895, and the Montreal and Lake Erie Steamship Co. in 1905, and was at one time President, Kingston and Pembroke Ry. after it became owned by the C.P.R. He was also at various times on the boards of the Northern Navigation Co., Toronto Ry., Canadian General Electric Co., Steel Co. of Canada, Dominion Bank, and several other financial and industrial companies. The funeral took place at Toronto, May 27, amongst the honorary pallbearers being Lord Shaughnessy, chairman, and Sir Edmund Osler, director, C.P.R.; Hon. F. Nicholls, President, Canadian General Electric Co.; L. H. Clarke, President, Toronto Harbor Commission; J. H. G. Hagarty, formerly of the St. Lawrence and Chicago Steam Navigation Co.; R. Hobson, President, Steel Co. of Canada, and Jas. Carruthers, formerly President, Canada Steamship Lines Ltd.

William Mills, who had been employed in the Transportation Department, G.T. R., Belleville, Ont., continuously for 40 years, died at Brockville, Ont., May 12.

Jno. E. Muhlfeld, at one time Superintendent of Rolling Stock, Intercolonial Ry., Moncton, N.B. and latterly President, Pulverized Fuel Equipment Corporation, New York, N.Y., has resigned the latter position, and with other engineers, has formed the Railway & Industrial Engineers, Inc., with offices in New York, to act as consulting and advisory engineers between bankers, railways and industrial corporations.

Sir Augustus Nanton, one of the C.P.R. directors, went from Winnipeg to attend the company's annual meeting in Montreal, early in May.

Godefroy Pelletier, who was appointed Assistant Superintendent Canadian National Rys., Levis, Que., recently, was born at Isle Verte, Que., Nov. 28, 1872, and entered railway service Nov. 25, 1889, since when he has been, to Sept. 20, 1890, relieving operator, Intercolonial Ry., at various points; Sept. 20, 1890 to Jan. 20, 1897, operator and dispatcher I.R.C., Riviere du Loup, Que.; Jan. 28, 1897 to Nov. 1, 1917, dispatcher, I.R.C., Riviere du Loup, Que.; Nov. 1, 1917 to Mar. 12, 1918, Assistant Chief Dispatcher, I.R.C., Riviere du Loup, Que.; Mar. 12, 1918, to Jan., 1919, Assistant Superintendent, Canadian Government Rys., Levis, Que.

William Phelan, appointed Car Accountant, C.P.R., Montreal, recently, was born there, Mar. 5, 1875, and entered C.P.R. service Nov. 29, 1889, since when he has been, to Feb. 1, 1890, office boy; Feb. 1, 1890 to Nov. 1, 1892, car record clerk; Nov. 1, 1892 to June 30, 1897, mileage and tonnage statistical accountant clerk; July 1, 1897 to June 30, 1902, chief mileage and statistical clerk; July 1, 1902 to Feb. 28, 1903, chief per diem clerk; Mar. 1, 1903 to Oct. 31, 1918, chief clerk to Car Accountant, all at Montreal.

Alfred Price, General Manager, Eastern Lines, C.P.R., has removed from 457 Roslyn Ave., Westmount, to 45 St. Mark St., Montreal.

Lord and Lady Shaughnessy and Hon. Marguerite Shaughnessy, will go to their seaside house, Fort Tipperary, St. Andrews, N.B., about the middle of June.

Arthur L. Smith, who has been appointed Superintendent, Toronto Union Station, was born at Toronto, and was for some time in C.P.R. service as Superintendent, District 3, Eastern Division, Montreal; Superintendent, District

1, Lake Superior Division, Sudbury, Ont., and Superintendent, London Division, Ontario District, London, Ont., resigning the last named position in Mar., 1917, on his appointment as President and General Manager, Algoma Eastern Ry., Sudbury, Ont., which position he resigned in June, 1918.

Lieut.-Col. G. R. Starke, President, Dominion Transport Co., and Mrs. Starke, entertained Sir Robert and Lady Baden-Powell at a buffet tea, at the Ritz-Carlton, Montreal, May 23. Among those present being Lord and Lady Shaughnessy, Sir Thos. and Lady Tait, A. D. MacTier, Vice President, Eastern Lines, C.P.R., and Mrs. MacTier.

Wm. Herbert Thompson, who was appointed Chief Dispatcher, C.P.R., Edmonton, Alta., recently, was born at Bobcaygeon, Ont., Dec. 26, 1886, and entered railway service May 15, 1906, since when he has been, to July, 1909, operator and relieving agent, Northern Division, G.T.D.; July, 1909 to Aug., 1910, dispatcher, G.T.R., Lindsay, Ont.; Sept. to Dec., 1910, operator, C.P.R.; Calgary, Alta.; Jan. to Mar., 1911, operator, C.P.R., Red Deer, Alta.; Mar. to Aug., 1911, operator, C.P.R., Calgary, Alta.; 1911 to Aug., 1914, dispatcher, C.P.R., Calgary, Alta.; Aug., 1914 to Oct., 1918, dispatcher, C.P.R., Edmonton, Alta.

Ivan E. Vallee, whose appointment as Chief Engineer and Director of Railways and Harbors, Quebec Public Works Department, and Engineer, Quebec Public Utilities Commission, Quebec, Que., was announced in our last issue, was born there, Feb. 11, 1877, and graduated from Laval University, Montreal, in 1910, with the degree of B.A.Sc. in civil engineering, and as chemical engineer. He entered Quebec Government service in May, 1910 as first Assistant Engineer and Assistant Director of Railways and Harbors, and held that position to Apr. 17, the date of his present appointment.

H. H. Vaughan, formerly assistant to Vice President, C.P.R., and now Vice President and General Manager, Dominion Bridge Co., and Dominion Copper Products Co., Montreal, has been elected a director of Armstrong Whitworth of Canada, Ltd.

F. L. Wanklyn, General Executive Assistant, C.P.R., and Mrs. Wanklyn, have opened their summer house at Ste. Anne de Bellevue, near Montreal, for the season.

John Wardrop, whose appointment as General Agent, Industrial and Resources Department, Canadian National Rys., Winnipeg, was announced in a recent issue, was born at Montreal, June 21, 1888, and entered railway service in 1908, since when he has been, to 1910, Immigration Agent, 1910 to 1915, Assistant Industrial Commissioner, 1915 to 1919, Agent in charge of U.S. and European Immigration, all with Canadian Northern Ry., Winnipeg.

H. E. Whittenberger, who has been appointed Federal Manager Grand Trunk Western Lines Rd. (U.S.R.A.), Detroit, Mich., was born at Peru, Ind., Nov. 9, 1869, and entered transportation service in 1885, since when he has been, 1885 to Feb., 1897, in various positions, Wabash Rd.; Feb., 1897 to May, 1902, Trainmaster, Middle Division, G.T.R.; May, 1902 to Sept., 1904, Superintendent, Denver & Rio Grande Ry.; Sept., 1904 to Jan., 1906, Superintendent, Cincinnati, Hamilton & Dayton Rd., Indianapolis, Ind.; Jan., 1906 to Sept. 30, 1907, Superintendent, Kansas City & Southern Rd.; Sept. 30, 1907 to Oct. 17, 1912, Superintendent, Eastern Division, G.T.R., Mont-

real; Oct. 17, 1912 to Jan. 14, 1913, Superintendent, Middle Division, G.T.R., Toronto; Jan. 14, 1913 to May 1, 1918, General Superintendent, Ontario Lines, G.T.R., Toronto; May 1, 1918 to May 1, 1919, General Manager, Grand Trunk

Western Lines Rd. (U.S.R.A.), Detroit, Mich.

E. R. Wood, of the Canadian National Rys. directorate, returned to Toronto at the end of April, after spending most of the winter in California.

Traffic Orders by Board of Railway Commissioners.

Baggage Car Traffic Regulations.

General order 262, May 8—Re general order 151, Nov. 8, 1915, prescribing regulations governing baggage car traffic for observance of every railway company within the legislative authority of the Dominion Parliament as amended by general orders 179, 181 and 191, dated respectively, Jan. 29, Feb. 3, and May 26, 1917; and the C.P.R.'s application for an order further amending rule 26 (d) of the regulations: A question having been raised as to whether, in view of the punctuation of the section, the words "otherwise the carrier shall not be liable" apply only to the cause of damage or delay, as set out in the second sentence, and not to non-delivery, as set out in the first sentence of the rule; upon reading what is alleged in support of the application to amend, and to make the intention clear, it is ordered that rule 26, sub-section (d) of the regulations governing baggage car traffic be, further amended by striking out the comma, after the word "receptacle," and before the word "otherwise," in the last line of the sub-section, and substituting therefor a period, making the words, "otherwise the carrier shall not be liable," a separate sentence.

Freight Rate on Logs.

28289, May 2.—Re complaint of Adolph Lumber Co., of Baynes Lake, B.C., against rate charged by Great Northern Ry. on shipments of logs from Dorr, B.C., to Baynes Lake, B.C. Upon hearing the complaint at Nelson, B.C., on Feb. 21, 1919, the complainant and the Great Northern Ry. Company being represented, and upon reading the further written submissions filed on behalf of the complainant and of the G.N.R., and the report and recommendation of the board's Chief Traffic Officer, it is ordered that the complaint be dismissed.

Stencilling Inches on Inside Walls of Grain Cars.

28,316, May 14. Re application of the Grain Claims Bureau, Ltd., on behalf of grain shippers in Western Canada, for an order directing railway companies to show on bills of lading covering grain shipped from points in Manitoba, Saskatchewan and Alberta, the depth in inches of the grain loaded in the cars, or, if this information is shown on the bills of lading by the shippers, to authorize their agents, after examination of the cars, to sign bills of lading whereon this record is shown; upon heading the matter at Winnipeg, March 3, 1919, in the presence of counsel and representatives for the Canadian Pacific, Grand Trunk Pacific, and Canadian National Railways, the applicant being represented and upon its appearing to the board, desirable that no action should be taken upon the application until a further opportunity shall be given of judging as to the practical effect of general order 205, Aug. 15, 1917, requiring railway companies to stencil inches on the inside walls of cars used in the grain traffic in Manitoba, Saskatchewan and Alberta, so as to show the depth in grain loaded therein, is set forth in the order; it is

ordered that the application be dismissed.

Commodity Rates on Glass Bottles.

28,348, May 19. Re special commodity rates on glass bottles, in carloads, from Wallaceburg, Ont., to London, Kitchener, Hamilton, and Toronto and Montreal, effective under the board's judgment of July 30, 1904; the supplemental schedules filed by the Canadian Pacific and Grand Trunk Railways on June 24 and 27, 1918, respectively, announcing the cancellation on July 25 and 28 of the commodity rates on bottles from Toronto, Hamilton and Montreal; and the board order 27,438, July 17, 1918, made upon the application of the Montreal Board of Trade, suspending the operation of said supplemental schedules pending hearing at a date to be fixed by the board, and the later application of the Canadian Pacific and Grand Trunk Railways, for leave also to cancel the said commodity rates from Wallaceburg; upon hearing the matter at Ottawa, Sept. 10, 1918, in the presence of counsel for the C.P.R., the Canadian Manufacturers' Association, the Montreal Board of Trade's Transportation Bureau being represented at the hearing, and upon reading the exhibits filed in support of the application and in opposition thereto, and the report of the board's Chief Traffic Officer; it is ordered that order 27,438, July 17, 1918, suspending C.P.R. supplement 77 to tariff C.R.C. no. E 3,210, and C.P.R. supplement 73 to tariff C.R.C. no. E 3,426, cancelling the special commodity rates on glass bottles, in carloads, from Hamilton, Toronto and Montreal, Quebec, be rescinded, and that leave be granted the C.P.R. and G.T.R. to cancel the special commodity rates on bottles, in carloads, from Wallaceburg, made effective in pursuance of the said judgment of July 30, 1904; the said cancellations to take effect simultaneously.

Milk Tariffs.

28,355, May 28. The application on behalf of National Dairy Council for an order suspending C.P.R. tariff C.R.C. no. E 25, to take effect June 1, 1919, increasing rates on milk in passenger or mixed passenger and freight train service; and application of Toronto Board of Trade for an order suspending G.T.R., tariff 693, C.R.C. no. 22,756, effective June 1, 1919, and other similar tariffs, increasing rates for transportation of milk in baggage cars; upon reading what is filed in support of the application, and on behalf of the C.P.R. and G.T.R., and upon its appearing that other railway companies have filed with the board similar increased tariffs for the transportation of milk in baggage cars; it is ordered that the following tariffs, namely:—C.P.R. tariff C.R.C. no. E 25; G.T.R. tariff, C.R.C. no. E 2,756; Canadian National Rys. tariff, C.R.C. no. E. 29; New York Central Rd. tariff C.R.C. 249; Quebec, Montreal and Southern Ry. tariff, C.R.C., 271; Napierville Jct. Ry. tariff, C.R.C., 115, and Montreal and Southern Counties Ry. tariff, supplement 2, to C.R.C. 22, be suspended pending a hearing of the matter to be held in Ottawa, June 10, 1919.

Problems in Design and Maintenance of Car Trucks in Relation to Maintenance of Roadway.

The paper on the above subject, read by W. J. Hyman, Chief Draftsman, Car Department, G.T.R., before the Canadian Railway Club, and published in Canadian Railway and Marine World for May, elicited considerable discussion, in the course of which much data of interest was brought out. An abstract of the discussion is given as follows:—

E. J. McVeigh, General Storekeeper, G.T.R.—I do not know of any railway in America that makes a practice of grinding cast iron chilled wheels that are going under freight cars, although it is a fact that before the use of cast iron wheels was abandoned under passenger cars, some roads had all the cast iron wheels for passenger cars ground before application, so as to make the wheels more perfect, orders reading that the wheels had to be ground, centered and balanced. When the American Railway Engineering Association set out to make an investigation, it was only considering it from the standpoint of the road department. Its recommendation was that flat spots should be reduced, the maximum being 1½ in., and it actually did reduce it to ½ in. I have felt for a long time that the 2½ in. flat spot was much too great.

E. A. Cunningham, Efficiency Engineer, Vice President's office, C.P.R.—The Pennsylvania Rd. grinds its cast iron wheels, and has been doing so for years. The practice has become so common with it that it keeps no record of the wheels so ground.

W. J. Hyman (in reply to queries).—My information is to the effect that there are only two railways in America that grind cast iron wheels, the Pennsylvania and the Atchison, Topeka and Sante Fe, and it is the custom to take wheels with flat spots out of service and grind them once, but the Sante Fe claims that its has ground the same pair of wheels three times for flat spots, and has obtained good service from them after the third grinding.

In reply to a query as to whether the ground wheels operate under the same conditions as prevail on Canadian lines, he said:—We accept Sante Fe cars on our lines, and if we can do this and not have trouble with them, why should not wheels that have been ground and applied to our own equipment in this climate give good results?

W. H. Sample, Superintendent of Motive Power, G.T.R.—It is my understanding from information received, that the Sante Fe is not applying ground wheels to all its equipment, and the cars so equipped do not leave its line. I think there should be some regulated practice in regard to the grinding, and the depth of chill will govern the extent to which the flat spot may be ground out. If it goes beyond, or near the end of the chill, it would be unsafe to operate the wheel except in light service.

W. J. Hyman.—A 2½ in. flat spot will take 1-16 in. exactly to grind out. The chill on the wheel, according to M.C.B. specification, must be not less than ½ in., nor more than 1 in., and the average chill is ⅝ in. thick, although it runs down in some cases to ⅜ in., but it is very seldom we find a real good chill more than ⅝ in. deep, from which point it

begins to string out into the softer metal. It would, therefore, be possible to grind a 2½ in. flat spot three times, and retain a factor of safety. But I think that if a wheel was ground twice for 2½ in. flat spots, it would be the maximum we could expect. If the flat spots were only 1½ in. instead of 2½ in., we would be able to grind the wheels four times with safety, as 1-32 in. will remove a 1½ in. flat.

E. A. Cunningham—In Pennsylvania Rd. practice, the wheels are ground on an ordinary grinder with two heads. The center of the axle is made to revolve the wheels against the grinder, which has from ¾ to 1 in. bearing against the wheel. The grinder moves across the face of the wheel, and a plentiful supply of liquid is used to prevent the wheel from becoming hot. 2½ in. flat

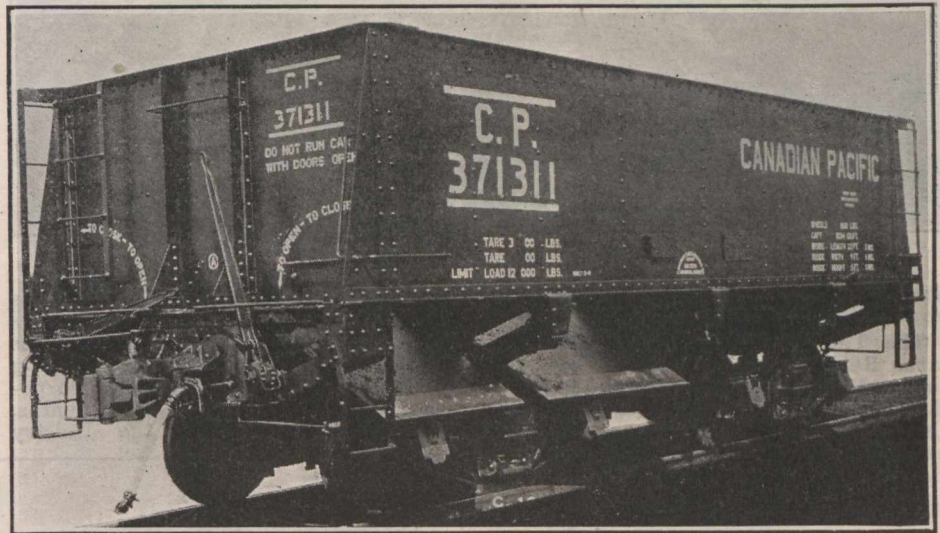
under discussion.

W. J. Hyman—Sometime ago, a test was made by a western university, by means of an instrument which recorded photographically the force of the blow delivered by flat spots. In these tests, it was found that a 3 in. flat spot, under a car going 16 m.p.h., and carrying a load of 20,000 lbs., strikes a blow of 104,000 lbs. Under similar conditions, a 2 in. flat spot produces a blow of 2,000 lbs., and a 1½ in. flat spot, 20,000 lbs. This would prove the value of reducing the flat spots from 2½ to 1½ in.

General Service Cars, Canadian Pacific Railway.

The accompanying illustration shows one of the 140 Hart-Otis general service cars built for the C.P.R. by Canadian Car & Foundry Co. at its Montreal plant, as announced previously in Canadian Railway and Marine World.

The floor of the car is composed of 8



General Service Car, Canadian Pacific Railway.

spot is the limit to which they go. An air hoist is used for putting the wheels in and out of the grinder, and as soon as finished, they are put back in service. The cost of the work is about 26c. This practice has been followed for many years, and gives good results.

E. J. McVeigh—I made a test at Chicago on wheels having flat spots from 2½ to 4 in. We had them ground, and broke some across where the flat spot had been. With the 4 in. flat, we found the wheel had been burnt, but in the smaller spots, there was nothing to indicate that the wheels had received injury. The chills were found to average from ⅝ to ¾ in. But there is no difficulty in giving a 1 in. chill, and the manufacturers would do so if called upon, and as many grindings as desired might be given. Admitting the tendency to weaken, the inside of the tread might be strengthened by putting more metal there, should the practice of grinding be found to be practical and economical. I believe the day will come when we will put a cast wheel under a car until it has been ground smooth, because, in the tests mentioned, not a wheel was found to be true.

E. A. Cunningham—The M.C.B. Association has the question of reducing allowable flat spots from 2½ to 1½ in.,

drop doors, 4 on each side, hinged to the center sill, and operated in pairs. The operating gear is the Hart-Otis Car Co.'s latest improved rolling shaft type, the operating shaft being 2½ in. open hearth mild steel. The car floors have an apex 14½ in. high along the center line, by 2 ft. 4 in. at the floor line, and are built up of steel plates and angles, entirely covering the center sills. Following are the chief dimensions:—

Length inside coupler knuckles.....	27 ft. 3½ in.
Length over end sills	24 ft. 4½ in.
Length inside	22 ft. 5 in.
Width overall	9 ft. 11¼ in.
Height inside	5 ft.
Height from rail	9 ft. 4 13-16 in.
Height from rail to floor	4 ft. 4 13-16 in.
Truck centers	13 ft.
Wheel base of truck	5 ft. 6 in.
Wheel base of car	18 ft. 6 in.
Doors on each side	4
Width of door opening	2 ft. 2 in.
Length of door opening, intermediate.....	5 ft. 7 in.
Length of door opening, end	4 ft.
Capacity	1,034 cu. ft.
Wheels	850 lb.

The Dominion Dredging Co., Ottawa, which has the contract for section 1, Welland Ship Canal, has opened a branch office in the Canadian Bank of Commerce Building, St. Catharines, Ont., and is getting its plant and machinery in order to resume operations, which will be in charge of E. A. Larmonth, Vice President, and H. A. Foster.

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

The Canadian Military and Civil Engineers' Association has been formed by officers of engineering units of the Canadian Expeditionary Forces, according to a statement made by Maj. F. J. O'Leary, late Brigade Major, First Canadian Divisional Engineers, who arrived in Canada recently from France. The object of the association is announced to be to project the interests of its members regarding pensions, war-service gratuities and civil re-establishment, as well as rendering financial assistance where required. The officers, elected in France, include the following: Gen. Sir A. C.

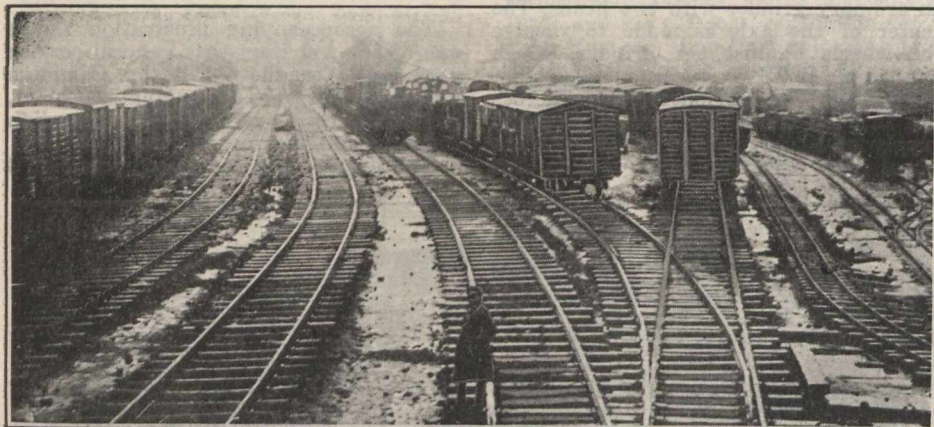
MacDonnell, Col. A. McPhail, Lt.-Col. J. M. Rolston, and Lt.-Col. E. Peppler. engineer for the Dominion Government at Victoria, B.C. Prior to the war he held the rank of major in the 50th Regiment, Victoria, B.C., and on the outbreak of war was appointed Brigade Major, 3rd Canadian Infantry Brigade, at Valcartier, Que., went overseas early in the war, and held that position until after the second battle of Ypres. On the formation of the 2nd division, he was given command of a brigade and promoted to Brigadier-General. When the 5th division was formed early in 1917, in England, he was recalled from France and given command of that division with the

Mar., 1915. He was appointed Officer Commanding no. 1 Co., 7th Battalion, June 1, 1915, and Staff Captain, 2nd Infantry Brigade, Oct., 1915, and was promoted to Major the following month. He commanded the 7th Brigade temporarily on two occasions during the absence of the commanding officer while wounded. He was mentioned in dispatches Nov. 13, 1916 and was awarded the D.S.O. for services in the field, Jan. 1, 1917. He was appointed to command the Canadian Railway Troops in England, Mar. 18, 1917, promoted Lieut.-Col., Dec. 18, 1917, and Colonel, July 5, 1918. Prior to the recent war, he had served the Riel Rebellion, in the Northwest Territories, in 1885, was with the 7th Fusiliers, London, Ont., 3rd Victoria Rifles, Montreal, 1900 to 1912, and 6th Regiment Duke of Connaught's Own Rifles, 1912 to 1914.

Col. Hon. Angus McDonnell, C.M.G., who returned from France recently, is a partner in the firm of Grant Smith & McDonnell, general contractors, Vancouver, B.C. He was second in command of the Canadian Railway Troops under Brigadier-General J. W. Stewart, C.B., of Foley, Welch & Stewart, railway contractors, who has also returned after long service in France and has since organized the firm of Jno. W. Stewart & Co., railway contractors, at Winnipeg, which has received several contracts from the Canadian National Rys.

T. McGuiness, who has been appointed acting Traffic Inspector, Regina Municipal Ry., Regina, Sask., was on active service with the 239th Construction Battalion, and prior to enlistment, was overhead foreman, Regina Municipal Ry.

Brig.-Gen. C. H. Mitchell, C.B., C.M.G., D.S.O., who has been appointed Dean of the Faculty of Applied Science, Toronto



Railway yard at Bapaume, France, Nov. 29, 1917. From photograph loaned by C.P.R.

MacDonnell, Col. A. McPhail, Lt.-Col. J. M. Rolston, and Lt.-Col. E. Peppler.

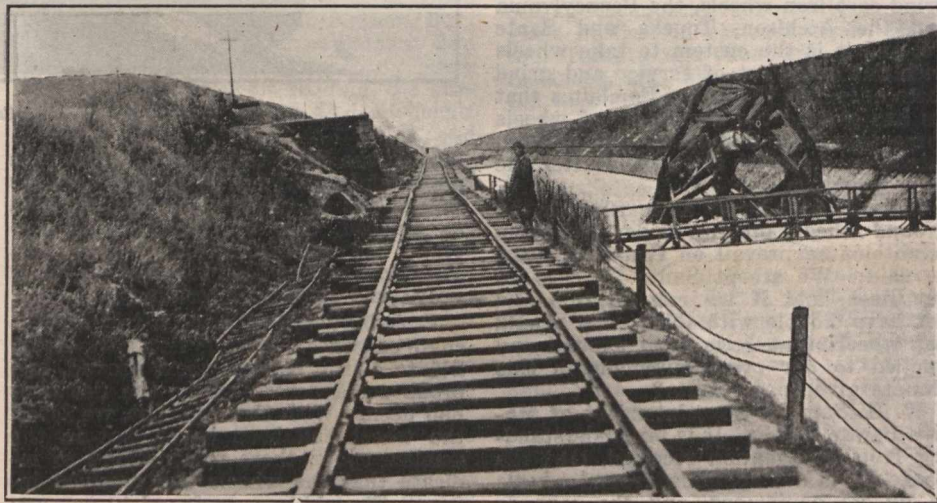
The Timiskaming and Northern Ontario Railway Men's Patriotic Association to Mar. 31, contributed \$99,446.50 to the Canadian Red Cross Society and the Canadian Patriotic Fund, exclusive of personal subscriptions by the commission and employees.

PERSONAL NOTES.

Capt. P. Beasley, of the Royal Air Force, who returned to Victoria, B.C., May 14, after nearly four years in the Imperial Army, is son of H. E. Beasley, General Superintendent, Esquimalt and Nanaimo Ry. He enlisted early in 1915 and after preliminary training at Dayton, Ohio, completed his training in England, where he obtained a commission in the Royal Naval Air Service. He went to France in 1916 and participated in many of the raids over German territory, and was latter engaged with the bombing and coast patrol in the neighborhood of Dunkirk, France. He visited Victoria on a short furlough in 1917 and on his return to France participated in the Ostend and Zeebrugge episodes. He went to England later and was appointed commanding officer of the Marine Observers' School on the Isle of Sheppey in Kent.

Major-General Garnet B. Hughes, C.B., C.M.G., D.S.O., who is Assistant Managing Director, British Cellulose and Chemical Mfg. Co. Ltd., Derby, Eng., is a civil engineer and was at one time in Mackenzie, Mann & Co.'s service and entered British Columbia Electric Ry. service, Sept. 4, 1911 as Resident Engineer on the construction of the Saanich Suburban line, and also took charge of extensive track reconstruction in Victoria, B.C. He also supervised track maintenance work for the company, on Vancouver Island. He resigned in March, 1914 on his appointment as District En-

rank of Major-General. He held this command until the 5th division was broken up early in 1918, when he was appointed General Officer Commanding troops at Witley Camp, Eng., which position he retained for about three months, when he was seconded to the Ministry



Newly laid railway track along path of Canal du Nord, Lebecquiere, East Diversion, France, Nov. 27, 1917. From photograph loaned by C.P.R.

of Munitions and assigned to the British Cellulose and Chemical Mfg. Co. Ltd., as Assistant Managing Director. He had full charge of the largest plant under erection for the manufacture of cellulose acetate, commonly called "dope," with which all aeroplanes had to be treated prior to going to France, to render them both fire and weather proof.

Col. B. N. Humble, D.S.O., who was appointed Manager, Empress Hotel, C.P.R., Victoria, B.C., recently, was, at the outbreak of war, Captain, 1st British Columbia Regiment. After being at Valcartier, Que., he proceeded to France in

University, and who is expected to return to Canada early in June, was, before the war, practising as a consulting engineer as a partner, in C. H. and P. H. Mitchell, Toronto. He is a Toronto University graduate and went overseas as Major in the Intelligence Department of the C.E.F., and was shortly afterwards transferred to the Imperial Army and placed on the General Staff. On account of the acknowledged excellence of his work, his promotion was rapid, passing through the various grades to Brigadier-General, and first class staff officer in charge of the intelligence work

for the Second Army. In addition to the decorations already mentioned, he has been awarded the following: Officer of the Legion of Honor, France; Croix de Guerre, and officer of the Order of Leopold, Belgium; Croci di Guerre and officer of the Crown of Italy, Italy. The Engineering Institute of Canada's Montreal Branch, has decided to entertain him at dinner on his arrival at Montreal.

Capt. D. J. Murphy Jr., formerly Superintendent, Dominion Atlantic Ry., Kentville, N. S., who is acting as Assistant Canadian Red Cross Commissioner for France will remain in France for some time owing to the volume of Red Cross work still to be done there. He went overseas in the spring of 1916 as captain with No. 1 Division Supply Company, from Halifax, N. S., and was later transferred to No. 3 Canadian Field Ambulance. After taking an active part in this capacity through all the principal battles he was loaned to the Red Cross Sept. 1, 1918, and during the heavy fighting at Mons was in personal charge of Red Cross supplies, arriving at Jemappes, 2½ miles from Mons, the day before the signing of the armistice, later following the attacking parties into Mons on Nov. 11 with supplies for the posts and emergency hospitals. He has been made a life member of the Belgian Red Cross Society and was presented with its gold medal. He was also in charge of Red Cross supplies for Cambrai, Denham and Valenciennes. His duties necessitated his motoring many times over the entire battlefields of France and Belgium. Premier Clemenceau in speaking in the Trench Chamber of Deputies, on Marshal Foch's report on the last 100 days fighting, and the wonderful part of the British troops in feeding so many civilians in the captured towns, said, "In this work, I want to make special reference to the achievements of the Canadian Red Cross; this work, under the supervision of Capt. Murphy, reflects great credit on him, and for his work he has been commended to military headquarters by several of the most prominent generals."

Capt. R. S. Reford, who has been appointed aide de camp to Viscount French, Commander in Chief of the forces in Ireland and Lord Lieutenant, is a son of R. W. Reford of the Robert Reford Co., steamship agents, Montreal. At the outbreak of war, he was attending Oxford University, and joined the King Edward Horse, later being transferred to the Sherwood Foresters, with which regiment he served about 18 months in France. He was later transferred to the 1st Battalion, Irish Guards, was wounded in 1917, and rejoined his regiment in France about the time of the armistice.

Col. G. S. Rennie, M.D., returned to Hamilton, Ont., May 5, having been overseas since the commencement of the war, as commanding officer, no. 2, Canadian General Hospital. He is medical officer for the Toronto, Hamilton and Buffalo Ry., and also for the Dominion Power & Transmission Co., which controls the various electric railways in, and radiating from, Hamilton, Ont.

Major S. F. Workman, M.C., who returned to Canada recently, was, before the war, engaged in engineering on C. P.R. Western Lines. He went overseas with the 3rd Pioneer Battalion, arriving in France in Mar., 1916, where he remained until the signing of the armistice. When the Canadian Railway Troops were organized, he transferred to that branch and received the M.C. for gallantry in action and devotion to duty, and

was mentioned in dispatches three times.

Lieut.-Col. S. C. Young, who was acting as Assistant Director of Railways and Docks, at Cherbourg, France, returned to Canada early in May. At the outbreak of war he was Mayor of Fort William and was gazetted Lieutenant-Colonel, and given authority to raise the 52nd Battalion. He was later commandant of the infantry school at Winnipeg for two years. Subsequently he went overseas to undertake the transportation duties at Cherbourg and Boulogne. He was in C.P.R. service for about 14 years.

Canadian National Railways' President and Vice President's Eastern Trip.

D. B. Hanna, President, and M. H. MacLeod, Vice President, Operation, etc., Canadian National Railways, have com-



Capt. D. J. Murphy, Jr.
Formerly Superintendent, Dominion Atlantic Railway.

pleted an inspection trip over the eastern lines. The principal feature of the trip was a meeting with a delegation representing the Moncton, N.B., City Council and Board of Trade, on May 17. The delegation presented their views at considerable length, urging, among other things, the maintenance of the management of the eastern lines at any rate at Moncton; suggesting that the proposed operation of steamships from Montreal to Newfoundland by the Canadian National Rys. would operate against the freight traffic on the line from Montreal to Sydney, and asking as to the plans for

second track construction from Moncton to St. John, and from Moncton to Halifax.

Mr. Hanna is reported to have said in reply, that he could not definitely understand what the delegation desired. There had not been any one removed from Moncton, but in the way of promotion, and the railway's payroll in the city was larger than ever it had been before. All the traffic from the west by the Canadian National Rys. for Halifax would have to go through Moncton, which was not in any danger of becoming a mere flag station. The steamship routes were being opened up to create additional business and it was intended to establish regular lines to China, Japan, South America, Africa and the West Indies, but the Dominion subsidized line to Newfoundland was not one of the proposed Canadian Government Merchant Marine lines. Some sections of the line between Truro and Moncton would have a second track built, the work being started this year; something was necessary in the way of additional freight shed accommodation at Moncton, but no decision had been reached as to what would be done.

Messrs. Hanna and MacLeod visited Sydney, Halifax, St. John and Fredericton, prior to returning to Toronto.

Freight and Passenger Traffic Notes.

Gull Lake, near Lacombe, Alta., is being developed as a summer resort. The C.P.R. grants week end tickets at special rates from Edmonton, and a press report states that Calgary people have asked that similar facilities be granted them.

The Canadian Northern Ry. inaugurated its car ferry service between Port Mann, on the British Columbia mainland, and Patricia Bay, on Vancouver Island, May 1. The first trip was made in 7 hours, the car ferry steamship Canora, carrying 21 cars of freight.

The C.P.R. announced recently that the regular summer suburban train leaving St. John, N.B., for Welsford at 1.10 p.m., Wednesday and Saturdays, and reaching St. John on the return trip at 4 p.m., would be again put in operation May 26, and will be so run until July 12, when the service will be made daily except Sunday.

Representatives of the Western Canada Livestock Union, the United Grain Growers' Association and the Winnipeg Stock Shippers' Association, met representatives of the C.P.R., the Canadian National Railways, and the Grand Trunk Pacific Ry. in Winnipeg, recently, to discuss matters connected with the shipment of live stock in the prairie provinces. Several amendments were suggested in the restrictions as to the conditions under which live stock would be carried, and the compensation to be paid for loss of live stock during transit, etc. It was announced by the representatives of the companies that an extensive programme of stockyard improvement was being arranged for throughout the west.

The Board of Railway Commissioners has authorized the Bell Telephone Co. to increase its tolls for long distance service and on all rates for exchange telephone service, by 10%. The so-called service in charge has been disallowed and the increase charges for exchange service already installed is effective July 1.

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.—J. W. BLOSS has been appointed District Passenger Agent, Cleveland, Ohio, vice H. W. Crawford, resigned.

R. A. CAMPBELL has been appointed Chief Dispatcher. Office, Toronto.

PERCY GRANT heretofore Assistant Traffic Manager, Toronto has been appointed Assistant Operating Manager. Office, Montreal.

J. W. GREINER, heretofore Mechanical Superintendent, has been appointed Marine Superintendent. Office, Montreal.

A. E. STINSON has been appointed Assistant Operating Superintendent. Office, Toronto.

Canadian National Rys.—G. COLLINS, Special Representative, Freight Department, has temporarily assumed the duties of acting Division Freight Agent, Ottawa Ont., M. A. Thompson, Division Freight Agent there, having resigned.

C. H. N. CONNELL, District Engineer, Quebec District, has had his office transferred from Montreal, to Champlain Bldg., Quebec, Que.

E. P. CRONK, heretofore City Freight Agent, Canadian Government Rys., Toronto, has been appointed City Freight Agent, Canadian National Rys., there.

W. A. CUNNINGHAM, heretofore Division Freight and Passenger Agent, Halifax and South Western Ry., Halifax, N.S., has been appointed Export and Import Freight Agent, Canadian National Rys. Office, Montreal.

L. C. DUPUIS has been appointed Resident Engineer, Saguenay Division, and Quebec to Shawinigan Falls, Montreal District. Office, Quebec, Que.

C. S. GZOWSKI, Jr., has been appointed Special Engineer to M. H. MacLeod, Vice President of Operation, etc. Office, Toronto.

M. HENCHY, heretofore Locomotive Foreman, Chaudiere, Que., has been appointed acting Assistant Master Mechanic, Edmundston N.B., during absence on leave of H. D. McKenzie.

T. KEARNEY, heretofore Assistant Engineer, Canadian Northern Ry., Montreal, has been appointed Resident Engineer, Montreal Division, Canadian National Rys. Office, Montreal.

G. F. KNIGHT, heretofore Assistant to Mechanical Superintendent, Moncton, N.B., has been appointed Shop Superintendent, St. Malo shops, Quebec.

G. P. MacLAREN has been appointed Engineer, Ontario District. Office, Toronto.

P. MARCOUX has been appointed acting Locomotive Foreman, Chaudiere, Que.

A. PATRICK has been appointed Inspector, Sleeping, Dining and Parlor Cars, Eastern Lines, Toronto.

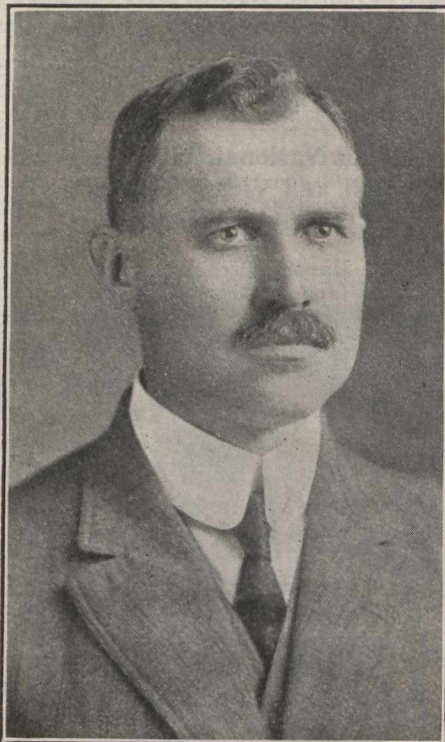
E. TIFFIN, heretofore General Western Agent, Canadian Government Railways, Toronto, has been appointed Special Traffic Representative, Canadian National Rys., Toronto.

Canadian Pacific Ry.—F. H. CLENDENNING, heretofore Division Freight Agent, Steamship Traffic, Vancouver, B. C., has been appointed Assistant Foreign Freight Agent, there.

W. B. HALL, heretofore Roadmaster, White River Subdivision, Algoma District, Chapleau, Ont., has been appointed

ed Roadmaster, Heron Bay Subdivision, Algoma District, vice D. Wilson transferred. Office, Schreiber, Ont.

L. HERBERT, heretofore Roadmaster,



T. C. Hudson,
General Master Mechanic Canadian National
Railways, Montreal.



John Wardrop,
General Agent, Industrial and Resources Department,
Canadian National Railways.

Nemegos Subdivision, Algoma District, Chapleau, Ont., has been appointed Roadmaster, White River Subdivision, Algoma District, vice W. B. Hall, transferred. Office, Chapleau, Ont.

J. R. KELLY, has been appointed General Foreman, Kenora, Ont., vice J. W. Keppel, transferred to Vancouver.

J. W. KEPPEL, heretofore General Foreman, Kenora, Ont., has been appointed General Foreman, Vancouver, B.C.

W. E. KINGSTON has been appointed Trainmaster for the portion of the Saskatoon Division west of Saskatoon, vice E. M. Smith, transferred to Lethbridge, Alta. Office, Wilkie, Sask.

E. M. SMITH, heretofore Trainmaster, Wilkie, Sask., has been appointed Trainmaster, Lethbridge, Alta., vice W. H. Gordon.

T. J. SMITH, heretofore General Freight Agent, London, Eng., has been appointed European Freight Manager. His former position has been abolished. Office, London, Eng.

W. H. THOMPSON, heretofore dispatcher, has been appointed Chief Dispatcher, Edmonton Division, Alberta District, vice R. J. Collins. Office, Edmonton.

M. W. VOUCHER, heretofore Locomotive Foreman, Ignace, Ont., has been appointed Locomotive Foreman, Field, B.C.

D. WILSON, heretofore Roadmaster, Heron Bay Subdivision, Algoma District, Schreiber, Ont., has been appointed Roadmaster, Nemegos Subdivision, Algoma District, vice L. Herbert, transferred. Office, Chapleau, Ont.

A. M. YOUNG, heretofore Night Foreman, Kenora, Ont., has been appointed Locomotive Foreman, Ignace, Ont., vice M. W. Voucher, transferred.

Canadian Pacific Ocean Service Ltd., A. G. BALCER, heretofore Freight Claims Agent, Montreal, is reported to have been appointed General Freight Claims Agent with office at Montreal.

J. R. CLANCY, heretofore representative at New York, has been appointed General Agent, Freight Department for Ontario. Office, Toronto.

H. D. DRING, heretofore General Passenger Agent, C.P.R., London, Eng., has been appointed European Passenger Manager, C.P.O.S. His former position has been abolished. Office, London, Eng.

W. G. ROCHE has been appointed General Agent, Freight Department. Office, Chicago, Ill.

J. T. WALSH, heretofore Assistant Manager, has been appointed Manager. Office, Montreal.

Grand Trunk Ry., J. F. AITCHISON, heretofore acting Auditor of Disbursements, has been appointed Auditor of Disbursements. Office, Montreal.

W. BIBBY has been appointed Supervisor of Track, District 4, Montreal Division, vice J. B. Franklin, transferred to Brockville, Ont. Office, Montreal.

G. COOPER has been appointed Trainmaster, District 5, Montreal Division, with jurisdiction from Brockville, Ont., to Turcot Yards, Montreal, vice W. J. Nixon, assigned to other duties. Office, Brockville, Ont.

J. B. FRANKLIN, heretofore Supervisor of Track, District 4, has been appointed Supervisor of Track, District 5, Brockville, Ont., vice W. Fitzgibbons, resigned.

H. M. GAIN has been appointed Trainmaster, Districts 2 and 3, Montreal Division, vice N. P. North, transferred. Office, Richmond, Que.

C. H. GODFREY, formerly Vice President, Canadian Steel Foundries Ltd., and

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more recently Comptroller of the City of Montreal, has been appointed Special Auditor, G.T.R., vice C. Percy, deceased.

W. JONES has been appointed Claims Inspector, Montreal Division. Office, Montreal.

LORNE MACDONALD, heretofore Division Freight Agent, Toronto, has been appointed Assistant General Freight Agent, Montreal, vice F. J. Watson, promoted.

H. C. MARTIN, heretofore General Freight Agent, Montreal, has been appointed Freight Traffic Manager, vice C. E. Dewey, deceased. Office, Montreal.

F. J. WATSON, heretofore Assistant General Freight Agent, Montreal, has been appointed General Freight Agent there, vice H. C. Martin, promoted.

Grand Trunk Pacific Ry., Grand Trunk Pacific Coast Steamship Co. (Minister of Railways, Receiver)—A. COTTER has been appointed acting Local Auditor, F. R. Hunt having resigned to accept service with another company. Office, Prince Rupert, B.C. The circular announcing this appointment was issued by J. M. Rose-year, General Auditor, and approved by Howard G. Kelley, President.

Grand Trunk Western Lines Rd. (U.S. R.A.)—This railway, which was grouped with the Pere Marquette Rd. and other roads under the U.S. Railroad Administration, has been separated and will be operated under the management of H. E. WHITTENBERGER, who has been appointed Federal Manager. Office, Detroit, Mich.

The following appointments have been made:—R. L. BURNAP, Traffic Manager; J. D. McDONALD, General Passenger and Baggage Agent; C. A. GORMALY, Division Freight Agent, with offices at Chicago, Ill.; W. H. EDMONDSON, Assistant to Federal Manager; W. K. WILLIAMS, General Solicitor; N. C. FOSS, Purchasing Agent; W. A. GEER, General Attorney; C. J. COOPER, General Claims Agent; L. R. FLANDERS, Freight Claim Agent, with offices at Detroit, Mich.; A. Z. MULLINS, Division Freight Agent, with office at Grand Rapids, Mich.; J. L. CRAMER, Federal Treasurer, and J. O. TALBOTT, Federal Auditor, with offices at Detroit, Mich.

Michigan Central Rd.—E. H. WOOD has been appointed Master Car Builder, Canada Southern Division, vice Neil Marple, assigned to other duties. Office, St. Thomas, Ont.

NEIL MARPLE, heretofore Master Car Builder, has been appointed General Foreman, St. Thomas, Ont., vice E. Mitchener, assigned to other duties.

Toronto Union Station—A. L. SMITH, formerly President and General Manager, Algoma Eastern Ry., Sudbury, Ont., has been appointed Superintendent, Toronto Union Station, vice J. J. Beck, deceased.

The Paravane in the War.

One of the secrets of the war most jealously and most successfully concealed was the paravane, and it was only recently that anything was made known about it. So complete is the protection which paravanes afford that squadrons of warships can now steam with impunity through the thickest mine fields.

The original paravane consisted of a long, buoyant, pear-shaped metal body. Ordinarily this would float on the surface of the water, but a plane placed under the broad end of the body and inclining downward serves, directly the paravane is

towed through the water, to drive it below the surface. The principle is the same as that by which the pull on a string drives a kite upward in the air. Once down, the paravane is kept at a predetermined constant depth by a fishlike tail rudder, actuated by a delicate hydrostatic valve. The paravane at first carried a heavy charge of explosives, and when towed from the stern of a destroyer or trawler proved a deadly weapon against submarines.

The outcome of the explosive paravane was the twin paravane, with one side of the depressing plane weighted, causing it to tow, not in the ship's wake, but obliquely outward and away from the hull. These are towed in pairs, one on either side, and mine-mooring ropes, which are encountered as the ship moves forward, are forcibly deflected from the ship and along the whole length of the towing rope until they come to the paravane itself. Here a sharp saw set in a slot, into which the mine cable is forced by the rush of water, severs it instantly, and the released mine rushes to the surface, where it can be immediately detected and destroyed.

After the British fleet was equipped with paravanes only two ships were sunk by mines, and the Germans found the mooring ropes of their mines cut so frequently as to lead them in the latter days of the war to abandon mine-laying altogether. This valuable device was invented by Lieut. Dennis Burney, son of Admiral Sir Cecil Burney, Commander-in-Chief at Rosyth.—Toronto Globe.

The Canadian Steamship Agency Ltd. has been incorporated under the Quebec Companies Act, with \$10,000 authorized capital and office at Quebec, Que., to act as steamship agent, and to own and operate steam and other vessels of every description, in the passenger, freight and other businesses. W. Q. Stobo, H. C. Thorn, C. St. J. Griffis, H. G. Deguire and J. Graham, Quebec, are the incorporators.

France and Canada Steamship Co. Ltd. has been incorporated under the Dominion Companies Act with \$10,000,000 authorized capital and office at Montreal, to carry on a general navigation and transportation business. A company of this name has been carrying on a steamship business between France and North American ports for several years, but during the war the service was chiefly confined to operating sailing vessels to New York.

A bill was introduced into the House of Commons, May 21, to amend the act respecting the appointment of a harbor master for Halifax, N.S., to provide that the remuneration shall not exceed \$3,000 a year, instead of \$1,800 a year, as previously, and that such remuneration shall be by fees on vessels utilizing the harbor, but should the revenue from this source, not be sufficient, such sum shall be the remuneration for a year. Fees on vessels are fixed as follows: For vessels over 20 and under 50 tons register, 50c; 50 to 100 tons register, \$1; 100 to 200 tons, \$1.50; 200 to 300 tons, \$2; 300 to 400 tons, \$2.50; 400 to 500 tons, \$3; 500 to 700 tons, \$4; 700 to 1,000 tons, \$5; and over 1,000 tons, \$7. Vessels under 20 tons, and those trading between Canadian ports, are not subject to any duty.

The White Pass and Yukon Ry. and Navigation Co. expects to put its river steamers in operation between White Horse and Dawson, Yukon, June 2.

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.

28224. Apr. 10.—Rescinding order 26258, June 22, 1917, and limiting speed of G.T.R. trains between Brant and Durham Sts., Brantford, Ont., to 8 miles an hour.
28225. Apr. 10.—Ordering Ottawa Gas Co. to pay G.T.R. only \$3,058.50 as demurrage charges on cars of coal.
28226. Apr. 10.—Ordering G.T.R. to erect station at Mille Roches, Ont.; plans to be submitted by May 15 and work to be completed by Sept. 1.
28227. Apr. 10.—Approving Railways Department plan of bridge reconstruction over Trent Canal at Washago, Ont.
28228. Apr. 12.—Authorizing C.P.R. to build reinforced concrete bridge over Seigneur St., Montreal, replacing existing bridge.
28229. Apr. 14.—Approving Canadian National Rys. plan of permanent structure over Laronde River, replacing wooden structure there.
28230. Apr. 14.—Authorizing Ottawa Electric Ry. to appeal to Supreme Court of Canada against board's orders 27830, Nov. 6, 1918, and 28120, Feb. 25, 1919, which suspended and disallowed its tariff C.R.C. 5, upon a number of questions for argument.
28231. Apr. 12.—Authorizing C.P.R. to remove portion of Motherlode spur from mileage 3 to 5.46, near Greenwood, B.C.
28232. Apr. 14.—Declaring on complaint of Pacific Coast Shippers' Association that movement from Huntingdon to Vancouver, B.C., not being competitive within the meaning of the Railway Act, the lawful rate of lumber in carloads from Abbotsford to Vancouver on June 14, 1917, was 5c a 100 lbs. and authorizing reparation on that basis to Abbotsford Timber and Trading Co.
28233. Apr. 15.—Approving Canadian National Rys. plan of new abutments and approach spans at crossing of Shawanaga River, mileage 16.5 from Parry Sound, Ont.
28234. Apr. 15.—Extending to May 15, time within which C.P.R. shall install automatic bell at crossing near Farrelton, Que.
28235. Apr. 16.—Authorizing C.P.R. to build spur for Canadian Axe & Harvest Tools Mfg. Co., Cote St. Paul, Que.
28236. Apr. 15.—Authorizing C.P.R. to build extension to spur for Brackman-Ker Milling Co., Calgary, Alta.
- 28237, 28238. Apr. 11.—Amending orders 7339, May 4, 1909, and 21288, Jan. 31, 1914, re crossings at College St., Lennoxville, Que., and Prince Edward St., Brighton, Ont., by C.P.R. and G.T.R., to provide for division of responsibility for accidents due to negligence of watchmen.
- 28239, 28240. Apr. 11.—Amending orders of the Railway Committee of the Privy Council, Nov. 2, 1897, and 2823, Dec. 18, 1890, re crossings of Bay St., and Bloor St., Toronto, by C.P.R. and G.T.R., to provide for division of responsibility for accidents due to negligence of watchmen.
- 28242 to 28244. Apr. 11.—Amending orders 10508, May 6, 1910, 19232, May 9, 1913, and 23899, June 24, 1915, re crossings of William St., Brockville, Ont., King St., Weston, and Cobourg and Grafton Road, Ont., by C.P.R. and G.T.R., to provide for division responsibility for accidents due to negligence of watchmen.
28245. Apr. 14.—Authorizing C.P.R. to remove agent at Shuswap, B.C., caretaker to be appointed to keep station clean, heated and lighted for passengers.
28246. Apr. 10.—Ordering G.T.R. to flag all switching movements over crossing of Niagara St., Hamilton, Ont.
28247. Apr. 22.—Extending to June 22, time within which C.P.R. shall install improved automatic bell at Horne Ave., Mission City, B.C.
28248. Apr. 19.—Amending order 28198, Mar. 31, re interchange track between C.P.R. and Canadian National Rys. at St. Leonards, N.B.
28249. Apr. 19.—Authorizing C.P.R. to build spur for Sheet Metal Mfg. Co., Calgary, Alta.
28250. Apr. 22.—Approving clearances of Pere Marquette Rd. spur for Acme Roofing Co., Walkerville, Ont.
28251. Apr. 22.—Amending order 25763, Dec. 22, 1916, closing road allowance by Canadian Northern Ry., between secs. 11 and 14 and secs. 11 and 12, Tp. 8, Range 19, west of principal meridian to provide that center lines of crossing be moved 30 ft. to the northeast.
28252. Apr. 19.—Ordering Canadian National Rys. to stop trains 5 and 6 regularly at Portland, Ont.
28253. Apr. 22.—Approving agreement Apr. 1, between Bell Telephone Co. and Lake Shore Mutual Telephone Co., Bruce and Huron Counties, Ont.
28254. Apr. 22.—Amending order 25753, Dec. 22, 1916, re crossing of Church St., Weston, Ont., by C.P.R. and G.T.R.
28255. Apr. 25.—Ordering Grand Trunk Pacific Ry. to erect standard A station at Avonhurst, Sask., to be completed by Oct. 1.
28256. Apr. 23.—Amending Railway Committee of Privy Council's order of July 15, 1886, re crossing of Strachan Ave., Toronto, by C.P.R. and G.T.R. to provide for division of responsibility for accidents due to carelessness of watchmen.
28257. Apr. 24.—Ordering G.T.R. to install automatic bell at crossing near Aultsville station, Ont.
28258. Apr. 24.—Ordering Canadian National Rys. to appoint day and night watchmen at crossing of 115th Ave., Edmonton, Alta.
28259. Apr. 24.—Authorizing Canadian Northern Saskatchewan Ry. to build across highway between Sec. 5, Tp. 24, and Sec. 34, Tp. 23, Range 8, west 3rd meridian.
28260. Apr. 23.—Approving plan of reconstruction of interlocking plant at crossing of Lake Erie and Detroit River Ry. by C.P.R. at Walker-ville Jct., Ont.
28261. Apr. 24.—Approving G.T.R. clearances for Maple Leaf Milling Co's sidings on Welland Canal reserve, Port Colborne, Ont.
28262. Apr. 24.—Authorizing Canadian Northern Saskatchewan Ry. to cross highway between Secs. 4 and 5, Tp. 24, Range 8, west 3rd meridian.
28263. Apr. 23.—Approving Canadian National Rys. plan of grade revision at Weir, Que.
28264. Apr. 8.—Authorizing G.T.R. to rebuild bridge crossing Weston Road, York Tp., over G.T.R., near West Toronto station, Ont.
28265. Apr. 28.—Amending order 27623, Sept. 3, 1913, providing that Canadian National Rys. stop trains 5 and 6 on flag at Clarence, Ont. instead of trains 7 and 8, which are to stop there on flag on Sundays only.
28266. Apr. 25.—Ordering G.T.R. to build stock pen by Sept. 30, with two loading chutes to load four cars at Thornby, Ont.
28267. Apr. 28.—Authorizing C.P.R. to build extension to spur for J. I. Case Threshing Co., Saskatoon, Sask.
28268. Apr. 28.—Ordering C.P.R. to provide station facilities at Corinne, Sask.
28269. Apr. 28.—Ordering apportionment of costs between the City of Edmonton, Alta., and C.P.R. re crossing of Whyte St.
28270. Apr. 29.—Extending to Dec. 31, time within which C.P.R. shall build spur for Western Canada Hardware Co., Lethbridge, Alta.
28271. Apr. 29.—Authorizing C.P.R. to divert road allowance on south boundary of s.w. ¼, Sec. 14, Tp. 35, Range 4, west 4th meridian, Alta.
28272. Apr. 30.—Ordering C.P.R. to provide additional station accommodation at Balcarres, Sask.
28273. Apr. 29.—Relieving C.P.R. from providing further protection at crossing of McDougal St., Port Arthur, Ont.
28274. Apr. 29.—Ordering C.P.R. to appoint a caretaker at Clair, Sask., to see that station is kept clean, heated and lighted for passengers.
28275. Apr. 30.—Ordering C.P.R. to build the main bodies of its standard A2 station as additional to freight shed at Prelate, Sask.
28276. Apr. 30.—Ordering Canadian National Rys. to build standard freight and passenger shelter and a one-car stock pen and chute at Katarine, Man.
28277. Apr. 30.—Relieving C.P.R. from providing further protection at crossing near Cabri, Sask.
28278. Apr. 29.—Ordering Canadian National Rys. to appoint caretaker at Runnymede, Sask., to see that station is kept clean, heated and lighted for passengers.
28279. May 2.—Approving crossing of Esquimalt & Nanaimo Ry. by Mayo Lumber Co., to spur at mileage 7.25, Sahtlawn District, Vancouver Island, B.C.
28280. May 3.—Ordering G.T.R. to limit speed of trains crossing Kingston Road, west of Port Union Station, Ont.
28281. Apr. 29.—Authorizing Canadian Northern Ontario Ry. to rebuild bridge over Farm Road, Whitechurch Tp., mileage 30.66, from Toronto.
28282. Apr. 28.—Authorizing Canadian Northern Ontario Ry. to build tie loading spur at mileage 4.45, Champagne Tp.
28283. Apr. 28.—Authorizing G.T.R. to build shelter at Perch, Ont.
28284. Apr. 25.—Approving agreement between Bell Telephone Co., Apr. 7, and Tilbury West Tp., Ont.
28285. Apr. 29.—Authorizing Canadian Northern Ontario Ry. to build crossing over farm road, March Tp., mileage 17.13 from Rideau Jct.
28287. Apr. 28.—Authorizing G.T.R. to operate over siding to be built in Toronto harbor industrial district by Toronto Harbor Commissioners.
28288. May 3.—Authorizing Canadian National Rys. to operate over crossing of Portage Ave., near Westside station, Man.
28289. May 2.—Dismissing complaint of Adolph Lumber Co., Baynes Lake, B.C., against rate charged by Great Northern Ry. on logs from Dorr, to Baynes Lake, B.C.
28290. Apr. 29.—Dismissing application of T. M. Kelly, Sebringville, Ont., for order directing G.T.R. to erect station between Ellice and Logan Tps., approximately midway between Sebringville and Mitchell, Ont.
28291. Apr. 28.—Authorizing C.P.R. to build reinforced concrete bridge near Atwater Ave., Montreal.
28292. May 5.—Approving proposed diversion of Rosebud River by Canadian National Rys. in n.w. ¼, Sec. 35, Tp. 27, Range 20, west 4th meridian, Alta.
28293. Apr. 25.—Authorizing C.P.R. to build spur for Canadian Tube & Iron Co., Montreal Parish, Que.
28294. May 5.—Approving Canadian National Rys. plan of proposed diversion of Rosebud River in Sec. 18, Tp. 28, Range 19, west 4th meridian, Alta.
28295. Apr. 28.—Authorizing Canadian National Rys. to divert and dam east branch of Severn River at Rattlesnake Island, mileage 88.3, Washago, Ont.
28296. Apr. 29.—Authorizing C.P.R. to build highway crossing between Secs. 1 and 2, Con. 3, of park lots, Sault Ste. Marie, Ont.
28297. Apr. 28.—Amending order 28177, Mar. 20, re Manitoba Government highway crossing over Canadian National Rys. between Secs. 14 and 23, Tp. 34, Range 23, Man.
28298. May 5.—Approving Canadian National Rys. plan for diversion of Rosebud River in Secs. 6 and 7, Tp. 28, Range 19, west 4th meridian, Alta.
28299. May 6.—Authorizing Vancouver, Victoria & Eastern Ry. & Nav. Co. (G.N.R.) to remove west leg of Y track at Colebrook, B.C.
28300. May 6.—Relieving C.P.R. and G.T.R. from maintaining signalmen to operate interlocking plant at Chatham, Ont., between 4 p.m. and 8 a.m. on week days during every month of each year excepting Sept., Oct., Nov. and Dec.
28301. May 5.—Extending to July 5, time within which C.P.R. is required to install automatic bell at crossing of Bull St., Woodstock, N.B.
28302. May 7.—Authorizing C.P.R. to build spur for Robin Hood Mills Ltd., Moose Jaw, Sask.
28303. May 6.—Ordering that gates at crossing of Eastern Ave., Toronto, by C.P.R. and G.T.R., be operated by watchmen appointed by the companies and in case of disagreement, matter to be settled by the board.
28304. May 8.—Amending order 4819, May 18, 1918, re crossing of Church St., Toronto by the G.T.R. and C.P.R.
28305. May 7.—Ordering G.T.R. to instal automatic bell at crossing of Muskoka Road, near Orillia, Ont.
28306. May 5.—Approving Canadian National Rys. plan of diversion of Rosebud River, Sec. 24, Tp. 27, Range 21, west 4th meridian, Alta.
28307. May 7.—Authorizing Montreal Tramways Co. to cross C.P.R. at Cote St. Paul, the Canal Bridge and St. Patrick St., Montreal, also G.T.R. on north bank of said bridge.
28308. May 12.—Extending to Aug. 12, time within which C.P.R. shall build spur for Rob Roy Mills Ltd., Durham, Ont.
28309. May 12.—Relieving G.T.R. from providing further protection at crossing of first public road east of Lawrence Station, Ont.
28310. May 9.—Amending order 28343, Apr. 11, re crossing of King St., Weston, Ont., by G.T.R. and C.P.R.
28311. May 9.—Authorizing Alberta Government to build public highway crossing over Grand Trunk Pacific Ry. in northeast ¼, Sec. 26, Tp. 52, Range 3, west 5th meridian, Alta.
28312. May 8.—Approving rearrangement of G.T.R. spurs on Lachine Canal Reserve for Dominion Flour Mills Ltd., Montreal Parish, Que.
28313. May 9.—Approving location of G.T.R. shelter at Stewarttown, Ont.
28314. May 12.—Approving plan showing work to be done on the McIntyre-Zavitz drain, in Brooke Tp., under G.T.R.
28315. May 14.—Dismissing application of Grain Claims Bureau Ltd., on behalf of grain shippers in Western Canada, for order directing railways to show on bills of lading covering grain shipped from points in Manitoba, Saskatchewan and Alberta, the depth of inches of grain loaded in cars.
28316. May 14.—Approving Niagara, St. Catharines and Toronto Ry. plans of standard concrete culverts and standard flat top culverts of various openings.
28317. May 14.—Authorizing Canadian National Rys. to build spur for J. McMillan, Fort Rouge, Winnipeg.
- General order 262. May 8.—Amending regulations governing baggage car traffic.
- General order 263. May 7.—Standardizing railway regulations governing guard rails, vestibule doors and platforms on passenger cars.

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

The British America Nickel Corporation has, a press report states, completed location surveys for a line from its works at Nickelton into Sudbury, Ont. Nickelton is a station on the Algoma Eastern Ry., 6 miles out of Sudbury, and the located route is reported to be between the A.E.R. and the C.P.R. Sudbury-Sault Ste. Marie line.

Burrard Inlet Tunnel and Bridge Co.—A press report states that a local committee has been formed to revive this projected enterprise, that a meeting of the local reconstruction committee was held at North Vancouver, B.C., May 5 and that it was decided to have the municipalities of North Vancouver—city and district—and West Vancouver appropriate \$1,000 towards an educational campaign. The building of a bridge across the second narrows of Burrard Inlet, at North Vancouver, has been under consideration for some years, and the charter for its construction, with connecting railways, etc., is held by the cities of North Vancouver, and Vancouver, and adjoining municipalities. A considerable sum has been expended upon plans, and in making foundation tests, etc. The building of such a bridge is one of the recommendations contained in the Swan report on the development of Vancouver harbor. (July, 1918, pg. 285).

Dolly Varden Mines Ry.—Subsequent to the appointment of Justice Clement as arbitrator to fix the amount due the Taylor Engineering Co. for the construction of the railway under the terms of the act passed recently by the British Columbia Legislature, an agreement was reached by which the company admits the Taylor Engineering Co.'s claim of \$462,628.08 without reference to the commission. The straightening out of this matter will confirm the company in its charter rights, and give it additional time within which to complete the railway and develop its mining property. (May, pg. 253).

Edmonton, Dunvegan and British Columbia Ry.—J. D. McArthur, President, is reported to have said in the course of a recent interview at Edmonton, Alta., that extensive improvements in the line are to be carried out at once; that the first 164 miles from Edmonton to Sawridge, will receive attention first; that a large number of new ties will be placed, and that the roadbed will be generally improved so as to permit of a more rapid and more satisfactory service being given; that between Sawridge and Burnt River, there is considerable work of a miscellaneous character to be done; that from Burnt River to Spirit River, mileage 357, ballasting is to be carried forward, and continued along the branch from Rycroft to Grande Prairie, 49.8 miles, and that these improvement works will be rushed to completion.

With regard to extensions of the time, Mr. McArthur is reported to have said that construction from Peace River to Varena cannot be proceeded with this year unless the Dominion Parliament will vote a subsidy. This extension would reach 50 miles beyond the crossing of the Peace River.

In connection with the foregoing, it should be borne in mind that it has been persistently reported recently that Mr.

McArthur could not carry on his railway enterprises much longer and that they would have to be taken over, either by the Dominion Government, or by the C.P.R.

W. R. Smith, General Manager and Chief Engineer of the McArthur lines (the E.D. and B.C.R., the Alberta and Great Waterways Ry., and the Central Canada Ry.) completed a trip of inspection recently over the lines in operation, under construction and projected, in company with a party stated to represent the C.P.R.

R. A. Hazelwood, C.E., is reported to have arrived in Edmonton, May 4, in connection with the company's work. (May, pg. 253).

Esquimalt and Nanaimo Ry.—After a number of conferences between representatives of the C.P.R., which operates the E. and N.R., considerable progress was reported to have been made, May 13, in the settlement of the Johnson St. bridge matter, which has been the subject of negotiations between the Victoria City Council, the company, and the British Columbia Government for three or four years past. The C.P.R. was represented at the most recent conference J. M. R. Fairbairn, Chief Engineer, and P. B. Motley, Engineer of Bridges, and the E. and N.R. by H. E. Beasley, General Superintendent, and R. A. Bainbridge, Engineer. A press report states that the only notable change decided upon is a decrease in the span of the proposed bridge from 150 ft. to 120 ft. and a slight decrease in the width of the superstructure. The city's plan provides for a curved vehicular approach by way of Johnson St. The City Engineer is reported to be engaged in remodelling the city's original bridge plans in accordance with the agreements reached at the conference.

The C.P.R. is reported to have advised the city and the B.C. Government that while \$60,000 would represent the actual value of a new bridge to its railway, it was willing to contribute \$100,000 towards the cost of a new structure such as the city desired. The British Columbia Government, it is reported, has promised to contribute \$200,000. The estimated cost of the railway and general traffic bridge, with approaches for vehicle and pedestrian traffic asked for by the city, is about \$600,000.

The mayor of Victoria, is reported to have said, May 13: "When the plans have been completed and formally approved by all parties concerned—as a matter of fact, they are being drawn up to suit the wishes of all—and as soon as we have interviewed the B.C. Electric Ry. Co. on its possible contribution, and the Dominion Government, we shall be in a position to prepare a bylaw. We will make the best bargain possible and then leave the question in the hands of the people. Before the summer is over, I am sure, the ratepayers will be given an opportunity to vote on it." (Apr., pg. 190).

Essex Terminal Ry.—A press report states that the company will lay a track between two structures being built by the General Motors Corporation, Windsor, Ont. (Mar., pg. 134).

Lacombe and Northwestern Ry.—The Alberta Government will, according to a press report, ask for tenders shortly for

the grading of the projected extension from the present terminus, Bentley, to Rimbey, 17 or 18 miles. Plans and specifications were on May 7 reported to be in preparation. The estimated cost of the completion of the work done by the Lacombe and Blindman Valley Electric Ry. Co. beyond Bentley, and of the new grading, etc., was recently stated by the premier in the legislature to be \$319,785. (Mar., pg. 254).

Grand Trunk Ry.—The Ottawa City Council has appointed a committee to interview the Dominion Government in regard to the removal of the G.T.R. cross-town tracks.

Grand Trunk Pacific Ry.—Application is being made to the Dominion Department of Public Work, for approval site and plans of a car ferry slip and works proposed to be built by the G.T.P.R., in front of waterfront Block C, Prince Rupert, B.C. (Near pg. 134).

The Maritime Coal, Ry. and Power Co., has applied to the Dominion Department of Public Works, for approval of plans of piers proposed to be built at River Hebert, on the Hebert River, and at Maccan, on the Maccan River, N.D., along the company's railway. Tenders were received to May 24 for the construction of three timber crib railway bridge piers, ballasted with rock on pile foundations, 2 to be built at Maccan and 1 at River Hebert, N.S.

Michigan Central Rd.—In reference to a press report that the company was planning extensive developments and improvements at Niagara Falls, Ont., involving the building of a new station, etc., we are officially advised that the company is not considering any large improvements there, but is making preliminary investigations towards the rebuilding or strengthening of the cantilever bridge across the Niagara River, but nothing definite has been decided in regard to this. J. F. Deimling, Detroit, Mich., is Chief Engineer. (Apr., pg. 191).

Montreal Central Terminal Co.—C. N. Armstrong, who is interested in the promotion of this enterprise, submitted plans of the projected station and its connections to the Montreal Board of Trade's council, Apr. 30. He is reported to have said in the course of his explanation of the plans that the carrying out of the company's project would get rid of the present G.T.R. tracks between St. Henri and Bonaventure station, and avoid level crossings in the city or suburbs, while the tunnel would afford prompt and economical communication with the south shore. The council referred the plans to its harbor and navigation committee.

Pacific Great Eastern Ry.—The Premier of British Columbia returned to Victoria, May 7, after a trip of inspection over the line. A press report states that rails are expected to be laid as far as Williams Lake near 150 mile house by September, and as far as Deep Creek by next winter. A site for the station to be built at Williams Lake was selected and a question of location at Deep Creek, or Deep Cove crossing, in the vicinity of Soda Creek, was discussed. At this point there is a hole 280 ft. deep, and 1,200 ft. wide, across which a bridge costing approximately \$500,000 would be necessary. At Quesnel, the question of

relocating the line was discussed with the board of trade. The suggestion is that the line be relocated south of Quesnel at a lower level, so as to connect with navigation on the Fraser River, and do away with the necessity of building a half mile bridge and trestle crossing of the Quesnel River. The present location would also require the construction of a bridge 3,000 ft. long and 315 ft. above water level across the Cottonwood River. The Premier is reported to have said that a careful resurvey and re-examination of the route would be made by the provincial railways department's engineers before any definite conclusion was reached.

The Premier's party was accompanied by A. F. Proctor, Chief Engineer, and C. C. Worsfield representing the Dominion Government. They travelled from Squamish, to deep water terminus, to the railhead in autos, lashed to flat cars, and from the end of railhead to Quesnel by autos. (May, pg. 254).

Reid Newfoundland Ry.—Answering questions in the Newfoundland Legislature, May 1, the Colonial Secretary said the company sent in a statement to the government in connection with the branch lines contract of 1910, up to Aug., 1917. The account was divided into three sections:—(1) Balances unpaid on general contract, in which it was alleged that the government had retained a larger percentage of the guarantee than was warranted; (2) As to extra work on the branch lines in respect of which there were differences of opinion between the government and the company's engineers, and (3) As to items not considered as extras by the government engineers. The total amount of these claims was \$668,041.28, of which the government subsequently paid the company \$132,546.94, without prejudice. As to the amount to be retained out of the guarantees, the government engineer was to be the sole judge under the contract. As to the other two points, the matter was argued out before the government by both parties, and the government engineer was given directions how to act. The company also made a request that it be paid in cash for lands to which it is entitled at the price fixed by the contract, and the government exercising its option under the contract had acceded to the company's request.

On the same day the Premier, replying to another question, said the matter of calling upon the company to proceed without further delay to construct the branch lines to Fortune Bay and to Bonne Bay, contracted for in 1910, was under consideration, as also was the question of the general state of repair of the railway.

A petition was presented in the legislature recently, asking for the extension to Lead Cove of the branch line now terminating at Heart's Content.

St. John and Quebec Ry.—Construction equipment was reported to have been delivered, Apr. 30, for ballasting and other completion work on the Gagetown-Westfield section. The work is to be done, it is reported, by the Canadian National Railways construction staff. It is expected that the work will be completed in order to permit of the operation of trains early in July. (May, pg. 254).

The House of Commons passed a resolution May 19, declaring it to be expedient to extend the time for the con-

struction of the St. John and Quebec Ry. from its present northerly terminus at Centerville to Andover, N.B., to Dec. 31, 1921, both with respect to the agreement as to operation, and as to subsidy, provided that such extension of time shall only be granted with the New Brunswick Government's consent. The necessity for the additional legislation, the Minister of Railways explained, was that the N.B. Government had called attention to the fact that this provision had been omitted from the act of 1918. A bill to give effect to the resolution was read a first time May 19. (May, pg. 254).

Timiskaming and Northern Ontario Ry.—We are officially advised that the engineering party which has been sent out for the collection of additional information with reference to the general physical features and economic resources of the country between Cochrane and James Bay, is in charge of W. R. Maher, Locating Engineer, T. and N.O.R. The work to be done by the party is in connection with the project for the extension of the line from its present northerly terminus at Cochrane to James Bay.

The party is reported to consist of 24 men, most of whom have seen active service at the front. They were reported to have left Cochrane, May 20, for Clute, and the route from there, it was expected, would be to the foot of the Long Sault Rapids, on the Abitibi River, where the first camp will be set up. (May, pg. 255).

Toronto, Hamilton and Buffalo Ry.—The Hamilton, Ont., Board of Control is reported to have appointed a committee to negotiate with the company for the removal of its coal dock at the west end of Herkimer St. (Jan., pg. 26).

Regulations for Handling Guard Rails, Vestibule Doors and Platforms on Passenger Cars.

The Board of Railway Commissioners passed general order 263, May 7, as follows:—

Whereas, the board's attention has been called to a number of accidents, in some instances fatal, caused by failure to keep vestibule doors on passenger cars closed; upon reading what has been filed by the Canadian Railway Association for National Defence, on behalf of railway companies operating in Canada, and upon the report and recommendation of the board's Chief Operating Officer, and in pursuance of the powers conferred upon it by sections 30 and 269 of the Railway Act, and all other powers possessed by the board in that behalf, it is ordered that every railway company subject to the legislative authority of the Dominion Parliament, operating a railway by steam power, shall strictly conform to the following rules and regulations governing the handling of guard rails, vestibule doors, and platforms on passenger cars which are hereby approved, viz.:

"Through and local (except suburban) trains, double track, right hand operation. When running, all doors and platforms except those on rear right hand side of last car are to be kept closed. When standing, the right hand doors and platforms, only, are to be opened, except when necessary to open left hand doors to receive or discharge passengers.

"Through and local (except suburban)

trains, double track, left hand operation. When running, all doors and platforms except those on rear left hand side of last car are to be kept closed. When standing, the left hand doors and platforms, only, are to be opened, except when necessary to open right hand doors to receive or discharge passengers.

"Through and local (except suburban) trains, single track. All doors and platforms, except those on rear of last car, are to be kept closed when running.

"Suburban trains, double track, right hand operation.—Doors and platforms on right hand side of train may be kept open, and when open are to be securely fastened. Those on left hand side must be kept closed, except when necessary to open them to receive or discharge passengers.

"Suburban trains, double track, left hand operation. Doors and platforms on left hand side of train may be kept open, and when open are to be securely fastened. Those on right hand side must be kept closed, except when necessary to open them to receive or discharge passengers.

"Suburban trains, single track.—All doors and platforms may be kept open and when open are to be securely fastened.

"Movable guard rails. When there are movable guard rails on non-vestibule or open vestibule cars, guard rails must be kept closed, except that when trains are standing they are to be opened only on the side at which passengers are to be received or discharged.

"Vestibule curtains. When cars are equipped with vestibule curtains, these appliances are to be kept closed, and are not to be uncoupled until trains stop at terminal, or when change is to be made in consist of train.

"Observation cars. When rear car is observation car, side gates and platforms must be kept closed when running.

"Tail gate, chain or bar. At rear of last car in train must invariably be kept closed."

2. "Suburban trains," as used in this order, means, and applies only to, trains within commutation limits when carrying commutation traffic.

The C.P.R. Recreation Club of Toronto has been organized to promote athletics and general social entertainment among the employes. The following officers have been elected: President, W. Fulton; Vice Presidents, T. Collins, F. M. Rutter and F. Ronaldson; Secretary, W. Henderson; Treasurer, F. MacGregor.

Jamaica Railways—A. Kingston, Jamaica, cablegram, states that owing to the high cost of coal, the Colonial Government is having a survey of the available water powers made to see if it would be possible to operate the railways on the island by electric power.

C.P.R. Pensions Raised—Montreal press dispatch, May 14.—Owing to the high cost of living the C.P.R. directors have authorized a special allowance to remain in force until the end of 1920, representing an increase of 25% on all pension payments to officers and employes on the pensions roll. According to the last annual report the pension allowances for the year ended Dec. 31, amounted to \$267,097.43, there being 854 officers and employes on the pension roll, of whom 411 were over 70 years of age and 404 between 60 and 70.

Canadian National Railways Shops, St. Malo, Que.

It is the intention to place in service the Canadian National Ry. shops at St. Malo, Quebec, in the near future, the passenger car shops towards the end of June, and the locomotive shops, sometime in the autumn. These shops were built by the National Transcontinental Ry. Commission, the contract being let in 1913, and a description of the layout with plan appeared in Canadian Railway and Marine World for Sept., 1913. The shops were built during 1914, but have not been used.

The shops are located in St. Malo, a suburb of Quebec about 2 miles from, and almost due west of, the center of the city. The National Transcontinental Ry. main line enters Quebec from the west over the C.P.R. tracks from Cadorna, 3.3 miles from Quebec, and the shops adjoin these tracks. From Cadorna, the Canadian National Rys. have built a parallel line about a mile long on the south side of the C.P.R. line for the shop approach of the C.P.R. line, for the shop approaches.

The shop buildings are arranged along a midway, with those handling the heaviest equipment adjoining, and with the others located back from it. The midway, which extends the full length of the main part of the shop area, is 75 ft. wide, and is served by a 20-ton travelling crane, the track for which is supported on the building abutments and steel columns. Most of the buildings are of the same type of construction, a self-supporting steel frame, with brick walls, the whole supported on a concrete wall carried up to the windowsills. The roof of each building is of double wood sheathing, with ventilators and skylight, and covered with a prepared roofing. Most of the floors are of 6 in. concrete, overlaid with a 1½ in. layer of special grease resisting mastic asphalt. The heating of all but the locomotive and boiler shop is by direct radiation, the locomotive and boiler shop having an indirect fan system.

The locomotive and boiler shop is 603 x 152 ft., containing both locomotive and boiler departments in opposite ends, there being no divisional walls in the length of the building. The building is divided into 3 longitudinal bays, and into 26 traverse bays, at 23 ft. centers; 18 of these bays contain locomotive pits and the other 8 are for boiler work. The longitudinal bays are as follows: erecting bay, 75 ft. wide; large machine bay, 55 ft.; small machine bay, 18½ ft. Over the small machine bay, there is a gallery extending the full length of the shop, containing the lighter equipment and heating plant. The shop space gives an area of 3,400 sq. ft. per pit. The locomotive shop has two entrance tracks with provision for two more, and the boiler shop, one track. The locomotive shop erecting bay has a 120-ton travelling crane for placing the locomotives, as well as two 10-ton cranes. The boiler shop has a 20-ton crane, as well as smaller cranes.

The shop offices are in a 3 story and basement building, 60 ft. square, near the end of the locomotive shop, and back from it, and all the shop officials will be located in it, dispensing with the smaller shop offices.

The stores building is of reinforced concrete throughout, 104 x 79 ft., flush with the midway, and with a 10 ft. platform extending along three sides, with ramps leading up from the ground level

at two corners. It also contains a basement. The platform on the midway side is served by the midway crane.

The forge shop is 155 x 107 ft., with a cinder floor, the steel work being designed to support jib cranes. It will contain the usual complement of forges, hammers, etc.

The power house is 125 x 107 ft., divided by a fire wall into engine and boiler rooms, with a pump pit running along the fire wall in the engine room, and a basement extending under the whole area of the boiler room to accommodate the coal and ash handling apparatus. The engine room is served by a light travelling hand crane. The power house is close to the midway, and centrally located to minimize power losses.

The oil house is a reinforced main floor and basement building at the rear end of the plant. The oil house is 30 x 40 ft., standing on a 50 x 70 ft. platform, which forms the roof of the basement.

The passenger car shop, 265 x 130 ft., is the principal of the car department buildings, and is located back from the midway. It is divided into 3 bays, 2 of which are served by cranes, and contains 4 through repair tracks, and a fifth stub track.

The planing mill, 82 x 265 ft., is at the rear of the car shop, and near the power house, to which the mill shavings will be forced by a fan system.

The dry kiln, to the rear of the planing mill, is 38 x 50 ft.

The lumber shed, 40 x 225 ft., is of wooden frame construction on concrete foundations. The whole of the car department buildings are so located as to give a continuous forward movement of the lumber through to the car shop.

The iron store and scrap bin, 140 x 24 ft., is between the forge shop and stores.

The crude oil store, 42 x 20 ft., is located between the boiler shop and oil house.

G. Fred Knight has been appointed Superintendent of the shops.

Orders for the equipment of the shops will be placed shortly as specifications from manufacturers showing the types of machines which they can supply, as well as information on delivery dates, etc., is now in the hands of Shop Superintendent Knight, who is making the necessary selection from the lists submitted.

The Canadian Ticket Agents' Association's executive committee met in Toronto, May 8, W. Jackson, C.P.R. Ticket Agent, Clinton, Ont., presiding. It was decided to hold the 33rd annual business meeting at the Prince George Hotel, Toronto, Sept. 23. The members and their wives will leave Toronto, Sept. 24, in the morning, by special G.T.R. train for Muskoka Wharf, and from there by a Muskoka Lakes Navigation and Hotel Co.'s steamboat to the Monteith House, Lake Rosseau, where the night will be spent. The party will leave there early on Sept. 25, proceeding down the lakes and return either by Muskoka Wharf and the G.T.R., or by Bala and the C.P.R., so as to reach Toronto in time to allow members to take night trains for the east, and possibly for Western Ontario points. E. de la Hooke, the Association's veteran secretary, is in charge of the general arrangements as he has been for so many years.

The Canadian Pacific Railway's New Transcanada Trains.

We are officially advised that in order to handle the increasingly large volume of transcontinental travel, and to give business travellers a faster service to and from the west, the C.P.R. has arranged to put on new daily limited express trains to be known as Trans-Canada Limited. These trains, which will start running June 1, will reduce the journey between Montreal, or Toronto, and Vancouver, to less than four days and save a full business day. They will be strictly limited; i.e., will have space for sleeping car passengers only. In addition to the ordinary sleeping cars, compartment cars and dining cars, will be run out of both Montreal and Toronto.

Train 7 will leave Montreal at 3.30 p.m. and train 9 will leave Toronto at 7.15 p.m. They will be consolidated at Sudbury and will be operated as train 7 from there to Vancouver. Passengers leaving Montreal or Toronto, say on a Sunday, will leave Sudbury at 4.20 a.m. Monday, reach other points as follows: Fort William, 9.30 p.m. Monday; Winnipeg, 9.05 a.m. Tuesday; Regina, 7.15 p.m. Tuesday; Calgary, 9.30 a.m. Wednesday, and Vancouver, 10 a.m. Thursday. The schedules of the Trans-Canada Limited, show a running time of 93 hours, 30 minutes, westbound, from Montreal to Vancouver, and 92 hours, 15 minutes, eastbound, from Vancouver to Montreal. From Toronto to Vancouver, 89 hours, 45 minutes; from Vancouver to Toronto, 88 hours.

The eastbound train no. 8, which will leave Vancouver at 7.30 p.m., is arranged with equal convenience for the business man. A Toronto man with business to do in Winnipeg, could leave Toronto on Monday evening, spend a full day in Winnipeg, and be back in Toronto at 1.30 p.m. on Friday.

These new trains will be particularly convenient for tourists from eastern Canada and the United States, desiring to reach the mountain resorts at Banff and Lake Louise. They will also be a great convenience for passengers to the Orient, who will be able to save a full business day in connecting with the C.P.R. Express steamships from Vancouver.

Canadian Northern Ry. Earnings, Etc.
—The Minister of Railways in reply to questions in the House of Commons, May 15, said the fixed charges on the Canadian Northern Ry. system for the year ended Dec. 31, 1918, were \$17,735,522.31. Included in this was the interest payable to the government, \$3,900,529.15. In the statement he made recently, showing that the net earnings for the C.N.R. system for the calendar year, 1918, were \$3,562,303.40, no provision was made for the payment of this interest. The deficit for 1918, after fixed charges had been provided for over \$14,333,085.07. The Dominion Government is a shareholder of the C.N.R., but as such does not necessarily assume all its liabilities.

E. W. Beatty, K.C., President, C.P.R., left Montreal, May 15, on his first official trip over the company's Western lines since his appointment to that position. Owing to the strike situation in Winnipeg, his movements have not been fully reported. He is said to have accepted an invitation to address the Canadian Club at Victoria, B.C., during his visit.

Aerial Transportation for Canada.

Canadian Pacific Railway's Application to Parliament.

As stated in Canadian Railway and Marine World for May, the C.P.R. Co. has applied to the Dominion Parliament for an act to authorize it to establish, maintain and operate services by air craft between such points and places within or without Canada as may be found desirable, and to exercise and employ such powers as may be necessary for such purposes.

Grant Hall, Vice President, is reported to have stated in this connection as follows:—

"The C.P.R.'s application for an air charter is only natural when one considers that we are approaching a new epoch in air transport as applied to commerce. Even before the war a dirigible airship maintained a regular passenger service between Frankfort and Berlin for two years, and during the war the progress in aerial transit has been phenomenal. Much of that progress has been due to the skill and daring of Canadian fliers. General Seeley, in the British House of Commons, recently, acknowledged the indebtedness of the allies to Canada in securing aerial supremacy and said: 'Canada gave the largest contribution in numbers and of her services those who know what Canadian airmen did need not be reminded—they were second to none.'

"The British Government has allowed no less than \$300,000,000 in the estimates for the coming year for air service, of which \$10,000,000 has been set aside for experimental research and civil aviation. Bonar Law owns his own aeroplane, which is used for his frequent visits to Paris, and there is a regular daily service of a 17-passenger Handley-Page machine between London and Paris. Although at present aerial transport is a distinctly expensive matter, the progress being made, both in aeroplanes and dirigibles is so rapid that it is quite in order for a company such as the C.P.R. to be ready to enter the field as soon as air transportation comes within the range of practical politics.

"Although there are areas in Canada which will for a long time present difficulties, particularly to aeroplanists, there are other areas which conform to the requirements of the experts. Take, for instance, the western prairies, which offer the conditions described by General Seeley as vital, viz.: that they are regions 'where there are wide spaces with almost complete absence of the airman's real enemy—mist and fog—not wind.' It is there where air travelling might be made profitable.

"There are, however, many costly features about an air service by means of aeroplanes which will militate against any hope of very low rates—particularly the necessity of suitable landing spaces at frequent intervals, in case of engine trouble. Orville Wright maintains that to make flying reasonably safe, good landing places should be provided at 10 or at most 15, miles interval. A landing space must be about a quarter section in size and the surface must be of level, smooth, hard sod. Then, in the case of airships, the cost of sheds is a very considerable item. Thus, for instance, a shed to house two of the new

rigid R-80 British dirigibles is about \$2,000,000—so that anyone who is under the impression that air transportation in the near future will reduce either rail or steamship rates is likely to be disappointed.

"In a word, the future of commercial air transportation is bound up in the question of cost, but we are of the opinion that with the engineering and operating resources which the C.P.R. has always been able to command, we should be able to enter the field with confidence when the time seems ripe."

Act to Authorize the Appointment of An Air Board for the Control of Aeronautics.

The Air Board Act to authorize the appointment of an air board for the control of aeronautics was passed by the House of Commons, May 6.

In introducing the bill Apr. 29, Hon. A. K. Maclean, acting Minister of Naval Service, said, owing to the development of aeronautics in Canada and in other countries, it is necessary to administer these services in this country. The bill proposes the establishment of an air board to consist of not less than 5 and not more than 7 members to be appointed by the government. It is intended that the chairman shall be a minister of the crown, and that the Militia and the Naval Service Departments shall each be represented on the board by one member. The purpose of the bill is to control and regulate and to prescribe laws for the conduct of aeronautics in Canada. It is deemed advisable to constitute a board for the time being as the most practicable method of dealing with this new subject. Possibly after a year's trial it may be found that some other legislation is necessary.

In the committee stage of the bill, May 5, it was stated that provision would be made for the services of the air board in the supplementary estimates; that the operations of the board would largely relate to commercial activities, as it was anticipated that naval and military activities would be limited for the next few years; that up to the present it is not the fixed or settled policy of the government to establish a school where practical or theoretical instruction will be imparted so as to render a man thoroughly competent to take charge of an aeroplane. Hon. A. K. Maclean, in charge of the bill, said the Militia and Naval Service Departments, during the period of the war, carried out a programme of education, but it has now practically ceased. It is necessary to first enact legislation before any fixed policy can be adopted by the government in respect of any form of aeronautical activity. Many applications have been received from commercial companies for the establishment of aeronautical routes throughout Canada. It is open to the government to embark upon various forms of aerial activity, such as the conveyance of mails, the survey of forest, fire protection, patrols by the mounted police, and so forth, but at the present time the government has reached no definite policy in respect of any of these matters. The immediate purpose of this legislation is chiefly to control aeronautics in Canada, established by any government department or by private corpora-

tions. For example, it is not within the right of any individual to fly in the air with aeroplanes or hydroplanes or any other machine of the kind, although there is no statutory law which directly prohibits it. It is unknown to both the common law and the statutory law. Consequently nobody can legally engage in flying today, and in none of the provinces or in Canada, as a whole, is there any statutory authority for anybody to grant licenses for the purpose. The board must establish aerial routes; the machines used must be licensed and inspected, just as a steamship is; the flyers and the crews must be licensed; regulations must be enacted compelling flying machines to use telephone or wireless apparatus. A very close parallel to the control of aerial navigation is the control exercised by the government over shipping. Generally speaking, the object of this legislation is to put the government in a position to control aeronautics chiefly commercial, as that is the form it will have to be dealt with in the immediate future in Canada.

A question was raised as to the rights of the provinces, but Mr. Maclean pointed out that any doubt entertained did not affect the competency of parliament to pass the legislation, although later it might be held by the courts to be only intra vires in so far as it affects inter-provincial aeronautics.

The bill as passed by the House of Commons, provides that the members of the air board shall be appointed for three years; they shall be eligible for reappointment, and shall be paid salaries to be fixed by the government. The board's duty will be to supervise all matters connected with aeronautics; to study the development of aeronautics in Canada and other countries, and to undertake such technical research as may be requisite for the development of aeronautics, and to co-operate with other institutions in carrying out such research; to construct and maintain all government aerodromes and air stations, including all plant, machinery and buildings necessary for their efficient equipment and upkeep; to control and manage all aircraft and equipment necessary for the conduct of any of His Majesty's services; to operate such services as the government may approve; to prescribe aerial routes; to co-operate with other officers of His Majesty, and to assist in the carrying on of any service under their jurisdiction which may require aerial work of any nature, and to collaborate with the officers employed in existing air services of His Majesty in such extension of their present work as the development of aeronautics may require; to take such action as may be necessary to secure by international regulation or otherwise the rights of His Majesty in respect of the Dominion Government in international air routes; to co-operate with officers of the Militia and of the Naval Service Departments on all questions relating to the air defence of Canada; to co-operate with the air staffs or authorities of other governments or countries for any purpose pertaining to air services; to investigate, examine and report on all proposals for the institution of commercial air services within or partly within Canada or the territorial waters of Canada; to consider, prepare

and draft for approval by the government such regulations as may be considered necessary for the control or operation of aeronautics in Canada or within the limits of the territorial waters of Canada and to perform such other duties as the government may impose. The board is empowered to make regulations, subject to the government's approval for licensing of pilots and other persons for the navigation of air craft; for the registration, inspection and licensing of air craft; for licensing, inspection and regulation of aerodromes and air stations; the conditions under which aircraft may carry goods, mail and passengers; the conditions under which goods, mail and passengers may be imported or exported; the prohibition of navigation of air craft over prescribed areas; the areas within which aircraft coming from places outside Canada are to land and the conditions to be complied with by such aircraft; the institution and enforcement of such laws, rules and regulations as may be deemed necessary for the safe and proper navigation of aircraft in Canada, or the territorial waters of Canada, and the organization, discipline, efficiency and good government generally of the officers and men employed under the air board. All regulations made are to become valid upon publication in the Canada Gazette. Persons found guilty, upon summary conviction, of violating any of the regulations, are liable to a fine not exceeding \$1,000, or to imprisonment for not exceeding six months, or to both fine and imprisonment. The board may employ such officers and men as may be required, at rates of pay, together with such arrangements for housing, boarding, clothing, etc., as may be approved by the government.

Aerial Transportation Notes

The Aerial League of Canada, is reported to be arranging for a flight across the Rocky Mountains and to have selected Vernon, B.C., as one of the points of call.

A press report states that work is in progress on laying out an "air port" at Atlantic City, N.J., and that an area of 160 acres is being developed, with landing places, hangars, and service stations.

A Sudbury, Ont., press report, May 11, states that a hydroplane service will be put in operation shortly between there and the new gold mining district of West Shining Tree. The report also states that Sudbury will be a station on a route the promoters expect to be able to develop to include Toronto, Fort William, Port Arthur and other points.

Two seaplanes given to Canada by the Imperial Government, are reported to have been turned over by the Minister of Marine to the St. Maurice River Forestry Protection Association, for use in connection with its work of forest protection in the St. Maurice River Valley. It is expected that the seaplanes will begin their work June 1, Three Rivers, Que., being their starting point. The work is being done by the association in close co-operation with the Quebec Government.

Major J. Inwood, Secretary of the Aero Club of Canada, who has been touring Canada in the club's interests, is reported to have said in Vancouver, May 7: "After the armistice was signed, 7,000 air mechanics of the R.A.F. in Canada were demobilized, besides 4,400 cadets discharged in various stages of training, 3,300 cadets who had been trained and

sent to England as flying officers, and between 3,400 and 4,000 men who transferred from the C.E.F. to the flying forces. All these and 2,500 employes of Canadian Aeroplanes Ltd., are now seeking employment or have temporarily taken employment in some calling where they are unable to make use of the technical knowledge and training they possess. Vancouver, by its position on the coast, is bound to have a great future as a station in the multiplicity of passenger and commercial flying stations that will, within the next few years, be employed in carrying mail and other important matter and passengers across the Dominion. The Vancouver people are alive to the vast possibilities of this new industry, and are ready to encourage those who are interested in the future of flying, and are working for an immediate development that will provide remunerative and congenial occupation for the large number of Canadian flying men and mechanics trained in the technology of this new business." The Aerial League of Canada, which has recently been organized in Vancouver, will, it is reported to have been arranged, become the provincial governing body of the Aero Club of Canada in British Columbia.

Timiskaming and Northern Ontario Railway Report.

The Timiskaming and Northern Ontario Ry's report for the year ended Oct. 31, 1918, has been issued by the commission which operates it and the Nipissing Central Ry.—an electric line—for the Ontario Government. Following are extracts:—

MILEAGE.	
Main line, North Bay to Cochrane.....	252.29
Branch lines (three)	76.21
Nipissing Jct. spur, leased to G.T.R.....	2.10
Yards and sidings	113.89
Second track	1.70
Total mileage operated.....	446.19
Leased to Nipissing Central Ry.....	13.16
Total mileage owned	459.35
ASSETS	
Cost of road	\$18,478,540.12
Cost of equipment	2,874,693.83
Investment Nipissing Central Ry.....	492,123.31
Empire Lumber plant, Latchford.....	1,007.60
Working assets	1,300,119.95
Deferred debit items.....	16,634.72
.....	\$23,163,119.53
LIABILITIES.	
Provincial loan account	\$21,822,744.13
Working liabilities	618,581.97
Deferred credit items	325,696.04
Balance profit and loss.....	396,097.39
.....	\$23,163,119.53
EARNINGS AND EXPENSES.	
Revenue from transportation.....	\$2,688,658.36
Revenue other than transportation....	123,652.26
Total operating revenue	\$2,812,310.62
Maintenance of way and structures....	\$ 462,526.51
Maintenance of equipment.....	486,057.18
Traffic expenses	19,376.52
Transportation expenses	1,260,079.90
Miscellaneous operations	52,651.27
General expenses	111,097.85
Transportation for investment (cr.)....	586.63
Total operating expenses.....	\$2,390,202.60
Net operating revenue	\$422,108.02
Ore royalties	96,579.78
Rent from joint facilities.....	14,118.11
Rent from lease of road.....	12,802.18
Interest (dr.)	3,459.15
Miscellaneous income	8,931.73
Total income	\$551,080.87
Deductions from income	121,661.03
Net earnings	\$429,419.64

Compared with the year ended Oct. 31, 1917, the total operating revenue increased \$480,404.83; the operating expenses increased \$508,906.31, and the net operating revenue decreased \$28,501.48. The income from other sources also decreased, making a total decrease of income of \$49,346.69, while the deductions from income increased \$37,934.23, thus making a decrease of net earnings of \$87,280.92. From profit and loss, \$300,000 was paid to the Treasurer of Ontario, certain adjustments were made and \$396,097.39 was carried forward.

TRAFFIC STATISTICS.

Revenue passengers	436,984
Passengers carried one mile.....	25,538,424
Passengers carried one mile per mile of road	77.743
Average distance carried (miles).....	58.44
Average amount received	\$1.48
Passenger train revenue per train mile	\$1.73
Revenue freight carried (tons).....	1,233,510
Tons carried one mile.....	237,038,877
Tons carried one mile per mile of road	721,564
Average distance of haul of one ton (miles)	192.16
Average revenue per ton.....	\$1.57
Average amount received per ton per mile	c.009
Freight revenue per train mile.....	\$2.95
Freight originating on the line (tons)	514,727
Received from Canadian lines.....	634,522
Received from U.S. lines (tons	84,261
Total (tons)	1,233,510
Mileage of revenue passenger trains....	378,972
Mileage of revenue mixed trains	51,637
Mileage revenue freight trains.....	605,297
Total revenue train mileage.....	1,035,906

Railway Finance, Meetings, Etc.

Canadian Northern Ry.—A press report of May 16 stated that an issue of \$7,500,000 of 6% equipment trust certificates was being placed on the United States markets, at prices yielding from 5½ to 6%. The certificates are to be issued against new rolling stock, costing \$10,724,705 on account of which \$3,224,705 has been paid by the company.

Guelph Jct. Ry.—The Guelph Jct. Ry. are reported to have declared a dividend of 6¾%, May 17. The line is owned by the City of Guelph, but is leased to the C.P.R., and is operated as part of a through line from Toronto to Goderich, connection also being given with Hamilton, by a line from Guelph Jct., on the Toronto-Windsor line.

Reid Newfoundland Co.—The Colonial Secretary laid before the Newfoundland Legislature May 1, a report of the railway operations of the Reid Newfoundland Co. for the year ended June 30, 1918. A local paper in summarizing the report, says the gross earnings of the railway were \$1,253,565.99, and the operating expenses, \$1,600,190.84, thus showing a deficit of \$346,624.85. The detail figures given show the gross earnings to be as stated, but do not agree with the expenses as given.

Timiskaming and Northern Ontario Ry.—Passenger earnings for Feb., \$49,624; freight earnings, \$167,392.48; total earnings, \$217,016.48; passenger earnings for March, \$68,195.08; freight earnings, \$166,515.87; total earnings, \$234,710.95, against \$38,859.37, passenger earnings; earnings; \$109,393.20, freight earnings; \$148,252.57, total earnings, for Feb.; and \$51,403.97, passenger earnings; \$214,884.14, freight earnings, and \$266,288.11, total earnings, for March, 1918.

The Board of Railway Commissioners has ordered the C.P.R. to resume the two trains daily service between Calgary and Macleod, Alta., commencing June 1.

Canadian National Railways Construction, Betterments, Etc.

Halifax Terminals—The Minister of Railways replying to a question in the House of Commons, May 14, said the total cost to Mar. 31, of the Halifax terminals, including the cost of the branch railway connecting the terminals with the Intercolonial Ry. main line, was \$14,802,655.11. The estimated cost, at present prices, of the work necessary to complete the first unit of 9 berths, including permanent station, train shed, passenger landing and immigration facilities, 2 story permanent sheds at berths, not now equipped with sheds, and leaving 4 temporary wooden sheds as they are, grain elevators, and conveyers, tracks, roadways, subways, etc., and completion of existing contracts, together with new locomotive facilities at Fairview is \$8,000,000.

Truro-Painsec Jct. Second Track—In Canadian Railway and Marine World for May, reference was made to a press report, crediting W. A. Kingsland, Assistant General Manager, Eastern Lines, with having stated that this year's construction programme will include the building of a second track between Truro, N.S., and Painsec Jct., N.B., from which point there is a double track to Moncton. We are officially advised that Mr. Kingsland did not make such a statement but merely said that a certain amount of second track would be laid. We are also advised that it is intended to lay some second track in both directions from certain stations between Truro and Painsec Jct.

Moncton Freight Shed—We were officially advised, May 8, while certain changes will have to be made in connection with the Moncton, N.B., freight sheds, owing to the T. Eaton Co. having located a distributing warehouse there, nothing definite has yet been decided.

Fredericton-McGivney Jct. Track Improvements—Fredericton, N.B., press report, of Apr. 30, stated that work had been started on the Fredericton-McGivney Jct., section of the old Canada Eastern Ry., to bring it up to main line standard, for use in handling through traffic from the National Transcontinental Ry. to and from St. John, N.B.

The New Brunswick Minister of Lands and Mines is reported to have said recently, that the building of a spur line of about 5 miles from the National Transcontinental Ry. to the Grand Lake coal fields had been discussed with Canadian National Rys. directors, and was being considered. The district is now served by the Fredericton and Grand Lakes Coal and Ry. Co.'s line, which is operated by the C.P.R.

Levis Station—A press report of May 16, states that the location of the proposed new station for Levis, Que., is to be looked into by the Minister of Railways, upon representations made in favor of building it on the site of the one burned down.

The question of building a temporary station at a cost of about \$100,000 was under discussion in the Senate, May 7, with a view of urging the Minister of Railways stop work upon a temporary station and arrange for a meeting of the railway authorities with the Levis people to discuss the whole matter.

St. Malo Shops, Quebec—It was reported May 6, that the rails to give these shops connection with the National Transcontinental Ry. main line, were

were being laid, and that the shops would be ready for opening early in July. They are dealt with in a separate article in this issue.

Ontario Lines—We are officially advised that contracts have been let for bridge and culvert work as follows:—Trenton Subdivision, Pillsworth and Daly, Cobourg Ont.; Rideau Subdivision, Doran and Devlin, Ottawa; Muskoka Subdivision, Jas. Bogue, Peterborough, Ont.; Pembroke Subdivision, Hyland Construction Co., Toronto; North Bay Subdivision, Wallace and Angus, North Bay, Ont.; Nipigon Subdivision, Campbell and Lathmore, Toronto.

Port Arthur and Duluth Ry.—A Flint, Ont., press report, May 1, states that a delegation of business men along the branch from Twin City Jct. to North Lake, Ont., was informed recently by Superintendent Moodie, that \$40,000 will be expended during this year on this branch, in putting in new ties and ballasting.

Western Lines Betterments, Etc.—Tenders were received up to May 26 for the supply of all labor and materials for the erection and completion of the following:—Port Arthur, Ont., 5 stall additions to locomotive house, and turntable foundation, Winnipeg; addition to freight car shop and addition to power house; Kamsack, Sask.; a 10-stall addition to locomotive house and a machine shop; North Battleford, Sask., 15-stall addition to locomotive house and a machine shop; Prince Albert, Sask., no. 4 stores building; Kindersley, Sask., cinder pit; Edmonton, Alta., 5-stall addition to locomotive house, and a cinder pit; Hanna, Alta., 5-stall addition to locomotive house; Calgary, Alta., no. 4 stores building; Big Valley, Alta., no. 4 stores building. J. Schofield is the company's architect, at Winnipeg.

Tenders have been received for the erection of standard fineing on the Oliver, Crooked Lake and Elrose Subdivisions.

A Port Arthur, Ont., press report of May 12, stated that fully 35% of this year's work on the line from Port Arthur to Winnipeg for this year had been completed. The report added that 250 men were relaying track between Port Arthur and Emo, and that this work would be completed at an early date.

An Edmonton, Alta., press report of May 8, stated that 80 lb. rails were being laid between Warman and Prince Albert, Sask., to replace lighter rails.

A press report states that the building of a second track from Wayne to Manson, in the Drumheller-Colbery district, Alta., will be completed this year.

Extensions in Prairie Provinces—In reference to the matter under this head, published in Canadian Railway and Marine World for May, we are officially advised that the following corrections should be made:—

Lampman-Peebles line—Lampman, Sask., is on the Maryfield extension, where it intersects the Bienfait branch, and Peebles is on the Brandon-Regina line, not on the Prince Albert line, as stated previously. The extension is not from Peebles northerly, but from Peebles southerly, for 21 miles.

Leech Lake extension is a continuation from Elrose Jct. for 35 miles from Dunblane, 13 miles of which were build previous to this year.

Acadia Valley line, 25 miles, is to be

built from at or near Alsask, Alta., on the Elrose extension southwesterly.

Gibbs Bros., Lumsden, Sask., who have the contract for the Swift Current extension, which is for continuing for some 25 miles on the Avonlea-Gravelbourg line from Gravelbourg, Sask., towards Swift Current, are farmers as well as railway contractors, the three members of the firm being W.C., Frank and David Gibbs.

The Canadian Construction Co. Ltd., which contracts for grading and culverts on the Lampman-Peebles line and the Hanna-Medicine Hat line, will have its headquarters for the latter contract at Millicent, Alta. The company's officers are J. D. McArthur, President; W. A. Dutton, Vice President and General Manager; E. J. Rankin, Treasurer, and D. N. McLeod, Secretary. Its head office being at Winnipeg.

A press report of May 8 stated that track had been laid on this branch to mileage 73, and that as soon as track laying is completed on the finished grading, ballasting will be started. The rails being laid on this line were lifted from the main line west of Battleford, Sask., where 85 lb. rails are being laid.

Kamloops-Vernon-Lumby Branch—A press report of May 8 stated that H. F. Silverthorne, of the C.N.R. engineering staff, had opened an office in Vernon, B.C., and had a survey staff going over the location. A Vancouver press dispatch of May 9 referred to the assembling of the contractor's plant, and quoted J. W. Stewart, the principal member of the contracting firm, as stating that work would be started at once.

New Westminster to Vancouver—A press report states that the building of a line from New Westminster to Vancouver, is contemplated, and that as soon as plans are prepared construction will be started. It is stated that the line will run through New Westminster, and down the North Arm, to South Vancouver, this year, and that eventually it will, in all probability, be continued on to Vancouver, and that it will probably be operated by electricity.

Victoria, B.C., Terminals—We are officially advised that the management is arranging for a car ferry slip at Patricia Bay on Vancouver Island, and for the erection of a 5-stall locomotive house at Victoria.

A recent press report stated that the electric equipment for the slip at Patricia Bay had been delivered, and that as soon as it was installed the slip would be equipped with 3 aprons, to enable the car ferry steamship Canora to be operated at any stage of the tide.

The same report also stated that the temporary terminal buildings at Victoria would be erected on the north side of Point Ellice bridge, and that this would make it possible to put in operation the track between Esquimalt Road and Alpha St., also the new bridge across the Selkirk water. Until entrance can be secured to the Songhees Indian Reserve, secured for permanent terminal purposes, the passenger station will remain, it is said, north of Esquimalt Road. Another report says that the management will go ahead with some of the permanent buildings on the Songhees Reserve, and with the erection of a car ferry slip to give access to the new government docks at Ogden Point. (May, pg. 246).

Canadian Pacific Railway Construction, Betterments, Etc.

Chateau Frontenac Improvements—A press report states that Mapes and Maxwell, architects, have prepared plans for the erection of an extensive addition to the Chateau Frontenac, Quebec, at an estimated cost of from \$1,500,000 to \$2,000,000. The report says the addition will be 10 stories high with a 15 story tower.

Quebec District—An unconfirmed press report states that tenders will be asked at an early date for the electrification of the branch line from Three Rivers to Shawinigan Falls and Grand Mere, Que., 27 miles.

Ontario District—Automatic signals are being installed between Galt and Woodstock, Ont., mileage 57.7 to 88. There are 3 positions, upper quadrant, top first mechanism, low voltage d.c., with d.c., track circuits; the type of control known being absolute permissive block. The work is being done by the General Railway Signal Co. of Canada, and it is expected to have it completed by the end of August.

Manitoba District—Tenders are under consideration for the construction of 4 concrete arch culverts on the Neudorf subdivision, and for new standard A-3 station at Harding, Man., and Marchwell, Sask.

A press report states that a considerable amount of ballasting will be done during this year between Virden and Broadview, Man., 84 miles, and that about 11 miles of new 85 lb. rails will be laid west of Virden.

Saskatchewan District—A Regina press dispatch, May 9, stated that the Saskatchewan Government had received a telegram from D. C. Coleman, Vice President Western Lines, C.P.R., announcing that work would be started immediately upon the construction of a line from Victoria or Govanlock, Sask., easterly. These stations are on the Weyburn-Lethbridge line, which has its present western terminus at Altawan, on the Saskatchewan-Alberta boundary, Govanlock being 7 miles and Vidora 28 miles east of that point. The line is projected to run easterly a few miles north of the International Boundary, and finally effect a junction with a line running easterly from Estevan. Surveys were made some years ago, and Grant Hall, then Vice President and General Manager Western Lines, made a trip through the country to be opened up.

Western Branch Lines—The C.P.R. made application to the Dominion Parliament this session for authority to build a number of branch lines in Saskatchewan and Alberta. A bill providing for the building of seven branch lines has been passed by the House of Commons, and is now before the Senate. The bill provides that the company may within two years begin, and within five years, complete the construction of any of the specified lines, at the end of which period the powers of construction shall be null and void in respect of so much of any of the lines remaining uncompleted. The company is authorized to issue securities for \$40,000 a mile in respect of the lines, such issues to be made in accordance with the terms of the Company's Special Act as defined by the Railway Act, sec. 2. By consent of the shareholders, the company may issue consolidated debenture

stock to the same amount, in lieu of the securities authorized by the present act. The following are the various branches:

From near Tp. 7, Range 29, west 2nd meridian, Sask., generally southerly to Tp. 5, Range 30, west 2nd meridian, thence generally westerly to Range 7, west 3rd meridian. This branch will probably be located from between Willows and Assiniboia on the Weyburn-Stirling line, and run south and then west, just north of Wood Mountains, midway between the Weyburn-Stirling line and the International Boundary.

From near Lanigan, Sask., on the Pleasant Hills branch, Tp. 33, Range 22, west 2nd meridian, a generally north easterly to near Watson, and thence in a generally northerly through Melfort to Tp. 48, Range 17, west 2nd meridian. Lanigan is the junction of a line from Virden, Man., with the Manitoba North Western Ry. extension into Saskatoon, and the projected line will cross the Canadian Northern Ry. main line at Watson, and the Canadian Northern Ry. Prince Albert line at Melfort, to the Carrot River Valley.

From the Manitou Lake branch, Tp. 43, Range 21, west 3rd meridian, Sask., generally northwesterly through Lloydminster to Whitford Lake, Tp. 56, Range 15, west 4th meridian, Alta. The section with regard to this line provides that for the purpose of avoiding duplication of construction of the portion of the line west of Lloydminster the approval of the route map shall be made subject to joint construction or operation with the Canadian Northern Ry., on terms to be agreed upon by the companies or settled by the Board of Railway Commissioners. The Manitou Lake branch terminates 29 nine miles from Wilkie, at Cutknife, in Tp. 43, Range 21, west 3rd meridian, consequently the projected line is an extension of the branch across the Grand Trunk Pacific Ry. branch, to Lloydminster on the Canadian Northern Ry., thence on the Whitford Lake.

From near Archive, Sask., on the Moose Jaw Southwesterly branch, in Tp. 15, Range 27, west 2nd meridian, Sask., southwesterly to near Weymark, on the Swift Current Southeasterly branch in Tp. 13, Range 13, west 3rd meridian. Archive is 10 miles from Moose Jaw, being the second station on the branch named, and Weymark is 17 miles from Swift Current, being also the second station on that branch. The line will run between Chaplin and Johnson's Lakes.

From Rosetown, Sask., on the Moose Jaw Northwesterly branch, in Tp. 30, Range 15, west 3rd meridian, generally southerly for 50 miles, then generally easterly for 30 miles to Tps. 20, 21 or 22, Range 10, west 3rd meridian. Rosetown is near the point where the Canadian Northern Ry., Saskatoon-Calgary line crosses the C.P.R., and the projected line will cross the South Saskatchewan River, on its southerly stretch, and on its easterly stretch will probably effect a junction with the main transcontinental line near Morse.

From near Leader, Sask., on the Swift Current, Northwesterly branch, Tp. 22, Range 26, west of the 3rd meridian, generally southwesterly for 50 miles, thence generally easterly to near Success or Cantaur, Sask. Leader is at mileage 94

from Swift Current on the line to Bassano, and the projected line would run 50 miles southwesterly, and then working easterly would rejoin it near Success or Cantaur, which are 20 and 13 miles respectively out of Swift Current.

From near Duchess, Alta., on the Bassano Easterly branch, in Tp. 20, Range 14, west 4th meridian, in a generally northerly direction to Tp. 25, Ranges 14, 15 or 16, west 4th meridian. Duchess is 25 miles east of Bassano. This projected branch would cross the Red Deer River and terminate south and east of the Hand Hills.

The Moose Jaw Southwesterly Branch was originally built from Moose Jaw to Expanse, 35 miles, and was extended subsequently to a junction with the Weyburn-Stirling line at Assiniboia, mileage 66. This section of line was apparently built without the shareholders' authority having been first obtained, as at the company's recent annual meeting a resolution was passed approving of the building of this line, and authorizing the directors to proceed with the construction of certain other branch lines, and extensions of branch lines referred to hereafter, when in their opinion conditions warrant, and after statutory authority, where any be necessary, shall have been obtained, and that to and in the construction and equipment of all such lines the directors may issue consolidated debenture stock to such an amount as they may deem expedient, but not exceeding in respect of any of the said lines the amount which the company is or may be empowered by statute to issue. The lines specifically mentioned in the resolution are:—

Branch of Manitoba and North Western Ry., Russell North branch, from Russell, Man., northerly, 15 miles. This is in operation from Hazelcliffe to Russell, 11 miles.

Lanigan, Northeasterly Branch from Lanigan, Sask., for 150 miles. This is the line from Lanigan through Watson and Melfort, and beyond for which the company has obtained parliamentary sanction recently.

Part of the Moose Jaw Southwesterly branch from Vidora, Sask., easterly, 35 miles. Vidora is 28 miles east of Altawan, the present western terminus of the Weyburn-Stirling line, and then 35 miles of extension would probably connect with the projected line for which parliamentary authority has just been obtained, to start somewhere near Assiniboia or Willows, and to run south and east.

Extension of the Bassano easterly branch from Empress, Alta., north easterly to Mildren, 132 miles. Empress is equidistant, 118 miles, from both Bassano and Swift Current, and Mildren is at mileage 142 on the Moose Jaw, northwesterly line to Kerrobert and Macklin.

Extension of Langdon North branch from Acme, Alta., to the projected extension of the Swift Current Northwesterly branch near Empress, 132 miles. The Langdon branch serves the irrigated areas, between Langdon and Acme, 40 miles, and the projected extension from Acme would connect with the first mentioned line northerly from Empress. The line from Duchess, authority to build which has been obtained from the Do-

minion Parliament, would apparently connect with this line.

British Columbia District—A New Westminster, B.C., press report, states that H. Rindal, District Engineer, C.P.R., Vancouver, has received instructions to prepare plans and specifications for the extension of the C.P.R. wharf at New Westminster to the harbor line. (May, pg. 258).

United States to Return Railways, Telegraphs and Telephones to Owing Companies.

* The message of President Woodrow Wilson, read at the opening of the United States Congress, May 20, contained the following reference to railway, telegraph and telephone utilities:—

"The telegraph and telephone lines will, of course, be returned to their owners so soon as the retransfer can be effected without administrative confusion—so soon, that is, as the change can be made with least possible inconvenience to the public and to the owners themselves. The railroads will be handed over to their owners at the end of the calendar year. If I were in immediate contact with the administrative question which must govern the retransfer of the telegraph and telephone lines, I could name the exact date for their return also. Until I am in direct contact with the practical questions involved, I can only suggest that in the case of the telegraph and telephone, as in the case of the railways, it is clearly desirable in the public interest that some legislation should be considered which may tend to make of these indispensable instrumentalities of our modern life a uniform and co-ordinated system which will afford those who use them as complete and certain means of communication with all parts of the country as has so long been afforded by the postal system of the government and at rates as uniform and intelligible. Expert advice, of course, available in this very practical matter, and the public interest is manifest. Neither the telegraph nor the telephone service of the country can be said to be in any sense a national system. There are many confusions and inconsistencies of rates. The scientific means by which communication by such instrumentalities can be rendered more thorough and satisfactory has not been made full use of. An exhaustive study of the whole question of electrical communication and of the means by which the central authority of the nation can be used to unify and improve it if undertaken by the appropriate committees of Congress, would certainly result, indirectly even if not directly, in a great public benefit."

Commenting on the foregoing, the *Railway Review*, says:—

"The President did not wish to spend money in cabling to Congress about railways, on the operation of which the government is now losing somewhere about half a billion dollars a year, so he limited consideration of that subject to 16 words which fixed the end of the calendar year for returning them to their owners. He acknowledges that he is, owing to his absence from the country, out of touch with the practical questions involved and proves it by saying that legislation should make telegraphs and telephones and railways 'afford those who use them as complete and certain means of communication' as the postal system. This certainly is proof incontestable that he is not 'in direct contact' with home

affairs. The postal system as at present administered is the acme of uncertainty and disservice. Just while these words are being penned, comes to the writer's desk a roll of blue-prints which has taken five days to come from an eastern city. Such events and worse are of daily occurrence. When we are paying 13c for letter postage to insure any certainty of service, we look longingly for the old 2c days. The fact that the 10c for special delivery does insure some promptness and accuracy, shows incontrovertibly that the postal administration alone is to blame. Time was when complaint brought inspection, investigation and correction, now it brings only resentment or acknowledgement of general inefficiency."

Amendments to the Railway Act re Location of Railways.

The Dominion Parliament has under consideration a measure to repeal sec. 157 and 159 of the Railway Act, 1906, as amended by sec. 4, chap. 22 of the statutes of 1911, and to substitute a new section therefor. The bill was introduced in the Senate, Apr. 30, and was passed through its different stages May 8, when it went to the commons.

On the second reading of the bill in the Senate, May 6, Sir James Loughheed stated that the section of the bill was taken from the bill to consolidate the Railway Act, now under consideration. It had been thought desirable that these clauses should be passed in a separate bill in the event of the railway bill not passing this session. The clauses in the present bill refer to the location of railways, and the policy is that there should not be a duplication of roads if that duplication can possibly be prevented. Therefore, particularly in the western provinces, roads paralleling each other which have been practically built at the public expense, and which are within a stone's throw of each other. This being a waste of public money and failing to develop or serve a section of country, which might well have been served had the railways been built within a reasonable distance from each other, it is desirable that this policy should be put into operation at the earliest possible date. It is proposed that the location of roads should be determined by the Board of Railway Commissioners.

When the bill came up in the committee of the House of Commons, May 16, the Minister of Railways said that in the bill to consolidate the Railway Act, which is before a special committee, these clauses have been changed so as to vest in the Board of Railway Commissioners the authority to approve of route maps, this authority having in the past been exercised by the Minister of Railways. When a charter was granted by parliament before construction could be proceeded with, a route map had to be approved by the minister. It was proposed to change that to provide that the Board of Railway Commissioners shall have this power of approval. It is the intention to have this bill put through in case the bill to consolidate the Railway Act does not go through this session. If the general railway bill now before the special committee was passed he would not proceed further with the location bill. In the event of the general railway bill not being passed at this session, he wished to provide that the authority for approving of route maps be placed in the Board of Railway Commissioner's hands. The reason for this is that prac-

tically speaking there are only two railway systems in Canada, and it is advisable that the Board of Railway Commissioners should decide on the route maps to be approved of. The Canadian National Railways or the Canadian Pacific Ry. might be involved and there might be a conflict of the two interests.

The new section, 157, provides that plans shall be prepared, showing the general location of the proposed line, on a scale of not less than 6 in. to the mile, covering such towns, railways, navigable streams, etc., within a radius of 30 miles and be submitted to the board. Before approving of the plan the board may, subject to the company's special act, make such alterations therein as it may deem expedient, and upon approval, the plan shall be filed in the Railway Department. The board may approve of the whole or any portion of the map submitted. The provisions of the section shall only apply to the main line and to branches over 6 miles in length.

Sec. 159 provides for the sanction by the board of plan, profile and book of reference, the effect of which is that the location of the railway, the grades and curves as shown are approved, but that the company is not thereby relieved from otherwise complying with the act; the board may sanction deviations of not more than one mile from the general route as previously approved. In granting such sanction, the board may fix the period within which the right of way may be acquired, and notices may be given.

Canadian Railway Club's Annual Meeting.

The Canadian Railway Club's annual meeting was held in Montreal, May 13, T. C. Hudson, President, in the chair. Jas. Powell, who had been Secretary for the 14 years, and who retired recently from the G.T.R. service to take up work in connection with vocational classes for returned soldiers, tendered his resignation. The President, on behalf of the membership, presented him with a solid silver epergne, as a mark of appreciation for the lengthened services.

The following officers and committee were elected for the current year:—President, J. Hendry, Master Car Builder, G.T.R.; First Vice President, W. H. Winterrowd, Chief Mechanical Engineer, C.P.R.; Second Vice President, C. H. N. Connell, District Engineer, Canadian National Rys., Quebec; executive committee, E. A. Nix, acting Assistant Works Manager, Car Department, C.P.R.; B. F. Shortley, recently Terminal Agent Canadian Government Railways; E. R. Battley, Superintendent Motive Power, G.T.R.; R. A. Pyne, Superintendent Motive Power and Car Department, C.P.R.; W. H. Sample, General Superintendent Motive Power and Car Department, G.T.R.; W. H. Langridge, Auditor of Stores and Mechanical Accounts, C.P.R.; G. M. Wilson, Superintendent Motive Power Shops, G.T.R.; R. M. Harvey, Safety Car Heating and Lighting Co.; Secretary, W. A. Booth, Chief Draftsman, Motive Power Department, G.T.R.; Treasurer, E. E. Lloyd, Auditor of Disbursements, C.P.R.

The retiring President was presented with a gold past president's badge.

The Grand Trunk Pacific Ry. is having 1,500 wooden box cars, 30 tons capacity, repaired by the Canadian Car and Foundry Co. at Fort William, Ont.

Electric Railway Department

Electric Railway Employees' Wages, Working Conditions, Etc.

Edmonton Radial Ry.—Towards the end of April it was stated that employees had applied to the Labor Department for a board of conciliation. Early in May we were officially advised that an application had been received, but that a board had not been established, as where the employer is a municipality a conciliation board can only be established by mutual consent and that the city had not concurred in the application. The Labor Department's Calgary officer was then at Edmonton trying to arrange a settlement. On May 28 it was reported that the employees had struck, probably sympathetically.

Fort William Municipal Ry.—The conductors and motormen asked recently for large advances in wages, the following table showing the present rates and those asked per hour:—

	Present	Asked
First six months.....	35c	50c
Second six months.....	"	55c
Second year.....	"	60c
Second 18 months.....	37½c	.....
Third year.....	40c	.....
One-man car operators extra.....	2c	5c

Overtime is now paid only when employe is working on his day off. Time and a half is asked for all over 8 hours and for time worked on day off and on legal holidays. The present average day is 9¾ hours. An 8 hour day is asked with overtime beyond that. Four cents an hour extra is asked for training students, and 5 minutes is asked for carrying fare boxes to office.

Employees now pay 25% of cost of uniforms and overcoats. These are asked to be supplied free. Seats for conductors and heaters in rear of car are also asked for.

The other employees are asking for increased pay according as follows:—Painters, union scale of wages; pitmen, 62½c an hour; handy men and laborers, 55c; trackmen, 45c. Day to be eight hours, and time and a half to be paid for all overtime.

The Fort William and Port Arthur Public Utilities Commissions held a joint meeting at Fort William, May 14, to discuss the wage schedules and conditions of employment. A press report states that no joint decision was reached, it being thought advisable that each committee should treat with its own employees, separately.

Guelph Radial Ry.—A press report states that a conference took place May 14, between Alderman Westoby, chairman of the Guelph City Council committee in charge of the Guelph Radial Ry., and J. Gibbons, Toronto, representing the men, relative to differences as to wages and hours of work of the Guelph Radial Ry. employes. The men asked for an 8 hour day and an increase of pay time and a half for overtime, and double pay for Sundays. The president and secretary of the local union are reported to have been dismissed by the management. Alderman Westoby is reported to have said that with a loss of \$11,000 on the line for 1918, there could not be any increase of wages.

A press report of May 21, stated that the matter was settled at a further conference that day, by increasing the wages 4c an hour, the hours to remain unchanged.

Hull Electric Co.—A board of conciliation was appointed in April, the company's representative being Geo. Kelley, of Ottawa, and the men's representative, Fred Bancroft, of Toronto. The Minister of Labor appointed D'Arcy Scott, K.C., of Ottawa, formerly a member of the Board of Railway Commissioners, as chairman. Up to May 30, the award had not been made public.

London and Port Stanley Ry.—Employees of some of the departments expressed dissatisfaction with conditions under which they work, and placed their grievances before the commissioners, April 30. Sir Adam Beck, chairman, met a delegation of employes, May 3, and a press report states he offered to advance linemen's wages from 45c to 50c an hour, and trackmen's wages from 37c to 40c an hour, for an 8 hour day. The trackmen asked for 55c an hour for a 9 hour day, or 60c an hour for an 8 hour day. The conductors and motormen, who are now getting a maximum rate of 45c, are reported as asking for an increase. Another press report states that a board of conciliation may be appointed.

Port Arthur Civic Railway—See Fort William Municipal Ry.

Regina Municipal Ry.—The employees application for increased wages has been under consideration by the City Council for some time. The council was asked by the union to deal with the matter at its meeting May 6, but no advice of the result has been received.

Sandwich, Windsor and Amherstburg Ry.—The board of conciliation appointed to investigate matters in dispute between this company and its employes, consisted of Judge Wallace, Woodstock, Ont., chairman; F. H. McGuigan, Toronto, representing the company, and A. E. Hooper, Windsor, representing the men. The board held its first sitting Apr. 16, and presented a majority report Apr. 24, a minority report being submitted subsequently by Mr. Hooper. The report did not recommend any change in the hourly rates of wages, which were as follows:

First 6 months.....	35c
Second 6 months.....	37c
Second year.....	38c
Third year.....	40c

A material change was, however, recommended in the overtime rate, viz.: 20c an hour, instead of 6c as formerly, and the extra pay for training new men was advanced from 40c to 50c a day. A schedule attached to the report also set out regulations governing the conditions of work, etc., while in the report certain matters with respect to particular employees were dealt with.

The company filed an acceptance of the majority award with the Labor Department, but the men, according to a press report, insisted on full recognition being given to the union; that F. E. Hayes, Superintendent, be dismissed, and 8 hour day, with a minimum wage of 50c and a maximum of 5c an hour. They are reported to have expressed their willingness to compromise on all points, but Mr. Hayes' dismissal. Attempts to reach a settlement were unavailing, and the men struck May 3. The company made an attempt to operate its cars May

9, when considerable disorder occurred. An order was obtained from the Ontario Railway and Municipal Board, May 12, directing the immediate resumption of the service, and with the assistance of soldiers taken from London, Ont., a partial service was put in operation.

An understanding was reached on the evening of May 13 under which the men agreed to return to work at the old rate of wages, pending the submission of by-laws to the several municipalities affected to grant an increase of fares. In Windsor a straight 5c fare, with 1c additional for transfers, will be asked in lieu of the present rate of 6 tickets for 25c with free transfer.

The vote will be taken in Windsor, Walkerville and Sandwich on June 14. The increase of wages to be given should the fares be increased, will be a minimum of 40c for the first 6 months, and a maximum of 50c to date from May 15.

In future, men's grievances are to be submitted to Jas. Anderson, Vice President, representing the company; M. Bell, President of the Trade and Labor Council and a third person to be selected by them.

Winnipeg Electric Ry.—We are officially advised that towards the end of April the street railway men's union presented a proposed schedule in which they asked for changes in working conditions, including an 8 hour day, a closed shop, and that the term of any agreement must not exceed 30 days, and for wages at the rate of 60c an hour for new men and 70c an hour for 2-year men. The management agreed to the 8 hour day, offered an increase of wages ranging from a minimum of 44c to a maximum of 53c an hour, but refused to agree to a closed shop and to a 30 day agreement. Ninety per cent of the men voted in favor of a strike to enforce their demands. The company applied to the Labor Department for a board of conciliation and named I. Pitblado, K.C., as its representative. This was granted and the men were asked to name their representative. The union declined to have anything to do with arbitration proceedings, but the union's business agent stated that if the board took action at once the men would wait for its decision. The Labor Department then appointed R. S. Ward, Winnipeg, who asked for the men on the board which sat in Oct., 1918. Owing to Mr. Pitblado's illness, the company named J. B. Coyne, K.C., as its representative, and on May 6, Justice Metcalfe of Winnipeg was appointed by the Minister of Labor as chairman. The board held its first meeting May 13, but the union was not represented.

In the meantime the employees of the general machine shops and of the various building trades in the city, struck and May 12, it was reported, that the street railway men's union had voted unanimously in favor of a strike of their demands were not immediately granted. The strike situation in the city became general after May 13, the street railway men going out along with nearly all the other union men in the city. Newspapers ceased publication, and rumors of all kinds were circulated, including one of the establishment of a soviet government

of the city, which was denied subsequently. Up to the time of writing, May 29, the operation of the railway had not been resumed.

Toronto Eastern Railway Construction and the Hydro-Electric Radial Railway Plans.

The question of the construction of a system of electric railways east of Toronto under the Hydro-Electric Power Commission of Ontario, has assumed a somewhat different phase since the partially constructed Toronto Eastern Ry. passed from the ownership of Sir Wm. Mackenzie and his associates to the Dominion Government through the Canadian National Rys.

Representatives of the Lake Shore municipalities met at Whitby, Ont., May 5, at which E. W. Oliver, General Superintendent Niagara, St. Catharines and Toronto Ry., attended, representing D. B. Hanna, President, Canadian National Rys. We are advised that the meeting was called by the Whitby Board of Trade and was attended by representatives of all the municipalities from Whitby to Scarborough. About two months ago Mr. Hanna informed a delegation that it was intended to electrify, that year, the line from Bowmanville easterly to Pickering, on most of which mileage track has been laid, and that it was intended to proceed with the construction of the line easterly to Toronto as soon as possible. This statement, Mr. Oliver reported at the meeting, and a resolution approving of the proposed work was passed. Mr. Oliver is also reported to have intimated that there was no possibility of diverting the road northerly from Pickering to Cherrywood, the present location running south of the Kingston Road, having been located and approved by the Board of Railway Commissioners.

Representatives of municipalities east of Toronto interested in the building of electric railways under the Ontario Hydro-Electric Railway Act, met at Whitby, Ont., May 8, when a resolution was passed by a majority to the effect that a hydro-electric railway be built from Toronto east to the St. Lawrence River region, and that the Dominion Government be requested to transfer on just terms the Toronto Eastern Ry. to the Hydro-Electric Commission to form a portion of such hydro-electric municipal railway.

A second resolution, passed unanimously, was to the effect that the Dominion Government be petitioned to co-operate with the Hydro-Electric Power Commission of Ontario, so that municipalities, through the commission, may acquire by lease, purchase or otherwise, such branch lines of the Grand Trunk and Canadian National Railway systems as will enable the municipalities to carry out the hydro-radial scheme to the best advantage throughout Ontario.

The campaign for the building of electric railways under the Ontario Hydro-Electric Railways Act, is being carried on at various points east of Toronto. The residents of South Hastings at a meeting at Warkworth, May 5, passed a resolution asking for the building of a line from Central Ontario Jct. in Rawdon Tp., through Campbellford and Warkworth and other places to Cobourg, Ont., and Sir Adam Beck, speaking at a meeting at Picton, on May 20, is reported to have said that the Minister of Railways has actually offered the Hydro-Electric Power Commission of Ontario the To-

ronto Eastern Ry. on condition that the commission pay the cost of the same to the government plus carrying charges to date. The meeting passed a resolution calling on the Dominion Government to turn over to the commission the surplus branches of steam lines, approved of the construction of hydro-radial railways to the St. Lawrence, and asked that the commission be given an opportunity to acquire one of the railways that parallel between Toronto and Napanee, and the C.N.R. branches between Trenton and Picton.

Authority to Board of Railway Commissioners to Over-ride Franchise Agreements.

Bill A—An Act to Consolidate and Amend the Railway Act introduced in the Senate, Feb. 20, 1919, proposes to amend the Railway Act, Consolidated Statutes of Canada, 1906, by substituting the following as sec. 325 for sec. 323 in the original act:

"325. (1) The Board" (of Railway Commissioners) "may disallow any tariff or any portion thereof which it considers to be unjust or unreasonable, or contrary to any of the provisions of this act, and may require the company, within a prescribed time, to substitute a tariff satisfactory to the board in lieu thereof, or may prescribe other tolls in lieu of the tolls so disallowed.

"(2) The board may designate the date at which any tariff shall come into force, and either on application or of its own motion may, pending investigation or for any reason postpone the effective date of, or either before or after it comes into effect, suspend any tariff or any portion thereof.

"(3) Except as otherwise provided, any tariff in force, except standard tariffs hereinafter mentioned, may, subject to disallowance or change by the board, be amended or supplemented by the company by new tariffs, in accordance with the provisions of this Act.

"(4) When any tariff has been amended or supplemented, or is proposed to be amended or supplemented, the board may order that a consolidation and reissue of such tariff be made by the company."

At a meeting of the House of Commons special committee, May 7, the Minister of Railways moved to add another subsection, which had been drafted by Sir Henry Drayton, Chairman Board of Railway Commissioners, as follows:—

"(5) Notwithstanding the provisions of sec. 3, the powers given to the board under this act to fix, determine, and enforce, just and reasonable rates, and to change and alter rates as changing conditions or cost of transportation may from time to time require, shall not be limited or in any manner affected by the provisions of any act of the Parliament of Canada, whether general in application or special and relating only to any specific railway or railways, and the board shall not excuse any charge of unjust discrimination, whether practised against shippers, consignees, or localities, or of undue or unreasonable preference, on the ground that such discrimination or preference is justified or required by any agreement made or entered into by the company."

The amendment was opposed by representatives from Hamilton and Burlington, Ont., but was adopted by the committee.

Glasgow and Winnipeg Electric Railway Conditions Compared.

The Winnipeg Electric Public Service News, issued by the Winnipeg Electric Ry., had the following in a recent number: "In many of the public discussions on local transportation matters, reference has been made to Glasgow and its tramway system which is claimed to be a 'pattern.' We do not deny the justice of the claim, but we do suggest that when the fares charged in Glasgow are being compared with the fares charged in Winnipeg, some attention should be paid to the contrast in operating conditions.

"For instance the motormen and conductors in Glasgow start in at slightly more than 25½c an hour, and work up to 29½c an hour at the end of seven years. The women employes, who constitute more than half of those who work on the platform, receive somewhat less because, the men are more steady in showing up for duty and expect to stay in the business. The women conductors start in at 14c an hour, and work up to 22c an hour. The motresses earn about 1¼c an hour more.

"Winnipeg, at present, the motormen and conductors start in at 39c an hour, while men who have been with us two years receive 47c an hour. The men are now asking 50c an hour for the first six months, 55c for the second six months, and 60c an hour for the second year and thereafter. The average time worked in Glasgow by motorman or conductor is 9 hours and 14 minutes a day. In Winnipeg the 8-hour day is asked.

"One large item of operating expense which the Glasgow system is spared, is that of car heating; nor does the public expect the cars to be heated. In order to heat the cars adequately in Winnipeg last winter, we spent well over \$40,000.

"There are always two sides to a story!"

The Mexico Tramways Returned to the Owners.

The system of electric railways operated by the Mexico Tramways Co., in the City of Mexico, and surrounding area, which was taken over by the then government of the Mexican Republic, in Oct., 1914, and operated by that government and its successors was handed back to the company May 7.

The Mexico Tramways Co. is organized under Canadian law and has an underlying company, the Mexico Electric Tramways Ltd., whose lines are operated by the M.T. Co. The company had in 1910, a total of 179.93 miles of track of which 158.62 miles were operated by electricity, and on 21.31 miles, of which the cars were hauled by mules. This was the property taken over and operated by the Mexican Government, and now handed back to the owners.

The M.T. Co. controls through stock ownership the Mexican Light and Power Co. Ltd., which in turn operates the Mexican Electric Light Co.'s property under a lease agreement. The companies' properties have not been interfered with in the way of operation by the Mexican Government, but have been throughout under the control of the Receiver of the Mexican Light and Power Co., G. R. C. Conway, M.I.C.E., acting in conjunction with the bondholders' committee in London, Eng., and through the board of directors.

Increases in Electric Railway Freight and Passenger Rates.

Calgary Municipal Ry.—The Calgary Alta., commissioners had under consideration, May 5, proposals for the revision of the fare schedule on the Calgary Municipal Ry., and press reports state that the suggested new schedule will be a straight 5c fare, or 5 tickets for 25c; school children's tickets, 8 for 25c, and workmen's tickets, 6 for 25c. The question was not settled, but the report said it was expected that a recommendation would be made along the lines suggested at the next council meeting. Commissioner Graves is reported to have stated that there was an increase of \$287 a day in operating expenses, and before any marked improvement could be made in the service at least 25 new cars would have to be purchased.

The new schedule was put in force May 14. It provides for a 5c cash fare. Tickets are sold 5 for 25c instead of 6 for 25c as heretofore; or 22 for \$1 instead of 25 for \$1 as heretofore. Workmen's tickets, heretofore sold 8 for 25c and good during limited hours in mornings only, have been abolished. Children's tickets are sold 8 for 25c, instead of 10 for 25c as heretofore. The new rates went into effect May 14.

Edmonton Radial Ry.—The Edmonton City Council passed a resolution, Apr. 14, stating that having considered the question of fares, and having taken it up with the commissioners and traffic manager, and having regard to the increased cost of operation, the price of tickets should be increased on Apr. 21. The cash fare remains as before, viz.: 7c until 11 p.m., after which it is 10c. Tickets were, up to Apr. 20, sold 4 for 25c if bought on the cars, or 5 for 25c if bought at stores throughout the city. They are now sold 5 for 25c, good only to 8.30 a.m. and 4 for 25c, good only to 11 p.m. Children's tickets remain as before, 10 for 25c. Night fares can be paid by 2 tickets instead of cash.

We are officially advised that for the first 10 days of the new fares being in force, Apr. 26 to 30, the number of passengers carried was 297,254, and the revenue therefrom, \$17,298.04, against 278,307 passengers and a revenue of \$13,113.30 for the corresponding 10 days of April, 1918.

The Hamilton and Dundas Ry. is reported to have refused to consider a suggestion by the Hamilton, Ont., City Council's street railway committee that a fare of 5c be put in operation as far as Ainslie's Woods.

Hamilton Radial Ry.—One of the amendments to the Consolidated Railway Act under consideration by the Dominion Parliament, provides for the granting of authority to the Board of Railway Commissioners to over-rule any agreement made between a company and a municipality and ratified by parliament insofar as such agreement debar an increase of rates as times and conditions may warrant. The amendment was opposed before the special committee of the House of Commons, May 6, by representatives of Hamilton and Burlington, Ont., which places are interested in an agreement with the Hamilton Radial Ry., which was the subject of considerable controversy during the winter. The Board of Railway Commissioners granted an increase of rates, subject to the

franchises from the municipalities. The amendment to the act was approved by the committee and is given fully elsewhere in this issue.

London St. Ry.—The London, Ont., City Council is reported to have passed a bylaw, May 19, fixing the fare for the Sunday operation of cars on the company's lines in the city at 5c straight, from May 1, 1919 to April 30, 1920. C. Currie, President, attended the meeting and explained that the company's employees are paid one-third more for Sunday work, representing about \$25,000 a year. If the men would forego the increase in wages, the company could carry passengers on Sundays at the same rate as on week days. If the increase in fares was not granted the company could be compelled to cut off the Sunday service. The bylaw was passed by six votes to three. The Sunday fare hitherto has been 7 tickets for 25c. The question of fares for the Sunday operation of cars on the Springbank line, which is outside the city, has not been settled.

Nova Scotia Tramways and Power Co.—See "The Street Railway Situation in Halifax, N.S."

The Street Railway Situation in Halifax, N.S.

A. S. Pratt, of Stone and Webster, Inc., the newly elected President of the Nova Scotia Tramways and Power Co., was reported to have returned to Boston, Mas., May 19, after having spent several days in Halifax, N.S., inspecting the company's properties. In the course of an interview prior to leaving, he is reported to have said: "My investigation of the company's affairs assures me that there is real need of large expenditures of money in order to secure for the people the adequate facilities which a city of this size should have. The problem before us is how to provide these facilities. To do this means the raising of a very large sum. The investor must be assured of his investment and a fair return thereon. With the rising costs in material and proper increases in wages, the company is faced with a problem very difficult of solution. The company as a whole is not earning a fair return on the actual cash investment. In many ways, however, the tramway department is the worst off, because it employs more labor in proportion to its earnings than do the other departments. It is perfectly manifest to any thinking man, especially to one who has followed electric transportation results in other communities, that the fare here, which averages four and thirty-one hundredths cents a passenger, must ultimately be increased, if operating costs are to remain at the present high level. If the necessary money for improvements is to be raised it will be because the investor has faith that the people of Halifax are willing to pay a higher rate for service, assuming always as a necessary precedent that the service is improved from what it is today. If we are able to go on with our plans we hope to deserve and receive the co-operation of the public. We must, however, ask them to realize that track reconstruction cannot go on without some interruption of service, and

that new cars cannot be bought like some other things, but are built to order, and take a good many months to construct."

British Columbia Public Utilities Commission.

Major John L. Retallack has, as stated in Canadian Railway and Marine World for April, been appointed Public Utilities Commissioner for British Columbia under the new Public Utilities Act. He went overseas as Quartermaster of the 48th Battalion. Later he was transport officer in the Railway Corps. He is a mining engineer. He was born in Quebec Dec. 2, 1863, and was educated in England. He served for five years with the Royal North West Mounted Police before going to British Columbia in 1890.

Major Retallack's appointment came after several days of public clamor, when the government's first appointment of R. H. Gale, Mayor of Vancouver, met with such opposition from the returned soldiers' organization, that Mr. Gale tendered his resignation.

Several weeks ago it was reported that Mr. Gale was slated for the position. Returned soldiers' bodies immediately protested, pointing to the government's promise to give returned men preference for any positions. When Mr. Gale's appointment was announced on Apr. 17, gatherings in Vancouver denounced it in such terms that he went to Victoria to consult the government. On his return on Apr. 19, he announced that he had resigned. He had been active in opposition to the B.C. Electric Ry., the largest public utility in the province. Immediately on Mr. Gale's resignation, the government appointed Major Retallack. He is to be paid \$7,000 a year.

Calgary Municipal Railway Operating Results.

The report for the calendar year, 1918, shows the following results, compared with those for 1917:—

	1918	1917
Revenue—		
Car earnings.....	\$606,188.73	\$556,374.33
Miscellaneous earnings....	10,925.98	7,686.26
Bank interest.....	20,464.95	18,493.38
Total.....	\$637,579.66	\$582,553.97
Operating expenses.....	\$419,682.02	\$356,096.28
Fixed charges, etc.....	225,015.88	204,965.17
Total.....	\$644,697.90	\$561,061.45
Deficit.....	\$7,118.24	
Surplus.....		\$21,492.52
Car miles.....	2,735,264	2,739,923
Car hours.....	279,109	279,584
Fare passengers.....	12,928,882	13,606,663
Transfers.....	3,796,960	3,830,702
Total passengers.....	16,725,482	17,437,365
Average fare, revenue passengers.....	4.687c	4.023c
Average fare, all passengers.....	3.696c	3.139c
Average daily receipts.....	\$1,954.86	\$1,596.04
Average daily operating expenses.....	\$1,203.60	\$975.90
Average daily total expenses.....	\$1,820.08	\$1,587.45
Percentage of operating expenses to revenue.....	71.2%	61.1%
Cost of power, per car mile.....	3.368c	3.258c

The report states that all taxes were paid and that allowances were made for sinking fund and depreciation. During 1918 unlimited tickets were sold 6 for 25c, and 25 for \$1; workmen's tickets, good 6 to 8 a.m., 8 for 25c; school children's tickets, 10 for 25c. In consequence of the deficit, fares were raised May 14, particulars being given elsewhere in this issue. T. H. McCauley is General Superintendent.

Electric Railway Projects, Construction, Betterments, Etc.

Brantford Municipal Ry.—A press report states that construction on the extension of the city lines into the Terrace Hill district, approved by the ratepayers in January, will be started at an early date. The commission has, says the report, decided to run the loop around the east ward manufacturing districts also, tapping a section which is progressing rapidly industrially, even though this will make the time longer for the round trip, and though the Terrace Hill residents wanted a more direct route. The commission's viewpoint is that this plan will provide an extension which would have to be built within a short time in any event. The work will, it is reported, be done by the city's labor department. The rails for the extension were expected to be delivered by the end of May. The estimated cost of the work, together with the purchase of some additional equipment, is \$125,000. (Feb., pg. 90).

The British Columbia Electric Ry. on May 8 cut in its new Point Grey substation, which serves part of Vancouver and all the municipality of Point Grey, both for railway and light and power, and which has been under construction for the last year. It was formerly a temporary structure, and while in operation, the permanent concrete building was completed over it. It also has an enlarged capacity and will render unnecessary a portable substation the company had been using.

British Columbia Electric Ry.—A press report states that the company has prepared plans for the erection of a station at Langley Prairie, B.C.

The bridge carrying the company's line over the Kitsilano Creek was reported, May 3, to be undergoing repairs, and traffic was being routed over the Grenville St. bridge. (Mar., pg. 143).

Calgary Municipal Ry.—The St. Andrews Golf Club has asked the Calgary Alta., City Council, to extend the Calgary Municipal Ry. so as to provide a service to the golf grounds.

The city commissioners are reported to have provided in the estimates for this year \$50,000 for improvements and extensions of the electric railway. (May, pg. 267).

Calgary Municipal Ry.—We are officially advised that it is proposed to build approximately a mile of new track in the city, using thereon rails, etc., from the line which was laid to serve the military camp on the Sarcee Indian Reserve. A recent press report stated that it was intended to extend the city's line as a loop to Mewata Park, south of the Armories. Another report refers to an extension of the Killarney line as having been approved by the council, May 12. (Feb., pg. 88).

Cape Breton Electric Co.—A delegation from New Waterford, N.S., appeared before the county council, recently and asked for co-operation in securing an electric railway service from Sydney. A committee was appointed to co-operate with the town committee to see what can be done. (Feb., pg. 88).

Hamilton St. Ry.—Negotiations are reported to be in progress between the city council's special street railway committee and the company with a view to having some extensions built. Extensions on Queen St. via Aberdeen and

Dundurn Sts., and Charlton Ave. to the present Locke St. line; and on York St. to the end of the cemetery, have been discussed. It is also suggested that the Queen St. line be extended to Aberdeen St., and then west to Ainslie Woods.

Hull Electric Co.—We are officially advised that the company is replacing 56 lb. rails on 1.5 miles of its belt line in Hull, Que., with 85 lb. rails.

The company is in the market for two 60 k.v.a. oil cooled, single phase transformers, 10,000 volts to 2,300 volts. G. Gordon Gale is Vice President and General Manager. (Jan., pg. 40).

International Transit Co.—We are officially advised that the company proposes to lay a second track for about 6,400 ft. in the central part of Sault Ste. Marie, Ont., the work to be done in advance of the city laying permanent paving. A. E. Pickering is Manager.

The Levis County Ry. is, we are officially advised, proceeding with the track reconstruction which was left incomplete last year. Contracts for rails, ties, etc., were let in June, 1918, in connection with the reconstruction of the entire line, and the building of about two miles of additional line. New ties were to be put in on the whole line, and stone ballasting provided. Several miles of reconstruction had been completed when work was suspended for the season in Nov., 1918. (Dec., 1919, pg. 561).

Montreal Tramways Co.—A press report states that the company is preparing plans for building a second track on 10 miles of line on Lawrence St. to Gouvin Boulevard, and through Bordeaux Village to Park Ave. This work does not appear to be part of the construction specified in article 33 of the company's contract with the city. The contract specified six lines upon which construction was to be done between June and Nov., 1918, that year. The length of each of these lines with details of construction was given in Canadian Railway and Marine World for Aug., 1918, pg. 348. The time for construction of the lines was extended to this year, owing to the difficulty of obtaining rails, etc.

Niagara, St. Catharines and Toronto Ry.—We are officially advised that the company has the following works in progress: On Ontario St., St. Catharines, Ont., the city is continuing the paving to the crossing of the Port Dalhousie line, as a result of which the company will have to pave between the rails and for 18 in. on the outside thereof; On James St., St. Catharines, the company is relaying the rails and putting down new pavement on its portion of the street. The company is reconstructing its transmission line between Thorold and St. Catharines, and carrying out spring repairs at Dalhousie Park, Port Dalhousie, which has been leased to the Colonial Amusement Co. of St. Catharines, which intends to add a great many amusement features. (May, pg. 267).

The Quebec Ry. Light and Power Co., we are officially advised, contemplates the construction of about a mile of new track on the Beauport Road in Limoilou Ward, between the Canadian Northern Ry. tracks at Mastai Village at the city limits. In 1916 an agreement was entered into between the company and the city with reference to street railway ex-

tension, when it was decided to extend the existing line from the corner of 3rd Ave. and 6th St. in Limoilou Ward to the city limits, Beauport Asylum. This extension should have been completed by Dec. 31, 1917, but, due, however, to the abnormally high cost of labor and material, an understanding was reached with the city for delaying the work. The city is about to commence building a permanent highway on the location above referred to, and has insisted that the company construct its line at the same time, in order to prevent cutting up the highway after it has been built. The company has agreed to undertake the work, but the line to be built will be different from that originally planned. Instead of building a line on the Beauport Road from the corner of 3rd Ave. and 6th St., it is the intention to form a loop and build on 8th Ave. across the Beauport Road, along 10th St., and down 3rd Ave., and then build on the main road from the Canadian Northern Ry. tracks to the city limits. The total line to be built will be approximately 1.5 miles. This will mean the construction of a line from the corner of 3rd Ave. and 10th St. along 10th St. across Beauport Road, and down 8th Ave. to a junction with the present line at the corner of 5th St., the lifting of the present rails on 3rd Ave. and 5th St., thus making a belt line, and the construction of a stubline from the crossing of the C.N.R. to the city limits. By this means the company will save approximately \$10,000 in not laying tracks and diamonds over the C.N.R., and will also save approximately \$3,100 a year upkeep on account of the diamond crossings. (Dec., 1918, pg. 561).

St. Thomas St. Ry.—A press report states that a bylaw will be submitted to St. Thomas, Ont., ratepayers at an early date to raise money for improving the street railway. The amount involved is \$45,000, distributed as follows: New rails and track equipment on Talbot St., \$18,587.80; repairing tracks on other streets, \$16,126.64; changing and improving cars, etc., \$10,285.56. (Mar., pg. 143).

Winnipeg Electric Ry.—The Assiniboia Ratepayers' Association on May 6 decided to ask the Manitoba Public Utilities Commission to order the company to place its tracks in the center of Portage Ave., and not at one side as at present. (May, pg. 267).

Beer and Wine for Quebec.—Among the committee of moderation, who appealed to the people of the Province of Quebec recently, to vote in favor of the use of beer and wine, were: Lord Shaughnessy, who is one of the honorary presidents; Sir Herbert Holt, another C.P.R. director; W. W. Butler, President, Canadian Car & Foundry Co.; R. F. Jones, Manager, Eastern Division, Bell Telephone Co.; W. F. Angus, director, Dominion Bridge Co.; A. Archibald, member of Montreal Tramways Commission; A. Lacombe, President, Street Railway Employes Union; and Alex. Dick, General Agent, Dominion Coal Co.

The Winnipeg Municipal Hospitals Commission is discussing with the Winnipeg Electric Ry. a plan for putting on, with the city's consent, a bus service to the King George Hospital.

Ontario Hydro-Electric Railway Legislation.

The Ontario Legislature at its recent session passed the Hydro-Electric Railway Act, 1919, which amends the previous Hydro-Electric Railway Acts in several particulars, and comprises a number of contracts and bylaws.

The act first of all repeals sec. 9 of the Act of 1916, amending the original Act of 1914, which prohibited the issuing of bonds for the construction of any electric railway for which agreements had been entered into between the Hydro-Electric Power Commission of Ontario and local municipalities until after the war, and provided that no bonds should be issued or work undertaken except under the authority of the Lieutenant-Governor in Council, and made provision for the purchase of right of way for such lines.

Section 3 confirms bylaws passed by the municipalities interested in the construction of the projected line from Port Credit to St. Catharines, and also bylaws passed by the municipalities interested in the projected Welland, Port Colborne, and Bridgeburg radial line. Sections 4 and 5 authorize the municipalities to complete the bylaws, and sec. 7 confirms an agreement between the commission and Blanshard Township Council for the construction of an electric railway.

A new section, 17a, is added to the Act of 1914 as follows: "(1) Where a municipal corporation has entered into an agreement with the commission for the construction and operation of a railway under the provisions of this act, the corporation shall not enter into any agreement or arrangement with, nor grant any bonus, license or other inducement to any railway or transportation company without the written consent of the commission, and where any such corporation controls or holds share or stock in a company operating a railway, an electric railway or street railway, the transfer of the control of such company or of stock or shares therein or securities thereof to any person or corporation shall be deemed to be an agreement or arrangement within the meaning of this section; (2) Every agreement or arrangement entered into by a municipal corporation in violation of subsection 1 shall be null and void."

Other new sections are as follows: Sec. 9:—"(1) Notwithstanding anything in the Hydro-Electric Railway Act, 1914, or any amendments thereto, or in any contract or bylaw made or passed, or purporting to be made or passed under the authority of the said act or the amendments thereto, where any municipal corporation named as a party to any such agreement has failed to pass the necessary bylaw and to execute the agreement, and it appears to the Lieutenant-Governor in Council that the amount for which such municipal corporation would be liable under the agreement does not exceed 10% of the estimated cost of construction and equipment of the railway, and that the remaining municipal corporation parties to the agreement have by resolution of their respective councils, expressed the desire to proceed with the undertaking notwithstanding the failure of such first mentioned municipal corporation to execute the agreement, the Lieutenant-Governor in Council may authorize the commission to proceed with the construc-

tion, equipment and operation of the railway provided for in the agreement, and to issue bonds from time to time for the amount required for the undertaking and may authorize the Treasurer of Ontario for and on behalf of the province to guarantee such bonds, as provided in the Hydro-Electric Railway Act, 1914, and amendments thereto, and in such case the municipal corporations which have executed the agreement shall deposit with the commission additional debentures in the respective proportions in which they undertook by the agreement to contribute to the cost of the undertaking, to the amount required to replace the debentures which would have been deposited by the first mentioned municipal corporation."

"(2) Should any municipal corporation which has failed to execute the agreement subsequently execute the same and deposit debentures as required by the Hydro-Electric Act, 1914, and amendments thereto, the commission shall return to the municipal corporations the debentures deposited under subsec. 1, and such debentures may be cancelled by the respective corporations.

"(3) Until a municipal corporation party to any agreement for the construction and operation of a railway under the Hydro-Electric Railway Act, 1914, has executed the agreement and deposited debentures with the commission as required by the said act, and the agreement, the commission shall not be bound to construct, maintain, equip or operate within the limits of the corporation any works contemplated by the agreement except such as may be necessary for the construction, equipment and maintenance of the railway in passing through the municipality, to and from municipalities the corporations of which have executed the agreements and deposited debentures to the amount stated therein."

A formal request is reported to have been made by the commission to the Ontario Government for an order in council authorizing the immediate starting of work on the projected lines from Toronto to Niagara Falls, and from Toronto to London. A local report from Bridgeburg states that the first part of the Toronto-Niagara Falls line, which will be built, will be the section from Port Colborne to Bridgeburg.

Proposed Large Street Railway Expenditures of Toronto.

The Mayor of Toronto moved at a board of control meeting, May 28, that a recommendation be made to the city council favoring the submission of a bylaw at the next municipal election providing for the expenditure of \$5,000,000 on track extension, rolling stock, and other equipment, preparatory to the taking over of the Toronto Ry. in 1921. He also asked that the Finance and the Works Commissioners, be directed to make a report on the suggestion and to submit plans therefor, together with a recommendation as to whether the work, if authorized, be done by day labor or under the contract system. The controllers thought more time was required to consider about such an extensive enterprise, and decided to refer the matter to the Transportation Commission for a report.

Moose Jaw Electric Railway's Negotiations With City.

Negotiations were reported to have been reopened Apr. 28, between the Moose Jaw Electric Ry. and the Moose Jaw, Sask., City Council. The company is reported to have submitted an offer that the city and the company become partners, and that out of the receipts of each year the company pay all operating expenses, interest charges, set aside a fair amount for insurance and depreciation and pay 6% interest to the shareholders. The balance would be distributed in the proportion of 80% to the city and 20% to the company. The city is asked to undertake the cost of the repairs to the Fourth Ave. bridge, and to relieve the company of all charges until the end of the franchise; to authorize the operation of one-man cars, and to increase the fare to 6c cash or 6 tickets for 35c; workmen's limited hour tickets 8 for 35c, and school children's tickets, 40 for \$1.10. The company, under this proposal, would operate the partially constructed line on Hill St. As an alternative, the company advised the council it was still willing to recommend its shareholders to accept an offer from the city to take over the line under the terms of the present franchise and to accept in payment city bonds bearing interest. The council referred the matter to the special Street Railway Committee. (Mar., pg., 143).

The Rule of the Road in British Columbia.

The rule of the road in British Columbia follows that of Great Britain, and is therefore at variance with that prevailing practically everywhere else in Canada. A plan is under consideration by the B.C. Government for changing the rule so as to conform to the more generally adopted practice in America, and it is suggested that the new plan be put in force July 1, 1920. The B.C. Electric Ry. is very much interested in the proposal as its lines were laid out, and its rolling stock built to suit existing conditions. W. G. Murrin, Assistant General Manager, Vancouver, and A. T. Goward, Local Manager, Victoria, had an interview with the B.C. Premier on May 9. While expressing no objection to the proposed change, if desired by the people, they contended that the expense should be borne by those requesting the change, and not by the company.

Mr. Murrin estimated that to change the company's tracks and equipment would cost \$600,000, and he reminded the Premier that the company had been put to an expense of between \$150,000 and \$200,000 several years ago by the Provincial Tramways Act, which prescribed certain changes in equipment. The Premier asked the company's representatives to submit a memorandum, setting out the company's views as to the payment of the cost of making the change.

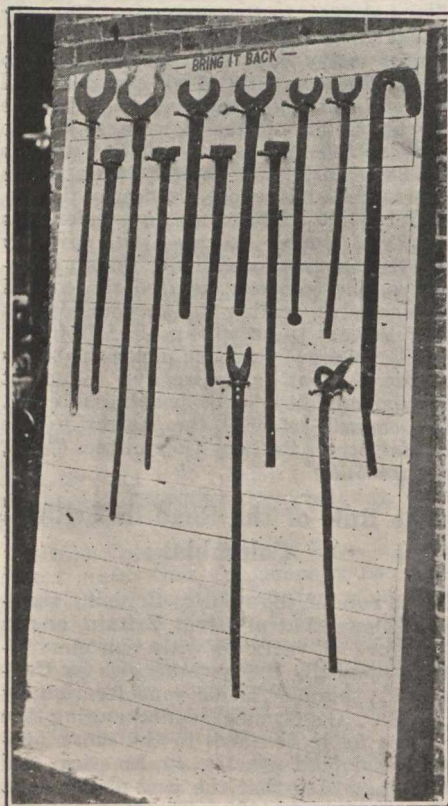
A Motor Passenger Omnibus has been placed on the Toronto-Hamilton highway and is making regular trips between Sunnyside, Toronto, and Stop 31.

In connection with a recent strike of building trades employes at Ottawa, it was reported May 8, that Ottawa Electric Ry. employes had voted in favor of a sympathetic strike.

Wrench Rack, Winnipeg Electric Railway Shops.

The many different special wrenches and larger tools necessary, where pit work is being done, pinions remover and put on armature shafts, etc., makes it a problem—not where to put the tools—but where to find them when wanted.

In the Winnipeg Electric Ry. Shops, this problem is solved by the provision of a tool board or rack, as shown in the accompanying illustration. The front of the board is painted a light grey, and the exact outline of each tool is painted in



black, so that one always knows where the tool belongs. No tools were on the board at the time the photograph, from which the illustration was made, was taken. Note the brief instructions on the top of the board, "Bring it back".

Trailer Cars for Toronto Railway.

The Toronto Ry. is completing in its shops, the conversion of a number of open motor cars, into closed trailers. The open motor cars were rendered no longer serviceable by the order Ontario Railway and Municipal Board's order of Nov. 22, 1915, forbidding their use, and the bodies are being used for this present purpose.

The whole body, with the exception of the frame work, is being practically rebuilt. They have the standard flat sides, with large sash, and with vestibules enclosed except for the step side. The interior layout comprises longitudinal rattan seats, the heating stove being mounted midway in one side. The finish inside is light colored varnished hardwood. The motor undergear is not being used, entirely new trailer undergearing being made in the company's shops.

The bodies are 22 ft. long, and the overall length of the cars is 32 ft. Some 30 trailers are now completed and in

operation, and it is the intention to convert some 16 or 17 more, some of which are nearly ready for operation.

Electric Railway Finance, Meetings, Etc.

British Columbia Electric Ry. and allied companies:—

	9 mons. to		9 mons. to	
	1919	1918	Mar. 31, 1919	Mar. 31, 1918
Gross	\$649,120	\$510,892	\$5,390,119	\$4,495,271
Expenses	457,600	381,234	3,724,249	3,462,714
Net	191,520	129,658	1,665,870	1,032,557

For the calendar year, 1918, there was an increase of 27.05% in gross earnings, the percentage of working expenses to gross earnings being 74.6%. For the first three months of 1919, the percentage of working expenses to gross earnings was 70.4%.

Cape Breton Electric Co.—

	3 mons. to		3 mons. to	
	Mar., 1919	Mar., 1918	Mar. 31, 1919	Mar. 31, 1918
Gross	\$42,924.29	\$39,516.74	\$138,078.43	\$117,239.52
Ex- penses	32,558.33	30,123.82	103,415.83	92,379.63
Net	10,365.96	9,392.92	34,662.60	24,859.89

Edmonton Radial Ry.—The city controller in reporting upon the Edmonton, Alta., public utilities for the three months, Mar. 31, is reported to have said: The gross earnings of the civic utilities were \$503,768.60, against \$459,979.37 for the first quarter of 1918, an increase of

against \$16,332.59 for the corresponding quarter of 1918.

Ottawa Electric Ry.—Under the provisions of the mortgage trust deed of June 29, 1987, fifteen debentures of \$1,000 each have been drawn for redemption, payable July 5, on which date all interest ceases.

Toronto Ry., Toronto and York Radial Ry. and allied companies:—

	3 mons. to		3 mons. to	
	1919	1918	Mar. 31, 1919	Mar. 31, 1918
Gross	\$1,083,285	\$1,113,472	\$3,205,922	\$3,163,724
Expenses	647,053	581,747	1,902,546	1,720,890
Net	436,232	531,725	1,303,376	1,442,834

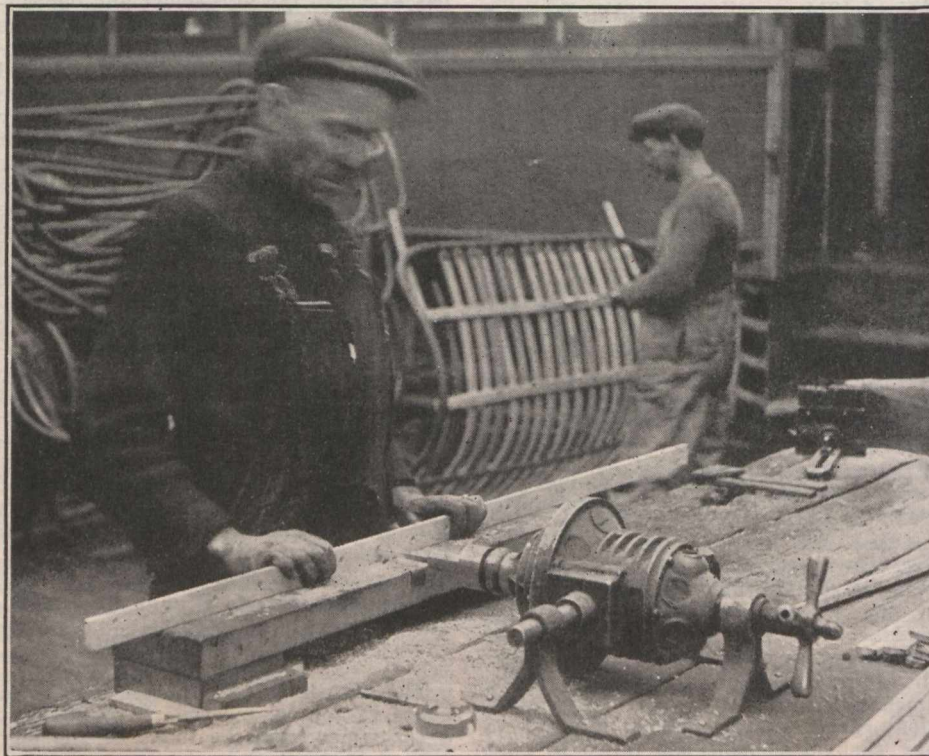
Winnipeg Electric Ry. and subsidiary companies:—

	3 mons. to		3 mons. to	
	1919	1918	Mar. 31, 1919	Mar. 31, 1918
Gross	\$387,841	\$307,289	\$1,149,542	\$940,830
Expenses	287,944	240,628	842,868	723,974
Net	99,897	66,661	306,674	216,856

The surplus after payment of fixed charges for March, was \$40,954.88.

Drilling Fender Slats, in Winnipeg Electric Railway Shops.

Severe operating conditions in Winnipeg keep car fender work active. The accompanying illustration shows an electric drill, used formerly in some other branch of the service, recovered and placed on a bench, with jig and stop for drilling and counter-sinking slats and



Jig for Drilling Fender Slats, Winnipeg Electric Ry. Shops.

9.5%. The combined operation and maintenance expenses on the other hand showed a composite increase of 13.5% over 1918. The deficit on the municipal railway was \$765.66 more than in 1918. The railway's gross earnings show an increase of 11.3%, while the cost of operation increased 17.7%.

Hamilton St. Ry.—Hamilton, Ont., City Treasurer reported Apr. 30, that the receipts of the Hamilton St. Ry. for the three months ended Mar. 31, were \$217,606.92, against \$204,157.38 for the corresponding quarter of 1918. The city's share of the receipts was \$17,408.55,

cross bars of fenders. This method and convenience results in about five times the amount of work being accomplished as was formerly done by hand.

The Reid Newfoundland Co.'s steamships are reported to be making regular trips between Port aux Basques, Nfld., and Sydney, N.S., and are moving much of the freight that accumulated during the winter at Port aux Basques and elsewhere. At one time during the winter the train service from Port aux Basques to St. John's, Nfld., was not operated for about a month.

Electric Railway Notes.

The Winnipeg Electric Ry. is employing some 400 returned soldiers.

The Quebec Ry. Light and Power Co. has asked prices for the supply of 10 double truck p.a.y.e. type of cars, 41 ft., for its city service.

The Regina, Sask., City Council decided recently to ask the City Commissioners to report on the question of operating the municipal railway cars on the skip stop plan in certain sections.

A Hamilton press dispatch of May 28 said that commencing June 1 the Hamilton St. Ry. cars would stop before crossing street intersections and that some 30 stops would be cut off.

The London and Port Stanley Ry. is reported to be considering a suggestion to operate a car service on Sundays from London to Pond Mills, where it is proposed to lay out a public amusement park.

The Hydro Electric Power Commission of Ontario has ordered an additional electric locomotive, similar to the 6 ordered previously and illustrated in our May issue, from Canadian Car and Foundry Co.

The Regina, Sask., City Council's special committee on May 16, directed that an account of Eli Parrish for \$300 for investigating the street railway department and for his work during the recent judicial investigation of the railway's affairs, be laid on the table.

The Regina Municipal Ry. has, it is reported, erected a galvanized metal waiting room at the terminus of its East-view line. It is stated that if this building proves satisfactory, the present wooden waiting rooms will be replaced by galvanized metal ones.

The Regina Municipal Ry. is reported to have installed a new type of power recorder in its power station in Regina, Sask. It is claimed that the new device has proved efficient in saving power where it has been installed—the saving being said to be about 17%.

The Calgary, Alta., City Commissioners, have, according to a press report, practically agreed that there shall be no special taxes on the municipally owned utilities. For the latter half of 1918, the tax levied on the Calgary Municipal Ry. was reported to be approximately \$25,000.

A list of employes of the City of Edmonton, Alta., compiled by the city comptroller, shows a total of 755 with a total monthly pay roll of \$73,985.31. The Edmonton Radial Ry. has 214 of the total on its list, the average monthly pay roll being \$19,176.33. Of the total number of employes, 690 are Canadian or British, the remaining 65 being of 12 different nationalities.

J. L. Retallack, who has been appointed Public Utilities Commissioner for British Columbia, is reported to have said in a recent interview: "It is not likely that any investigation will be undertaken until I have had an opportunity of examining the scope and methods of public utilities commissions elsewhere. The great point to be kept in view is to make the commission as easy of access to the public as possible."

The Regina, Sask., City Council was to have considered a bylaw to authorize the operation of one-man cars in the

city, at its meeting, May 6, but the matter was not reached when the council adjourned. The bylaw was on the agenda for a first and second reading May 20. The bylaw has to be approved by the ratepayers before it becomes operative. The employes' union has issued a statement urging that the bylaw be not passed.

The Regina, Sask., City Council, held a further lengthy session in committee Apr. 30, to discuss the suggestions of City Commissioner Thornton, as summarized in Canadian Railway and Marine World for May, pg. 262. The only conclusion arrived at was the adoption of a recommendation for the appointment of an additional inspector, for which appointment T. McGuinness, a returned soldier, formerly in the department's employ, was suggested. The meeting adjourned without adopting the report as a whole.

The question of standard time or daylight saving is responsible for a good deal of discontent in London, Ont. The London St. Ry. is being operated on standard time, but the company wishes it to be operated on daylight saving time. The men want the matter settled one way or the other, and asked the City Council to refer it to a vote of the ratepayers on May 31. At a meeting of the council, May 19, this was refused by seven votes to three, but a resolution was passed, asking the men to agree to starting the cars half an hour earlier.

The Quebec Court of Appeal on May 2, confirmed a judgment of the Court of Review giving A. Bergeron judgment for \$283.18 against the Montreal Tramways Co. for damages to an auto. Bergeron's auto became stalled on the track while being backed out of the garage, at the time it was struck. At the first hearing the action was dismissed, the court being of opinion that Bergeron was at fault, but this decision was reversed by the Court of Review. Justice Martin, in confirming this decision, held that the M.T. Co.'s employes could and should have seen the auto on the track and so prevented the accident.

The Toronto and York Radial Railway and the City of Toronto.

The acquisition of the Toronto and York Radial Ry.'s Metropolitan Division, within the city limits, was again discussed by the Toronto Board of Control, May 15, when a conference was held with representatives of the company and of the Hydro Electric Power Commission of Ontario. The agreement which had been arrived at between the company and the city, fell through, as the Hydro Electric Power Commission of Ontario would not consent to the city concluding it. A counter proposal made by the commission would not have required legislation to make it effective, but owing to the late date at which the bill was introduced into the legislature, the private bills committee threw it out. The city's negotiations now appear to have been started de novo, and the mayor stated recently that it was his desire to "clean the Metropolitan off Yonge St." W. H. Moore, General Manager, T. & Y.R.R., in replying to the mayor's question as to whether the company was prepared to sell, stated that a few years ago

the city obtained legislative authority to expropriate the portion of the line within the city limits; the company is operating under a franchise, and he felt that it had nothing to sell, except according to the terms and conditions of the franchise, which gave it certain powers and also certain obligations, and it could only sell if the city was prepared to indemnify it against any claim which might be made relative to the company's obligations, particularly to the York County and in regard to the transportation of freight.

After considerable fruitless discussion, a committee was appointed representing the City of Toronto, York County and the company, to discuss the matter further, and to see if an arrangement could not be arrived at. A further meeting took place May 26, and a report was made to the Board of Control, May 28, to the effect that the company will not submit any offer, unless the city agrees to take care of the freight between the city limits and Farnham Ave., where the company's receiving station is at present located. The mayor stated that he had desired the company to submit some offer, but the city would only purchase, if the price was right and reasonable, and the title to the property free of all claim and encumbrances, and freight franchises of all kinds eliminated within the city limits. The board deferred action.

Mainly About Electric Railway People.

Thos. Boden, Superintendent, Brandon Municipal Ry., has also been appointed City Electrician, the former City Electrician and City Purchasing Agent, Mr. Skead, having left the city's service. The head of each city department now does the purchasing for his respective department.

James Gunn, Superintendent, Toronto Ry., completed 50 years of continuous service with the company and its predecessors, May 15, when he received numerous congratulations from associates and other friends.

T. McGuinness, a returned soldier, formerly in the Regina Municipal Ry.'s employ, has, according to a press report, been appointed Traffic Inspector for the line. This is a new position just authorized by the Regina, Sask., City Council.

A. S. Pratt of Stone and Webster, Inc., Boston, Mass., has been elected President Nova Scotia Tramways and Power Co.

E. F. Seixas, Official Representative and General Manager, Monterey Railway, Light & Power Co., Monterey, Mexico, visited St. Catharines, Ont., and Toronto, towards the end of May, to arrange for his wife and family, who have remained in St. Catharines, since he went to Monterey, spending the summer on the Atlantic coast.

George Lee Snelling, who has been acting Secretary-Treasurer, Ottawa Electric Ry., since the death of Jas. D. Fraser, has been appointed Secretary-Treasurer. He was born at Ottawa, Mar. 2, 1880, and entered the company's service, Aug. 1, 1898; since when he has been, to Feb., 1902, junior clerk; Feb., 1902 to Aug. 1, 1912, timekeeper, stenographer and storekeeper; Aug. 1, 1912 to Dec. 23, 1918, accountant, and from Mar. 2, 1914, during various absences of the late Secretary-Treasurer, acting Secretary-Treasurer.

Bell Telephone Co. Authorized to Increase Rates.

The Board of Railway Commissioners passed general order 264 May 13, as follows: Re application of Bell Telephone Company of Canada, for an order permitting an increase in rates of 20% on all tolls, rates, and charges for exchange telephone service; for a revised schedule of long distance tolls; for a charge to be known as "service connection charge"; and a charge for moving telephone stations and other equipment; all as set forth in tariffs of tolls accompanying the application. Upon hearing the application at Ottawa, Jan. 8 and 22 and Feb. 12, 1919, and in Toronto and Montreal on Jan. 13 and 16, 1919, respectively, in the presence of counsel for the applicant company, the Union of Canadian Municipalities, and the corporations of the following cities and towns: Montreal, Toronto, Hamilton, Ottawa, Quebec, London, Windsor, Brantford, Outremont, Westmount, Levis, Granby, Brockville and Verdun; the boards of trade of Toronto, Montreal, and Cornwall, the municipalities of North Gower and Marlborough, and the Proprietors' League of Montreal being represented at the hearings, the evidence of experts offered both in support of and in opposition to the application, and what was alleged; and upon reading the written statements, reports, and submissions of experts filed on behalf of the applicant company and the respondent corporations, as well as the reports of chartered accountants, made after examination of the applicant company's books which were available to them by the direction and under the authority of the Board's order; no objection being made to the long distance tolls as filed.

It is ordered that (a) the revised increased tolls for long distance service, (b) an increase of 10% instead of 20% on all tolls, rates, and charges for exchange telephone service and charges incidental thereto, and (c) the charges for moving telephone stations and other equipment, all as set out in the application filed with the board, be authorized and allowed. That the "service connection charge," so-called, as applied for be disallowed. That where exchange services are at present installed, the increased tolls hereby authorized and allowed may become effective July 1, 1919. That the increased tolls hereby authorized and allowed for long distance service, for moving telephone stations and other equipment, and where new exchange services are installed subsequent to the date of this order and prior to July 1, 1919, may become effective on one week's notice.

Jurisdiction Over Grand River Ry.—The Dominion Parliament has been asked to amend Chap. 47 of the statutes of Canada, 1904, by repealing sec. 3, which enacts that the acquisition by the company of the Galt, Preston and Hespeler St. Ry., and the Preston and Berlin St. Ry. shall not make such railways subject to the Railway Act or works for the general advantage of Canada, but that they shall remain subject to Ontario jurisdiction. (May, pg. 267).

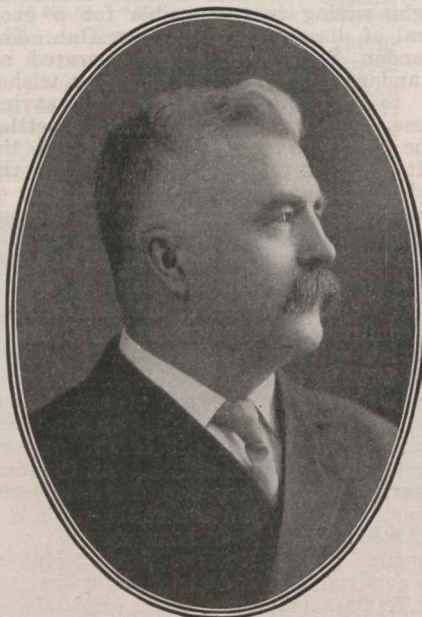
It All Depends.

"Is your place within walking distance of the cars?"

"I dunno," answered Farmer Corntosel. "How far kin you walk?"—Washington Star.

The Death of Duncan McDonald.

Duncan McDonald, formerly General Manager, Montreal Tramways Co., who died at Ste. Agathe, Que., May 8, from tuberculosis. He was born at St. Thomas de Montmagny, Que., June 17, 1859, and removed to Montreal in 1875. He entered Montreal St. Ry. service in 1881, as a driver, in order to acquire a thorough knowledge of street railway work from its veyr commencement. He was soon changed to conductor and after about a year in that capacity, was appointed roadmaster. In 1886 he severed his connection with the company and engaged in other business. Anticipating the progress that the trolley system would make, he went to St. Paul and Minneapolis, Minn., in 1889, and secured a practical knowledge of electric railways. He returned to Montreal in 1892 and re-entered Montreal St. Ry. service as inspector, and in 1894 was appointed Superintendent of Transportation, which position he held until 1898, when he resigned to become General Manager, Parisian Tram-



Duncan McDonald,
Formerly General Manager, Montreal Tramways
Company.

ways Co., Paris, France, in which position he organized the Parisian system to a high degree of efficiency. In 1903 he returned to Montreal, having been offered the position of Manager, Montreal St. Ry., which position he held to Nov., 1910, when he was appointed General Manager, and on the organization of the Montreal Tramways Co., in 1912, he was appointed General Manager of the new company, resigning in July, 1912, after which he devoted his time to his other interests, including the Montreal Tunnel and Terminal Co., the Prepayment Car Sales Co., of which he was President, and which controls the pay as you enter cars, of which he was one of the patentees, and also the pay within car. He was a director of the Dominion Park Co., the Automobile Club of Canada, a member of the Civil Engineers' Society of France, a member of the Institution of Electrical Engineers of England, and was connected with the Canadian Street Railway Association, now Canadian Electric Railway Association, from its inception until his retirement from actual street railway service, being President for two years and member of the executive committee

for several years. For two years he was a city controller of Montreal, and was an unsuccessful candidate for the mayoralty in 1916. In 1917 he acted as the Toronto Ry.'s representative on a board of conciliation appointed under the Industrial Disputes Investigation Act, to deal with wages, questions in dispute between the company and its employes.

Mr. McDonald had a most extensive circle of friends, and was especially well known to electric railway officials. He was most generous and hospitable, and exceedingly popular with all classes.

One-Man Cars in Edmonton.—Edmonton, Alta., Municipal Ry. union employes passed the following resolution recently:—"That owing to the increased responsibility caused by the city in changing the fare, in that almost every passenger is purchasing tickets from the motorman-conductor, also the fact that those who pay cash fares have to receive change, and that the department insists that the crews keep on schedule time, we hereby declare that we will not be responsible for any accidents that may occur, owing to the fact that our attention has to be given to so many matters at one time it is impossible for us to run the cars in the interest of public safety, and we would recommend that the city commissioners and council in the interest of the travelling public place two men on each car; also that it was promised that at the time that the one-man car was introduced it was done as a war time necessity, now that the war is over and the day of reconstruction has arrived, we would ask in the interest of the returned soldiers that this be done at once."

The Montreal Harbor Commissioners' report for 1918 shows that the cost of work was \$28,000,000. The accommodation in the harbor includes 100 steamship berths, 350 to 750 ft. long, with depth of water from 20 to 35 ft. There are 2 modern fire proof elevators, with a conveyor system to 15 steamship berths; 21 permanent fireproof sheds and 51 miles of railway. The channel from Montreal towards the sea has been deepened and widened and during the year there was never less than 30 ft. of water available. The number of trans-Atlantic vessels arriving at the port during 1918 was 674, the greatest on record. Merchandise exported was valued at \$496,793,000 and imports, \$178,021,000. The exports included 962,000 tons of grain, 490,000 tons of flour, 394,000 tons of packing house and dairy products, 500,000 tons of lumber, 209,000 tons of fuel oil and 492,000 tons of munitions. In addition to this, there were the cargoes of about 250 vessels sailing under allied or neutral flags. The harbor revenue was \$2,104,191, and expenditure \$2,026,542, including \$903,585 interest on debentures.

The Victoria and Sidney Ry., on Vancouver Island, a line owned by the Great Northern Ry., U.S., ceased operating Apr. 30. Since the company announced that it intended to cease operating, residents of the area served have been petitioning the Premier of British Columbia to take steps to have a service provided on the line, and the government has been negotiating with the Canadian National Rys. management. It was reported in Victoria, May 16, that the C.N.R. is ready to operate the line as soon as the necessary legal formalities can be complied with.

Marine Department

The Dominion Government's Shipbuilding Programme Discussed in the House of Commons.

When the House of Commons went into committee of supply, May 8, on the item of \$30,000,000 required for the construction of ships in accordance with the government's shipbuilding programme, the Minister of Marine, Hon. C. C. Ballantyne, said: "A year ago I had the honor of introducing the government's merchant marine shipbuilding policy. A great many changes have taken place since the armistice has been signed, and it seems to me to be an opportune time to furnish to this house all the information that I have on the subject for which the vote is now asked. I think it would be well for us to look at the shipping conditions of the world, and particularly as they existed in Canada when the government deemed it wise to embark on its shipbuilding policy.

"Up to about Feb. or Mar., 1918, the Imperial Munitions Board was occupying all the vacant steel shipyards in Canada, building ships for England. The British Government is to be congratulated for its energy and foresight in not only having ships built to the fullest capacity of the immense shipyards of the United Kingdom, but also for utilizing all the available yards in Canada. But, when I became Minister of Marine I could not see what particular value the steel ships that were being built in Canada for England could be to our own country, and after considering the matter from every point of view, I thought the time had come when Canada should have her own merchant marine. Therefore I recommended to my colleagues in the government that we should utilize our own yards to build up a national merchant marine, and, much as we admire the old country and desire at all times to render her every assistance possible, more particularly when she is engaged in war, I consider that we were doing not only our full duty to Canada, but also to the Empire when we took that course. There was an immense total loss of shipping at that time, about 15,000,000 gross tons, the war being at a very serious and critical stage, and the success of Great Britain and her allies depending very largely on the extent of their merchant marine. So pressing was the need for tonnage that all Canadian ships under Canadian register and all ships plying in Canadian waters under British register, were commandeered by the British Ministry of Shipping, a fact which left Canada devoid of a merchant marine.

"At that time, all of our allies, with the exception of our neighbor to the south, were coming to me constantly to know if I would allow them to build ships in our yards—I refer particularly to France and to Italy, and also to Norway, one of the neutral powers. I had to reply to the overtures made to me that the policy of the Canadian Government was to utilize to the fullest extent our own steel shipyards, and that therefore we could not look with favor upon building ships for them. It was not so much a matter of price. Many of our allies were willing to pay from

\$20 to \$25 per ton more than this government was paying for the ships it was having built under contract. The policy of the Imperial Munitions Board was to build wooden as well as steel cargo vessels. The Canadian Government did not think it good policy to have wooden ships built. Not that either I or the government had anything to say against wooden ships, but we thought it was a sounder policy, having in view that sometime peace would come, to confine our efforts to the building of steel ships only, which accounts for our not having built any wooden ships. The money for the ships that were being built by the Imperial Munitions Board for Great Britain was being loaned by the Canadian Government. As these ships were being built



Hon. C. C. Ballantyne, M.P.
Minister of Marine and Fisheries.

with Canadian money, it seemed to me to be a wise and sound policy that they should be Canadian ships, for the use of the Canadian people.

"There were three reasons why the government adopted the policy of building up a mercantile marine. The first for reasons arising out of the conditions brought about by the war, and to which I have already alluded. The second was the desirability of building up our export trade. At no time in our history have the prospects been so favorable as at present for the building up, the extending, and the expanding of our export trade. The third reason was that Canada has a vast railway system, and it was proper that the government, in order to complete the chain of transportation and to place our railways on as favorable a footing as possible, should

supply those railways with the necessary steamship service. Parliament and the people generally will, I am sure, agree as to the wisdom of the policy of having these splendid cargo ships work in co-operation with our railways and carrying on a service somewhat similar to that operated by the C.P.R. Co. We hope to see our ships on the Atlantic and on the Pacific oceans, plying to England, to Australia, to New Zealand, to South Africa, to South America and to all the ports with which Canada can carry on a foreign trade. At present we have under contract 45 steel ships, orders for which have been placed in yards from Prince Rupert to Halifax."

The minister then read a summary statement of orders placed, the particulars of which have been given in considerably more detail in each issue of Canadian Railway and Marine World for several months past, and he proceeded as follows:—"The total tonnage of these 45 ships is 263,850 dead weight tons. We have at present ready to go into service the Canadian Ranger and the Canadian Pioneer, both of 8,100 tons dead weight; we have the Canadian Voyageur, 4,350 tons, which has been doing splendid service for some months; and we have the Canadian Warrior, 3,750 tons. Two more will be ready in May, 5 in June, 3 in July, 2 in September, 4 in October, 7 in November, and 2 in December, making 25 ships that we expect to put into service during this year. The value of the contracts which have been placed is, in round figures, about \$52,000,000 and up to the end of the present fiscal year \$20,000,000 of that will have been paid. The item that we are asking the committee to pass is for \$30,000,000, which with the \$20,000,000, constitutes, in round figures, the total amount of all the contracts, \$52,691,450.

"I stated in the house a year ago that it was the policy of the government to utilize only existing steel shipyards. But there existed at Prince Rupert a large ship repairing plant and floating dry dock, and considerable pressure was brought to bear upon the government, especially as the war was proceeding at that time in a way that did not look favorable to us, and tonnage was very badly needed, to place some orders out there. I took the ground that the government was not investing money in shipyards, but that if any firm would come along with the necessary capital the government would be willing to give it a share of their business. That accounts for the placing of orders for 2 ships of 8,100 tons at Prince Rupert. Victoria, B.C., did not have a modern shipyard. The Victoria Machinery Depot had a small place there, and our Victoria friends, especially the late Premier Brewster, were very anxious that we should give Victoria part of the government business. We therefore placed an order with the Victoria Machinery Depot for two ships of 8,100 tons each. Enterprising capitalists, J. W. Norcross and R. M. Wolvin, said that they were prepared to put \$5,000,000 into a modern ship-

yard at Halifax, if the government would give them some business. I shall not weary the committee with an account of all the interviews that I had and of the requests that these gentlemen made and which the government could not see its way clear to grant. They wanted us to allow them to bring in free of duty what plant they required; I told them we could not agree to do that. They also wanted a very large order for ships, as their capital expenditure was great; but I told them that all we could do would be to give them an order for four ships, which we have done. When that yard is fully completed—and it will be completed shortly, because the keels of two vessels have already been laid there—it will be one of the finest and best equipped yards in the country.

"As regards the type of ships, after consultation with the technical officers of my department, we decided it was wise not to build too expensive a freight ship, but at the same time to make our ships as efficient as possible. And I am proud to state to the committee that in no other country in the world, not even in the old country, are any ships being built

possible, but according to the information I have received, their price, taking all the ships they have ordered from the various shipyards, would be at least \$25 a ton higher than the 45 contracts we have entered into in Canada.

"The other night the leader of the opposition (D. D. McKenzie) stated that the Canadian Government ships under contract cost 400% more than they had any right to cost, the comparison made by him being between the pre-war price in England of \$50 a ton and the prices the Canadian Government have made with the various shipyards throughout the country. The correction I wish to make is that he overlooked stating that his price was a pre-war price. The most reliable information I can get from England, Ireland and Scotland is that all of their yards are busy; that they are building ships rapidly for themselves, and that they are also building a certain number of ships for their allies in Europe. Consequently, no one can get a firm price for ships over there. If any one in Canada wanted to build a ship of any size and approached any of the old country yards, he would be told that

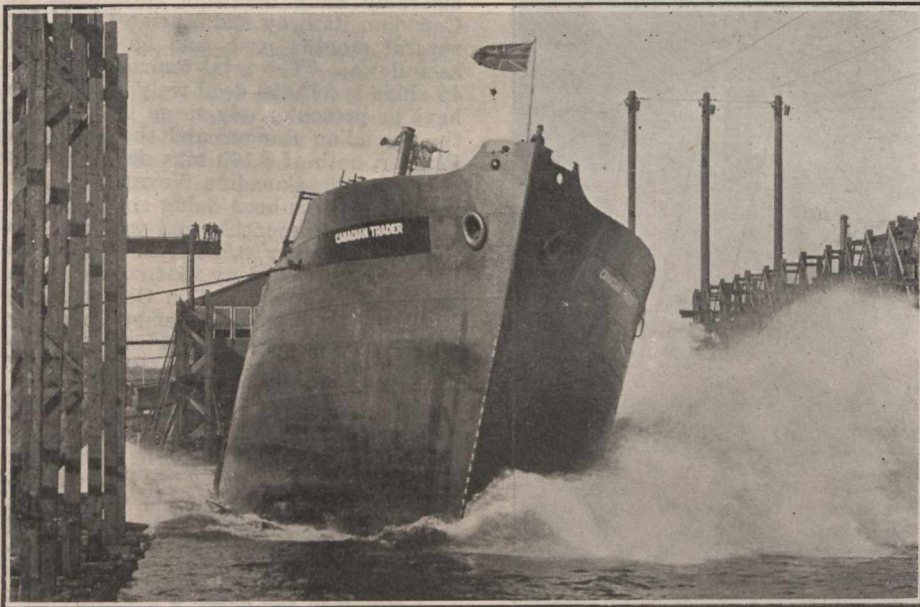
the Canadian Government will be glad to give it a large contract. I do not know of any firm in the old country that would undertake to build ships at any such price, although I give the member credit for making a statement which he believed was accurate at the time. I merely want to clear this point up, because I do not want the public to think that, in order to build ships in Canada, we are compelled to pay \$180 to \$215 a ton when they could be built in the old country for \$50 a ton. I sent cablegrams to four different firms, in order that the information which I am now giving might be accurate and up to date. It will interest members to know that one of our great allies is having 30 wooden ships built in Canada at \$200 a ton d.w., so that if \$200 a ton is being paid for a wooden ship I do not think the government has paid too high a price when it pays from \$180 to \$215 for steel ships."

Mr. Ballantyne stated, in answer to a question that the wooden ships are being built at Victoria, whereupon W. Duff, M.P., for Lunenburg, N.S., said that wooden ships are being built in Nova Scotia for about \$75 a ton d.w. Mr. Ballantyne continued:—"The type of ship built at Victoria for \$200 a ton, is, I imagine, entirely different from the ships being built in the Maritime Provinces for \$75 a ton. I wish to explain why the government found it necessary to pay British Columbia shipbuilders \$10 a ton more than eastern shipbuilders. First of all, I endeavored to place contracts with B.C. shipbuilders at eastern prices, but they pointed out that the labor cost is \$7 a ton more in B.C. than in the east, and that freight rates are very much higher. After a great many interviews, extending over some months, the government agreed to pay the B.C. shipbuilders \$10 a ton more than the eastern price for a similar type of ship. For instance, if an 8,100 ton ship was being built by Canadian Vickers of Montreal for \$180 a ton, the price for a similar ship in the B.C. yards would be \$190 a ton.

"There has been some criticism of me, especially by B.C. shipbuilders, because I would not allow them to take foreign contracts. When the war was on, France, Norway, and Italy were urging us to allow ships to be built here for them. I would gladly have consented had we been able to get sufficient ship plates, marine engines, boilers, and the other necessary equipment for our own needs, and at the same time have a surplus for ships to be built on foreign accounts; but unfortunately, notwithstanding that we had an agreement with the United States for 80,000 tons of plate, up to the time of the signing of the armistice, we had only been able to get some 6,000 tons. So I could do nothing else than say that Canada could not afford to delay her own shipbuilding programme by building ships on foreign account.

"With regard to the slowness of the construction of some of our ships, I admit that the yards have taken very much longer than I anticipated, but the delay has been unavoidable owing to the shortage of skilled and unskilled labor, and the great difficulty in getting shipbuilding plate from the U.S., as well as engines, boilers, and other equipment. The ships are coming along more rapidly now than when the war was on.

"Quite recently there has been a great demand for space. Our ships are going



Launching of Steel Cargo Steamship, Canadian Trader, 3,400 tons d.w., for Canadian Government Merchant Marine Ltd., by Port Arthur Shipbuilding Co., at Port Arthur, Ont., May 5, 1919.

better than those which our Canadian shipyards have so far turned out for the Dominion Government.

"I now wish to refer to the matter of price which ranges all the way from \$180 to \$215 a ton dead weight, and I hope members will fully realize that when the government commenced their shipbuilding programme a year ago, everything was at its height; labor was very high, the rate of wages was constantly increasing, as was the cost of boilers, engines, and all the auxiliary equipment that goes into a ship. I am pleased to state that the 45 ships that we have under contract for the Dominion Government are being built at a considerably lower cost than the ships on the vast programme of shipbuilding which the United States Emergency Fleet Corporation is carrying out. Its ships have cost considerably more than ours, notwithstanding the fact that it has turned out so far 555 steel ships. I do not like to say anything but what would be pleasant about our neighbors who are our allies, and who have helped us in every way

they would enter into a contract with him on a cost plus basis, but that they could not give him a firm price per ton. He would also be told that they could not make deliveries before at least the spring of 1920. In this connection, I may quote a well known shipbuilder, Sir G. B. Hunter, of Swan and Hunter, a firm distinguished for its shipbuilding. In an interview which was reported in the Newcastle Journal on Apr. 6, 1919, he stated that ships cost at present three times as much to build in England and Scotland as they did before the war. Therefore, if we take Mr. McKenzie's figure of \$50 a ton, and if we take the well known and reliable authority, which I have quoted, viz. Sir G. B. Hunter, ships built in the United Kingdom at the present time would cost \$150 a ton."

J. H. Sinclair, M.P., for Antigoish, etc., N.S., having quoted a Canadian paper as stating that ships are being built on the Clyde for \$55 a ton, Mr. Ballantyne continued:—"If the member can give me the name of any firm on the Clyde that will build ships for \$55 a ton

to be operated by Canadian Government Merchant Marine Ltd., and naturally manufacturers and firms who have large orders for shipment abroad have been coming to the Marine Department to know whether or not they can get the tonnage. The Dominion Coal Co. told me that all its ships had been requisitioned by the British Minister of Shipping, and it wanted tonnage to send 1,000,000 tons of coal to Montreal. It said that unless the Canadian Government could provide the tonnage it might have to close down its mines, which would be almost a catastrophe. The steel men, the pulp men, the sugar men and the general produce merchants, all want to know what tonnage the Canadian Government can provide. The British ships that are plying from Canadian ports at present have 70% of their available cargo space reserved for the British Minister of Shipping, which leaves only 30% for the Canadian export trade. While in England last year I did everything I could to meet the Dominion Coal Co.'s requirements. I have since sent many cables to the British Minister of Shipping. The Canadian High Commissioner, Sir George Foster, and Lloyd Harris, Chairman of the Canadian Mission, have all done their very best, but I am sorry to say they have been unable to get the tonnage. To illustrate the great necessity of our having ships at the present time, I will read a cable received by the Canadian Manufacturers' Association from the secretary of the Canadian Mission in London, Mar. 1:

"Our work here practically futile unless additional ocean space can be secured. Commercial shipments Canada to Great Britain now three times quantity space available, and rate of freight on many lines practically prohibitive, amounting in many instances to 75% invoice value. Steamship companies in many instances charging double published rate. You may make statement that unless the matter of shipping is immediately attended to Canadian trade will suffer tremendous loss."

In answer to a question as to by what right the British Admiralty could requisition Dominion Coal Co.'s vessels, which are on the Canadian register, Mr. Ballantyne said: "Before a Canadian registered ship can be so requisitioned, application has to be made to the Canadian Government through the Minister of Marine. When the war was on and tonnage was required to transport munitions and foodstuffs and soldiers across the seas, the Canadian Government could not refuse to release the ships on Canadian register."

In answer to another question, Mr. Ballantyne stated that all the plate used on Dominion Government ships to date has been imported from the United States, the plate mill at Sydney not being ready.

Mr. Ballantyne continued: "I think it will interest the house to know what Australia is doing is not only building her own merchant marine, but war ships too, so their Minister of Naval Service, informed me when I was in London. Australia has during the war erected a plate mill. Besides the ships Australia is now building, she bought ten in 1915 or 1916 and these have proved to be very profitable. It is now building 20 ships more. The acting Minister of the Australian Navy, announced on Apr. 10 that the Australian Government would remain in the shipping business and would continue its shipbuilding programme. He said that the present programme contemplated the building of 20 steel ships, and war ships as well.

"I now come to the government policy for the future. I have already stated that we have 45 ships under contract. There are at present certain yards in Canada that require business. Berths are becoming vacant, and many more will become vacant in the very near future. The government has not finally decided how many additional ships it will order, but I will bring down in my supplementary estimates the amount that the government will think it wise to ask approval for. The \$30,000,000 I am dealing with now is to complete the contracts we have already let, but in view of the fact that there is a great demand for ships and also that we could sell some of our ships under contract at present if the government deemed it wise to do so, we are not going to discontinue shipbuilding for the moment. We realize that there are 30,000 men engaged in the shipyards throughout Canada, from Prince Rupert to Halifax, and there are fully 10,000 more engaged in making engines, boilers, etc., and to cause 40,000 men to be out of employment at this time would be rather a dangerous thing. It is therefore not the government's intention to cease its shipbuilding programme now. We are going to order additional ships, at least to keep the

we hope to have a policy ready to present. Naturally when the shipyards complete the building of the ships that are ordered by the government now, and a few more that will be ordered, it will be a problem that the government will have to deal with, as to whether it will let these shipyards go out of existence altogether or give them a fair amount of protection the same as other Canadian industries are enjoying and have been enjoying for some years.

"Over a year ago the government entered into a contract for 250,000 tons of ship plates at \$4.15 per 100 lb. based on the price of steel billets at \$25.50, and as the price of steel billets would go down, so would the price of ship plates. For a few months the government placed auditors in the steel company's plant to check up the costs. The total amount of plate that we contracted for was 250,000 tons. What caused the government to give this contract was the scarcity and the impossibility of getting ship plates from the U.S. in order to carry on our shipbuilding programme. No one at that time could foresee the end of the war. It might be a year or more before the conclusion of hostilities, and when a country is at war, as Canada was, it is necessary to prepare for



Launching of steel cargo steamship Canadian Recruit, 3,750 tons d.w., for Canadian Government Merchant Marine Ltd., by Collingwood Shipbuilding Co., at Collingwood, Ont., May 3, 1919.

yards that are requiring work busy throughout the balance of 1919, and probably for a few months in 1920. I do not want this house or the shipbuilders to think that the government can go on forever ordering ships, because there must be a limit to the number of ships that the government can use, and we are getting very near to that point. So that when I say that it is the government's intention, subject to parliament's approval, to order more ships, the shipbuilders must not expect that there will be many more orders to follow, and they must therefore look for orders for their shipyards in the same way as any other industry in the country would.

"There is no protection whatever given to Canadian shipbuilders in the way of duty and bonus, and when the yards of the United Kingdom are free a year and a half hence to take orders, it will be most difficult for Canadian shipbuilders to compete unless some form of assistance is given by the government. What that form of assistance will be has not been determined, but between now and the next session of parliament

an indefinite continuance of war conditions. The shipyards at that time were paying for plate all the way from 4c a lb. up to 10c. The ruling price in the U.S. outside of the plates, required for the government ships, was from 4 to 5½c. I called into competition the great U.S. steel companies, besides inviting all the steel companies in Canada to tender and the best price I could get was \$4.15, the U.S. steel price being 4¼c per lb. Since the letting of this contract the armistice has been signed, and the price of steel plates has dropped to 2¾c in the U.S. and may possibly go lower. I therefore interviewed the officials of the steel company recently and pointed out to them that this was a war contract that we had entered into with them, and that in view of the price of steel plates having declined so much in the U.S. and for other reasons, I wanted to negotiate with them for a modification of the existing contract. I met the President and the Vice President of the Dominion Steel Corporation, who could not have met me in a more broad and patriotic spirit than they did; and they said that

they were prepared to make any modifications that I, as a responsible minister would care to propose with the approval of the government. These negotiations are being carried on, and the contract will either be modified or be entirely cancelled. The government has not yet got the necessary information before it to decide what action they will take, but I am free to state now that we can modify the contract or, if we prefer, as the company met us in a broad spirit, we can cancel it. The Dominion Steel Corporation has its plant partially up. There is no machinery or plant in it at all, and it is very far from completion. I understand it is only barely started."

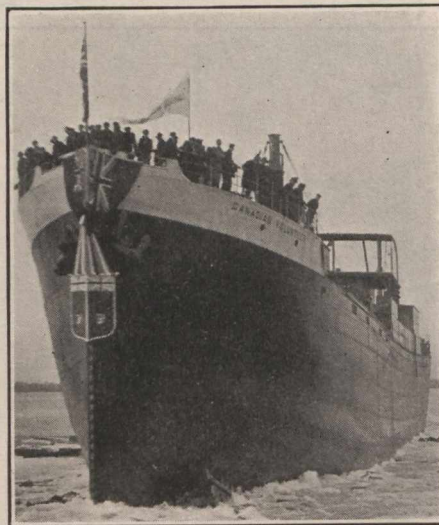
W. Duff, M.P., interrupted and said: "The minister informed us earlier in his remarks that contracts had been entered into with different shipyards at from \$180 to \$215 a ton. I presume this price was made in view of the fact that either the shipyards or the government would have to pay to the Dominion Steel Corporation or other steel manufacturers, \$4.15 per 100 lb. If, as the minister has just told us, the government makes a new contract with the Dominion Steel Corporation, or if the steel company modifies its contract to meet U.S. competition at \$2.25, will the government pay the shipbuilders \$215 a ton d.w. for these ships?"

Mr. Ballantyne replied:—"The gentleman could not have understood me correctly. As I said, the contract price was not based on the price of steel that we contracted for with the Dominion Steel Corporation, but on the price of steel that we contracted for with the U.S. Government at 3½c. It has really nothing to do with that price. I hope to receive the approval of the house for the \$30,000,000 that I am now asking and I trust that when my supplementary estimates come down for the additional sum, for the reasons that I have explained this afternoon to the best of my ability, members will give the government their unanimous support. I hope they will not look upon this as a party question at all. I consider that our shipbuilding programme is a large, national question.

"I did not explain how these ships are going to be operated. At one time I thought I would organize a shipbuilding branch under the Marine Department and engage a capable manager to operate the ships. But after careful and serious thought I could not see how I could keep the operation of these ships free from political influence, as it was desirable that we should, and therefore, I thought the best policy for the government to pursue would be to follow the good example of the C.P.R. Co., which has its own steamships, while owned by the same shareholders as the railway, operated separately under the name of Canadian Pacific Ocean Services Ltd. Therefore I recommended to the government that D. B. Hanna and his board of directors should be responsible to the government for the operation of the government ships the same as they will for the government railways. In order that parliament and the public may know what profits and losses these ships might make I proposed that a steamship company be formed and it has been formed under the name of Canadian Government Merchant Marine Ltd. The operations of the ships are going to be kept separate from those of the railway. Mr. Hanna promised that he would procure one of

the best steamship managers that he could get and an efficient organization. In addition to that, as so many enquiries come into the Marine and Trade and Commerce Departments, there will be an advisory committee here that will not in any way interfere with the management of the ships by Mr. Hanna and his board of directors, but will act more in an advisory capacity. The Deputy Minister of Marine and the Deputy Minister of Trade and Commerce, will consult as often as necessary with the general manager of the government ships in regard to what cargoes should be moved because there is more cargo available than the government has ships to carry. As these ships are built for Canada alone, Mr. Hanna understands full well that they are not to be used in any foreign trade if there is business available in Canada.

"As to whether the government will retain in its service the 45 ships ordered already and such additional ships as may be built, or, inasmuch as the work is largely for the purpose of giving employment, whether it will sell some of these ships and build others, will depend altogether on the business offered. At present it would not be wise for the government to sell any of its ships, especial-



Steel Cargo Steamship, Canadian Volunteer, 4,300 tons d.w., for Canadian Government Merchant Marine Ltd., immediately after launching by Wallace Shipyards Ltd., North Vancouver, B.C.

ly those that are ready to go into service now. I had an offer from a New York firm today at \$190 a ton which I have refused. It may be possible that some of the ships will not be completed until a later date and if we find the demand for ships and the volume of business falling off the government might possibly sell some of the ships.

Trawlers and Drifters — Sir Sam Hughes asked if the Minister of Marine had considered the advisability of the government, assisting Canadian corporations in the construction of trawlers in government yards, or under some other system, so that Canada may have its own fleet of trawlers engaged in the fishing industry in this country with ocean ships to convey the products to the nations of the world. Mr. Ballantyne replied:—"Of the trawlers and drifters built in this country, only 6 were built for Canada. These trawlers and drifters were built probably more for war purposes than anything else. A large number of trawlers and drifters, which some people think belong to

the Canadian Government, are at Liverpool at present. The British Government has sold some and might possibly sell more. The Canadian Government has only 6 trawlers on hand for the time being. There would never be any demand for trawlers except by fishermen, and I am quite sure that they would not pay the price of these expensive war trawlers. The sum they would want to pay would be so small that no one could build a similar type of trawler for it. I hope our friends in Canada will build the type of trawler that our fishermen need and at a price which they can pay."

Control of Rates, Etc.—J. E. Armstrong, M.P., for East Lambton, Ont., asked whether as the government railways are under the Board of Railway Commissioners' control as to rates, tolls and tariff agreements, it is the government's intention to place the ships under the same commission in regard to rates and tolls? Mr. Ballantyne replied: "That would be a matter for D. B. Hanna and his board of directors to consider more than it would be a question for the government. It would be a very difficult problem for any government to undertake to control rates for ocean traffic, but if it is at all feasible, the government would be willing to join in with the others."

United States Shipping Board's Policy — Mr. Ballantyne said:—"Chairman Hurley, of the U.S. Shipping Board, says that they have built 555 ocean going steel ships, that they have contracts for 1,336 similar ones yet to be built, and that when the programme is finished they will have 16,732,700 tons of shipping. Mr. Hurley's proposal, which he is going to submit to Congress, is that the U.S. Government shall sell these ships to private persons. He goes so far as to say that he is willing to recommend to the U.S. Government that they be sold, not at the cost of construction to the government, but at the cost of construction at the time the sale was made. He also states that he hopes the U.S. Government will be able to control rates, but I do not see how it can very well do so. He further states that they are going to set aside \$15,000,000 for what he calls a merchant marine development fund, so that if any of their ships are in a trade route that does not prove to be profitable, the U.S. Government will come to their aid. He also states that the U.S. is striving to be the leading maritime nation of the world; and consequently we must recognize the keen competition that we are going to have from the U.S."

Shipbuilding at Sorel and Toronto — In answer to questions, Mr. Ballantyne stated that the government had not given any orders to build ships at Sorel, Que., as the yards there could not build the types of ships which have been ordered. The government has not placed any orders with any of the Toronto shipyards, because the two shipyards there had their berths all occupied either by ships they were building for the Norwegian Government before the Dominion Government's shipbuilding programme was undertaken, or by ships they were building for Canadian register. They have berths vacant now, but whether the government will be able to place any orders with them or not will depend on the amount that will be brought down in the supplementary estimates, and the approval of the house thereto.

Government's Policy Criticized—J. H. Sinclair, M.P. for Antigonish, N.S., said he thought the government was building the wrong class of ships. It was not following the policy of the C.P.R., which had never built tramp vessels, but liners which make regular trips, connect with its railway system and undertake to route goods to certain places and to deliver them on certain dates. The slow tramp vessels being built by the government will never be suitable for that class of work. It will be of no advantage to Canada to have its goods carried by a tramp vessel owned by the government, instead of by a private owner. The vessels already owned by the government are not developing Canadian trade. The s.s. McKee was chartered by a New York firm to carry coal from New York to Chili and to carry an ore cargo back. The s.s. Canadian Voyageur was carrying sugar from the West Indies to New York. Mr. Sinclair contended that ships are now being built in Great Britain at about \$115 a ton d.w., and that Canada is paying too much. The government would lose heavily by its policy. When it ceased giving orders shipbuilding in Canada would stop. It should find some way by which Canadian investors could put their money into shipbuilding and

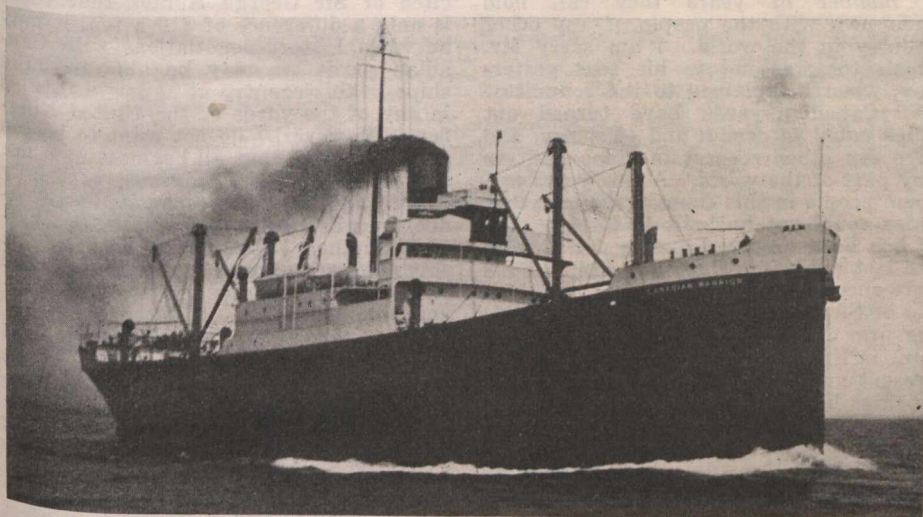
ing these freight ships we should have passenger ships plying on the various oceans. Every one knows that a passenger ship has not as much available space for cargo as a cargo ship, and therefore the government's policy is a sound business policy. These ships were never designed to carry passengers at all, but were designed and are being built to carry cargoes. They are what the Canadian National Rys. want, because they will carry freight from the Orient to Vancouver, and the Canadian National Rys. will carry the freight to whatever point in Canada it may be destined for. Rates are very high and profitable now, but as market rates drop it would not be supposed that the general manager of the steamship company for the government would ask for higher rates than those ruling at the time. These ships are being built in order that the people of Canada and the government may control the freight from the time that it leaves the port from which it is shipped to the time it reaches its destination in Canada, and they will carry export cargoes from mine, field, and forest, and from our industries here. The U.S. Government has put a ban on the export of wheat from Baltimore, New York, and Boston. What would this govern-

Great Britain owned 60% of the world's ships. He did not believe that under its present tariff system Canada could compete successfully with Great Britain in shipbuilding.

Lieut.-Col. Currie, M.P. for North Simcoe, in replying to Mr. Clark, made a strong protectionist speech, and stated that Germany had built up its maritime trade by subsidizing shipbuilding. The German Government provided that inland manufacturers in Germany should have the same freight rate of the world's ports as those paid by manufacturers on the sea coast. The same policy should be adopted in Canada. He urged the establishment of a number of steamship lines, particularly to the East Indies, to Australia and New Zealand, and to South America.

Steel Plate Manufacture—D. D. McKenzie, M.P., for Cape Breton North and Victoria, urged the government to see that the projected steel plate mill at Sydney, N.S., be erected and put in operation and that ship plates may be made in Canada.

Mr. Ballantyne, in reply to a question as to the price to be paid for ship plates to be made at Sydney, said:—"The best price for the government that could be agreed upon over a year ago was \$4.15 per 100 lb., based upon the price at which steel billets were selling at that time, viz.: \$25.50 a ton. Ship's plates are made from steel billets, and in talking with the President of the company, I learned that steel billets would not in any event decline in price more than \$10 a ton. When the government entered into the contract with the Dominion Iron and Steel Co., it was as a war project; we could not get steel from the U.S. and notwithstanding that we had placed an 80,000 ton contract there, we were only able to obtain 6,000 tons. Other countries at war, such as Britain and France, were depending on the U.S. for steel, and Japan was also getting steel from that country. The U.S., having a huge mercantile marine programme to carry out, naturally were going to serve their own necessities first before they supplied the needs of others; therefore, to make shipbuilding a self-contained industry in Canada, and to enable this country to get ships during the war, it seemed to the government that there was no other course open but to enter into the best contract we could to have the steel plates made here. It is greatly to the credit of the Dominion Iron and Steel Corporation that it was able to place before the government a more favorable proposal than we could get from the U.S. The ore used by the company to make the pig iron originates in British territory, and comes from Newfoundland, so that all the materials used in production are obtained on British soil. But after the armistice had been signed, the price of ship's plates being 2½c in the States, against possibly a minimum price of \$3.75 under the Dominion Iron and Steel Co.'s contract and the government being obligated to take no less than 50,000 tons a year for a period of five years, making 250,000 tons in all, it seemed to the government that we could not very well afford to pay that price. The arrangement looked very favorable a year ago when plates were selling at from 4c to 10c a pound, but it does not look so favorable now. I agree with the leader of the opposition that to make Canada's shipbuilding programme permanent, the industry must be on a self-contained basis in this country, and that we ought to make our own ship's plates. I am



Steel Cargo Steamship, Canadian Warrior, 3,750 tons d.w., built for Canadian Government Merchant Marine Ltd., by Collingwood Shipbuilding Co., Collingwood, Ont.

compete successfully with the outside world.

Mr. Ballantyne said in reply:—"If the ships we are building are tramp ships, then all cargo vessels that ply the various waters are also tramp ships. I cannot see why a ship, of say 11 knots sea speed, leaving Montreal for Liverpool should not make her schedule time just the same as a passenger ship can. Cargo ships are necessarily for carrying cargoes, and it would not be an economical policy for the government to build palatial passenger vessels to carry the cargoes that these ships are designed to carry. Mr. Sinclair went on to say that there is no difference between the freight ships built in the United States, in England, or in Canada. He must know that there is a vast difference in the design, speed and types of ships, just as there is in the various kinds of automobiles that are made. I cannot understand him when he classes all freight ships together, as regards cost and design. He is at a loss to know what particular use the government is going to make of its merchant marine ships to co-operate with the railways, and suggests that instead of hav-

ment do to carry the wheat of our great western prairies if we had not the ships we have now? Cargo ships are built for the very purpose of carrying freight, and the government shipbuilding programme does not include a passenger service. Whether we shall build passenger ships and have them ply on the Pacific and Atlantic is a subject that has not yet engaged the government's attention. The ships we are building are modern up to date cargo ships, and I do not think they should be referred to as ordinary tramp ships. They are built for the purposes of Canadian trade and to assist the Canadian National Rys., and I am sure the majority of the members of this house will support the government policy."

Michael Clark, M.P. for Red Deer, Alta., hoped the government would very seriously consider its shipbuilding programme before giving a very wide extension to it. He argued that ships could not be built and operated successfully under a high protective tariff. There had only been one great shipping country in the world, Great Britain, and that under free trade. Before the war

quite satisfied that the Dominion Steel Corporation could carry out the contract, and I am also well satisfied that Sydney is a very good point at which to make these plates. No definite conclusion has been arrived at, but the company's fairly stated that if it had completed its plant and installed the machinery necessary, it would have been at a capital cost of \$5,000,000. Therefore, if it is to meet the N.S. price, it would take it many years before it could do so, and possibly it might never be able to write off the initial cost of the plant, or a portion of it. If the Dominion Iron and Steel Co. give us a more favorable price, the government would be more inclined to go on with the proposition than it is to cancel it. If, however, the company cannot see its way clear to modify the price, I think it is in the best interests of the country to cancel the contract.

"In regard to the 45 ships under contract for the government, the prices were zased, not on the contract made with the Dominion Iron & Steel Co., but on the agreement made with the United States at 3¼c a lb. The Dominion Iron and Steel Co. has not imported any of the required machinery at all. All it has done so far has been to partially erect the building; it contains no plant in the way of machinery, engines, and boilers."

Free Trade vs. Protection—In the course of further discussion, Michael Clark, M.P., for Red Deer, Alta., contended that, prior to the war, Great Britain had imported steel plates from Germany, used them in shipbuilding and then sold the ships to Germans at a profit.

J. H. Burnham, M.P., for West Peterborough, Ont., having made some protectionist remarks, D. D. McKenzie said: "While I am not a very high protectionist, I am not in favor of the tremendous wall that the Peterborough member would like to build; but I cannot help knowing that protection of certain industries has done much for this country. I cannot help knowing that in connection with this very plate industry we are talking about the institution of the steel works at Sydney those works have furnished a market for Nova Scotia coal and employment for thousands of colliers who today would not be employed were it not for the assistance which the government in the early stages gave to the development of our steel and iron industry.

"If there is to be a further development of that industry and of the coal industry by the manufacture of plate and the building of ships in this country, I think it is a wise move. I do not think any one is preaching any political heresy when he advocates the development of whatever resources we have within our own country and making ourselves as far as possible self sustaining and independent. I have no doubt the day is not far distant when we shall have a navy of our own, and I want this country to be able to build its own warships from stem to stern, with what we can ourselves produce. I am not a high protectionist, but I am prepared to deal with facts and circumstances and not with any theory which may suit somewhere but not elsewhere."

Great Lakes Service—J. E. Armstrong, M.P., for East Lambton, urged the minister to place some of the government steamships on the upper Great Lakes to control freight rates, and added:—"In 1909, wheat was taken from Port Arthur to Montreal for 2½c a bus., while in 1919, steamships on the upper lakes

charged 11c for carrying wheat between those two ports, and the rates are constantly increasing, despite the fact that since 1909 we have been spending millions of dollars on our waterways."

Mr. Ballantyne said, in reply:—"We intend to have ships, not only on the Pacific and the Atlantic, but on all the principal trade routes, and certainly on the Great Lakes, so that our transportation chain will be complete."

Encouragement for Shipbuilding—A. McMaster, M.P., for Browne, Que., said that Canada could not establish shipbuilding on an artificial basis and that no interest in the country would be served by attempting to do so. He argued that the United States merchant shipping had decreased as a result of a protective policy.

W. S. Middleboro, M.P., for North Grey, Ont., pointed out that Germany had subsidized shipbuilding in order that it might be done more cheaply there than in England.

Mr. Ballantyne, in replying to Mr. McMaster, said:—"He would have Canadians simply hewers of wood and drawers of water. Canadians and drawers of water. Canadians have demonstrated that with the very moderate protection they have had for a number of years they can hold their own with the people of any other country in the world. I am sorry Mr. McMaster was not in his seat yesterday, when I explained to the committee that Canadian yards have turned out ships equal in design and efficiency, and in every other respect to ships built in any part of the world. A few years ago some people in this country thought that ships could not be built in Canada, but it has been amply demonstrated during the last two years that they can be built here successfully. According to the opinion of Sir Geo. Hunter, of the shipbuilding firm of Swan & Hunter, of the ships built in England, Ireland and Scotland at present are costing three times as much as ships built in pre-war times. No one believes for a moment that wages in the United Kingdom will ever reach again the low level prevailing before the war. Both skilled and unskilled laborers in the old country are asking for a higher rate of wages, and I think they are perfectly justified in doing so. In view of the marvellous development that has taken place in Canada during the last few years, and the skill which Canadians have exhibited in turning out ships equal to similar ships turned out in the United Kingdom, I take issue with Mr. McMaster when he says that Canada will not be able to compete with the United Kingdom and other shipbuilding nations. As I stated yesterday, between now and the next session we are going to consider if it will be necessary to render any aid to our shipbuilders when the days of keen competition arrive, and there will be plenty of time to deal with this matter at the next session of parliament.

"Mr. McMaster has referred to the U.S. and apparently he has not kept abreast of the times. The U.S. has constructed 555 steel ships of various kinds and tonnage. Chairman Hurley, of the U.S. Shipping Board, states that they are going to build 1,136 more ships, and that when their entire mercantile marine programme has been completed they will have the enormous tonnage of 16,000,000 tons. The U.S. Government is going to aid that vast mercantile fleet. With a fleet like that next door to us, Mr. McMaster's advice to the government is that we should sit down with folded arms

and go out of the shipbuilding business. That is not the policy of this government."

Several other members having spoken, Mr. Ballantyne said:—"Of course the government believes that shipbuilding will be a permanent industry in this country. If the house passes the supplementary estimate that I shall bring down in the very near future to have a limited number of ships constructed in addition to the 45 we have under contract, for the reasons that I gave yesterday, the cost of these ships will be very materially less than the cost of the 45 that are under contract. I have not had any firm offers because I have not yet received the authority of the house to order any more ships, and I will not have such authority until the supplementary estimate is approved. But, I firmly believe that I can buy an 8,000 ton ship for \$160 a ton, and probably less.

"I explained to the house yesterday that for a year and a half to come no ships could be purchased from any of the yards in the United Kingdom. In answer to a member's question as to a comparison today between the price for a ship built in Canada and a similar ship built in England, the authority being cited of Sir George Hunter that there is only a difference of \$10 a ton, it may be when I start negotiations with Canadian yards we may be able to build ships in this country at as low a rate as in any of the yards of the United Kingdom. However, I do not want to be too optimistic, and that all business men are trained to be most cautious, especially when they have the responsibility of office, such as I have. In respect to whatever further outlays are required on shipbuilding, the money will be expended on a thoroughly conservative and business-like basis.

"In reference to the 80,000 tons of steel contracted for in the U.S., we do not need to take the balance of the contract unless we desire to. This country has nothing to fear in shipbuilding competition from our neighbors to the south. I made a very conservative statement yesterday when I said that the ships built by the Emergency Fleet Corporation cost at least \$25 a ton more than the 45 ships which the Canadian Government has under construction. A member talks about building ships at \$200 a ton. In the plainest language possible I stated yesterday that our contracts ranged from \$180 to \$215 a ton. So far as we have gone with our shipbuilding programme, our prices compare favorably with those paid by the U.S. Government, which has built a vastly greater number of ships than we have contracted for. I have stated over and over again that when it comes to competition with the United Kingdom you cannot get a fixed price there that everything is on a plus cost basis. The information I obtained from England is that \$150 a ton would be the cost, provided you could get your ships built there now; but it is quite impossible to get any built for a year and a half, and I have given as my authority the well-known shipbuilder, Sir George Hunter, of Swan and Hunter. Why a member wants to make it appear that the cost of a Canadian-built ship is so much more than that of a ship built in the U.S., and is basing on that supposition his argument that we can get ships built in the United Kingdom at present, is more than I am able to follow.

"I took the precaution of communi-

ating with several of the leading shipbuilding firms in England before I came to this house to ask for approval of the \$30,000,000 vote, and I submit that the information I gave to the committee yesterday and today is certainly based on facts. I suppose members noticed in the press some weeks ago that the famous firm of Yarrow and Co., said that it were going to establish a shipyard in British Columbia, and gave as the reason for leaving the old land, so famed for shipbuilding, that the cost of labor, material and everything else had gone up so high that it could build ships in British Columbia at a price to compete with the rest of the world.

"In view of that statement from such eminent authority, I do not see why we

should feel so very uneasy about Canadians being able to build ships in competition with the world when the competition gets keener than it is now."

Atlantic and Pacific Ocean Marine.

The C.P.R. s.s. War Beryl, outbound from Montreal, collided with barge 8 at Beaujeau, Crane Island, about 40 miles below Quebec, May 21. Both vessels were badly damaged and the barge was docked at Levis for examination and repair.

The s.s. General Currie built recently by the Dominion Shipbuilding Co., Toronto, arrived at Montreal, May 14, and later sailed for New York, where she

is to take a cargo for Great Britain. This vessel was not, as stated in a Montreal press dispatch, built under order of the Imperial Munitions Board.

The Jamaica Steamship Co. brought action against the U.S. steamship American in the Admiralty Court at Halifax, May 21, on the basis of a \$100,000 mortgage on the vessel. It was decided that the vessel be sold after her cargo was removed. The master and crew are claiming against the ship for \$11,000 wages.

The steamships Jiul and Principessa sailed from Montreal early in May with cargoes for Galatza, Rumania, these being the first of a number of sailings established through the efforts of the Canadian Trades Commission to develop

Vessels Registered in Canada During January and February, 1919.

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.	N.h.p.	Owners or managing owners
141071	Avon Queen (1)	Windsor, N.S.	Hantsport, N.S., 1918	201.8	39.2	18.5	1035	939	Sc.	14	G. E. Fauquier, Ottawa, and J. P. Porter, Halifax, N.S.
140957	Canadian Voyageur (*)	Montreal	Montreal, 1918	319.4	44.3	22.6	3099	1868	Sc.	226	Minister of Marine and Fisheries, Ottawa.
141212	Cap Finisterre	Vancouver, B.C.	N. Vancouver, B.C., 1918	242.7	44.4	18.7	1471	1189	Sc.	26	William Lyall Shipbuilding Co., Montreal.
141210	Cap Horn	Vancouver, B.C.	"	242.7	44.4	18.7	1469	1184	Sc.	17	"
141220	Cap Vert	Vancouver, B.C.	"	242.7	44.4	18.7	1472	1177	Sc.	17	"
94738	Chester	Windsor, N.S.	Hantsport, N.S., 1890	73.9	17.3	10.7	98	7	Sc.	17	Gypsum Packet Co., Windsor, N.S.
133968	Frances Boutilier	Digby, N.S.	Centreville, N.S., 1918	86.5	18.0	8.3	99	7	Sc.	16	A. Boutilier, Centreville, N.S.
138763	Huntley	Halifax, N.S.	Scots Bay, N.S., 1918	175.8	37.0	12.7	608	520	Sc.	13	W. H. Hebb, Halifax, N.S.
141174	War Ewan	New Westminster, B.C.	New Westminster, B.C., 1918	249.6	43.5	22.7	2344	1441	Sc.	143	Shipping Controller, London, Eng.
137910	Le Quesnoy	Toronto	Toronto, 1919	251.0	43.7	26.1	2742	1670	Sc.	147	Nova Scotia Transportation Co., Toronto.

(1) Formerly Jessie L. Fauquier. (*) Equipped for wireless telegraph.

SAILING.

No.	Name	Port of Registry	Rig	Where and when built	Length	Breadth	Depth	Gross Tons	Reg. Tons	Owner or Managing Owner.	
130389	A. E. Ponsford No.1	Amherstburg, Ont.	Scow	Fairport, Ohio	1896	147.8	30.6	5.8	250	250	J. G. Mullen, Amherstburg, Ont.
141169	Adamac	Parrsboro, N.S.	Schr.	Advocate, N.S.	1918	165.2	36.0	12.9	570	527	A. Shipping Co., St. John's, Nfld.
141046	Arthur H. Zwicker	Lunenburg, N.S.	"	Chester Basin, N.S.	1918	158.8	36.0	12.9	574	507	Arthur H. Zwicker Shipping Co., Lunenburg, N.S.
141134	B. L. Rafuse	La Have, N.S.	"	Conquerall Bank, N.S.	1918	157.8	32.2	12.8	536	481	Z. H. Richard, M.O., La Have, N.S.
141261	Barbara W.	Parrsboro, N.S.	"	Port Greville, N.S.	1919	127.0	31.5	11.7	308	286	G. E. Wa'stuff, Port Greville, N.S.
141170	Barnhill Brothers	"	"	Two Rivers, N.S.	1919	144.0	34.0	12.0	410	374	Barnhill Shipping Co., Amherst, N.S.
141133	Bernice R.	La Have, N.S.	"	Salmon River, N.S.	1918	134.0	30.5	11.6	376	324	M. J. Parks, M.O., La Have, N.S.
138509	C. Maud Gaskill	Weymouth, N.S.	"	Little Brook, N.S.	1919	143.5	33.2	12.4	462	397	J. E. Gaskill, Grand Manan, N.B.
141135	Cape d'Or	La Have, N.S.	"	Cape d'Or, N.S.	1918	133.5	34.5	12.8	424	373	W. N. Reinhardt, M.O., La Have, N.S.
141136	Cape La Have	"	"	Yarmouth, N.S.	1918	137.8	32.2	12.3	398	363	"
138850	D. 12	Port Arthur, Ont.	Scow	Fort William, Ont.	1911	80.0	33.0	7.1	182	182	Great Lakes Dredging Co., Port Arthur, Ont.
138852	D. 77	"	"	"	1912	97.0	22.0	9.2	232	232	Thunder Bay Contracting Co., Port Arthur, Ont.
138853	D. 76	"	"	"	1912	110.0	32.0	8.5	290	290	"
141047	Democracy	Lunenburg, N.S.	Schr.	Lunenburg, N.S.	1918	112.8	26.3	10.4	130	100	S. Corkum, M.O., Lunenburg, N.S.
138808	Donald & Keith	Weymouth, N.S.	"	White's Cove, N.S.	1918	120.0	29.7	11.0	329	285	Bank of Nova Scotia, Halifax, N.S.
138807	Edith Belliveau	"	"	Belliveau's Cove, N.S.	1919	122.0	30.3	10.2	288	238	B. Belliveau et al., Belliveau's Cove, N.S.
141044	Edith Dawson	Lunenburg, N.S.	"	Bridgewater, N.S.	1918	144.6	33.0	12.7	495	446	Eridgewater Shipping Co., Bridgewater, N.S.
141138	Ella L. Williams	La Have, N.S.	"	Eatonville, N.S.	1918	147.2	33.3	12.0	406	374	J. E. Backman, M.O., La Have, N.S.
141175	F.L.B. 4	New Westminster, B.C.	Scow	New Westminster, B.C.	1918	116.0	40.0	9.4	372	372	J. Crane, New Westminster, B.C.
141073	Favonian	Halifax, N.S.	Schr.	Hantsport, N.S.	1918	150.3	33.8	12.4	442	428	A. Moulton, Halifax, N.S.
141221	Frances J. Elkin	Weymouth, N.S.	"	Church Point, N.S.	1918	165.4	36.9	13.8	622	555	R. C. Elkin, Ltd., St. John, N.B.
141209	G. of G. No. 7	Vancouver, B.C.	Scow	Eburne, B.C.	1914	82.6	31.8	7.8	171	171	Gulf of Georgia Towing Co., Vancouver, B.C.
141166	George Melville	"	"	"	"	"	"	"	"	"	
	Cochrane	Parrsboro, N.S.	Schr.	Fox River, N.S.	1918	183.5	37.0	18.9	886	820	W. N. Reinhardt and H. A. Conrad, La Have, N.S.
140871	Gordon T. Tibbo	Liverpool, N.S.	"	Liverpool, N.S.	1918	121.0	86.4	11.6	186	154	J. C. Bellman, Grand Bank, Nfld.
141213	Hanbury No. 3	Vancouver, B.C.	Scow	Vancouver, B.C.	1910	75.2	26.2	6.8	114	114	J. Hanbury & Co., Vancouver, B.C.
141214	Hanbury No. 4	"	"	"	1911	81.0	27.1	6.8	121	121	"
141216	Hanbury No. 6	"	"	"	1911	81.2	27.1	6.9	126	126	"
138572	Harsen	Windsor, Ont.	Barge	Duluth, Minn.	1916	144.0	40.0	11.0	582	561	Ontario Gravel Freighting Co., Windsor, Ont.
141219	K.N. No. 3	Vancouver, B.C.	Scow	New Westminster, B.C.	1912	86.0	28.0	6.7	140	140	Kingome Navigation Co., Vancouver, B.C.
141129	L.W. 21	"	"	"	1912	81.0	26.0	6.6	117	117	W. H. Hind, Vancouver, B.C.
141137	Maid of Canada	La Have, N.S.	Schr.	Weymouth, N.S.	1918	128.0	31.3	12.0	379	330	W. N. Reinhardt, M.O., La Have, N.S.
140870	Maplefield	Liverpool, N.S.	"	Belliveau's Cove, N.S.	1918	146.5	32.3	12.1	473	411	Ruby W. Shipping Co., Liverpool, N.S.
138805	Melanson Bros.	Weymouth, N.S.	"	Gilbert's Cove, N.S.	1918	126.0	29.8	10.9	358	308	B. N. Melanson, Gilbert's Cove, N.S.
141048	Marshal Foch	Lunenburg, N.S.	"	Ward's Brook, N.S.	1919	134.4	35.0	11.6	384	351	W. C. Smith, M.O., Lunenburg, N.S.
141167	Minas King	Parrsboro, N.S.	"	Bass River, N.S.	1918	154.2	36.0	12.8	550	470	B. L. Tucker, M.O., Parrsboro, N.S.
141168	Northcliffe	"	"	Fox River, N.S.	1918	146.5	31.8	10.8	380	343	S. J. Soley, M.O., Fox River, N.S.
141139	Russel S. Zinck	La Have, N.S.	"	Dayspring, N.S.	1918	109.1	26.5	10.8	160	121	W. R. Zinck, M.O., Rose Bay, N.S.
138748	T. H. Macdonald	Yarmouth, N.S.	Bktn.	Meteghan, N.S.	1918	196.0	41.0	19.3	1179	1135	T. H. Macdonald, Meteghan, N.S.
134210	Victory Chimes	Charlottetown, P.E.I.	Schr.	Cardigan, P.E.I.	1918	129.7	30.2	11.5	297	294	J. A. McDonald, et al., Cardigan, P.E.I.
138810	Westway	Weymouth, N.S.	"	Plympton, N.S.	1918	112.2	29.5	10.5	274	284	S. St. C. Jones, Weymouth, N.S.

trade between Canada and Rumania. Galatza is about 140 miles up the River Danube, which debouches into the Black Sea.

The steamship service between Montreal and the River Plate, which the Houston Line of Liverpool, Eng., was to inaugurate during May, as mentioned in our last issue, under the Canadian management of McLean, Kennedy & Co., Montreal, has been postponed, owing to labor conditions in South America. It is announced that until conditions improve on the River Plate no further steps will be taken to establish the service.

The 100th anniversary of the sailing of the s.s. Savannah from Savannah, Ga., to Liverpool, Eng., was celebrated May 22. The Savannah is claimed to be the first steamship to cross the Atlantic Ocean. She was built in New York and launched Aug. 22, 1818. Her dimensions were, length 98½ ft., beam 26 ft., depth of hold 14½ ft., 319 tons. She was equipped with an inclined, direct connecting, low pressure engine of 98 h.p. with a single cylinder 40 in. diameter. Her bunker capacity was 25 tons of coal and 25 cords of wood. It is told of the trip that while at sea, June 17 of that year, she was stopped by a British cutter, whose captain thought she was on fire. The voyage took 20 days, during which steam was utilized for 80 hours.

Maritime Provinces and Newfoundland.

Lightship 15, after having been overhauled and repaired, has been replaced on her station on the Sambro Island outer bank, off the south coast of the Halifax, N.S., harbor entrance.

A St. John, N.B., press dispatch of May 15, stated that arrangements had been made with the Minister of Marine for the taking over of St. John harbor by the Dominion Government.

The Dominion Steel Corporation has acquired the s.s. Hochelaga from Furness, Withy & Co., for the coal and ore trade. The Hochelaga, during the war, was attacked by a German submarine, which she was successful in sinking, and she is stated to be the only vessel now in Canada with this honor.

The Newfoundland Government has awarded contracts to Bowring Bros., Ltd., for 2 steamship services, one to northern and the other to southern and western Newfoundland ports for a total of \$100,000 a year. The steamships Portia and Prospero will be operated for 19 fortnightly trips to the north, and 26 fortnightly trips to the south and west, respectively, for 10 years from May 1. These vessels have been performing similar services during the past 15 years.

The Marine Department received tenders to May 31, for the purchase of the s.s. Lansdowne, lying at Dartmouth, N.S. She will be sold as she now lies, without any warranty as to condition of hull, boiler, machinery or equipment, and no additional equipment will be supplied by the department. She was built at Macan, N.S. in 1884, and is screw driven by engine of 80 n.h.p. Her dimensions are, length, 188.6 ft.; breadth, 32.1 ft.; depth, 15.8 ft.; tonnage, 680 gross; 463 net. The engine is of the compound, surface condensing type with cylinders, 24 x 43 x 36 ins., supplied with steam by a tubular boiler, 13 x 10 ft.

Province of Quebec Marine.

Cie. de la Navigation Montreal-Valleyfield-Soulanges, has been granted a winding up order.

The Dominion Public Works Department received tenders May 30, for rebuilding the wharf at Magog.

The Dominion Public Works Department is receiving tenders to June 4, for rebuilding the lower entrance pier at lock 25, Galops Canal.

The Louise Docks, Quebec, which were considerably damaged by the storms and high tides of last autumn, were repaired by the Quebec Harbor Commissioners during May.

The House of Commons has voted \$25,000 to the Quebec Salvage and Wrecking Co., to aid it in maintaining a plant for the assistance of vessels requiring salvage service in the St. Lawrence.

The ferry service between Montreal and St. Helen Island opened May 24. The contract has been given to J. O. Normand & Co., and covers the privilege of operating amusements, etc., on the island, until Sept. 1, 1921.

The Quebec Harbor Commission intends to complete the building of the grain conveyors from the elevators to the steamship piers and to lay railway track on the back lines along the river front, as well as raise sheds 26 and 27 by 2 ft. and also the railway tracks there.

Ontario and the Great Lakes.

The s.s. Avon, which has been purchased from foreigners by the Montreal Transportation Co., has had its name changed to Stormount.

The Public Works Department will receive tenders to June 25, for the construction of an extension to the breakwater at Bare Point, Port Arthur.

The Massey Steamship Co.'s s.s. Schlesinger, Superior, Wis., sprang a leak and sank near Passage Island, near Port Arthur, May 26. The crew were taken off by the C.P.R. s.s. Assiniboia and landed at Fort William.

The steam tug Michipicoten, operated formerly by the Owen Sound Tug Line, Owen Sound, Ont., is now operated by the North American Bent Chair Co., Owen Sound. Capt. G. T. Dunn is master and J. N. Bellmore is chief engineer.

The Chats Falls Navigation Co., Ottawa, has appointed Capt. John Chartier, Aylmer, Que., as master, and H. E. Shaver, Ottawa, Ont., as chief engineer of the steamboat which it has under con-

struction at Hull, Que., for operation between Britannia on the Bay and Fitzroy Harbor, Ont.

The s.s. D. R. Hanna, owned in Cleveland, Ohio, downbound with wheat, was sunk in collision with the s.s. Quincy A. Shaw near Thunder Bay Island, Lake Huron, May 16, and she lies in 140 feet of water. She was built in 1906, and with her cargo was valued at \$1,800,000. The crew of 31 were saved.

The Public Works Department received tenders, May 26, for the purchase of the steamboat Cingalee as she lies at Midland, Ont. She was built at Toronto in 1905, her dimensions being, length, 65.5 ft., breadth, 13 ft., depth, 5ft., tonnage, 59 gross, 23 net, and she is screw driven by engine of 10 n.h.p.

The Collingwood Steamship Co.'s s.s. City of Meaford, was burnt in Collingwood harbor, May 17. She was valued at \$12,000, and was partly insured. The fire is reported to have been incendiary. She was built at Meaford, Ont., in 1906, her dimensions being, length, 111 ft.; breadth, 24 ft.; depth, 8.5 ft.; tonnage, 328 gross; 223 net. She was screw driven by engine of 28 n.h.p.

Canada Steamship Lines opened its Toronto-Niagara service May 17, with the s.s. Cayuga. The s.s. Chippewa will be added to the service June 14, when two trips a day will be run. The Thousand Islands service will be opened June 14, the steamship Kingston and Toronto, running from Toronto, making three trips a week until the end of June, when a daily service will be started.

The Minister of Public Works stated in the House of Commons recently, that it is the intention to start the extension of the breakwater on the Port Arthur side of Thunder Bay, and to continue the construction of a revetment wall near the G.T.P.R. terminals on the Fort William side. About \$300,000 will be spent during this season. Tenders will be received to June 5, for the construction of the breakwater extension.

A motion was made in the House of Commons recently for the resumption of the work of improving the French River waterway connecting Georgian Bay with Lake Nipissing. The Minister of Public Works stated that he had received deputations from North Bay and district and pointed out to them that although they did not put forward claims for the carrying on of this work as a part of the Georgian Bay Canal scheme, but more as a claim by itself, he felt that if the government made up its mind to start on constructing the French

Vessels Added to and Deducted From the Canadian Register During January and February, 1919.

Added.	Steam.—Tonnage—			Sailing.—Tonnage—		
	No.	Gross.	Registered.	No.	Gross.	Registered.
Built in Canada.....	46	15,202	13,506	20	14,589	10,196
Purchased from foreigners.....	.....	.....	.....	2	36	23
Transferred from British possessions	1	88	88	.....	.....	.....
New registers	1	250	250	2	112	17
Totals	48	15,540	13,844	24	14,737	10,236
Deducted.						
Wrecked or otherwise lost.....	11	1,657	1,533	4	1,975	1,146
Broken up or unfit for use.....	31	1,669	1,626	11	756	496
Sold to foreigners	2	465	465	4	851	440
Transferred to United Kingdom .....	.....	.....	.....	2	5,125	3,033
Transferred to British possessions	3	673	584	.....	.....	.....
New registers	1	11	11	2	93	45
Totals	48	4,475	4,219	23	8,800	5,162

River end, it would be adopting the policy of constructing the Georgian Bay Canal, it being the first link in the chain. He did not feel like asking parliament to start out on an expenditure on work of this nature during this year.

British Columbia and Pacific Coast

Navigation was opened on the Yukon River between Lake Labarge and Dawson, May 13.

The White Pass and Yukon Ry. and Navigation Co. expects to put its river steamers in operation between White Horse and Dawson, Yukon, June 2.

The Grand Trunk Pacific Coast Steamship Co.'s s.s. Prince Rupert had the blades stripped from her propeller, May 15, and was docked at Victoria, for repairs.

Frank Waterhouse & Co., shipping agents, Vancouver, B.C., and Seattle, Wash., are reported to have given all employes a bonus equal to 100% of their salary for 1918.

The British Columbia Salvage Co., Esquimalt, will receive \$10,000 as a subsidy from the Dominion Government, for this year. This subsidy is granted annually to aid the company in maintaining a service for vessels which may require assistance along the coast.

Admiral Sir Charles Kingsmill inspected the s.s. Stadacona recently, prior to her sailing for the Pacific coast, and which with the steamships Armentieres, Thiéval and Givenchy have left the Atlantic coast for Esquimalt, B.C., via the Panama Canal. On arriving on the Pacific coast they will be employed on fisheries protection duties.

Copies of a resolution passed recently at Victoria, B.C., urging the Dominion Government to build a dry dock at Esquimalt, have been sent to the acting premier, and other political leaders, with the view of having the matter brought before the House of Commons on the discussion of the Marine Department estimates. The resolution calls attention to the advantages of the port's location, and to the fact that the Dominion Government already owns land there, which was acquired for such a purpose.

Compagnie Canadienne Transatlantique Ltee., has been incorporated under the Dominion Companies Act, with \$1,000,000 authorized capital and office at Montreal, to carry on a general navigation business for the transportation of passengers, mail and general merchandise. Those chiefly interested in the matter are Canada Steamship Lines Ltd., Montreal, and Cie. Generale Transatlantique, of France. Details of the organization are not complete at the time of writing, but arrangements have been made for the sailing of the steamships Bilbster, May 25, and Honduras, June 15, both from Montreal, for Havre, France.

Dominion Towing and Wrecking Co. Ltd., has been incorporated under the Dominion Companies Act, with \$250,000 authorized capital and office at Midland, Ont., to carry on a general towing and wrecking business, and to build, own and operate steam and other vessels, wharves, docks, etc. J. Playfair, President and Managing Director, Great Lakes Transportation Co., D. L. White, President, and D. S. Pratt, Vice President, Midland Shipbuilding Co., all of Midland, are among the provisional directors.

St. John, N.B., Harbor Development and Dry Dock.

In connection with the vote for \$750,000 for improvements in the St. John harbor, the Minister of Public Works stated in the House of Commons recently, that the work which is under contract involves also the construction of a dry dock. The harbor improvements and the dry dock are both under contract to the St. John Drydock and Shipbuilding Co., really the Canada Dredging Co., which has carried out works at Port Arthur, Fort William and other places. The dry dock is being built under the Dry Dock Subsidies Act to cost at least \$5,500,000 and the contractors are to receive, not a subsidy of 4½%, but interest on an amount up to \$5,500,000 at 4½% for 35 years. The principal of the bonds, of course, has to be taken care of by the contractors. When the work is completed the harbor improvements will belong to the government and the dry dock will belong to the company, so that two distinct propositions are incorporated in the same contract.

The contract calls for the construction of a dry dock and ship repairing plant, which latter comes under the Dry Dock Subsidy Act, but the money will be furnished by the company and not by the government. The expenditure on this will be about \$3,250,000. The company is also laying out a large shipyard, but that is entirely its own affair with which the government has nothing to do. Under the contract the dry dock is to be ready for operation in 1922, but from the progress being made and from the engineer's report, it will probably be ready a year ahead of time. The dry dock will be one of the largest in existence, the dimensions being, length, 1,150 ft.; width, 125 ft.; width on sill, 100 ft. with 40 ft of water at high tide. There are only three other dry docks on this continent to compare with it, the Champlain dry dock at Levis, Que., one at Boston, Mass., and one at the Panama Canal's Atlantic entrance.

The Naval Service Department's drifter no. 35, has been sold to A. N. Smith & Co., Halifax, N.S. Her dimensions are, length, b.p., 84 ft.; breadth extreme, 18¾ ft.; depth moulded, 10 ft. 11½ in. She is built of wood, to equal Lloyd's 100 A1 class, for a speed of 9 knots an hour, on a consumption of 4½ tons of coal a day, and has bunker capacity of 25 tons. The propelling machinery consists of compound surface condensing engine, with cylinders 12 x 24 x 16 in. stroke and 24 n.h.p., supplied with steam by a Scotch boiler, with two plain furnaces equipped for natural draft. The boiler dimensions are, length, 9 ft., diameter, 9½ ft.; working pressure, 140 lb. a sq. in. She has large circulating feed and bilge pumps working from main engine, duplex tank pump, injector and bilge syphon.

Quebec Towing and Transportation Co. Ltd. has been incorporated under the Quebec Companies Act, with \$140,000 authorized capital and office at Quebec, Que., to carry on a general transportation, towing and wrecking business, and in connection therewith, to own and operate steam and other vessels. J. S. Thom, H. L. Thom, R. Guay, C. Fremont and A. Boivin, Quebec, Que., are the incorporators.

General Shipbuilding Matters Throughout Canada.

Cholberg Ship Co., Victoria, B.C., launched, May 8, the first of several auxiliary powered schooners to be built for Norwegian interests. She was named Gunn, by Mrs. Hansen of Porsgrund, Norway. To mark the occasion of the first launch at the yard, the employes presented the manager, C. Cholberg, with a case of silver, and the owners of the first vessel presented Mrs. Hansen with a gold ring set with five pearls. The Gunn is owned by the Porsgrund Damp and Seil Co., Porsgrund, Norway, and is built of wood, and equipped with Diesel auxiliary power. It was expected that she would be completed and ready to take her cargo of 1,200,000 ft. of lumber from Hastings Mills, by the end of May. A second vessel for the same owners is under way.

Foundation Co., Victoria, B.C.—Of the 20 full powered wooden steamships which this company is building for the French Government, details of which have been given in previous issues, seven have been launched and named, respectively, Strasbourg, Metz, Mulhouse, Canada, Montcalm, Winnipeg and Ontario. Names have been selected for the remaining 13 as follows:—Wilfrid Laurier, Trois Rivières, Vancouver, Victoria, Quebec, Montreal, Ottawa, Frontenac, La Salle, Acadie, Montmagny, Alberta and Nouvelle Ecosse.

Grant & Horne Ltd., St. John, N.B., are building a 4-masted schooner of 650 tons for trans-Atlantic and South American trade. She is expected to be ready for service about September.

C. T. White and Sons, Alma, N.B., launched a four masted schooner, Bessie A. White, May 3. Her dimensions are, keel, 151 ft.; beam, 36 ft.; depth of hold, 12½ ft.; cargo capacity, 600 tons. She is equipped with auxiliary power supplied by a Wolverine gas engine. She took on a cargo of lumber at St. John, during May, for Great Britain. A similar ship is in frame at the same yard, and is expected to be ready for launching in August.

Sale of Trawlers and Drifters—Canadian Railway and Marine World for May gives some information as to the purchase by the Anderson Co. of Canada, Montreal, of a large number of trawlers and drifters built in Canada during the war. We are advised that there are 60 of these steel steam trawlers and 89 wooden steam drifters. The majority of these vessels are at the Halifax dockyard and in the northwest arm of the harbor. Twenty-two drifters are at Liverpool, N.S. There are 7 steam trawlers still under construction, 5 of which are expected to be completed in June; 4 are being built at Port Arthur; 2 at Quebec and 1 at Kingston.

Canals Expenditures and Revenues—The Railways and Canals Department report for the year ended Mar. 31, 1918, issued recently, shows that the expenditure on canals for the year was \$3,327,556.55 of which \$1,781,957.07 was on capital account, \$111,552.28 on income account, and \$1,434,047.20 on revenue account. The revenue from the canals for the year was \$414,868.22, made up of rents, harbor dues, etc., \$163,164.82, and receipts from Port Colborne elevator, \$414,868.22. No tolls have been collected for the use of the canals since 1903.

Canadian Government Merchant Marine, Ltd., Shipbuilding, Operation, Etc.

Keels Laid.—Since the publication of the full page table in Canadian Railway and Marine World for May, and which is repeated in this issue with additions up to date, we have been advised of the laying of keels for steamships for Canadian Government Merchant Marine Ltd., as follows:

Marine Department contract 6, builder's yard no. 101, Wallace Shipyards Ltd., Vancouver, B.C., s.s. Canadian Aviator, 5,100 tons, Apr. 5, 1919.

Marine Department contract 27, builder's yard no. 71, Canadian Vickers, Ltd., Montreal; s.s. Canadian Spinner, 8,100 tons, Apr. 23, 1919.

Marine Department contract 28, builder's yard no. 72, Canadian Vickers, Ltd., Montreal; s.s. Canadian Planter, 8,100 tons, May 10, 1919.

Marine Department contract 31, builder's yard no. 15, Collingwood Shipbuilding Co., Kingston, Ont.; s.s. Canadian Beaver, 3,750 tons, Apr. 7, 1919.

Marine Department contract 34, builder's yard no. 11, J. Coughlan & Sons, Vancouver, B.C.; s.s. Canadian Importer, 8,100 tons, Apr. 26, 1919.

Marine Department contract 35, builder's yard no. 12, J. Coughlan & Sons, Vancouver, B.C., 8,100 tons, May 3, 1919.

Names of Vessels.—Since Canadian Railway and Marine World for May was published, we have been advised of the following additional names having been chosen for steamships, ordered for Canadian Government Merchant Marine Ltd.

Marine Department contract 13; builder's yard no. 5; Tidewater Shipbuilders Ltd., 5,100 tons; s.s. Canadian Settler.

Marine Department contract 14; builder's yard no. 6; Tidewater Shipbuilders Ltd., 5,100 tons d.w.; s.s. Canadian Rancher.

Marine Department contract 15; builder's yard no. 7; Tidewater Shipbuilders Ltd.; 5,100 tons d.w.; s.s. Canadian Fisher.

Marine Department contract 16; builder's yard no. 8; Tidewater Shipbuilders Ltd.; 5,100 tons d.w.; s.s. Canadian Forester.

Marine Department contract 17; builder's yard no. 459; Davie Shipbuilding & Repairing Co., 5,100 tons d.w.; s.s. Canadian Trapper.

Marine Department contract 18; builder's yard no. 460; Davie Shipbuilding & Repairing Co.; 5,100 tons, s.s. Canadian Hunter.

Marine Department contract 19a; builder's yard no. 41; Port Arthur Shipbuilding Co., 3,400 tons d.w.; s.s. Canadian Adventurer.

Marine Department contract 20a; builder's yard no. 42; Port Arthur Shipbuilding Co.; 3,400 tons d.w.; s.s. Canadian Cadet.

Marine Department contract 21; builder's yard no. 1; Halifax Shipyards Ltd.; 8,100 tons d.w.; s.s. Canadian Mariner.

Marine Department contract 22; builder's yard no. 2; Halifax Shipyards Ltd.; 8,100 tons d.w.; s.s. Canadian Explorer.

Marine Department contract 34; builder's yard no. 11; 8,100 tons d.w.; J. Coughlan & Sons; s.s. Canadian Importer.

Marine Department contract 35; builder's yard no. 12; J. Coughlan & Sons; 8,100 tons d.w.; s.s. Canadian Exporter.

Marine Department contract 36; build-

er's yard no. 13; J. Coughlan & Sons; 8,100 tons d.w.; s.s. Canadian Inventor.

Marine Department contract 37; builder's yard no. 14; J. Coughlan & Sons; 8,100 tons d.w.; s.s. Canadian Prospector.

Launchings of Steamships.—Since Canadian Railway and Marine World for May was published, we have been advised of the following additional launchings:—

Marine Department contract 10, builder's yard no. 62, Collingwood Shipbuilding Co., Collingwood, Ont.; s.s. Canadian Recruit, 3,750 tons, d.w., May 3, 1919.

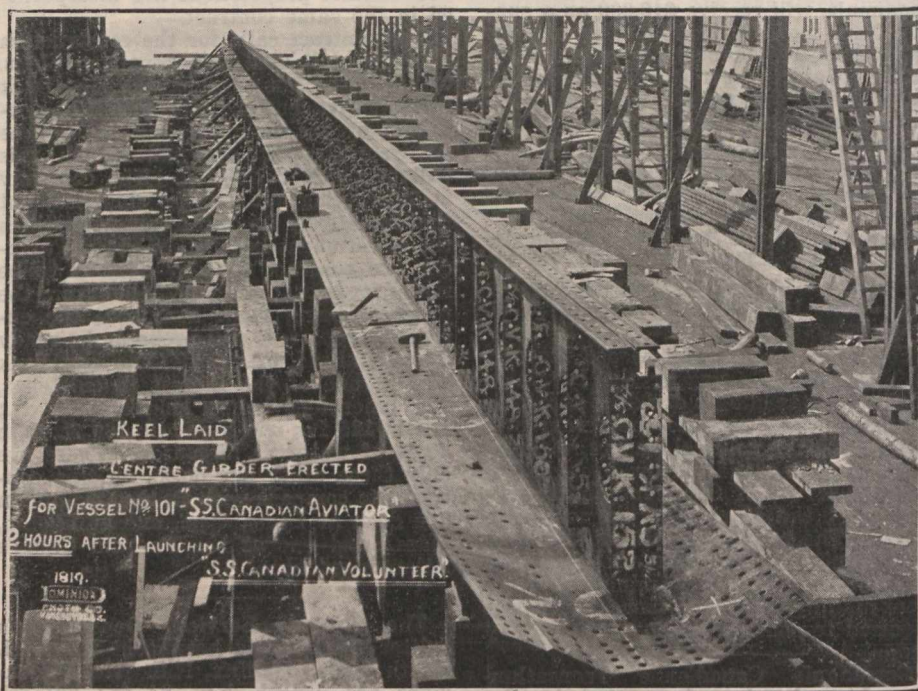
Marine Department contract 19, builder's yard no. 39, Port Arthur Shipbuilding Co., Port Arthur, Ont., s.s. Canadian Trader, 3,400 tons, d.w., May 5, 1919.

Tonnages of Ships.—Three of the steamships built have had their respective tonnages obtained by actual measurement as follows:

Marine Department contract 1; builder's yard no. 66; Canadian Vickers Ltd.;

sell to shipbuilders throughout Canada at \$3.25 a hundredweight. This will mean a profit of \$10 a ton, which the government can apply to reducing the cost of its ships. For one of the standard 8,100-ton ships 2,800 tons of steel plates will be used, so that on each ship the government will save \$28,000. As many of the Pittsburg furnaces have been closed down for lack of orders to keep them running there will be no difficulty for some time in the government tsecuring any steel it may need, for shipbuilding steel is the only material used in shipbuilding on which a drop in price has been reported.

Ships for Pulp and Paper Trade.—Ottawa press dispatch, May 26.—The Dominion Government has been approached by pulp and paper manufacturers with a view to having the government turn over to them two of the government steamships built during the war. These steamships would supply a bi-monthly service and would pick up most of their



Keel and Center Girder for Steel Cargo Steamship, Canadian Aviator, 5,100 tons d.w., for Canadian Government Merchant Marine Ltd., under construction by Wallace Shipyards Ltd., North

s.s. Canadian Voyageur; 4,300 tons d.w.; 3,099 tons gross, 1868 tons net.

Marine Department contract 2; builder's yard no. 67; Canadian Vickers Ltd.; s.s. Canadian Pioneer; 8,100 tons d.w.; 5,758 tons gross, 3,548 tons net.

Marine Department contract 3; builder's yard no. 61; Collingwood Shipbuilding Co., Collingwood; s.s. Canadian Warrior; 3,750 tons d.w., 2,409 tons gross, 1,452 tons net.

Prices for Building Steamships.—Ottawa press dispatch, May 19:—As the price of steel plates which the Dominion Government contracted for with United States firms has gone down from \$3.25 a hundredweight to \$2.75; the government will, on that account, get its ships a little cheaper than it had anticipated. The government's contract with the Pittsburg firms called for a maximum of \$3.25 and for anything less if the price goes lower. It is possible that the price will go still lower. The government will buy the steel at the Pittsburg price and

cargoes at the various pulp and paper mills on the St. Lawrence.

The s.s. Canadian Pioneer, 8,100 tons, d.w., the second ship built by Canadian Vickers Ltd., at Montreal, under the Dominion Government's programme, and which was launched Dec. 3, 1918 and afterwards taken to Quebec, was finally completed at the Canadian Vickers' works, Montreal, May 9 and proceeded up the harbor to take on cargo for Buenos Aires, and sailed from Montreal, May 22. After discharging cargo at Buenos Aires she will load a general cargo from South America for a return trip to Montreal.

The s.s. Canadian Ranger, 8,100 tons d.w., was delivered to Canadian Government Merchant Marine Ltd. at Canadian Vickers Ltd. yard at Montreal, May 23, and at once went up the harbor and commenced loading general cargo for Liverpool, for which port she was expected to sail May 29. She is to bring back a general cargo from Liverpool to

Montreal.

The s.s. **Canadian Warrior**, 3,750 tons d.w., built by Collingwood Shipbuilding Co., Collingwood, Ont., was delivered to Canadian Government Merchant Marine Ltd., Apr. 26, and left Collingwood, Apr. 30, for Port Huron, Mich., where she loaded coal for Montreal. After discharging the coal at Montreal, she loaded a general cargo for Barbadoes, Trinidad, and Havana, and sailed May 20. After discharging her cargo she will load a full cargo of sugar at Havana for Montreal.

British American Shipbuilding Co., Welland, Ont., which has contracts from the Marine Department for 2 steel cargo steamships of 4,350 tons d.w., each, laid the keel for Department contract 44, builder's yard no. 4, Mar. 29, as previously stated in Canadian Railway and Marine World. The company advised us May 14 that it expects to launch its builder's yard no. 3, the s.s. **War Raccoon**, 3,500 tons d.w., for the British Government, between May 26 and 31, and as soon as possible thereafter it will lay the keel for Marine Department contract 45, builder's yard no. 5, 4,350 tons for Canadian Government Merchant Marine Ltd.

Canadian Vickers Ltd., Montreal, finally completed the s.s. **Canadian Pioneer**, 8,100 tons, d.w., May 9, and delivered her to the Marine Department at Montreal.

Canadian Vickers Ltd. has laid keels for 2 more 8,100 ton steamships for Canadian Government Merchant Marine Ltd., viz.: Marine Department contract 27, builder's yard no. 71, s.s. **Canadian Spinner**, Apr. 23, and Marine Department contract 28, builder's yard no. 72, **Canadian Planter**, May 10. The latter is the last contract placed with this builder by the Marine Department.

Collingwood Shipbuilding Co., Kingston, Ont., laid the keel of the s.s. **Canadian Beaver**, Marine Department contract 31; builder's yard no 15; 3,750 tons d.w.; Apr. 7, and expects to have her ready for launching in September.

The trial runs of the s.s. **Canadian Warrior**; 3,750 tons d.w.; Marine Department contract 3; builder's yard no. 61, were made on Apr. 23, and the ship was accepted by the Marine Department, Apr. 26. The company launched the s.s. **Canadian Recruit**; 3,750 tons d.w.; Marine Department contract 10; builder's yard no. 62, May 3.

J. Coughlan & Sons, Vancouver, B.C., who have contracts from the Marine Department for 4 steel cargo steamships, 8,100 tons d.w., each, laid the keel for Marine Department contract 34, builder's yard no. 11, Apr. 26, and the keel for Marine Department contract 35, builder's yard no. 12, May 3. They advised us May 8 that the keel for Marine Department contract 36, builder's yard no. 13, will probably be laid during the first week in June, and the keel for Marine Department contract 37, builder's yard no. 14, about the end of June or early in July.

Port Arthur Shipbuilding Co., Port Arthur, Ont., launched the s.s. **Canadian Trader**, Marine Department contract 19, builders' yard no. 39, 3,400 tons d.w., May 5, the ship being christened by Mrs. A. W. Roberts, wife of the President, Port Arthur Board of Trade. This ship is a full canal sized ocean freighter of 3,400 d.w. tons, steel, screw, single deck type, with a straight stem and semi-elliptical stern, built on the transverse system with poop, bridge and forecastle. The

principal dimensions: Length over all, 260 ft.; length, between perpendiculars, 251 ft.; breadth, moulded, 40½ ft.; depth, moulded, 23 ft. The ship is built to British Lloyds 100 A1 classification, fit-out in accordance with British Board of Trade rules. The propelling machinery is placed amidships. The main engine is of the triple expansion vertical inverted type, with cylinders 20½, 34, 56 x 40 in. stroke, developing about 1,500 i.h.p. The auxiliary machinery includes a feed pump evaporator of 15 tons capacity per 24 hours; auxiliary condenser, with attached air and circulating pumps, vertical duplex ballast pump and auxiliary feed pump. A steam ash hoist is located in boiler room. Steam is to be supplied by two Scotch boilers, 15 x 11 ft.; construction, according to Lloyds and Canadian rules, having working pressure of 190 lbs. The 3,400 ton type is very similar to the 3,750 ton type ordered by the Marine Department, a full description of which was published in Canadian Railway and Marine World for Sept., 1918.

Prince Rupert Dry Dock and Engineering Co., Prince Rupert, B.C., which has contracts from the Marine Department for 2 steel cargo steamships, 8,100 tons each, has been delayed in getting started, owing to the non delivery of steel, but we were officially advised May 9 that the company expects to lay the keel for one between June 15 and July 1, and for the other about a month later.

Tidewater Shipbuilders Ltd., Three Rivers, Que., which has orders from the Marine Department for 4 steel cargo steamships, 5,100 tons d.w. each, and which, as already announced in Canadian Railway and Marine World, has laid keels for 2, viz.: Marine Department contract 13, builder's yard no. 5, Jan. 8, 1919, and Marine Department contract 14, builder's yard no. 6, Jan. 10, 1919; it expects to lay the keel for the other two as follows: Marine Department contract 15, builder's yard no. 7, about Sept. 1; Marine Department contract 16, builder's yard no. 8, about Oct. 1.

Victoria Machinery Depot Co., Victoria, B.C., has contracts from the Marine Department for 2 steel cargo steamships, 8,100 tons d.w. each, the approximate delivery dates being Jan. 31 and Nov. 30, 1920. We were officially advised by the department May 22, that the keels had not then been laid. As stated in Canadian Railway and Marine World for April, the Harbor and Marine Co. Ltd. is reported to have been organized as a subsidiary company to carry out the contracts.

Wallace Shipyards Ltd., North Vancouver, B.C., which is building four steel cargo steamships for Canadian Government Merchant Marine Ltd., 2 of 4,300 tons d.w. each and 2 of 5,100 tons d.w. each, launched the first one, the s.s. **Canadian Volunteer**, of 4,300 tons, Marine Department contract 4, builder's yard no. 100, on Apr. 5, as stated in Canadian Railway and Marine World for May, the keel having been laid Oct. 1, 1918. Within two hours after the Canadian Volunteer's launching, the keel for the s.s. **Canadian Aviator**, Marine Department contract 6, builder's yard no. 101, of 5,100 tons d.w., was laid complete with center girder in the same berth.

We were advised May 1 that the builders expected to launch the s.s. **Canadian Trooper**, Marine Department contract 5, builder's yard no. 106, of 4,300 tons,

about May 20, and that immediately thereafter the keel would be laid for the s.s. **Canadian Scout**, Marine Department contract 7, builder's yard no. 102, of 5,100 tons d.w.

The following are comparative details of the six different types of steamship being built for Canadian Government Merchant Marine Ltd.:

	2,800 ton.	3,400 ton.	3,750	4,300 ton.	5,100 ton.	8,100 ton.	10,500 ton
Length, overall.....	270 ft.	260 ft.	260½ ft.	333 ft. 7 ins.	344½ ft.	413 ft. 1 in.	430 ft.
Length, bet. perpendiculars.....	38 ft.	251 ft.	251 ft.	320 ft.	337 ft.	400 ft.	56 ft.
Breadth, moulded.....	20½ ft.	43½ ft.	43½ ft.	44 ft.	46½ ft.	52 ft.	38 ft.
Depth, moulded.....	17½ ft.	23 ft.	26 ft.	25 ft.	25½ ft.	31 ft.	31 ft.
Draft, loaded.....	17½ ft.	20 ft. 1½ in.	22 ft. 2 in.	21 ft. 2 ins.	21 ft. 8 ins.	25 ft. 1 in.	25 ft. 1 in.
Type.....	S.d., p.b. & f.c's'le	S.d., p.b. & f.c's'le	Lake, s.d., p.b. & f.c's'le	S.d., p.b. & f.c's'le	S.d., p.b. & f.c's'le	2d., p.b. & f.c's'le	3d., p. & f.c's'le
Engines—Type.....	Tri-compound	Triple expansion	Triple expansion	Triple expansion	Triple expansion	Triple expansion	Triple expansion
Cylinders, diam.....	17½ x 28¼ x 47 ins.	20½ x 34 x 56 ins.	18 x 30 x 50 ins.	25 x 41 x 68 ins.	25 x 41 x 68 ins.	27 x 44 x 73 ins.	29½ x 50 x 80 ins.
Stroke.....	33 ins.	40 ins.	36 ins.	45 ins.	45 ins.	48 ins.	54 ins.
Ind. h.p.....	875	1,300	1,200	1,800	2,500	3,000	3,000
Boilers—Type.....	Single ended	Single ended	Single ended	Single ended	Single ended	Single ended.	Single ended
No.....	2	2	2	2	3	3	4
Diam. and length.....	12½ x 10½ ft.	15 x 11 ft.	14 x 10½ ft.	15½ x 11½ ft.	14 x 11½ ft.	15½ x 11½ ft.	15½ x 11½ ft.
Working pressure.....	185 lbs.	190 lbs.	180 lbs.	180 lbs.	180 lbs.	180 lbs.	180 lbs.
Furnaces—No.....	2	6	6	6	9	9	9
Grate surface.....	80 sq. ft.	135 sq. ft.	100 sq. ft.	132 sq. ft.	156 sq. ft.	198 sq. ft.	198 sq. ft.
Heating surface.....	3,000 sq. ft.	4,670 sq. ft.	3,900 sq. ft.	5,162 sq. ft.	7,275 sq. ft.	7,743 sq. ft.	7,743 sq. ft.
Speed.....	8½ knots	9 knots	9 knots	11 knots	11 knots	11 knots	12 knots
Classification.....	Lloyd's	Lloyd's	Brit. Corp.	Lloyd's	Lloyd's	Lloyd's	Lloyd's

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. 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, forecastle.

Contract	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 11, 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, 1918	Apr. 5, 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	Apr. 5, 1919	.....	Canadian Aviator
7	Nov. 25, 1918	"	102	5,100	210.	1,071,000	S.d., p., b. and f'c's'le.....	"	11	Sept. 30, 1919	.....	.....	Canadian Scout
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	May 3, 1919	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	Jan. 16, 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	Feb. 10, 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	.....	Canadian Settler
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	.....	Canadian Rancher
15	Jan. 24, 1919	"	7	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Nov. 15, 1919	.....	.....	Canadian Fisher
16	Jan. 24, 1919	"	8	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	May 15, 1920	.....	.....	Canadian Forester
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	Mar. 11, 1919	.....	Canadian Trapper
18	Sept. 4, 1918	"	460	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Nov. 8, 1919	Mar. 28, 1919	.....	Canadian Hunter
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	May 5, 1919	Canadian Trader
19a	Mar. 1, 1919	"	41	3,400	210.	714,000	Lake, s.d., p., b. and f'c's'le	"	9	Sept. 30, 1919	Mar. 31, 1919	.....	Canadian Adventurer
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	.....	Canadian Sailor
20a	Mar. 1, 1919	"	42	3,400	210.	714,000	Lake, s.d., p., b. and f'c's'le	"	9	Oct. 31, 1919	Mar. 31, 1919	.....	Canadian Cadet
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	Feb. 24, 1919	.....	Canadian Mariner
22	Sept. 13, 1918	"	2	8,100	195.	1,579,500	2.d., p., b. and f'c's'le.....	"	10	Apr. 1920	Mar. 15, 1919	.....	Canadian Explorer
23	Oct. 11, 1918	Canadian Vickers Ltd., Montreal...	73	4,300	215.	924,500	S.d., p., b. and f'c's'le.....	"	11	May 27, 1919	Jan. 22, 1919	.....	Canadian Navigator
24	Oct. 11, 1918	"	68	8,100	188.	1,522,800	2.d., p., b. and f'c's'le.....	"	11	May 1, 1919	Aug. 26, 1918	Apr. 19, 1919	Canadian Ranger
25	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	.....	Canadian Seigneur
26	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	.....	Canadian Miller
27	Oct. 11, 1918	"	71	8,100	188.	1,522,800	2.d., p., b. and f'c's'le.....	"	11	Aug. 1, 1919	Apr. 23, 1919	.....	Canadian Spinner
28	Oct. 11, 1918	"	72	8,100	188.	1,522,800	2.d., p., b. and f'c's'le.....	"	11	Sept. 1, 1919	May 10, 1919	.....	Canadian Planter
29	Jan. 24, 1919	Victoria Machinery Depot Co., 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	Apr. 7, 1919	.....	Canadian Beaver
32	Mar. 1, 1919	Port Arthur Shipbuilding Co., Port Arthur, Ont.	43	4,300	215.	935,250	S.d., p., b. and f'c's'le.....	Lloyd's	10½	Nov. 1, 1919	.....	.....	.....
33	Mar. 1, 1919	"	44	4,300	215.	935,250	S.d., p., b. and f'c's'le.....	"	10½	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	Apr. 26, 1919	.....	Canadian Importer
35	Nov. 22, 1918	"	12	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	Aug. 31, 1919	May 3, 1919	.....	Canadian Exporter
36	Nov. 22, 1918	"	13	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	Sept. 30, 1919	.....	.....	Canadian Inventor
37	Nov. 22, 1918	"	14	8,100	198.	1,603,800	2.d., p., b. and f'c's'le.....	"	11	Oct. 31, 1919	.....	.....	Canadian Prospector
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	Mar. 31, 1919	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	Mar. 27, 1919	.....	.....
41	Mar. 31, 1919	"	6	2,800	210.	588,000	S.d., p., b. and f'c's'le.....	"	8½	Nov. 1919	Mar. 31, 1919	.....	.....
42	Feb. 21, 1919	Prince Rupert Dry Dock and 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	Mar. 29, 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							

Cargo Steamship Building in Canada for British Government.

Steamships Launched and Under Construction—Since the information given in our last issue, covering launchings of steamships under construction in Canada for the British Government was published, 2 steel steamships have been launched as follows: May 1, War Magic, Midland Shipbuilding Co., Midland, Ont.; 3,400 tons d.w.; May 3, War Column, J. Coughlan & Sons, Vancouver, B.C., 8,800 tons. This makes a total of 34 steel steamships of 169,300 tons, and 45 wooden steamships of 138,600 tons launched, an aggregate of 79 vessels and 307,900 tons.

Following is a list of the vessels under construction:

Builder.	Steel Steamships.	Tons d.w.
British American Shipbuilding Co.		
Welland, Ont.—	War Ragoon	3,500
Canadian Allis-Chalmers, Ltd.,		
Bridgeburg, Ont.—	War Vixen	3,500
"	War Wallaby	3,500
"	War Wombat	3,500
J. Coughlan & Sons, Vancouver, B.C.—	War Chariot	8,800
"	War Company	8,800
Midland Shipbuilding Co., Midland, Ont.—	War Fury	3,400
Polson Iron Works, Ltd., Toronto, Ont.—	War Algoma	3,500
"	War Halton	3,500
	9 steel steamships	53,000
	Wooden Steamships.	
Grand & Horne, St. John, N.B.—	War Moncton	3,080
Total—9 steel steamships, 1 wooden steamship,		56,080 tons.

Names of Ships Changed—As stated in Canadian Railway and Marine World for April, Canadian Allis-Chalmers Ltd., Bridgeburg, Ont., launched on March 3 a steel cargo steamship of 3,500 tons d.w., for the British Government, under order from the Imperial Munitions Board, and she was christened War Leveret. Subsequently by order of the I.M.B. the name was changed to War Magic. On May 1 the Midland Shipbuilding Co., Midland, Ont., launched another steel cargo steamship of 3,400 tons d.w., also for the British Government, which was christened War Magic. Subsequently this name was changed to War Leveret.

J. Coughlan & Sons, Vancouver, B.C. Work on vessels under construction for the British Government in this yard was reported May 9, to have been temporarily suspended owing to steel shortage. The vessels under construction affected by this are War Chariot and War Company. The steamships War Convoy and War Cavalry, built at this yard for the British Government, are reported sold to New York interests. The War Convoy sailed from Vancouver early in May for New York, where it is said she is to take on cargo for Greece. The War Cavalry will also go to New York, both vessels taking the Panama route.

Grant & Horne Ltd., St. John, N.B.—The s.s. War Moncton, the last of the wooden steamships to be built in Canada for the British Government under order from the Imperial Munitions Board, was expected to be launched May 29 with boilers installed, and after launching, to be towed to Sandy Point where the engines are to be installed. The launching of this vessel completes the wooden shipbuilding in Canada for the British Government through the Imperial Munitions Board.

The Midland Shipbuilding Co., Midland Ont., launched, May 1, War Magic, the second of three steel cargo steamships

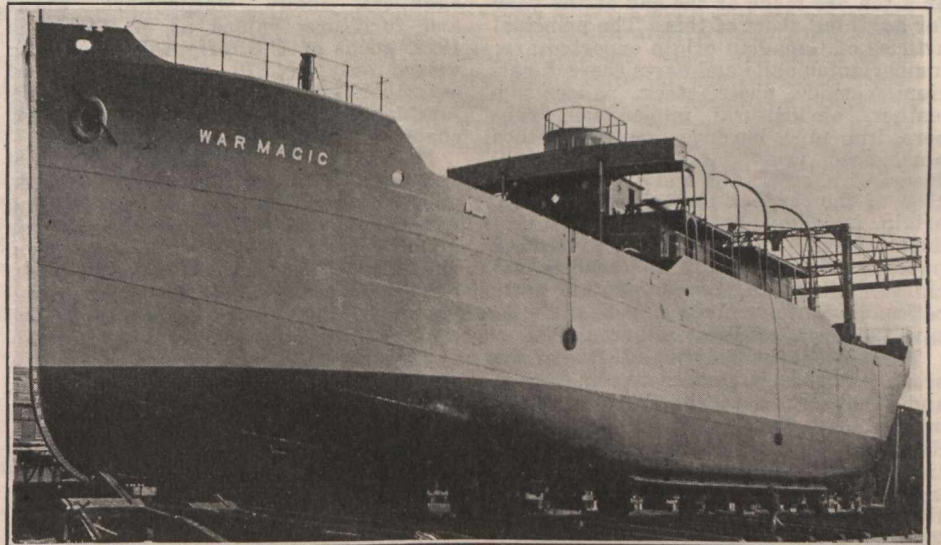
cook and assistant, 2 mess rooms, wash of 3,400 tons each d.w., ordered of it by the Imperial Munitions Board for the British Government. The first ship, War Fiend, was launched Oct. 24, 1918, and the third one, War Fury, is being built. The following are the principal dimensions:

Length over all	261 ft.
Length between perpendiculars.....	251 ft.
Depth moulded to main deck.....	23 ft.
Load draft	19½ ft.

The vessels are built to Lloyd's highest class and are of the ocean going type, with raised forecastle, bridge and poop decks, the propelling machinery being placed amidships. The deckhouse containing the officers' quarters is on the bridge deck, accommodation being provided for the chief officer, second and third mates, chief engineer and assistants, wireless operators and steward. The saloon, dining room, pantry, storeroom, galley and other offices are also contained in this house. Above these quarters are the captain's cabin and chart room, which are surmounted in turn by the pilot house and the navigating bridge. The layout of accommodations under the poop deck provide for 6 seamen, 6 firemen,

cargo, the whole of the working gear is of the most modern type. Four steel derrick posts, 30 ft. high, are provided, each with 2 cargo booms, having a lifting capacity of 4 tons to each boom. Eight 7 x 10 in. steam winches, of the latest type are supplied.

The steering engine is on the main deck at the aft end of bridge erection, and is of the usual type for ocean freighters; the control shafting being run alongside the casing top on boat deck to the engine, with rods and chain to the quadrant. There are 2 metallic lifeboats 24 ft. x 3¼ ft. deep, each boat being capable of accommodating the entire crew; one 16 ft. working boat is also provided for. The propelling machinery consists of triple expansion engines with cylinders 20½, 33, 54 x 40 in. stroke, steam being supplied by 2 single-ended Scotch boilers 15¼ ft. diameter by 11 ft. long, built by John Inglis Co., Toronto. The War Magic will be fitted out in accordance with the latest Board of Trade requirements. Her construction has been under the personal supervision of Capt. E. E. Tedford, representing the British Government.



Steel cargo steamship, War Magic, 3,400 tons d.w., for British Government just before launching by Midland Shipbuilding Co., Midland, Ont., May 1, 1919. (The name of this vessel was subsequently changed to War Leveret).

room and shower, while the boatswain and the donkey-man are located in the forecastle, as is also the hospital. Coal bunkers are fitted along side the engines and boilers, with coal chute above, and three coaling hatches each side on main deck; the space in 'tween decks can also be utilized for bunker coal.

A complete double bottom of the cellular type, 42 in. deep, runs for the entire length of the ship, constructed with solid floors on every frame, and one longitudinal girder on each side of the center line. Four watertight bulkheads, all extending to the main deck, divide the peaks and machinery space from the cargo holds of which there are two. There are 4 main cargo hatches, two 26 x 18 ft., one 22 x 18 ft., and one 18 ft. square. The hatch coamings are 42 in. high, with extra stiffening to withstand heavy water; the web beams are spaced about 4½ ft. apart, and fitted 'thwartship with fore and aft hatch covers. For loading and discharging

Victoria Machinery Depot Co., Victoria, B.C. Work is progressing satisfactorily on the laying out of the shipbuilding yard for the Harbor Marine Co. Ltd., on the south side of the Songhees Reserve, where 2 steel steamships of 8,100 tons each will be built for Canadian Government Merchant Marine Ltd. It was expected that the plant would be ready for the laying of the first keel by the end of May, when delivery of steel was expected. The outbuildings are nearly completed, but have been somewhat delayed owing to non delivery of lumber, the first shipway is completed with the exception of the keel blocks and considerable progress has been made on the second shipway.

Spier Ship Co., has been incorporated under the Dominion Companies Act, with \$30,000 authorized capital and office at Montreal, to carry on a general steamship and navigation business and to own and operate steam and other vessels.

Canadian Ocean Steamship Subsidies, Cargoes, Etc.

Of the total amount of \$2,467,120.67 provided in the Dominion Government estimates for mail subsidies and steamship subventions for the year ending Mar. 31, 1920, the greater part, or \$1,716,666.66, is for services operating to and from Canada on the Atlantic Ocean; \$492,142.34 for Pacific Ocean services, and the rest for local services. For most of the Atlantic services the votes are double those for 1918, they remain the same for the Pacific services and also for the individual local services, although some extra allowances are made for encouraging services on the St. Lawrence River, from Quebec to points on the north and south shores, and to local services from Sydney, Cape Breton. The increase in Atlantic subsidies is a cheering sign that this year the government expects something like a normal service to be restored.

The subsidy for the New Zealand Shipping Co. to make a monthly sailing from Montreal in the summer and St. John and Halifax in the winter to New Zealand and Australian ports, is \$140,000, and is paid at the rate of \$11,666.66 a voyage, if an average cargo of 5,000 tons is maintained. Deductions at the rate of \$2 a ton are made at the end of the year for anything short of this. The principal articles of Canadian origin exported are: lumber automobile and parts thereof, calcium carbide, chair stock, paper, sole leather, agricultural implements, rubbers, iron pipe, hardware, cattle, clothes pins, seed, fruit jars, corsets, cereal foods, wire, steel rails and organs. About 15% of the cargoes carried were of U.S. origin, including, besides the above products, cereal foods, machinery, roofing paper, shoe polish, wire and sewing machines. They also carried from our ports coffee, cocoa, pimento, ginger and cassava, products of West Indian origin.

The \$400,000 subsidy in 1918-19 for the ocean and mail service between Canada and Great Britain by the White Star-Dominion Line, the Canadian Pacific Ocean Services, Ltd., and the Cunard Line is increased to \$1,000,000, for the year ending Mar. 31, 1920. These services in 1918 carried 11,268 passengers, 36,305 tons of freight, 60,937 locked bags of mail and 45,912 tied sacks of mail into Canadian ports, in 49 round trips; and 39,309 passengers, 293,538 tons freight, 138 head of live stock, 214,079 locked bags of mail and 86,923 tied sacks of mail, out of Canadian ports to Great Britain, the total subsidy paid being \$574,928.61. Of this \$408,992.88 went to the C.P.O.S. Eighty-five per cent. of the cargo exported was of Canadian origin, consisting of asbestos, copper-nickel matte, silver ore, silver ingots, aluminum ingots, lumber, meats, leather, cheese, wheat, flour, oatmeal, apples, zinc dross, salammoniac skimmings, raw furs, scrap brass, pulpboard, wool, salmon, rags, bacon, hay, organs and parts thereof, agricultural implements, acetate of lime and linseed cake.

As an indicator of Canada's export trade and the possibilities for further expansion by the way of these various subsidized steamship services, the following additional particulars may be helpful with regard to the various services:

Canada and Newfoundland boats of the Reid Newfoundland Co., Ltd., subsidized \$70,000 a year, carried flour, oats, oatmeal, hay, bran, feed, potatoes, leather, furniture, oil, cattle, pigs, sheep, beef,

pork, iron and steel bars, stoneware, wire mats, fresh meal, condensed milk, trunks, machinery, pulpboard, stoves and felt of Canadian origin, valued at \$2,392,697 in 1918, and flour, cornmeal, oats, dried fruits, pork, beef, leather, feathers, broom corn, glue and machinery of U.S. origin, valued at \$2,182,497.

Canada, West Indies and South America.—The Royal Mail Steam Packet Co.'s subsidy has been raised from \$250,666.66 to \$340,666.66. The vessels employed carried in 1918 no goods of U.S., but carried fish, canned salmon, canned salmon, canned goods, flour, feed, meal, oilmeal, hay, oats, cheese, butter, eggs, apples, potatoes, split peas, vegetables, groceries, beef, live stock, mineral water, tea, soap, sulphate of ammonia, fertilizer, lumber, shingles, shooks, laths, furniture, chairs, brooms, brushes, stoves, trunks, rope, cordage, nails, paper and biscuits, of Canadian origin, valued at \$6,259,594.

Canada and South Africa.—The Elder-Dempster Co. is having its subsidy raised from \$73,000 to \$146,000 a year, for monthly sailings, the goods of Canadian origin carried in 1918 being flour, agricultural machinery, calcium carbide, binder twine, automobiles, paper, cattle, lumber, wax, carriage-ware, cereal foods, eggfillers, chairs, woodenware, wheat and furniture, valued at \$2,714,870 in 1918, goods of U.S. origin carried being valued only \$74,670, and consisting of automobiles, mining machinery, fruit jars, lumber, mules, wax, condensed milk, chairs and wheelbarrows.

Halifax, N.S.; St. John's, Nfld., and Liverpool—Furness, Withy & Co. Ltd., steamships, with a subsidy of \$20,000 and none last year when no service was given, carried goods of Canadian origin valued at \$848,535 in 1917, taking to St. John's, Nfld., apples, fruits, peas, canned vegetables, hay, flour, cheese, condensed milk, confectionery, meats, fish, medicines, tea, dry goods, rubbers, paper, stoves, smallwares, roofing, bricks, paint, nails, cordage, sacks, tripoli and naphtha, and on to Liverpool lumber, boxboards, wood tops, wood shanks, apples, cider, canned apples, canned lobsters, canned beef, fish, seal oil, cod oil, tallow, oats, cheese, furs, machinery, lawn mowers, wire fencing, scrap brass, metals, lead ashes, leather, flour, wheat, sacks and bone black, and carrying in 1917, also goods of U.S. and West Indian origin, valued at \$41,615,602, those taken to St. John's consisting of boots and shoes, shoe manufacturing material, furniture, hardware, canned and pickled meats, lard, provisions, groceries, flour, feed, corn, rolled oats, meal, seeds, earthenware and bottled beer, and those taken on to Liverpool being flour, pork, shoes, lamp chimneys, brass discs, motor cars, meats, lard, oak timber; the goods of West Indian origin going to St. John's being greenheart, mahogany, rum, bay rum, sugar and molasses, and on to Liverpool lignum-vitae, satinwood dye extract, oranges, rum, sugar, cocoanuts and lime juice.

Canada and Australia or New Zealand.—The Union Steamships Co. of New Zealand, Ltd., is being subsidized at \$180,509 yearly for a monthly service to Honolulu, H.I., Suva, Fiji, Auckland, N.Z., and Sydney, N.S.W. In 1918 it carried canned salmon, fresh fruit (in cold storage), potatoes, onions, leather and rubber goods, lumber, codfish, whisky, bicycles and parts thereof, chairs, corsets, suspenders, sewing machines,

hardware and machinery of Canadian origin, valued at \$3,913,672 and drugs, sewing machines, automobiles, gas engines and other machinery, soap and scouring powders, leather and rubber goods, cash registers and scales, cereal foods, telephone material, adding machines, vacuum cleaners, motor cycles and corsets of U.S. origin, valued at \$2,615,177.

Canada, China and Japan.—The Canadian Pacific Ocean Services Ltd., is getting a subsidy of \$375,000 or \$12,000 a round voyage. It carried in 1918 automobiles, aluminum, durgs and chemicals, provisions, spelter and hardware of Canadian origin, valued at \$1,431,233; and automobiles, aluminum, dry goods, boots and shoes, hardware, machinery, provisions, tobacco, drugs, leather, tin plate, iron and steel, electrical goods and rubber goods of U.S. origin, valued at \$12,620,537.

Victoria B.C., and San Francisco.—The Pacific Steamship Co., is getting a subsidy of \$3,000, and carries liquors, automobiles, household goods coal tar, rice meal, plants and bulbs of Canadian origin, the export value being only \$28,948 in 1918, and empty cylinders of U.S. origin, whose value last year only reached \$4,475. Ottawa correspondence, Toronto Globe.

Pilotage to Be Controlled From Ottawa.

Ottawa press dispatch, May 26:—The Minister of Marine, in the House of Commons today moved a resolution, preceding a bill, authorizing the government to appoint the Minister of Marine to be the pilotage authority for any pilotage district. Mr. Ballantyne said that the Montreal and Quebec districts were already under the Marine Department. The administration had been so successful that it was proposed to place the other pilotage districts likewise under the authority of the department. A royal commission had recommended such a course and Mr. Ballantyne thought it would mean increased efficiency in the pilotage systems.

J. H. Sinclair, M.P., for Antigonish and Guysborough, N.S., doubted whether placing the other pilotage districts under the Marine Department would lead to increased efficiency. Ottawa was too far from the sea coast and he would hesitate to take the authority out of the hands of the local commissioners. The resolution carried and a bill based upon it was introduced.

Control of Navigation Rates.—The amendments to the Railway Act to place the control of freight rates on inland and coastwise waters under the Board of Railway Commissioners, details of which were given in our last issue, were defeated in the commons special committee, May 14, by five votes. When the bill was under consideration by the committee of the whole house, Mr. Armstrong again moved the amendments which were defeated by 61 to 36.

U.S. Government Requisitions Steel.—A press dispatch by the U.S. Navy Department has decided to exercise its authority under war emergency legislation and requisition steel for battleship construction, the price to be paid to be fixed later on a basis of market conditions and quotations, rather than on an examination of the steelmakers' books.

Mainly About Marine People.

Sir Montagu Allan, formerly of the Allan Steamship Line, and Miss Allan, returned to Montreal, May 13, after having been in England since early in the war. Lady Allan, who is Staff Commandant at the Canadian Red Cross Officers' Rest Home at Moor Court, Sidmouth, Eng., has been appointed an Honorary Serving Sister of the Society of St. John of Jerusalem, and will not return to Canada until the home closes at the end of August.

Sir Alfred Booth, Chairman, Cunard Steamship Co., is visiting North America and is expected to spend some time in Canada.

G. J. Desbarats, C.M.G., Deputy Minister of the Naval Service, had V. Stephansson, the Arctic explorer, staying with him in Ottawa, recently.

Herbert George Dring, who has been appointed European Passenger Manager, Canadian Pacific Ocean Services, Ltd., London, Eng., was born at Easton, Northamptonshire, Eng., Mar. 8, 1881 and entered C.P.R. Passenger Department service in London, Mar. 1, 1897, since when he has been, to Sept. 30, 1897, junior clerk; Oct. 1, 1897 to Dec. 31, 1898, clerk; Jan. 1, to Dec. 31 1899, short-hand clerk; Jan. 1, 1900 to June 30, 1901, general and correspondence clerk; July 1, 1901 to Mar. 31, 1904, booking and correspondence clerk; Apr. 1, 1904 to Aug. 31, 1905, chief booking and correspondence clerk; Sept. 1, 1905 to Mar. 31, 1907, chief clerk to General Passenger Agent; Apr. 1, 1908 to Dec. 31, 1915, Assistant General Passenger Agent; Jan. 1, 1916 to Mar. 1, 1919, General Passenger Agent, C.P.R., London, Eng.

James T. Duke, an assistant engineer, Public Works Department, engaged on the harbor improvement works at Courtenay Bay, St. John, N.B., died as the result of an injury sustained in the course of a heavy dynamite blast, in the course of his work, May 23. He was a graduate of New Brunswick University in civil engineering.

John Eadie, Vancouver, manager for Dingwall, Cotts & Co., steamship owners of Great Britain, died at Vancouver, B.C., May 5, following an operation for appendicitis. He went to Vancouver a few years ago to represent his company in the handling of the steamships of the War series, which were built on the Pacific coast for the British Government through the Imperial Munitions Board.

Mrs. C. Gardner Johnson, wife of Lloyd's Agent for British Columbia, left Vancouver recently for a visit to England.

J. W. Greiner, Marine Superintendent, Canada Steamship Lines Ltd., Montreal, was laid up with typhoid fever, at Buffalo, N.Y., during May.

Capt. P. L. Lachance, heretofore Superintendent of Pilots for Quebec and Montreal District, has been appointed harbor master for the port of Quebec, succeeding Capt. Jas. Murray, who lost his life in the Halifax disaster, Dec. 6, 1917. He has been associated with sea life since the age of 14, received his pilot's certificate when 21, and was for some time in the Quebec Steamship Co.'s service. Subsequently he became Examiner of Masters and Mates, and during the war was Superintendent of Pilotage for Quebec and Montreal District.

James T. Mathews, Vice President,

Mathews Steamship Co., Toronto, died there, May 19, aged 69, after a long illness, of Brights disease. He was born at Niagara-on-the-Lake, Ont., and was at one time station agent, G.T.R., London, Ont. With his father he formed the firm of J. & J. T. Mathews, and operated the schooner Heather Bell, in the lakes trade. On his father's death in 1900, he and his brother, A. E. Mathews, established the Mathews Steamship Co. The funeral was attended by representatives of several lake steamship companies.

H. Milburne, Superintendent, Canadian Government Merchant Marine Ltd., left Montreal May 30, on a business trip to Vancouver.

W. Grant Morden, M.P., one of the members of the Canada Steamship Lines, London, Eng., advisory committee, arrived in Montreal, from England, in May.

Capt. W. Murphy, who died at Kingston, Ont., May 4, was in Montreal Transportation Co.'s service for the last 15 years, latterly as master of the tug Laura Grace, which was wrecked Dec., 1918.

J. W. Troup, Manager, British Columbia Coast Steamship Service, C.P.R., has returned to Victoria from California, where he has been recuperating after an illness.

James T. Walsh, who has been appointed Manager, Canadian Pacific Ocean Services Ltd., Montreal, has had a variety of seagoing experiences. He was, for some time, Superintendent, Elder Dempster & Co., Liverpool, Eng., and when the C.P.R. acquired the Beaver Line from that firm, he transferred to C.P.R. service, and was, successively, Superintendent, C.P.R. steamships, Chief Marine Superintendent, C.P.R., and Assistant Manager, Canadian Pacific Ocean Services Ltd., all at Montreal. He has served in the Royal Naval Reserve, and for special services in embarkation work with the Ashantee Expedition he was mentioned in dispatches. He holds the rank of Commander; R.N.R., is a Fellow of the Royal Geographical Society, and during the recent war, conducted considerable responsible work in shipping under the British Ministry of Shipping (Canada), and the Admiralty.

Canada's Naval Policy.

Ottawa press dispatch, May 26:—The Minister of Marine, in speaking in the House of Commons today, incidentally announced that when parliament is summoned next year the government will submit a naval policy for the Dominion which will meet with unanimous approval. The Niobe and the Rainbow had given efficient service, steaming 80,000 miles between them and conveying vessels laden with passengers, troops and rich cargoes.

A bit of news hitherto kept secret was given by Mr. Ballantyne when he told the house that on the outbreak of war, and again in 1915, the Canadian Government inquired of the British Admiralty whether in its judgment steps should be taken to increase Canada's naval forces and enlarge the service. The reply was in the negative, the imperial authorities adding that Canada's effort should be concentrated on recruiting and equipping troops for the battlefields.

Wreck Commissioners' Enquiries and Judgments.

Enquiries have been held and judgments delivered, respecting casualties, as follows:—

Stranding of s.s. War Toronto.

Held at Quebec, May 9, into the cause which led to the stranding of the s.s. War Toronto, May 1, near Cape St. Michel, River St. Lawrence, before Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. C. Lapiere and C. Koenig, as nautical assessors. The s.s. War Toronto is one of the wooden steamships built at Toronto for the British Government under order of the Imperial Munitions Board. The master, Capt. A. J. Low, in his evidence, stated that from Toronto to Montreal, he found the steering gear worked stiffly, but not unusually so. A pilot was taken on at Montreal, the master being a stranger in those waters, and subsequently his attention was called to a defect in the steering gear. The telegraph was rung for full speed astern, and immediately after, the ship grounded while going full speed ahead, the order full speed astern having no effect on the vessel, which had canted to port before grounding. She was refloated May 6, and proceeded to Quebec, where a small leak was discovered. The court, after a thorough examination of the pin, which was stated to be the direct cause of the defective steering, came to the conclusion that the grounding was not due to any lack of examination of the steering gear, but to an unforeseen happening, and therefore exonerated the pilot and officers of the vessel from blame for the casualty.

Loss of the s.s. Princess Sophia.

Held at Victoria, B.C., before Mr. Justice Morrison, assisted by Capt. E. Martin, C.M.G., R.N., and Capt. J. D. Macpherson, Wreck Commissioner for British Columbia, as nautical assessors, into the causes of the loss of the C.P.R. s.s. Princess Sophia in the Lynn Canal, Oct. 24, 1918, with all passengers and crew. The report of the commission, which was somewhat delayed, was laid on the table of the House of Commons recently. Owing to the fact that the vessel was lost in Alaskan waters, outside Dominion jurisdiction, and that all the witnesses who were in a position to describe the conditions existing in the vicinity of the wreck at the times material to the enquiry, were residents of Alaska, difficulty was experienced in making progress at the various sittings at Victoria and Vancouver, where all the evidence of witness who voluntarily came within the jurisdiction, was exhausted, and two sittings were held at Juneau, Alaska.

The evidence disclosed that the vessel was seaworthy and well found in every respect, and at the time of her departure, from Skaway, the weather was fine. From the lighthouse records it would appear that heavy squalls of snow were met about 30 miles from Skagway with strong northerly winds, which continued until some hours after she struck on the Vanderbilt Reef, about 54 miles from Skagway. The weather subsequently moderated and remained so until the afternoon of the same day, during which, passengers could have been transhipped to the several craft standing by, and landed without much, if any, risk to life. During the afternoon the wind freshened, and the master wired to one of the vessels that it was impossible to get pas-

sengers off owing to the high seas running, but that they could probably be taken off on the following morning. After this, and during the following day, it appears that vessels which were standing by were unable to render any assistance. In the meantime, J. W. Troup, Manager, C.P.R. British Columbia Coast Service, was endeavoring to ascertain the exact conditions prevailing, and wired the master enquiring what assistance he was getting and asking what disposition he had made of the passengers. This wire was not delivered until the day following the grounding.

During the time the Princess Sophia was visible, she appeared to be resting firmly on an even keel, and considering the wireless messages as a guide, she must have been forced off the reef in the late afternoon of the day following the grounding, the snowstorm then being at its height, when she apparently foundered, leaving no survivors. It is entirely a matter of conjecture as to how she came to leave the reef after holding firmly during two periods of high water,

with decreasing tides, but it was ascertained that at the time there was an abnormally high tide from various causes.

As to why passengers were not landed, there is room for conjecture, and the commission submitted that from the evidence of the surrounding circumstances, such as the vessel being staunch and well officered, other craft being in the vicinity and approaching, the inhospitable shore and lack of shelter sufficiently near, the time of year and the weather conditions, it is not prepared to find that it was unreasonable for the master not to land his passengers, and it therefore arrives at the conclusion that the vessel was lost through peril of the sea.

The commission notes, in securing witnesses and affording facilities in the course of the investigation, the untiring and effective services rendered by Hon. Thos. Riggs, Jr., Governor of Alaska, and his staff, and W. C. Dibrell, Superintendent of U.S. Lighthouse Service, Bremerton Navy Yard, Washington, as well as Juneau, Seward and Fairbanks citizens.

Report on Pilotage for Maritime and Quebec and Montreal Districts.

A commission was appointed by the Dominion Government, Feb. 1, 1918 to enquire into and report on the pilotage system and its administration in the pilotage districts of Miramichi, Sydney, Louisburg, Halifax, St. John, Montreal and Quebec, the commissioners being Thos. Robb, Manager, Shipping Federation of Canada, Chairman; Capt. J. N. Bales, Port Warden, Montreal; and Capt. J. W. Harrison, Marine Superintendent, Furness, Withy & So., Halifax, N.S. Sitings were held at Halifax during Feb., 1918, and pending a final disposition, it was recommended that the Halifax Pilotage Commission be abolished, and the pilotage for that district placed under the administration of the Marine Department. Sitings were held at other points concerned during the year, and the report was presented, Sept. 10, 1918, and laid on the table of the House of Commons during the current session.

The commission reported that the commissions administering the pilotage service at Miramichi, Sydney, Louisburg and St. John, had outrun their usefulness, and recommended that the Minister of Marine be appointed the pilotage authority. It also recommended that a superintendent, having seagoing experience, be placed in full charge of the Sydney and Louisburg districts combined, and a similar superintendent for St. John, with a qualified assistant for the Miramichi district, the assistant being responsible to the superintendent, and the superintendents being directly responsible to the Minister; that the testing of eyesight be standardized, and tests for pilots under 65 be made annually, and semi-annually for pilots between 65 and 70; licenses for pilots to be at the discretion of the Minister, and all pilots to be compulsorily retired at 70; that the use of intoxicating liquors by pilots be prohibited, any infraction to be punishable by fine or suspension, and for a second offence by dismissal; that no intoxicating liquors be permitted at any pilot station, or on any pilot vessel, any infraction to entail instant dismissal; that solicitation of gratuities by and from pilots be prohibited; that no pilot be allowed to perform any pilotage duties out-

side his own district; that the apprentice system as in force in the Maritime Provinces pilotage districts, not having proved satisfactory, be discontinued, when the present apprentices shall have had sufficient training, and have received their certificates as branch pilots, any vacancies subsequently arising to be advertised and examinations held, this system to apply to the Maritime Province and Quebec Pilotage District, but not to the Montreal District, as it is felt that apprentices are necessary for the last named; that the Minister take over the pension funds; that the pooling of earnings be abolished, that pilots be placed on salary to be adjusted to meet the requirements of the local districts, and that pilots be permitted to draw a certain amount each month, adjustments to be made quarterly after deducting expenses, and not less than 5% to go to the pension fund, the busier districts aiding the poorer ones; and that all pilotage earnings be collected by and paid to the Marine Department.

In regard to the Montreal District, which was dealt with entirely separately, the commission came to the conclusion that the administration was carried out efficiently. One of the questions at issue was the pilots' demand for an increased charge for moving vessels in the harbor. The present rate of \$5 was made when Longue Pointe was outside the harbor limits, and this charge has been maintained since the extension of the limits as far down as Bout de l'Isle. Increases on the following graduated scale were recommended: For moving vessel from Lachine Canal to Victoria pier, \$5; for moving any inland or lake vessel from Lachine Canal to sec. 50, \$5; for moving any inland or lake vessel from sec. 50 to the eastern limits, \$10; for moving any seagoing vessel from any place above Victoria pier to sec. 50, \$10; for moving any seagoing vessel from above sec. 50 to Canadian Vickers' dry dock, \$15; for moving any seagoing vessel from above sec. 50 to the explosives ground, \$15; and should any pilot be detained on board more than 24 hours, an additional \$10 a day, these charges to be over and above the ordinary pilot-

age charge between Montreal and Quebec.

It is also recommended that the Quebec harbor tariff be increased to allow for a charge of \$5 for each moving on the Quebec or Levis side of the river, and \$10 for each moving entailing crossing the river from either side, and that the pilotage tariff on outward bound vessels from Quebec to Father Point, between May 1 and Nov. 10, be increased from \$3.40 to \$3.65 a ft. draft, and that pilots provide their own board while waiting at Father Point or Chicoutimi, and that other rates remain as at present.

The Kirkwood Steamship Co., a recently organized concern, is reported to have purchased the s.s. Glen Allen from the Ottawa Transportation Co., for operation in freight service between Montreal, Quebec and Chicoutimi. The Glen Allen was built at Kingston, Ont., in 1912, and is screw driven by engine of 22 n.h.p. Her dimensions are length, 112.8 ft.; breadth, 26.4 ft.; depth, 8.5 ft.; tonnage, 276 gross; 113 net. T. M. Kirkwood, formerly of Toronto, who started the Three Rivers Shipbuilding Co. and who has been associated with several shipbuilding proposals, is chiefly concerned in the company.

Canadian National Railways Steamships—The Canadian Government Rys., when placed under the Canadian National Rys. management, were operating the steamships Drummond, McKee and Sheba, which have been used largely in carrying coal for the C.G.R. and have been under the jurisdiction of the General Superintendent of the C.G.R. at Moncton, N.B. It is probable that they will be operated in the near future under the direction of the Canadian National Rys. Marine Superintendent, M. Milburne, Montreal.

The Montreal Transportation Co. Ltd. has closed its Kingston, Ont., office. The Superintendent, Capt. H. N. McMaster, and the Superintending Engineer, H. McClymont, have been removed to Montreal. E. A. Turner, heretofore agent at Kingston, has left the company's service to enter business for himself in Montreal.

Richelieu Transportation Co. Ltd., which has been incorporated under the Dominion Companies Act, with \$50,000 authorized capital and office at Montreal, is in process of organization, and proposes to purchase a number of barges for the transportation of lumber between Montreal and New York.

Acadia Shipping Co. Ltd., the incorporation of which was announced in a recent issue, with \$128,000 authorized capital and head office at Sussex, N.B., is controlled by C. T. White & Sons Ltd., lumber merchants, which has built a number of sailing vessels and intends continuing in that business.

The Lights in Hudson Strait and Hudson Bay, on Button Islands, Hatton headland Wales Island, Ashe Island, Nottingham Island, Digges Island, Mansell Island, Coats inlet, Charles Island and Cape Tatnam, will not be operated during this navigation season.

Tower Ship Co. Ltd., has been incorporated under the Dominion Companies Act, with \$30,000 authorized capital and office at Montreal, to carry on a general steamship and navigation business and to own and operate steam and other vessels.

Cancellations of Shipbuilding Orders in United States.

In addition to 2,000,000 tons of steel ships the contracts for which have been cancelled since last November by the U.S. Shipping Board, 2,000,000 tons more are being cancelled, according to a statement by Edward N. Hurley, chairman of the board. No details are given as to the sizes of ships and the yards affected. The statement refers to the necessity of balancing the fleet and also to the war prices of the contracts. Chairman Hurley says, "We feel that we should now be building only at peace prices," and states that the cancellation of all existing contracts is under contemplation, where keels have not acutally been laid. This statement, issued from the shipping board's office Apr. 25, is amplified and somewhat changed by a statement issued May 5. According to the latter, the type of vessel that will be most largely needed for post-war ocean carriage is a combined freight and passenger vessel of at least 12,000 to 15,000 tons d.w. carrying capacity, and the cancellations are to be made with a view to preparing for placing orders for this type of ship.

Among the Express Companies.

E. A. Williams has been appointed agent Canadian Northern Ex. Co., Prince Albert, Sask., vice N. W. Storie, transferred.

R. A. Mitchell has been appointed General Agent, Canadian Ex. Co., Toronto, vice R. G. Wilkins, who has retired after 50 years service.

The American Railway Ex. Co., is applying to the Interstate Commerce Commission for authority to increase express rates between U.S. and Canadian points.

N. W. Storie, heretofore agent Canadian Northern Ex. Co., Prince Albert, Sask., has been appointed agent at Edmonton, Alta., vice H. J. Morrison, transferred.

Edward Todd, of Owen Sound, Ont.,

who died in Florida, May 21, at one time conducted a telegraph, express and ticket office business in Owen Sound, and is said to have introduced the first telegraph instrument there in 1866. He retired from business in 1896.

Telegraph, Telephone and Cable Matters.

W. H. Doyle has been appointed acting local manager, Western Union Telegraph Co., Moncton, N.B., during the illness of W. H. Crandall.

G. C. Baudrin has been appointed local manager, Great North Western Telegraph Co., Quebec, Que., vice W. T. Leslie, transferred to other duties at Ottawa, Ont.

R. F. Errington, heretofore operator at Sault Ste. Marie, Ont., has been appointed local manager, Great North Western Telegraph Co., Regina, Sask., vice R. T. Dawson, resigned.

The Great North Western Telegraph Co. has opened offices at Beaumaris, Helderleigh and Rosseau, Ont., and Beatty, Sask., and has closed its offices at Fort Coulonge and Milnikek, Que., and Pass Lake, Ont.

An Ottawa press report states that the Dominion Government is likely to abandon the direct operation of its telegraph lines, and to merge its eastern lines with the Great North Western Telegraph Co.'s system and the western lines with the Grand Trunk Pacific Telegraph Co.'s system. It is also stated that powerful wireless telegraph stations are to be erected in Yukon territory.

The Marconi Wireless Telegraph Co. was reported recently to have decided to build a wireless telegraph station at Montreal, working direct with Paris, France. We are advised that the report is at least premature. The company is making experiments in regard to long distance reception in Montreal, and the possible erection of a wireless station there will depend on the result of these experiments.

An order in council has been passed

authorizing a fee of \$5 for candidates for emergency certificates of proficiency in radiotelegraphy. These certificates have hitherto been issued, valid only until the next regular examination, without fee, and there has been a tendency to abuse the privilege. The order in council, which cancelled all licenses for amateur and other non-essential radiotelegraph stations throughout Canada, has been rescinded, and the pre-war regulations have been resumed.

In reply to question in the House of Commons May 5, re the operations of the Commercial Cable Co. in Canada, the following information was given: The company, which is a U.S. incorporation, has its head office in New York, and F. G. Burstall, Hazel Hill, N.S., is the superintendent in Canada. So far as the government is aware no employe of the company was refused permission to enlist for overseas military service. After the passing of the Military Service Act, exemptions were applied for by the company on behalf of cable operators and these were granted. The government control of the cable station and the staff was limited to censorship and was not extended to the relations between the company and its employes.

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.

Whiting Foundry Equipment Co., Harvey, Ill., has issued a folder on Whiting bucket cranes, describing and illustrating different types of cranes used by railways, etc.

Armstrong Whitworth of Canada Ltd. At the recent annual meeting the following directors were elected: President, Sir Percy Girouard, K.C., M.G.; Vice President, M. J. Butler, C.M.G.; other directors, Right Hon. G. H. Murray, G.C.B.; Hon. G. G. Foster, K.C.; F. B. T. Trevelyan, H. B. Walker, H. H. Vaughan, Lawrence Russell. Messrs. Vaughan and Russell are now directors. With M. J. Butler, they comprise the executive committee in charge of the company's works in Canada.

Steel Company of Canada—At the recent annual meeting several changes were made in the directorate. Robt. Hobson was re-elected President. C. A. Birge retired from the Vice Presidency, but remains on the executive. F. H. Whitton, heretofore General Manager, and R. H. McMaster, heretofore Assistant General Manager, were elected Vice Presidents. G. H. Duggan, President, Dominion Bridge Co., Montreal, was elected a director, succeeding C. Alexander, of Providence, R.I., who retired.

Safety Car Heating & Lighting Co., New York. The directorate for this year has been constituted as follows: President, W. L. Conwell; Vice Presidents, J. A. Dixon, R. Parnly and J. P. Soper, President, Soper Lumber Co.; other directors, C. A. Austin, President, Mercantile Trust Co.; R. Barbour, President, Barbour Flax Spinning Co.; E. M. Bulk-

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie canals during April, 1919:

ARTICLES.	Eastbound.			Total.
	Can. Canal.	U.S. Canal		
Lumber.....m. ft. b. m.		2,650		2,650
Flour.....Barrels				
Wheat.....Bushels	1,896,073	14,832,927		16,729,000
Grain, other than wheat.....Bushels	791,941	3,384,100		4,176,041
Copper.....Short tons				
Iron Ore.....Short tons	198,736	940,590		1,139,326
Pig Iron.....Short tons				
Stone.....Short tons	750	1,150		1,900
General Merchandise.....Short tons	5	6		11
Passengers.....Number		3		3
Westbound.				
Coal, soft.....Short tons		415,824		415,824
Coal, hard.....Short tons		142,864		142,864
Iron Ore.....Short tons				
Mfd. Iron and Steel.....Short tons	2			2
Salt.....Short tons		5,000		5,000
Oil.....Short tons		46,656		46,656
Stone.....Short tons				
General Merchandise.....Short tons	5,299	1,252		6,551
Passengers.....Number	9	4		13
Summary.				
Vessel passages.....Number	167	549		716
Registered tonnage.....Net	326,682	1,764,087		2,090,769
Freight—				
Eastbound.....Short tons	277,897	1,478,369		1,756,266
Westbound.....Short tons	5,301	611,596		616,897
Total Freight.....Short tons	283,198	2,089,965		2,373,163

The Canadian canal opened Apr. 12, and the U.S. canal, Apr. 10.

ley, Spencer Trask & Co.; H. R. Carse, President, Submarine Boat Corporation; F. F. Ditzpatrick, President, Railway Steel Spring Co.; E. LeB. Gardner, President, New Jersey General Security Co.; A. B. Hepburn, Chairman, Advisory Board, Chase National Bank; G. D. Pope, A. C. Soper, H. H. Wehrhane, Hallgarten & Co. W. L. Conwell entered the company's service Jan. 1, 1916, as Assistant to the President. On the death of R. M. Dixon, the President, on Oct., 1918, Mr. Conwell was elected acting President.

Transportation Conventions in 1919

- June 11.—Railway Accounting Officers' Association, New York.
- June 17-20.—American Train Despatchers' Association, Chicago, Ill.
- June 18-21.—Master Car Builders' Association, Atlantic City, N.J.
- June 23-25.—American Railway Master Mechanics' Association, Atlantic City, N.J.
- September.—Master Car and Locomotive Painters' Association of the United States and Canada, Chicago, Ill.
- September.—Traveling Engineers' Association, Chicago, Ill.
- Sept. 16-18.—Roadmasters' and Maintenance of Way Association, Chicago, Ill.

- October.—American Railway Electric Engineers' Association, Chicago, Ill.
- Oct. 21-23.—American Railway Bridge and Building Association, Cleveland, Ohio.
- Oct. 21-23.—Maintenance of Way and Master Painters' Association, St. Louis, Me.

Transportation Associations, Clubs, Etc.

- The names of persons given below are those of the secretaries unless otherwise stated:
- Belleville Railway Men's Educational Club. Meets each Tuesday, 7.30 p.m. F. A. Pingston, Belleville, Ont.
 - Canadian Car Service Bureau—W. J. Collins, Manager, 401 St. Nicholas Building, Montreal.
 - Canadian Electric Railway Association—Acton Burrows, 70 Bond Street, Toronto.
 - Canadian Freight Association (Eastern lines)—G. C. Ransom, Canadian Express Building, Montreal.
 - Canadian Freight Association (Western lines)—W. E. Campbell, 305 Boyd Block, Winnipeg.
 - Canadian Railway Club—J. Powell, St. Lambert, Que. Meetings at Montreal 2nd Tuesday, each month, 8.30 p.m., except June, July and August.
 - Canadian Railway War Board—W. M. Neal, Montreal.
 - Dominion Marine Association—F. King, Counsel, Kingston, Ont.
 - Canadian Ticket Agents' Association—E. de la Hooke, London, Ont.

- Eastern Canadian Passenger Association—G. H. Webster, 54 Beaver Hall Hill, Montreal.
- Engineers' Club of Montreal—R. W. H. Smith, 9 Beaver Hall Square, Montreal.
- Engineers' Club of Toronto—R. B. Wolsey, '94 King Street West, Toronto.
- Engineering Institute of Canada—F. S. Keith, 176 Mansfield St., Montreal.
- Express Traffic Association of Canada—C. N. Ham, Montreal.
- Great Lakes and St. Lawrence River Rate Committee—James Morrison, Montreal.
- Hydro-Electric Railway Association of Ontario—T. J. Hannigan, Guelph, Ont.
- International Water Lines Passenger Association—M. R. Nelson, New York.
- Niagara Frontier Summer Rate Committee—James Morrison, Montreal.
- Quebec Transportation Club—A. F. Dion, Quebec.
- Shipping Federation of Canada—Thos. Robb, Manager, 42 St. Sacrament Street, Montreal.
- Toronto Transportation Club—W. A. Gray, 143 Yonge Street, Toronto.
- Transportation Club of Vancouver—H. W. Schofield, 556 Church Street, Vancouver, B.C.

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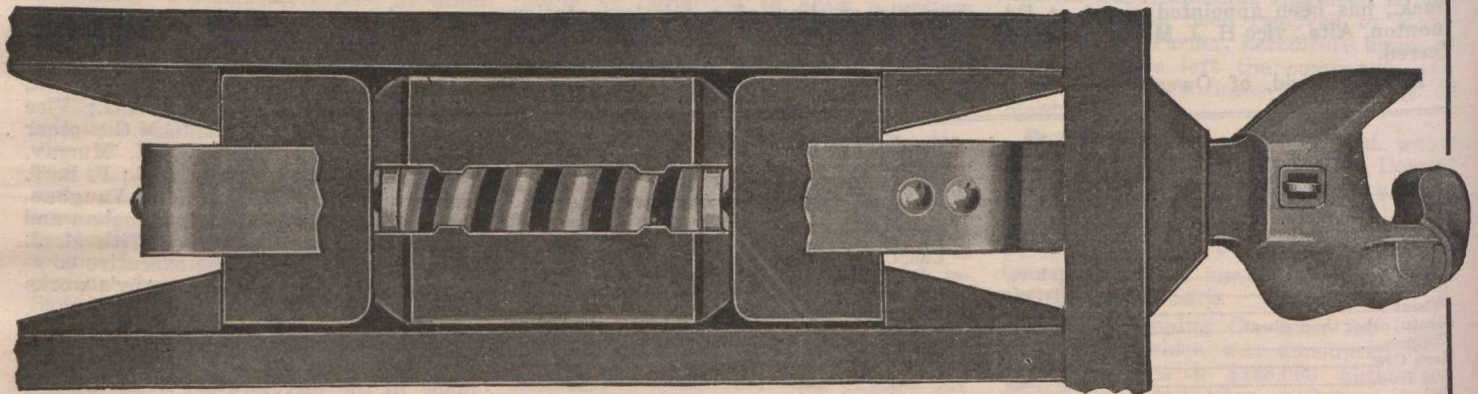
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Canadian Agents,

International Equipment Company, Ltd., Transportation Building, Montreal, Quebec