

Canadian Railway and Marine World

July, 1918

Freight and Passenger Rates Increased by United States Government.

The Director General of U.S. Railroads issued general order 28 on May 25, providing for increases in freight and passenger rates. This was followed on June 12 by a supplement making a number of changes. The order is of such great general importance that it is given practically in full, in consolidated form, as follows:—

Whereas it has been found and is hereby certified to the Interstate Commerce Commission, that in order to defray the expenses of federal control and operation fairly chargeable to railway operating expenses, and also to pay railway tax accruals other than war taxes, net rents for joint facilities and equipment, and compensation to the carriers, operating as a unit, it is necessary to increase the railway operating revenues, and whereas the public interest requires that a general advance in all freight rates, passenger fares, and baggage charges on all traffic carried by all railroad and steamship lines taken under federal control under an act of Congress approved Aug. 29, 1916, entitled "An act making appropriations for the support of the army for the fiscal year ending June 30, 1917, and for other purposes," shall be made by initiating the necessary rates, fares, charges, classifications, regulations, and practices by filing the same with the Interstate Commerce Commission under authority of an act of Congress approved Mar. 21, 1918, entitled "An act to provide for the operation of transportation systems while under federal control, for the just compensation of their owners, and for other purposes." Now, therefore, under and by virtue of the provisions of the said act of Mar. 21, 1918, it is ordered that all existing freight rates, passenger fares, and baggage charges, including changes heretofore published but not yet effective, on all traffic carried by all said railroad and steamship lines under federal control, whether the same be carried entirely by railroad, entirely by water, or partly by railroad and partly by water, except traffic carried entirely by water to and from foreign countries, be increased or modified, effective June 25, 1918, as to freight rates, and effective June 10, 1918, as to passenger fares and baggage charges, to the extent and in the manner indicated and set forth in the exhibit hereto attached and made part hereof, by filing schedules with the Interstate Commerce Commission effective on not less than one day's notice.

Freight Rates.—Sec. 1. Class rates (domestic)—(a) All class rates, both interstate and intrastate, shall be increased 25%, except that between points in Oklahoma the class rates for single and joint lines prescribed by the Interstate Commerce Commission for use between Shreveport, La., and points in Texas contiguous territory, as shown in Interstate Commerce Commission reports, vol. 48, pp. 345 and 346, plus 25%, shall be applied.

(Paragraphs (b) and (c) of order 28 were cancelled by the supplement.)

(d) After such increase no rates shall be applied on any traffic moving under class rates lower than the amounts in cents per 100 lb. for the respective classes

as shown below for the several classifications. The minimum rate on any article shall be the rate for the class at which that article is rated in the classification shown below applying to the territory where the shipment moves.

Official Classification.										
Classes	1	2	3	4	5	6				
Rates	25	21½	17	12½	9	7				
Southern Classification.										
Classes	1	2	3	4	5	6	A	B	C	D
Rates	25	21½	19	16	13	11	9	10	7½	6½
Western Classification.										
Classes	1	2	3	4	5	A	B	C	D	E
Rates	25	21	17½	15	11	12½	9	7½	6½	5
Illinois Classification.										
Classes	1	2	3	4	5	6	7	8	9	10
Rates	25	21	17½	15	11	12½	9	7½	6½	5

Section 2. Commodity rates (domestic).—(a) Commodity rates, both interstate and intrastate, on the following articles applicable on carloads, except as otherwise provided, shall be increased by the amounts indicated below:—

Coal, per net ton of 2,000 lb.—Where rate is 0 to 49c a ton: 15c a ton. Where rate is 50 to 99c a ton: 20c a ton. Where rate is \$1 to \$1.99 a ton: 30c a ton. Where rate is \$2 to \$2.99 a ton: 40c a ton. Where rate is \$3 or higher a ton: 50c a ton. Where rates have not been increased since June 1, 1917, the increase to be made now shall be determined by first adding to the present rate 15c a ton, net or gross as rated, or if an increase of less than 15c a ton, net or gross as rated, has been made since that date, then by first adding to the present rate the difference between the amount of that increase and 15c a ton, net or gross as rated; and to the rates so constructed the above increases shall now be added. Where rates from producing points or to destinations have been based on fixed differentials in cents a ton, such differentials to be maintained, the increase to be figured on the highest rated point or group.

Coke, per net ton of 2,000 lb.—Where rate is 0 to 49c a ton: 15c a ton. Where rate is 50 to 99c a ton: 25c a ton. Where rate is \$1 to \$1.99 a ton: 40c a ton. Where rate is \$2 to \$2.99 a ton: 60c a ton. Where rate is \$3 or higher a ton: 75c a ton of 2,000 lb. Where rates have not been increased since June 1, 1917, the increase to be made now shall be determined by first adding to the present rate 15c a ton, net or gross as rated, or if an increase of less than 15c a ton, net or gross as rated, has been made since that date, then by first adding to the present rate the difference between the amount of that increase and 15c a ton, net or gross as rated; and to the rates so constructed the above increases shall now be added. Where rates from producing points or to destinations have been based on fixed differentials in cents a ton, such differentials to be maintained, the increase to be figured on the highest rated point or group.

Ores, iron—30c a net ton of 2,000 lb.; except that no increase shall be made in rates on ex-lake ore that has paid one increased rail rate before reaching lake vessel.

Stone, artificial and natural, building and monumental, except carved, lettered, polished, or traced—2c per 100 lb.

Stone, broken, crushed, and ground—1c per 100 lb.

Sand and gravel—1c per 100 lb.

Brick, except enameled or glazed—2c per 100 lb.

Cement, cement plasters, and plaster—2c per 100 lb.

Lime—1½c per 100 lb.

Lumber and articles taking same rates or arbitrarily over lumber rates; also other forest products, rates on which are not higher than on lumber—25%, but not exceeding an increase of 5c per 100 lb.

Grain, wheat—25%, but not exceeding an increase of 6c per 100 lb.

Other grain—New wheat rates.

Flour and other mill products—25%, but not exceeding an increase of 6c per 100 lb., and increases shall be not less than new rates on wheat.

Cotton—15c per 100 lb.

Cotton linters—New cotton rates.

Live stock—25%, but not exceeding an increase of 7c per 100 lb., where rates are published per 100 lb., or \$15 per standard 36 ft. car where rates are published per car.

Packing house products and fresh meats—25%, except that the rates from all Missouri River points to Mississippi River territory and east thereof shall be the same as the new rates from St. Joseph, Mo.

Bullion, base (copper or lead), pig or slab and other smelter products—25%, except that rates from producing points in the States of Arizona, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, and Washington, to New York, N.Y., shall be \$16.50 a net ton with established differentials to other Atlantic seaboard points; and rates from points in Colorado and El Paso, Texas, to Atlantic seaboard points shall be increased \$6.50 a net ton. Separately established rates used as factors in making through rates to the Atlantic seaboard shall be increased in amounts sufficient to protect the through rates as above increased.

Sugar, including syrup and molasses (where sugar rates apply thereon—25%, except (1) where the official classification applies, 5th class rates as increased will apply. (2) From points east of the Indiana-Illinois State line to points west of the Mississippi River, rates will continue to be made on combination of local rates or of proportional rates if published, to and from the Mississippi River; except that from points on the Atlantic seaboard to the Missouri River, Kansas City, Mo., to Sioux City, Iowa, inclusive, established differentials over the increased rates from New Orleans, La., shall be maintained. (3) From points in the States south of the Ohio River and east of the Mississippi River, also from points in the States of Louisiana and Texas, rates shall be increased by the following amounts, less the amount of any advance made in such rates since June 1, 1917—To Chicago, Ill., 23c per 100 lb.; to St. Louis, Mo., 27½c per 100 lb.; to other points west of the Indiana-Illinois State line and west of the Mississippi River, except points in Arkansas, Louisiana, and Texas, 22c per 100 lb.; to points on and north of the Ohio River and east of the Indiana-Illinois State line rates shall be increased to maintain the former established relation to the rates from the same points of origin to Chicago, Ill., and St. Louis, Mo. (4) From producing points in Colorado, Wyoming, Montana, Kansas, and Nebraska to Missouri River territory and points in Arkansas, Oklahoma, Louisiana, and Texas and points east thereof, 22c per 100 lb. (5) From points in Idaho and Utah to points named in paragraph (4) rates shall be 15c above the rates from eastern Colorado. (6) From points in California and Oregon to points taking Missouri River rates and points related thereto under the commission's fourth section orders, and to points east of the Missouri River 22c per 100 lb.

(b) Commodity rates, both interstate and intrastate, not included in the foregoing list, shall be increased 25%.

(Paragraphs (c) and (d) of order 28 were cancelled by the supplement.)

(e) In applying the increases prescribed in this section the increased class rates applicable to like commodity descriptions and minimum weights between the same points are not to be exceeded, except that the increases in rates on sugar in carloads shall be made as expressly provided in paragraph (a) of this section.

Sec. 3. Export and Import Rates.—All export and import rates shall be cancelled and domestic rates applied to and from the ports.

Sec. 4. Filing Intrastate Tariffs with Interstate Commerce Commission.—(a) All intrastate rates and all rates for transportation by water which are to be increased under this order, if not now on file, shall be immediately filed with the Interstate Commerce Commission. Such intrastate rates shall not be applied on interstate shipments, and the schedules containing said rates shall be so restricted.

Sec. 5. Minimum Charges.—(a) The minimum charge on less than carload shipments shall be as provided in the classification governing, but in no case shall the charge on a single shipment be less than 50c.

(b) The minimum charge for a line haul of a carload shipment shall be \$15, except that on brick, cement, coal, coke, logs, ore, sand and gravel, and stone

(broken, crushed and ground), the existing rates as increased under section 2 of this order, shall apply. Does not apply to charges for switching service.

Sec. 6. Disposition of Fractions.—In applying rates, fractions shall be disposed of as follows:

(a) Rates in cents or in dollars and cents per 100 lb. or package. Fractions of less than $\frac{1}{4}$ or 0.25 to be omitted. Fractions of $\frac{1}{4}$ or 0.25, or greater, but less than $\frac{3}{4}$ or 0.75, to be shown as $\frac{1}{2}$. Fractions of $\frac{3}{4}$ or 0.75, or greater, to be increased to the next whole figure.

(b) Rates per ton: Amounts of less than 5c to be omitted. Amounts of 5c or great, but less than 10c, to be increased to 10c.

(c) Rates per car: Amounts of less than 25c to be omitted. Amounts of 25c or greater, but less than 75c, to be shown as 50c. Amounts of 75c or greater, but less than \$1, to be increased to \$1.

Sec. 7. Observance of Differentials.—In establishing the freight rates herein ordered, while established rate groupings and fixed differentials are not required to be used, their use is desirable, if found practicable, even though certain rates may result which are lower or higher than would otherwise obtain.

Passenger Fares and Baggage Charges.

Sec. 8.—This order shall apply to all passenger fares, both interstate and intrastate, of railroads under federal control. No existing fare equal to or in excess of 3c a mile shall be reduced. All fares now constructed on a lower basis than 3c a mile shall be advanced to the basis of 3c a mile. All fares which are on a lower basis than the said existing or advanced fares, as the case may be, such as mileage or excursion tickets, shall be discontinued. These requirements are subject to the following exceptions:

(a) The provisions of sec. 1 and 22 of the act to regulate commerce, which authorize free or reduced fares or transportation, may be observed, except—that no mileage ticket shall be issued at a rate that will afford a lower fare than the regular one-way tariff fare, and that excursion tickets may be issued only to the extent and on the terms set forth in paragraphs (b) and (c) below:

(b) Round-trip tourist fares shall be established on a just and reasonable basis bearing proper relation to the one-way fares authorized by this order, and tariffs governing same shall be filed as promptly as possible with the Interstate Commerce Commission.

(c) For the national encampment of the Grand Army of the Republic and auxiliary and allied organizations at Portland, Ore., in 1918, and for the United Confederate Veterans Reunion, auxiliary and allied organizations at Tulsa, Okla., in 1918, a rate of 1c a mile in each direction via direct routes shall be authorized and confined by certificate of identification to the membership of these organizations and members of their immediate families. For the various state meetings of these organizations held during 1918, fares shall be authorized under like conditions on basis of 2c a mile in each direction and confined to limits of the state in which the meeting is held.

(d) Where public convenience will be served thereby, subject to the approval of the Director General, fares determined by the short line may be applied over longer practicable routes.

(e) Officers, enlisted men, and nurses of the U. S. Army, Navy, and Marine Corps, when traveling in uniform at own expense, shall be granted the privilege of purchasing passage tickets at one-third the regular one-way fare, via route of ticket, applicable in coach, parlor or

sleeping car, as the case may be, when on furlough or official leave of absence, except that this reduced fare shall not be granted on short-term passes from camps or when on liberty from ships or stations to nearby cities. Applicants for such tickets shall be required to submit for inspection of ticket agent military furlough or other official form of leave of absence and to surrender to ticket agent a furlough fare certificate signed by a commanding officer.

(f) Children under five years of age, when accompanied by parent or guardian, shall be carried free; children five years and under 12 years of age shall be charged half fare.

Sec. 9.—Commutation fares shall be advanced 10%. Commutation fares shall be construed to include all forms of transportation designed for suburban travel and for the use of those who have daily or frequent occasion to travel between their homes and places of employment or educational institutions.

Sec. 10.—Passengers travelling in standard sleeping cars and parlor cars shall be required to pay an additional passage charge of 16 $\frac{2}{3}$ % of the normal one-way fare, and passengers traveling in tourist sleeping cars an additional passage charge of 8 $\frac{1}{3}$ % of the normal one-way fare. The foregoing charges are in addition to those required for the occupancy of berths in sleeping cars or seats in parlor cars.

Sec. 11.—The following minimum number of tickets of the class good for passage in sleeping or parlor cars shall be required for occupancy of drawings rooms, compartments or sections in parlor or sleeping cars: Two adult tickets for a drawing room in a sleeping car. Two adult tickets for a compartment. One and one-half adult tickets for a section. Five adult tickets for exclusive occupancy of drawing room in a parlor car.

Sec. 12.—Passenger fares or charges for accommodation and transportation of passengers entirely by water, or partly by water and partly by rail, shall be increased proportionately with fares and charges for the transportation of passengers via rail.

Sec. 13.—The basis for computing charges for excess baggage transported under lawfully effective tariffs shall be 16 $\frac{2}{3}$ % of the normal one-way passenger fare, with minimum of 15c per 100 lb. and minimum collection of 25c per shipment.

Sec. 14.—Tickets purchased prior to June 10, 1918, will not be honored for passage on and after that date, except—

(a) Passengers en route on June 10, 1918, on one-way tickets will be carried to destination by continuous passage without additional charge.

(b) Round-trip tickets, portions of which have been used prior to June 10, 1918, or held by passengers en route on June 10, 1918, shall be honored in accordance with original tariff conditions under which sold without additional payment except that they shall be subject to the same requirements as one-way tickets in respects of additional payment for passage in sleeping or parlor cars as prescribed in section 10.

Tickets made invalid for passage by this order will be redeemed from original purchasers as follows: Unused tickets will be redeemed at amount paid therefor. Partially used one-way tickets will be redeemed by charging tariff fare at time of journey for portion used and refunding difference between such amount and fare at which sold. In redemption of mileage, scrip, or credential forms the purchaser shall be given the benefit for the distance traveled of a net basis pro-

portionate to that which would have applied had the entire book been used according to its contract.

Sec. 15.—All passenger fares lower than those hereinbefore prescribed, such as mileage, party, second-class, immigrant, convention, excursion and tourist fares, shall be discontinued until further notice, except that tourist fares shall be reestablished as prescribed in sec. 8, paragraph (b) hereof.

Sec. 16.—Tariff provisions intended to assure the long haul to carriers, and which prevent the free interchange of traffic, shall be eliminated.

Sec. 17.—Stop-overs on one-way tickets, side trips at free or reduced fares, discounts by use of excess baggage permits or excess money coupon books, and the sale of one-way tickets bearing limit in excess of time necessary to make trip by continuous passage shall be discontinued.

Sec. 18.—Optional routes may be used only when specified in tariffs.

Sec. 19.—In publishing fares and charges, under this order, tariffs may be used which increase the present fares by fixed percentage to bring them to the bases authorized herein, even though the actual fares so constructed may be fractionally more or less than 3c a mile.

General.—Sec. 20.—The rates, fares and charges to be increased under this order are those existing on May 25, 1918, including changes theretofore published, but not then effective and not under suspension, except where the Interstate Commerce Commission prior to that date authorized or prescribed rates, fares and charges, which shall have been published after that date, and previous to June 15, 1918, the increases here prescribed shall apply thereto. Such authorized, or prescribed rates, fares and charges not so published shall be subsequently revised when published by applying the increases prescribed herein.

Sec. 21.—(a) All schedules, viz., tariffs and supplements, covering passenger fares and baggage charges published under the provisions of this order shall bear on the title page the following:—“The fares* made effective by this schedule are initiated by the President of the U.S. through the Director General, U.S. Railroad Administration, and apply to both interstate and intrastate traffic. This schedule is published and filed on one day's notice with the Interstate Commerce Commission under general order 28 of the Director General, U.S. Railroad Administration, dated May 25, 1918.”

(b) All schedules, viz., tariffs and supplements, published to cover freight rates under the provisions of this order shall bear on the title page one of the following legends,—

If all rates therein are to be restricted to apply on intrastate traffic only, use the following:—“The rates made effective by this schedule are initiated by the President of the U.S. through the Director General, U.S. Railroad Administration, and apply to intrastate traffic only. This schedule is published and filed on one day's notice with the Interstate Commerce Commission under general order 28 of the Director General, U.S. Railroad Administration, dated May 25, 1918, and amended June 12, 1918.”

If all rates therein are to apply on interstate traffic only, use the following:—“The rates made effective by this schedule are initiated by the President of the U.S. through the Director General, U.S. Railroad Administration, and apply to interstate traffic only. This schedule is published and filed on one day's notice with the Interstate Commerce Commis-

sion under general order 28 of the Director General, U.S. Railroad Administration, dated May 25, 1918, and amended June 12, 1918."

If all rates therein are to apply on both intrastate and interstate traffic, use the following:—"The rates made effective by this schedule are initiated by the President of the U.S. through the Director General, U.S. Railroad Administration, and apply to both interstate and intrastate traffic. This schedule is published and filed on one day's notice with the Interstate Commerce Commission under general order 28 of the Director General, U.S. Railroad Administration, dated May

25, 1918, and amended June 12, 1918."

If some of the rates therein are to apply to interstate traffic and others to intrastate traffic, use the following:—"The rates made effective by this schedule are initiated by the President of the U.S. through the Director General, U.S. Railroad Administration, and apply to interstate or intrastate traffic, as provided herein. This schedule is published and filed on one day's notice with the Interstate Commerce Commission under general order 28 of the Director General, U.S. Railroad Administration, dated May 25, 1918, and amended June 12, 1918."

*On baggage tariffs use word charges.

Regulations for Protection of Railway Employees.

The Board of Railway Commissioners passed general order 236, May 20, as follows:—Upon hearing the application of the Trainmen's Association of Canada, for revision of order 5888, Dec. 16, 1908, making provision for the protection of railway employees, and upon the reports of the board's Chief Operating Officer and Chief Engineer, it is ordered as follows:

1. Whereas subsec. 3 of sec. 264 of the Railway Act provides that
"There shall also be such a number of cars in every train equipped with power or train brakes that the engineer of the locomotive drawing such train can control its speed, or bring the train to a stop in the quickest and best manner possible, without requiring brakemen to use the common hand brake for the purpose."
Therefore, at least 85% of the number of cars in every train shall be equipped as above required.

2. When more than one engine is attached to a train, the engineer of the leading engine shall operate the brakes.

3. No light engine, nor two or more light engines coupled, when the movement is either on a single track or against the current of traffic on a double track, shall be run a greater distance than 25 miles in any one direction without a conductor appointed for service as such and possessed of the qualifications set out in paragraph (b) of sec. 5 of this order.

4. No railway company shall permit any employe to engage in the operation of trains, or handle train orders, without first requiring such employe to pass an examination on train rules and undergo a satisfactory eye and ear test by a competent examiner.

5. (a) Locomotive engineers must be at least 21 years of age; undergo a satisfactory eye and ear test by a competent examiner; and pass an examination on train rules and regulations, and the proper care and operation of locomotives and air brakes.

(b) Conductors must be at least 21 years of age; undergo a satisfactory eye and ear test, and pass an examination on train rules and regulations and the operation of air brakes.

(c) Telegraph or telephone operators engaging in the operation of trains or handling train orders must be at least 18 years of age, write a legible hand, and pass an examination on train rules and regulations. Telegraph operators must be able to send and receive messages at the rate of not less than 20 words a minute.

(d) Train dispatchers must be at least 21 years of age, be familiar with the line over which they have charge, and pass an examination on train rules and regulations.

(e) Railway companies shall (within 90 days from the date of this order) file with the board a copy of each examination paper for the examinations herein re-

quired to be passed by the employes of such railway company.

6. All railway companies shall strictly conform to the rules and regulations from time to time approved by the Master Car Builders' Association, governing the loading of lumber, logs and stone upon open cars, and the loading and carrying of structural material, plates, rails and girders; and no material of any kind shall be carried on the roofs of cars.

7. (a) All open drains crossing tracks in railway yards shall be safely covered for at least 5 ft. from the gauge side of each rail, except in times of flood, when temporary open drains may be provided if necessary.

(b) No semaphores, signals, poles, high or intermediate switchstands, or piles of material, erected or placed in future, shall be nearer than 6 ft. from the gauge side of the nearest rail.

(c) No structure, except mail cranes, which shall be erected and maintained as directed by order 5647, Nov. 20, 1918, over 4 ft. high, shall hereafter be placed within 6 ft. from the gauge side of the nearest rail without first obtaining the board's approval.

(d) Water stand-pipes shall not be nearer than 2½ ft. from the widest engine cab, and the spout of the stand-pipe shall, when not in use, be fastened parallel with main track, and enginemen are required to see that this is done after using any such pipe.

8. Every person or company offending against any of the foregoing provisions shall forfeit and pay \$50 for every such offence.

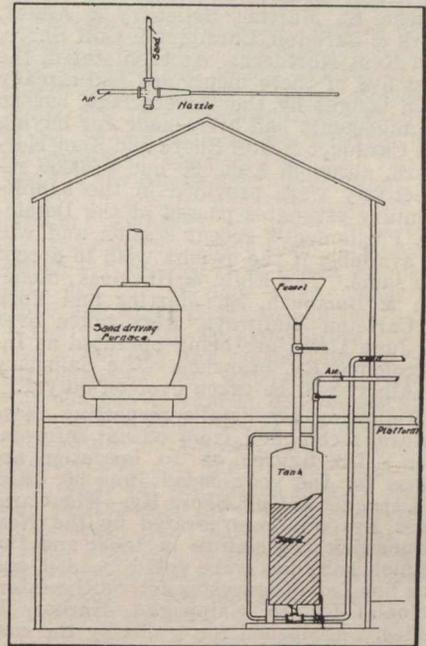
9. Orders 5888 and 12225 (general orders 22 and 65), dated Dec. 16, 1908, and Nov. 9, 1910, made herein are rescinded.

Protection of Railway Employees.—The Board of Railway Commissioners passed general order 237, May 31, requiring railway companies to adopt the following rule:—"Where two main tracks parallel each other and are less than 20 ft. from centre to centre, whether such tracks are for double or single track operations, employes in every instance, when stepping out of the way of approaching trains must move to the right of way and not to the other track."

Great Northern Subsidiaries.—The Board of Railway Commissioners has approved bylaws of the Great Northern, Crows Nest Southern, New Westminster Southern, and Victoria & Sidney Railways, and Victoria Terminal Ry. & Ferry Co., authorizing H. H. Brown, General Freight Agent, and C. E. Stone, Passenger Traffic Manager, to prepare and issue tariffs of tolls to be charged on those railways.

Air Sand Blast Machine at Ogden Shops, C.P.R.

The accompanying illustration shows plan of an air sand blast machine, which is used at the C.P.R. shops at Ogden, Alta., for sand blasting tender tanks, cabs,



dome casings, driving wheels, or other parts of locomotives, removing all substances right down to bare iron, and thereby giving the opportunity to do the best painting possible.

Safety Appliances for Freight Cars.—The Board of Railway Commissioners passed general order 229, May 9, as follows:—Re general order 128, July 20, 1914, and the application of the Grand Trunk Pacific, Canadian Pacific, and Canadian Northern Railways for an extension of time of 18 months within which to equip their freight cars with safety appliances, as required under the said order. Upon hearing the applications at Ottawa, May 7, in the presence of counsel for the railway companies and representatives of the Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen and Enginemen, it is ordered that the railway companies subject to the board's jurisdiction be granted an extension of time until Sept. 30, 1919, within which to make the changes required under the said order, the railway companies to continue their present practice of filing with the board monthly reports of the progress made in complying with the requirements of said order.

Tree Planting for Snow Fences.—T. A. Hoverstad, Agricultural Commissioner, Minneapolis, St. Paul & Sault Ste. Marie Ry., in acknowledging receipt of Canadian Railway and Marine World for May, containing an article on tree planting for railway snow fences, writes: "I feel that you have given the matter of tree planting along railways a great stimulus forward. I am sure that all the northern roads that are troubled with snow blockades will begin a vigorous and systematic campaign for planting trees in the very near future. Owing to the government having taken over the operation of the railways, we shall not extend our planting this year, but we are doing a certain amount of repair planting, and are cultivating the trees now growing on the right of way."

Acquisition of Maritime Province Railway by Dominion Government.

Canadian Railway and Marine World for June contained full particulars of the sums voted by parliament to take over seven Maritime Province railways, viz., the Elgin & Havelock, Moncton & Buctouche, St. Martins, Salisbury & Albert, York & Carleton, Caraquet & Gulf Shore, and Kent Northern. As then stated, the first five of these mentioned had already been bought by the Government, but no arrangements had been made for buying the Caraquet & Gulf Shore and Kent Northern, although \$200,000 and \$60,000 respectively were provided in the supplementary estimates passed at the Dominion Parliament's recent session and will be available if the owners wish to accept the same. The Elgin & Havelock, Moncton & Buctouche, St. Martins and York & Carleton Railways were taken over on June 1 and are being operated as Intercolonial Ry. branches. The Salisbury & Albert will be taken over on July 1.

Following are details respecting these railways compiled from official information. The figures as to operation are those for the year ended June 30, 1916.

Caraquet & Gulf Shore Ry.—The Caraquet Ry. was incorporated by the New Brunswick Legislature in 1882, and Dominion subsidies were voted in 1883, and the line from Gloucester Jct. on the Intercolonial Ry. to Shippegan Harbor, 68 miles, was opened for traffic by the contractor in 1887, and taken over by the company in 1889. The Dominion Government gave subsidies of \$224,000, and the New Brunswick Government \$180,000. In 1884 the Gulf Shore Ry. was incorporated by the N. B. Legislature, and in 1894-7 the Dominion Parliament voted and paid subsidies of \$53,699.20, the New Brunswick Government providing an additional \$41,950, for the construction of a line from the C. Ry. to Tracadie, 16.78 miles. These lines were generally operated as the Caraquet & Gulf Shore Ry., and were acquired about 1906 by a Toronto syndicate. The present capitalization is \$1,250,000 of common stock and \$500,000 of bonds. The company owns 3 locomotives, 3 1st class passenger cars, and 15 flat cars. Its earnings for the year ended June 30, 1916, were \$81,218.37; operating expenses, \$75,494.05; net revenue \$5,724.32. It carried 19,630 passengers and 44,413 tons of freight, its trains running 32,199 miles. It is said that Sir Jno. Gibson, of Hamilton, Ont., is one of the persons principally interested in the ownership. Geo. Collins, Superintendent, Canadian Northern Ry., Trenton, Ont., is President of the company, and W. B. Cronk, Bathurst, N.B., is Vice President and Manager.

The Minister of Railways stated in the House of Commons, May 17, that the company had asked for the property double what the government was willing to pay. The Minister of Public Works said in the Commons May 23:—"We have offered the owners \$200,000 for the railway. They can't make 200,000 cents out of it in the next 10 years. We won't arbitrate. We won't pay any more. We think they will take it."

The Elgin & Havelock Ry. was built under a charter granted by the New Brunswick Legislature to the Elgin, Petitediac & Havelock Ry. Co., with which in 1885 the Dominion Government entered into a subsidy contract for the building of 12 miles of railway, from the Intercolonial Ry. at Petitediac to Havelock Corner, which was built and put in operation at the end of that year. In 1888 the

Dominion Parliament voted iron rails from the Intercolonial Ry. valued at \$44,252.82 to the company in aid of the line from Petitediac to Elgin, 14 miles, which was completed and opened for traffic in 1890. The company got into financial difficulties and its lines were sold under foreclosure in Oct., 1892, when the present company acquired possession and obtained a New Brunswick charter of incorporation. An extension to Keith's Mills was made subsequently, making the total mileage 28. The company owns 1 passenger and 1 freight locomotive, 1 1st class passenger car and 1 combination car; 2 box, 4 flat cars, and 1 stock car. In addition to the Dominion subsidies noted above, the New Brunswick Government voted \$107,500, and \$13,000 was paid by subsidies by municipalities. The capital stock outstanding is \$44,900, and there are \$50,000 of bonds. For the year ended June 30, 1916, the company earned \$10,997.40, its operating expenses were \$10,700.21, leaving a net income of \$297.10. It carried 10,112 passengers and 15,860 tons of freight by mixed trains which ran 16,200 miles. J. M. Lyons, Moncton, is General Manager. A. H. Robinson, who had the title of Superintendent, has been appointed a conductor in Canadian Government Railways service.

The Kent Northern Ry. extends from Kent Jct. on the Intercolonial Ry. to Richibucto, N.B., 27 miles. It was chartered by the New Brunswick Legislature in 1884 and was granted a subsidy by the Dominion Parliament in 1888, on which \$58,334.27, including the value of iron rails, was paid, while the New Brunswick Government paid \$135,000. The St. Louis & Richibucto Ry. was chartered by the New Brunswick Legislature in 1882, and a line was built from St. Louis to Richibucto, 7.5 miles, in aid of the construction of which the Dominion Government paid \$22,400 and the New Brunswick Government \$21,000. Neither of these lines was prosperous; for a time the St. L. & R. was not operated, and then it was leased to the K.N. Ry. and afterwards abandoned. The K.N. Ry. was acquired by a Toronto syndicate in 1911. Its capital stock at June 30, 1916, was \$75,000 of common stock and \$32,000 of bonds. The company has not made any report of its earnings for some years. G. H. D. Lee, of the National Trust Co., Toronto, is President, that company being executors of the estate of the late Thos. Walmsley, of Toronto, who was one of those principally interested in the line.

The Moncton & Buctouche Ry. extends from Moncton to Buctouche, N.B., 32 miles, and was built under a New Brunswick charter, the Dominion Parliament voting a subsidy in 1889, on account of which there was paid \$101,600. The New Brunswick Government paid \$94,500 as subsidy. After a few years of operation, the line, which was then called the Buctouche & Moncton Ry., was sold under foreclosure proceedings in 1895, and the M. & B. Ry. was organized. Efforts were made by the incorporation of the Buctouche Ry. & Transportation Co., and the Moncton & Northumberland Straits Ry. Co., in 1913, to provide for the extension of this railway, but the plans were not successful. For the year ended June 30, 1916, its gross earnings were \$34,663.55; working expenses, \$31,526.69; net earnings of \$3,136.86. It carried 64,833 passengers and 21,141 tons of freight, its trains travelling 17,972 miles. It owns 3 passenger locomotives, 2 1st class and 1

combination passenger cars, 4 box and 36 flat cars. It has \$250,000 of capital stock outstanding, and \$60,000 of bonds. I. G. Merritt, New York, N.Y., is President.

The St. Martin's Ry.'s history begins with 1871, when the St. Martin's & Upham Ry. was incorporated by the New Brunswick Legislature, and a railway was built from Hampton on the Intercolonial Ry. to Quaco, 30 miles. Towards the construction of this line the Dominion Government gave subsidies in cash or in used iron rails to the amount of \$83,612.54, and the New Brunswick Government paid \$145,600. By a Dominion Act passed in 1887 the company was authorized to sell its railway to the Central Ry. Co. of New Brunswick, or any other railway company, and up to 1897 it was operated as the southern division of the Central Ry. of New Brunswick, when the Hampton & St. Martins Ry. was organized. After a chequered career the line was sold at the end of 1906 to satisfy a judgment obtained by A. P. Barnhill under foreclosure proceedings. The New Brunswick Legislature authorized the incorporation of a new company to take over and operate the line under the title of the St. Martins Ry., with a capital of \$99,000 and office at Hampton, N.B., the first directors being:—G. W. Vaughan, St. Martins; W. E. Foster, W. G. Scovil, H. A. McKeown, St. Johns; and F. M. Anderson, Campbellton, N.B. Its capital at June 30, 1916, consisted of \$99,000 of stock, and \$90,000 of bonds. Its earnings for the year were \$21,506.10; operating expenses, \$20,587.97; net revenue of \$918.13. It carried 8,580 passengers, and 19,268 tons of freight, its trains running 16,500 miles. It owns 2 freight locomotives, 1 2nd class and 1 combination passenger car, 1 box and 6 flat freight cars. Hon. W. E. Foster, Premier of New Brunswick, is President.

The Salisbury & Albert Ry. is the name given in 1910 to the Salisbury & Harvey Ry., which company acquired it from the liquidators of the old Albert Ry. in 1888. The Albert Ry. was incorporated by the New Brunswick Legislature to build a railway from Salisbury on the Intercolonial Ry. through Albert County. The line extends from Salisbury to Albert, 45 miles, and all of which is laid with steel rails, 56, 58 and 60 lb. It received \$29,391.01 as cash subsidy, and 726 tons of used iron rails and fastenings, valued at \$14,665.45, in 1888 at the time of reconstruction. It also received altogether as subsidies from the New Brunswick Government, \$455,000, and \$70,000 from municipalities. The Albert Southern Ry. was incorporated to build a line from the southern terminal of the S. & A. Ry. to Alma, 16 miles, and from Alma to Harvey Bank, 3 miles. The A.S. Ry. received \$50,460 from the Dominion Government and \$48,680 from the New Brunswick Government, for this number of miles of extension of the S. & A. Ry. After being operated unsuccessfully for several years from 1887, the extension was abandoned and the rails taken up. The S. & A. Ry. has \$150,000 of capital stock outstanding, and no bonded or other indebtedness. It owns 2 freight locomotives, 1 1st class and 1 combination passenger car, 3 box and 25 flat cars. For the year ended June 30, 1916, its earnings were \$42,076.97; operating expense, \$32,983.58; net earnings of \$9,093.39. It carried 13,328 passengers and 43,687 tons of freight during the year, its trains running 30,620 miles in so doing. The two

latter roads were originally promoted by A. A. Killam, who is now aged 84. E. M. Sherwood, Hillsboro, N.B., is Manager.

The York & Carleton Ry. was built under a charter granted by the New Brunswick Legislature in 1887. The line starts at Cross Creek station on the old Canada Eastern Ry., subsequently taken over by the Intercolonial Ry., and runs to Stanley, 5.85 miles. In 1903 a Dominion subsidy was voted towards an extension from Stanley to Ryan Brook, 4.5 miles, but construction was not undertaken until 1906, when it was completed to Glippen Glen, 3.5 miles, and to Ryan Brook, early in 1907. In 1908 a project was initiated by Dr. D. Moore, President Y. & C. R., and his associates under the title of the Stanley Ry. & Manufacturing Co., for the establishment of industries at Ryan Brook and the extension of the line from there to a junction with the National Transcontinental Ry. at Nappedoggin Lake, 9 miles. Towards the construction

of this line the Dominion Government in 1908 voted a subsidy at the usual rate. Surveys were made, but nothing was done in the way of construction, and the line has continued to be operated from Cross Creek to Ryan Brook, 10.35 miles. This mileage is reported to be laid with steel rails; there do not appear to be any bridges on the line, but there are 11 level crossings, all of which are reported to be unguarded. Its equipment consists of 1 locomotive engine and 1 car. Its earnings for the year ended June 30 were \$4,987.54; operating expenses, \$3,835.38, and net earnings \$1,152.16. It carried 7,461 passengers, and 5,994 tons of freight, its trains making 7,112 miles of mixed train running. The company received \$32,896.00 from the Dominion Government, and \$25,247.00 from the New Brunswick Government as subsidies. Its capital stock outstanding is \$105,900, and there is no bond or other outstanding indebtedness.

Report of the Railways Department for 1916-17.

The report of the Railways and Canals Department for the year ended Mar. 31, 1917, was issued recently, in a very much abridged form, as compared with previous years. All maps, plans and illustrations of railway and canal works, and all detail reports of engineers and other officers are omitted, only the direct reports of the chiefs being inserted. Several statistical tables and miscellaneous information relating to previous years, valuable only for reference, are also omitted. The reports of the department's accountant, and of the Comptroller and Treasurer of Government Railways are given in a compressed and rearranged form. The whole report is contained in 79 pages, compared with 416 the previous year, which had maps and illustrations in addition.

The total railway expenditure for the year, including the Quebec Bridge, was \$41,895,886.53, of which \$14,737,326.70 was charged to capital, \$25,799,906.54 to revenue, and \$1,358,653.29 to income. The expenditure on capital account included \$4,490,472.56 for the Intercolonial Ry., \$609,751.71 for the Prince Edward Island Ry., \$3,916,586.20 for the National Transcontinental Ry., \$2,604,279.94 for the Hudson Bay Ry., \$2,733,677 for the Quebec Bridge, \$3,724.98 for the International Ry., \$46,579.38 for the New Brunswick & Prince Edward Island Ry., and \$332,254.93 for the Quebec & Saguenay Ry. The expenditure on income account included \$959,583.88 paid as subsidies on railways, \$215,947.14 for the Board of Railway Commissioners, \$46,630.53 for railway grade crossing fund, and \$44,149.09 for surveys and inspections. The total government expenditure on railways prior to and since Confederation to Mar. 31, 1917, on capital account was \$391,884,025.79, which includes the expenditure on Quebec Bridge account; \$25,000,000 granted to the C.P.R., and \$660,683.09 expended on the Annapolis & Digby Ry. In addition there has been expended out of the consolidated fund \$267,997,373.17, covering the operating expenses of the government lines, and \$75,117,415.47 on subsidies other than that for the C.P.R. main line. Of this amount there was expended prior to Confederation \$10,766,765.54 upon Intercolonial Ry., and \$3,144,735.11 on Prince Edward Island Ry. construction.

Canadian Northern Ry. Headquarters.

In connection with the change in C.N.R. ownership, and the appointment of all the directors by the Dominion Government, the question of the location of the company's head office is being discussed, at least by press correspondents, some of whom predict a removal from Toronto to Montreal. Sir Robert Borden, in speaking in the House of Commons on May 15, said it might be desirable to bring the National Transcontinental, the Intercolonial and the Prince Edward Island Railways under the same corporate ownership as the Canadian Northern. The opinion prevails that should this be done it might be followed by the removal of the C.N.R. headquarters from Toronto and of the Canadian Government Railways headquarters from Moncton, N.B., and their concentration at Montreal, which would be more in the centre of the system.

Canadian Government Railways Working Expenses.—The following sums were voted at the Dominion Parliament's recent session under the supplementary estimate. For year ended Mar. 31, 1918, further amount required, \$8,500,000. For year ending Mar. 31, 1919, \$37,000,000.

Birthdays of Transportation Men in July.

Many happy returns of the day to:

A. A. Allen, Vice President, Holden Co., Ltd., Montreal, formerly Master Mechanic, Timiskaming & Northern Ontario Ry., born at Grafton, Ont., July 7, 1870.

J. H. Black, ex-Superintendent, Timiskaming & Northern Ontario Ry., now at Toronto, born near Smiths Falls, Ont., July 8, 1874.

D. E. Blair, Superintendent of Rolling Stock, Montreal Tramways Co., born at St. Thomas de Montmagny, Que., July 25, 1877.

D'Alton C. Coleman, Assistant General Manager, Western Lines, C.P.R., Winnipeg, born at Carleton Place, Ont., July 9, 1879.

G. C. Conn, ex-Freight Traffic Manager, Pere Marquette Ry., Detroit, Mich., now General Traffic Manager, Buick Motor Co., Flint, Mich., born at Woburn, Mass., July 1, 1867.

H. Darling, Locomotive Foreman, G.T. Pacific Ry., Smithers, B.C., born in Northumberland, Eng., July 27, 1873.

S. E. Dewey, General Eastern Freight Agent, G.T.R., New York, born at Beckenham, Kent, Eng., July 4, 1879.

A. H. Eager, Assistant Superintendent of Rolling Stock, Western Lines, Canadian Northern Ry., Winnipeg, born at Waterloo, Que., July 15, 1868.

F. C. Foy, ex-Canadian Passenger Agent, New York Central Lines, Toronto, now on company's Buffalo staff, born at Toronto, July 5, 1881.

S. J. Hungerford, General Manager, Eastern Lines, Canadian Northern Ry., Toronto, born at Bedford, Que., July 16, 1872.

C. W. Johnston, Assistant General Passenger Agent, G.T.R., Montreal, born at Actonvale, Que., July 27, 1879.

M. Kelly, Resident Engineer, Farnham Division, Quebec District, C.P.R., Farnham, born at Thamesville, Ont., July 6, 1874.

T. King, Superintendent, Detroit Division, Western Lines, G.T.R., Detroit, Mich., born at Dunbarton, Ont., July 18, 1869.

A. E. Lock, Superintendent Car Service, Toronto, Hamilton & Buffalo Ry., Hamilton, Ont., born at Albany, N.Y., July 14, 1879.

G. A. McNicholl, Assistant General Freight and Passenger Agent, Grand Trunk Pacific Ry., Prince Rupert, B.C., born at Montreal, July 31, 1876.

H. D. Mackenzie, Master Mechanic, Canadian Government Railways, Edmundston, N.B., born at Churchville, N.S., July 22, 1864.

J. M. Macrae, District Freight Agent, Canadian Northern Ry., Saskatoon, Sask., born at Stornoway, Scotland, July 31, 1884.

W. G. Manders, General Freight Agent, Western Lines, Canadian Northern Ry., Winnipeg, born at Owen Sound, Ont., July 24, 1876.

Neil Marple, Master Car Builder, Canada Southern Division, Michigan Central Rd., St. Thomas, Ont., born in McKillip Tp., Ont., July 1, 1860.

G. A. Mills, Electrical Engineer, Winnipeg Electric Ry., born at Indianapolis, Ind., July 5, 1885.

J. E. Morazain, Superintendent, District 1, Intercolonial Division, Canadian Government Railways, Levis, Que., born at Wheatland, Que., July 31, 1875.

R. E. Perry, Assistant General Freight Agent, Canadian Government Railways, Moncton, N.B., born at Drayton, Ont., July 5, 1876.

J. E. Quick, General Baggage Agent, G.T.R., Toronto, born at Richmond, Ontario Co., N.Y., July 10, 1851.

G. G. Ruel, Chief Solicitor, Canadian Northern Ry., Toronto, born at St. John, N.B., July 5, 1866.

George Stephen, Freight Traffic Manager, Western Lines, Canadian Northern Ry., Winnipeg, born at Montreal, July 5, 1876.

Sir Thos. Tait, President, Fredericton & Grand Lake Ry. & Coal Co., Montreal, born at Melbourne, Que., July 24, 1864.

M. M. Todd, Vice President, Grand Valley Ry. and Lake Erie & Northern Ry., Galt, Ont., born there July 22, 1891.

G. A. Walton, General Passenger Agent, Western Lines, C.P.R., Winnipeg, born at Montreal, July 17, 1881.

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

	Acres.
Alberta & Great Waterways Ry.	13.91
Calgary & Edmonton Ry.	2,226.20
Canadian Northern Ry.	1,766.00
Edmonton, Dunvegan & British Columbia Ry.	85.91
Grand Trunk Pacific Ry.	2.68
Qu'Appelle, Long Lake & Saskatchewan Rd. & Steamboat Co.	320.00
Total	4,414.70

New Rules for Interswitching Freight Traffic.

The Board of Railway Commissioners passed general order 230, May, 17, as follows:—The board hereby rescinds order 4988 (general order 11), dated July 8, 1908, and orders as follows:

1. For the interpretation, application and operation of this order—

(a) "Interswitching" means the movement of freight in cars between the unloading or loading tracks of one carrier, hereinafter called the "terminal carrier," and the point of interchange with another carrier, by whom, singly or jointly with a further carrier, the said traffic has been carried from its point of shipment or is to be carried to its destination, hereinafter called, singly or jointly, the "line carrier," both the terminal carrier and the line carrier which interchanges with the terminal carrier being subject to the board's jurisdiction; the said movement being performed with or without the aid of an intermediate carrier, whether subject or not subject to the board's jurisdiction, hereinafter called the "intermediary."

(b) The "interchange" means the junction between the terminal carrier and the line carrier, or between the terminal carrier and the intermediary, nearest to the point of loading or unloading of the car.

2. This order does not apply—

(a) to tracks used by the terminal carrier for the transfer of freight between cars and its freight warehouse, or for the purpose of trans-shipment from car to car, nor to tracks otherwise set apart for its own working purposes, except team tracks;

(b) to joint movements which both begin and end in the same terminal or group of terminals or adjoining switching districts;

(c) to cars which, having been once properly interswitched for unloading, are reconsigned for unloading elsewhere within the same terminal or group of terminals.

3. Subject to the provisions of sec. 14, carriers shall at all times, according to their powers, furnish an interswitching service equal to the service accorded their own traffic, at all points where interswitching facilities are, or may hereafter be, provided, under the circumstances and at the tolls herein prescribed; provided that no terminal carrier or intermediary shall be obliged hereunder to make any movement exceeding the distances herein specified at the tolls herein prescribed, and that the said distances be irrespective of the location of the interchange and of yard limits or boundaries.

4. The toll of an intermediary subject to the board's jurisdiction shall not exceed, irrespective of weight, \$3 a car for any distance within and including three miles, or \$3.50 a car for any distance exceeding three miles to and including four miles.

5. If the traffic is loaded or unloaded upon private sidings connecting with the terminal carrier's railway, or directly from or into an industry, elevator or yard abutting upon its tracks (commonly known as industrial sidings), or in any public stock yard, the toll of the terminal carrier shall not exceed 1c per 100 lb. for the actual weight thereof, subject to the minimum weight of the line carrier's tariff, for any distance within and including four miles from the interchange; except that the terminal carrier shall be entitled to a minimum charge of \$3 a carload of traffic included in the 7th, 8th and 10th classes of Canadian Freight Classi-

fication, and \$5 a carload of all other traffic.

6. The toll of the terminal carrier upon all traffic other than that referred to in sec. 5, including traffic to or from team tracks, shall not exceed 2c per 100 lb. for the actual weight thereof, subject to the minimum weight of the line carrier's tariff, for any distance within and including four miles from the interchange, except that the terminal carrier shall be entitled to a minimum charge of \$6 a car.

7. Not less than the following proportions of the tolls herein prescribed shall be absorbed in the rate of the line carrier and the remainder shall be an addition thereto:—(a) One-half of the tolls charged by the terminal carrier under sec. 5, as qualified by sec. 9. (b) Of the tolls prescribed in sec. 6, one-half of the tolls permitted under sec. 5, as qualified by sec. 9, as if the movement were to or from private sidings. (c) One-half of the herein prescribed or lower tolls of each intermediary, if any, whether subject or not subject to the board's jurisdiction. Provided that the line carrier may, unless its tariff rate is lower, charge and collect \$12 a car for its haul between the interchange and the point of shipment, or destination, when by reason of such absorption its line charges would otherwise be less than that amount.

8. The appropriate tolls hereinbefore prescribed shall not be exceeded, for the distances herein specified, in each direction, for the movement from and the return to the line carrier of so-called off line transit traffic, and the line carrier shall be subject to the absorption provisions of sec. 7 only when its through rates are the sum of its published rates to and from the stop over point.

9. If an extra car, commonly known as an idler, is used solely to take care of an overhang of long articles loaded on an open car, it shall be charged by the terminal carrier not more than two-thirds of the herein prescribed appropriate toll for the minimum weight of the line carrier's tariff, except that the terminal carrier shall be entitled to a minimum charge of \$3 a car. If interposed between two cars in the same shipment to protect an overhang from each, the idler shall be charged for once only.

10. No charge shall be made for the accessory interswitching of the empty car. If the car is loaded in both directions, the interswitching toll shall be charged for each movement.

11. Subject to the provisions of sec. 14, nothing herein contained shall prevent the line carrier from absorbing the entire toll or tolls charged for interswitching competitive traffic, provided that the traffic and movements so treated are clearly defined in its tariffs.

12. Traffic to or from the United States shall be subject to the provisions of this order at the point of shipment or destination in Canada.

13. If an exceptional rate is published to apply to or from the tracks of the carrier line only, the ordinary rate, which includes the right of interswitching, shall be plainly indicated in the same schedule, and the latter rate shall not exceed the former by more than the appropriate toll herein prescribed for the interswitching service.

14. Except as hereinafter provided, the tolls herein prescribed shall not apply to deprive the initial carrier of the line haul by a reasonable route of traffic loaded or to be loaded on its railway, including sid-

ings connecting therewith, provided it furnishes at the destination, itself or through its connections or by interswitching, the same delivery and facilities as the competing carrier at no greater charge. If a car is expressly ordered by the shipper to be interswitched to another railway, notwithstanding that the initial carrier can furnish the services as above provided, the said initial carrier may, in lieu of the tolls otherwise prescribed herein, charge and collect its ordinary published tariff rate to the interchange, which rate shall be an additional charge against the shipment. Provided, however, that if the said initial carrier fail or neglect to furnish the shipper with a car within 48 hours after it has been requested, or should through movement by the route of the initial carrier be embargoed, the shipper may require the initial carrier to accept and place, and the said carrier shall so accept and place, an empty car of any other carrier, in which case the movement of the empty car in and the loaded car out shall be effected under the provisions of sec. 10 and 5 or 6, as the case may be.

The schedule to give effect to this order shall be published and filed to come into force on July 1, 1918.

Railway Employees Voting at Ontario Municipal Elections.

Owing to the nature of their employment, a large number of railway employees are, because they are absent from home, precluded from voting at municipal elections. This has been remedied in Ontario by the passing of an act to enable employees, whose employment is such that they are absent from home from time to time, and who have reason to believe that they will be absent on the polling day, to cast their vote at municipal elections before the regular polling day. A polling place is to be kept open in the municipalities, whose councils have passed a bylaw bringing the act into force, for three days prior to the date of polling, exclusive of Sunday, between 9 a.m. and 5 p.m. The clerk of the municipality or his appointee is to be the special returning officer, and separate ballot boxes are to be provided where the municipality is divided into wards. Every person offering himself as a voter must be on the last revised voters' list for the municipality and must subscribe a declaration, showing the railway company by which he is employed, and that he expects to be absent in the course of his employment from the municipality on the regular polling day. The penalty for making a false statement is not less than \$25 nor more than \$100. The ballot box or boxes are to be sealed at the close of the poll, and are not to be opened until the close of the regular poll, when they will be opened and the ballots counted in the regular way.

Jurisdiction over Taxicabs in Stations. Outside taxicab drivers at Winnipeg laid a complaint before the Board of Railway Commissioners recently, that some of them were not allowed to enter the station there to do business, but that two or three of them were so allowed. The company operating the Fort Garry union station contended that arrangements for governing the interior of the building was in its hands, and this view was upheld by the commission and the complaint dismissed.

Summary of Work Done by the Canadian Railway Association for National Defence.

Following is a summary showing the work done by Canadian railways under the direction of the Canadian Railway Association for National Defence (now called the Canadian Railway War Board) from its establishment on Oct. 23, 1917:

Increases in freight traffic by diversion of cars from over-burdened routes.—On orders issued by the association, and arrangements made with the railways interested, a total of 14,759 loaded cars have been diverted from congested routes to others which were comparatively free. These cars, many of which were loaded with grain and coal, contained approximately 516,563 tons of freight. Included in the diversions were 2,180 cars which were billed eastbound via the C.P.R. through Fort William for points in Ontario and Quebec and diverted via the "Soo" Line from Emerson to Sault Ste. Marie, being returned to the C.P.R. at the latter point, thus relieving the heavily taxed line east from Fort William.

Diversions of freight routed via C.P.R. from Fort William for Eastern Canada points and overseas were made to the Canadian Northern Ry. at Port Arthur, the cars being returned to the C.P.R. at Sudbury and Ottawa. These diversions via Port Arthur total up to date 403 cars and the arrangement calls for continued diversion as necessary up to 40 cars a day.

One result of these two switches in the movement of eastbound freight is an increase in the movement of grain by rail from the head of the lakes of approximately 3,500,000 bush., in addition to avoiding congestion at the terminals in that territory, and expediting the general movement of cars through that gateway.

The handling of traffic from the Niagara frontier to Ontario points during the winter, when the entire burden is thrown upon the railways operating between Buffalo and Toronto, owing to the suspension of ferry service across Lake Erie, up to this year caused a great deal of delay to freight and cars and interfered with the requisite coal deliveries for consumption in Ontario to such an extent as to have been partly responsible for the fuel shortage in that province during the winter of 1916-1917.

This year, at the first hint of trouble, the association's administrative committee, after going over the situation in detail, delegated one of its members F. F. Backus, General Manager, Toronto, Hamilton & Buffalo Ry., as the association's representative to take full charge of operation of lines between the frontier and Toronto, with authority to switch traffic and locomotives from one line to another as the conditions day by day might demand. Under Mr. Backus' direction, cars were diverted from the over-burdened G.T.R. route to the joint line furnished by the M.C.R., T.H. & B.R. and C.P.R., to the number of 5,081, which means that the total movement of freight from the U.S. to Canada via the Niagara gateway was increased to that extent. These diversions extended over the period from Jan. 6 to Mar. 6, when conditions became practically normal and the necessity for further transfer of cars from the routing prescribed on the billing disappeared. About 60% of the 5,081 cars by which the movement from the frontier was increased as described above contained coal, so that the coal receipts in Ontario during the two months mentioned

were increased by approximately 150,000 tons.

Arrangements were made with the U.S. railway authorities at Washington whereby empty box cars ordered to Canada to assist in making up the number of cars due Canada on the interchange with U.S. lines were diverted to the Delaware and Hudson Co.'s railway, where they are loaded with coal, principally for points in the Province of Quebec, thus increasing the coal receipts in this province, as well as providing box cars for the movement of exports to the U.S. Under this arrangement 5,800 empty box cars were turned over to the Delaware and Hudson, and up to Mar. 20, 3,835 had been loaded with coal as above, containing approximately 135,000 tons of coal. It is the intention to continue this arrangement as long as empty cars are being sent to Canada as at present.

During the latter part of the winter the movement of shipments from points in Ontario to Quebec and Maritime Provinces was increased by the diversion of 1,641 carloads from the C.P.R. and Grand Trunk Ry. to the Canadian Northern at Toronto, in order to relieve the two former companies' lines between Toronto and Montreal and hasten recovery from conditions arising from the series of severe storms from which the railways suffered in Ontario during January and early February.

Another object sought by the association was the avoidance of a repetition of the shortage of foodstuffs which existed in the Maritime Provinces during the winter of 1916-1917, owing to the heavy movement of overseas supplies, which had to be given preference over the lines east of Montreal, and tended at times to crowd out domestic shipments. With this end in view, cars were transferred from the C.P.R. route from Montreal to St. John to the Canadian Government Railways at Quebec and Ste. Rosalie, the movement of freight to the Maritime Provinces being increased in this way by 1,565 carloads, or approximately 45,000 tons of freight.

Diversions of cars from one line to another similar to those given in detail above were made at Sudbury, Ottawa, North Bay, Winnipeg and Saskatoon.

Handling of Grain, Flour and Coal.—In Western Canada the activities of the association were directed chiefly to keeping up the deliveries of grain and flour to the east, both for domestic consumption and shipment overseas, and maintaining the requisite movement of cars from the Alberta mines. It is admitted that, in the face of a winter of operating conditions of almost unprecedented severity, when locomotives froze upon the road, water supplies disappeared overnight and at times the men remained on duty only at greatest hardship, the demands of the transports and eastern millers were met and coal was delivered to the prairie cities and towns with a regularity and promptness that could hardly have been expected by the uninitiated had they been able to foresee the obstacles which had to be overcome. Preparations which have been made in the for improvements during this summer, will, it is anticipated, permit of a still better service being provided next winter.

The arrangements made by the association's western committee included the distribution of grain and coal cars between lines as they were required regard-

less of ownership, and the same action was taken in the case of water cars when water supplies failed on account of the severe weather, and water for locomotives had to be hauled long distances.

Car Supply.—When the association was formed in October, 1917, one of the first tasks with which it was confronted was the recovery from the U.S. railways of some 20,679 Canadian owned freight cars located in the U.S. in excess of the number of cars of U.S. ownership in this country, that is, the Canadian lines had less than 30% of the number of cars owned by them and required to handle traffic currently. The railways individually had been pressing their U.S. connections to return their cars, but had been unable to make satisfactory progress.

After numerous communications had taken place between the association and the headquarters of the U.S. railways at Washington without the desired result, a committee representing the association proceeded to New York and Washington in an endeavor to establish a working arrangement which would provide for a constant return movement of empty cars from the U.S. to Canada of sufficient magnitude to offset the Canadian losses which had taken place during the previous spring and summer and balance the southbound movement of loaded cars. A result of this conference was an immediate increase in the movement of cars to this country, which continued until the U.S. lines became involved in the aggravated traffic congestions resulting from the unusually severe winter difficulties. The movement was resumed for a time with the advent of more favorable weather and continued until the pressure from Western States, which had millions of bushels of potatoes, corn and grain awaiting cars, became so great that the U.S. Railroad Administration felt it necessary to issue a preference order for movement of empty cars to the lines west of Chicago, which again had the effect of curtailing the deliveries to Canada. Some progress continued to be made however as congestions at U.S. terminals were worked off and delayed cars with freight for Canada reached us. The association was advised by the Car Service Section of the U.S. Railroad Administration that it anticipated a general resumption of the movement of empty cars to Canada early in April.

Following is a table giving particulars of the adverse car balance against Canadian railways on interchange with the U.S. at various dates since Oct., 1917:

	Box cars.	Other cars.	Total cars.
Oct. 1, 1917.....	19,000	1,679	20,679
Dec. 15, 1917.....	19,872	2,247	22,119
Jan. 15, 1918.....	19,898	774	20,672
Feb. 15, 1918.....	16,681	108	16,789
Mar. 1, 1918.....	14,907	3,118*	11,789

*Balance in favor of U.S. lines.

The balance of 3,118 other cars in favor of U.S. railways is accounted for by the heavy receipts of coal cars, principally via the Niagara frontier, many of which had accumulated on U.S. lines during the severe weather and were moved in abnormal numbers when weather conditions improved. These cars have not yet had time to be made empty and return to the U.S. in sufficient numbers to offset the heavy receipts.

As a result of the negotiations between the association and the U.S. railway authorities at Washington, 14,500 empty box cars were ordered to Canada up to

Mar. 20, in addition to empty cars received in the ordinary course of interchange and distributed principally in Eastern Canada, where the demand for equipment for loading to U.S. points is heaviest.

In addition to empty cars ordered and received, as described in the preceding paragraph, 5,800 empties were ordered to the Delaware and Hudson Co. to be loaded with coal for Canadian points, making the total number of extra cars ordered to Canada, 20,300. Of the 5,800 cars, 3,835 had been received to Mar. 20, the total number of the specially ordered cars received therefore, being 14,260.

Aside from the orders which have been issued by Washington to the U.S. railways covering the movement of empties to Canada as above, the association had requests placed at Washington for 11,770 cars which had not been confirmed to the U.S. railways by the Director General's staff when this was written, on Mar. 20, but which they expect to begin to place early in April.

The heavy demand placed upon Canadian railways during the past winter for transportation of foodstuffs and other supplies for overseas has made it extremely difficult to furnish shippers of hay, pulp, pulpwood, newsprint, lumber and other commodities for export to the U.S. with all the cars for which they have asked. The imperative demand for providing an adequate number of cars for war materials and the continued holding of Canadian cars in the U.S. made it necessary last autumn to prohibit the use of Canadian owned box cars for loading to points beyond the Canadian lines and for our U.S. shipments we are dependent upon what U.S. owned cars are obtainable. The situation as regards equipment for shipments going to the U.S. was further aggravated with the close of navigation on the St. Lawrence River and the Great Lakes on account of the larger number of cars required to handle war supplies the greater distance around Lake Superior and between Montreal and the Atlantic seaboard, which meant that a certain number of U.S. owned cars had to be placed in this traffic which prior to this time had been available for loading to the U.S. The opening of navigation this spring permitted the withdrawal of these cars from overseas business and they are now available for loading to U.S. points.

Increased Car Efficiency.—The car shortage with which shippers and railways alike were confronted last autumn, and up to the present time, inability to obtain sufficient additional cars, longer haul of freight during the winter season, increasing traffic, shortage of locomotives and men and necessity for saving coal, called for economy in the use of cars to the greatest possible extent. The association therefore immediately inaugurated a campaign amongst both the shipping public and the railways to ship goods in larger units and thereby reduce the number of cars, engines, men and amount of coal required to move a given amount of traffic. What has been accomplished in this department of the association's activities is outlined in the following figures, showing the average weight of contents per loaded car handled on Canadian railways:

Year 1916	20.91 tons
October, 1917	20.76 "
January, 1918	23.71 "

Taking the Canadian Railway Statistics for the year 1916 as a basis, the increase of approximately three tons a car means that if the record is maintained during 1918, as we have every reason to expect

it will, if not improved upon, 260,663 less car trips will be required this year to handle the number of tons of freight loaded on Canadian railways equivalent to that loaded in 1916 than were required in the latter year. The haulage of that number of cars less to handle the same amount of freight means a saving of approximately 79,000 tons of coal, 13,271 less trains, the use of 122 locomotives and the time of 350 locomotive men and trainmen during the year. Further effects of reduction in the number of cars to be handled will be seen in more expeditious handling of traffic in terminals and a general improvement in transportation conditions in this country, which even now are admitted to be better than in any other country of size engaged in war work.

The campaign for increased loading of cars embraces not only carload traffic, which is controlled to a very great extent by shippers, but to less than carload shipments as well, the handling of which is performed by railway employees. A few months ago a revised plan of handling of this class of traffic was inaugurated with a view to not only reducing the number of cars required, but eliminating rehandling at intermediate points which took place under the old methods, and at the same time delivering the goods at destination in less time. Under this system it is anticipated that the average weight of contents of l.c.l. cars will be increased from about 11,000 lb., as it was formerly, to at least 14,000 lb. For January, when the new system was but partially adopted the record was 12,459 lb. This improvement in car service will mean a saving of approximately 10,000 cars a month.

The general use of interline billing of cars received attention. Under this system a car moving over two or more lines may travel through from shipping point to destination on the original billing, instead of having to be held at junction joints for the preparation of new papers. The adoption of the new system, while meaning radical changes in the accounting methods of some of the railways, is being placed in operation. It is estimated that the delay to cars at junction points which will be avoided is about 500,000 car days a year, and the elimination of this delay represents the service of 44,754 cars.

Fuel Conservation.—The efforts of the individual lines to economize in the use of coal were co-ordinated at the formation of the association, and advantageous methods which had existed on one line were circulated amongst others so that the saving in consumption might be increased. The greatest room for fuel conservation, however, was to be found in connection with passenger services, which, during a period years, had grown through competition, and to that phase of transportation special attention was directed. Frequent conferences of the association's committee on passenger transportation have been held, and this committee has painstakingly analyzed the services throughout the Dominion so that unnecessary or duplicate services might be dispensed with and trains on the various lines re-arranged so that reductions made would cause the minimum inconvenience to the travelling public.

Further savings in coal were made through the reduction of speed of both passenger and freight trains, discontinuance of the operation of special passenger travel by elimination of reduced rates and excursions, fully loading freight trains and cars. As a result of arrangements made up to this time, on a per an-

num basis, the reductions in passenger trains are equivalent to 8,000,000 passenger train miles, representing about 400,000 tons of coal, in addition to 100,000 tons additional through increased efficiency in the handling of freight.

Summary.—Following is a summary of what the association has accomplished:

Fuel conservation—Saving through reduced passenger services and heavy loading of cars and trains during this year under practices now in vogue (estimated), 500,000 tons.

Increased movement of freight by diversions during congestions arising from unusually severe winter weather, 516,565 tons.

Increase in delivery of empty box cars from United States to Canada under arrangements made by association, 14,260.

Estimated increase in car efficiency during this year through improved handling and heavier loading of cars equivalent to 300,000 car trips.

Freedom from serious congestion in both eastern and western Canada such as was experienced in the winter of 1916-1917, and in the U.S. during the winter of 1917-1918.

Prompt filling of requirements of overseas transports at ports served by Canadian railways.

Increase in coal deliveries to Canada from U.S., 285,000 tons.

Canadian Government Railways Coal Supplies.

The Minister of Railways gave the following information to the House of Commons recently:—During the year ended Mar. 31, there were purchased in the U.S. for the Canadian Government Railways 568,971 net tons of coal, which were delivered at St. John, N.B.; Quebec, St. Hyacinthe, St. Lambert and Montreal, Que., and at Fort William, Ont. The prices paid per net ton at the points of delivery were:—At Montreal, St. Lambert and St. Hyacinthe, average price, \$6.90 a net ton, f.o.b. cars, all charges paid, including duty and war tax. At Quebec, average price a net ton, \$7.85, delivered f.o.b. cars, all charges paid. At Fort William, Ont., prices, \$5.35½ to \$5.50½ a net ton, delivered f.o.b. cars, all charges paid. Special purchases made owing to coal shortages: At St. John, N.B., 9,352 tons at \$6.40 a net ton, delivered f.o.b. piers, Port Richmond or Greenwich, Pa. This coal was carried by boats owned by the department. For delivery at Fort William, 80,000 tons at \$4.75 a net ton, delivered f.o.b. mines, U.S. points—cost delivered f.o.b. cars at Fort William, average price \$7.44 a net ton, all charges paid.

Of the coal delivered at Montreal, 32,179 tons were transported to points east of that place, the furthest being Campbellton, N.B., 406 miles, at a cost of \$1.65 a ton; the average haul being 108 miles at an average cost of 45c a ton. The price per ton paid to Nova Scotia coal mines for coal during the same year were: \$3.79, \$4.13, \$4.25 and \$4.50 a net ton for run-of-mine coal, and 22.4c a ton additional for screened coal.

Western Grain Routes.—The Senate passed a resolution recently for copies of any representations that have been made to the Government as to the alleged diversion of two-thirds of Canada's western grain trade to Buffalo, New York and other United States seaports, for export, and showing the steps taken by the government to turn this traffic to Canadian seaports.

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

Alberta & Great Waterways Ry.—J. D. McArthur, president, on returning to Winnipeg, May 3, after a trip of inspection over the line, is reported to have said that the washed out section at Clearwater River had been temporarily repaired, and will be permanently put in order before August, by which time it is expected to complete track laying into McMurray, Alta. It is also hoped to have the line fully ballasted by the autumn. A. McGregor is the sub-contractor on the work. It is not intended to start any further construction at present. (June, pg. 240.)

Algoma Central & Hudson Bay Ry.—A press report, June 5, states that owing to heavy floods two bridges, a considerable piece of line, etc., have been carried away, and that traffic has been suspended pending temporary repairs.

Burrard Inlet Tunnel & Bridge Co.—The Dominion Parliament has granted an extension of time for two years for starting construction on this projected undertaking. The application for the extension of time was made by the municipalities forming the company in order to protect their interests in the project, upon which they have spent some \$200,000 upon plans for a bridge across the second narrows of Vancouver Inlet and certain preliminary work in connection therewith. (Jan., pg. 12.)

Canadian Niagara Bridge Co.—The Dominion Parliament has incorporated a company with this title to build a railway and general traffic bridge across the Niagara River with approaches and terminal facilities. The Canadian end of the bridge is to be located in Bertie or Welland Townships, between Chippewa and Fort Erie, Ont. The provisional directors are: Lord Shaughnessy, Montreal; J. N. Beckley, Rochester, N.Y.; E. S. Cahill, Hamilton, Ont.; W. P. Torrance, Toronto. (May, pg. 186.)

Central Canada Ry.—The steel for the superstructure of the bridge across the Peace River at Peace River Landing is being delivered and the preliminary work for its erection is well advanced. It is proposed at present to plank over the railway bridge so as to permit vehicles and foot passengers to cross it, and provision has been made so that when traffic warrants it brackets can be put into position to carry roadway and footpaths. It is expected to have the grading on the 15-mile extension from the further side of the bridge ready for track laying in the autumn. Tracks will not be laid until the completion of the bridge, some time in the spring of 1919. The Dominion Parliament at its recent session voted \$175,000 towards the construction of the bridge referred to above. (May, pg. 186.)

Edmonton, Dunvegan & British Columbia Ry.—No further new construction will be done this season, but it is expected to have the ballasting to Spirit River and to Grande Prairie City fully completed by the autumn. (June, pg. 240.)

The International Bridge & Terminal Co., which was incorporated by the Dominion Parliament in 1905 to build a bridge across the Niagara River near Niagara Falls, Ont., and to lay out terminals there, in conjunction with a United States company, has now been given power by the Dominion Parliament to connect its bridge with any railway lines now built or hereafter to be built, and to build branch lines, not exceeding in any

one case 6 miles, and to issue bonds for \$40,000 a mile of such lines. (April, pg. 147.)

Intercolonial Ry.—Tenders are under consideration for the construction of a piece of railway 2.7 miles long from Moffatt station, on the I.C.R. main line, to a junction with the International Ry. of New Brunswick, near Christopher, about 7 miles from Campbellton, N.B.

Kettle Valley Ry.—The Dominion Parliament has extended for two years the time within which the company may start building a branch from Penticton to the International Boundary at Osogoos Lake; a line to the Copper Mountains and Voight Mining Camp, 15 miles southwest of Princeton; a line from Vernon to Kelowna and Penticton, a line from near Tulameen for 50 miles up the Tulameen River Valley, and a line from Otter Summit to Aspen Grove mineral district, 30 miles.

We are officially advised that the contract let to W. P. Tierney, Vancouver, for construction of the Copper Mountain Branch from Princeton, B.C., covers clearing the right-of-way and grading and building bridges. The contractor started work at the end of April. It was reported that some sub-contracts would be let. The track laying and ballasting will be done by the company by day labor.

A press report states that the company has purchased the buildings at East Princeton, formerly used as a cement plant, and will convert them into repair and machine shops, and that a spur line is to be built to connect them with the main line. (June, pg. 240.)

Montreal, Joliette & Transcontinental Ry.—The Dominion Parliament has incorporated a company with this title to build a railway from Montreal, northerly through the counties of Hochelaga, L'Assomption, and Montcalm to Joliette, thence northwesterly to St. Michel des Saints, Berthier County, and thence to a junction with the National Transcontinental Ry., 180 miles. The provisional directors are:—E. J. Walsh, T. F. Delaney, H. S. Short, C. W. Butler, L. J. Kehoe, Ottawa.

The Joliette & Lake Manuan Colonization Ry. Co., which had power to build through the same territory, went into liquidation some time ago, and its assets were offered for sale under a court order in Sept., 1917. (April, pg. 146.)

Port Canada Docks Ry.—The New Brunswick Legislature has extended until 1920 the time within which the company may build its projected railway from L'Etang Harbor to St. Croix, N.B. (April, pg. 146.)

St. John & Quebec Ry.—At a meeting of directors at Fredericton, N.B., June 6, dissatisfaction was expressed with the progress being made by the Nova Scotia Construction Co. on the section of the line in progress, and a resolution was passed calling upon the contractors to complete the work by Oct. 31. (April, pg. 147.)

Toronto Terminals Ry.—Work on the new union station on Front St., Toronto, is being gone on with rapidly. The exterior stone work was completed May 28, with the placing in position of the final stone of the coping, and the interior stone work was started in June. About 15,000 cubic ft. has to be put in position in the ticket lobby. Other work has been in progress continuously, and it is expected that the building will be ready

for occupancy to some extent in September. (Dec., 1917, pg. 471.)

Van Buren Bridge Co.—The Dominion Parliament has confirmed an agreement between the Railways Department and the company under which the department leases certain lands owned by the Bridge Co. lying between the International Ry. of New Brunswick and the National Transcontinental Ry. at St. Leonards, N.B., and the track thereon, to Aug. 1, 1934, for \$1,200 a year. The object is to rearrange traffic on the International and the National Transcontinental at St. Leonards by concentrating it at the National Transcontinental station. (June, pg. 248.)

Rules for Wires Erected Along or Across Railways.

The Board of Railway Commissioners passed general order 231 May 6 as follows:—Upon the recommendation of the board's Electrical Engineer, it is ordered:

1. That the conditions and specifications set forth in the schedule hereto annexed, under the heading, "Rules for wires erected along or across railways," be adopted and confirmed as the conditions and specifications applicable to the erection, placing, or maintaining of electric lines, wires or cables along or across all railways, part 1 being applicable where the line or lines, wire or wires, cable or cables, is or are carried along or over the railway; part 2 being applicable where the line or lines, wire or wires, cable or cables, is or are carried under the railway.

2. That any order of the board granting leave to erect, place, or maintain any line or lines, wire or wires, cable or cables, along or across the railway and referring to "Rules for wires erected along or across railways," shall be deemed as intended to be a reference to the conditions and specifications set out in that part of the said schedule which is applicable to the mode of crossing authorized.

3. That any order of the board granting leave to erect, place, or maintain any line or lines, wire or wires, cable or cables, along or across any railway subject to the jurisdiction of the board, shall, unless otherwise expressed, be deemed to be an order for leave to erect, place and maintain the same according to the conditions and specifications set out in that part of the said schedule applicable thereto, which conditions and specifications shall be considered as embodied in any such order without specific reference thereto, subject, however, to such change or variation therein or thereof as shall be expressed in such order.

4. That general order 113, Nov. 5, 1913, approving of "Rules for wires crossing railways," and the conditions and specifications adopted thereby, be rescinded.

Want of space prevents the publication of the rules here. They can be obtained from the board, at Ottawa.

U. S. Government Operation of Short Lines.—The Director General of Railroads has requested Congress to extend the time for the Government to take over short lines, from July 1 to Jan. 1. He also informed the Senate recently that no agreements had been reached with any railway taken over by the government, as to the rate of compensation to be paid, and that no carrier had declined to execute contracts.

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

Canadian Railway and Marine World is desirous of publishing all the information possible about the war work of Canadian transportation men, engineers, etc., and invites its readers to send in information for use in this connection. No doubt a large number of our readers receive many letters from the front, etc., extracts from which would prove of interest in these columns. We should be glad to be favored in this respect.

Canadian Railway Troops' Work.—A London, Eng., cablegram says: Canadian Railway troops working under machine gun fire, within 600 ft. of the Hun line, have removed nearly 20 miles of standard rail track which is being relaid for a new strategical spur in the fresh zone. Australians and Canadians worked together in accomplishing this. The Australians carried out successful raids which made it possible for the Canadian Railway Troops to get at this line, which previously had been for some time behind the front of the German posts, owing to the British line having been forced back. Each night the Canadians quietly hauled off hundreds of rails, the Australians meanwhile stalking out against the Hun machine gun post. The Canadian Railway Troops were in the heavy fighting in the northern sector, and gained special mention in French orders.

One of the most noted French generals issued the following order:—I wish to express my appreciation and admiration of the splendid way in which ammunition was brought to our guns, and the rapidity with which the old lines were repaired, and new ones constructed.

PERSONAL NOTES.

Lieut. F. X. Amoss, Canadian Railway Troops, who was awarded the Military Cross recently, was in charge of a party engaged on railway work, which suffered severe casualties during an enemy bombardment. After bringing his wounded men back to a place of safety, he found that one man was missing. He went back through intense shell fire, found the man, who was unable to move, and conveyed him to safety. His good judgment and cool behavior saved many casualties.

Wm. M. Armstrong, formerly Locomotive Foreman, Canadian Northern Ry., Edmonton, Alta., and later at Port Mann, B.C., who enlisted with the Canadian Railway Troops, and left Canada early in 1917 for France, with the rank of sergeant, has been given a commission as a lieutenant, and is still in active service.

Lieut. J. Bourke, Canadian Railway Troops, who was decorated with the Military Cross recently, was engaged on urgent railway construction, and so encouraged his men by his splendid example, that the work was completed under heavy shell fire. On one occasion, during a heavy bombardment, after ordering his men back to a safer place, he found that two men were missing, and at once went back, through intense shell fire, found the men, who were suffering from shock, and brought them to safety, showing great coolness and resource.

D. M. Brown, at present on active service overseas, and who has been elected an associate member of the Engineering Institute of Canada, was, from 1906 to 1913, in Grand Trunk Pacific Ry. service, and from 1913 to 1916 with the Edmonton, Dunvegan & British Columbia Ry.

Major Maurice Burbank, Canadian Railway Troops, has been given the Distin-

guished Service Order. He completed two bridges in 10 hours, under heavy shelling and bombing, and superintended the withdrawal of large quantities of railway material across a river, showing magnificent skill and dash in a most difficult situation.

F. D. Burpee, Superintendent, Ottawa Electric Ry., who was granted extended leave of absence, for military service, and went overseas towards the end of 1916, as Major in command of No. 1 Company, 207th Battalion, subsequently reverted in rank, in order to get to France, and was attached to the Canadian Railway Troops as a temporary lieutenant. He has now been gazetted as acting captain.

Capt. Michael Chapman, M.C., reported recently as killed in action in France, was at one time President of Chapman and Walker, Ltd., electrical engineers, Toronto, and prior to that was in Canadian General Electric Co.'s service.



Lieut. R. S. Richardson, No. 13 Light Railway Company, R.E., British Expeditionary Force, formerly Superintendent, Canadian Government Railways, Fort William, Ont., placing a wreath on the grave of Lieut. Bruce H. A. Burrows, 12th Field Company, Canadian Engineers, in Bapaume Military Cemetery, Albert, France, Nov. 25, 1917, on the first anniversary of the latter's death.

Norman P. Dalziel, formerly Assistant Controller, Canadian Northern Ry., who has been with the Imperial Munitions Board at Ottawa, since early in the war, has been made an officer of the Order of the British Empire.

D. N. Gill, heretofore Purchasing Agent, Ottawa Electric Ry., Ottawa, Ont., is training at Niagara camp, Ont., preparatory to going overseas to join the Canadian Railway Troops.

Lieut.-Col. J. A. Hutchison, who has been appointed Consulting Surgeon, Canadian Army Medical Corps, in London, Eng., is Chief Medical Officer of the G.T. R. He has been overseas since 1916, and was, for some time, attached to No. 1 Canadian General Hospital at Etaples, France, as Consulting Surgeon. In the same year he was appointed acting Com-

manding Officer and Chief Surgeon of that hospital. After about a year of service in France, he was called to England as Chief Surgeon of the Moore Barracks Hospital, Shornecliffe, and Consulting Surgeon for the Folkestone area.

H. A. Irving, formerly chief clerk to Superintendent, Canadian Government Railways, Fort William, Ont., is serving in France with the Canadian Railway Construction Corps.

F. E. Jackson, formerly Chief Dispatcher, Canadian Government Railways, Graham, Ont., is serving in France, with the Canadian Railway Construction Corps.

Lieut. H. Kennedy, of the Canadian Engineers, was awarded the Military Cross recently for conspicuous gallantry and devotion to duty, in repairing a railway track in spite of very heavy barrage, which broke the track afresh in many places. The work took six hours to complete, during which he was twice blown up by shells and partially buried.

Lt.-Col. W. B. Kingsmill, of Saunders, Torrance and Kingsmill, Toronto, solicitors, Michigan Central Rd., who went overseas in command of the 123rd Battalion from Toronto, has been given the Distinguished Service Order.

Lt.-Col. D. E. MacIntyre, D.S.O., M.C., reported wounded recently, is a son of the late D. F. MacIntyre, railway contractor, and prior to enlisting was in C.P.R. service, being engaged on construction on western lines. He went overseas with a Saskatchewan regiment in 1915, and was awarded the Distinguished Service Order in Mar., 1916, and the Military Cross in Nov., 1916. He was in command of a party, who, in the earlier stages of the war, went out on a wire cutting expedition with blackened faces, which is mentioned as one of the earliest uses of camouflage in the war.

Capt. Clarence Marpole, who left Canada with the 239th Railway Construction Corps in 1915, and was later transferred to the 3rd Canadian Railway Transport in France, returned to British Columbia early in June on a short furlough.

Lt.-Col. L. T. Martin, D.S.O., who was mentioned in dispatches recently, commands the 7th Canadian Railway Troops. Prior to the war he was in with railway construction work, as a partner in O'Brien and Martin, and is a director of Great Lakes Dredging Co., Thunder Bay Contracting Co., Port Arthur, Ont., and Kennedy Construction Co., Montreal. He was born at Arnprior, Ont., June 11, 1884, and in 1901 was instrument man on the Timiskaming and Northern Ontario Ry., North Bay, Ont.; 1905, Resident Engineer, same road, Englehart, Ont.; 1906 to 1911 contracting on the National Transcontinental Ry.

E. McDonald, General Baggage Agent, Canadian Government Railways and Grand Trunk Pacific Ry., Winnipeg, has enlisted for overseas military service.

Lt.-Col. C. H. Mitchell, C.M.G., D.S.O., of Toronto, who has won great distinction in the intelligence branch on the western front, and who was appointed to the British staff on the Italian front towards the end of 1917, has been made a Companion of the Bath, for services in Italy.

Lieut. Bernard Moberly, of the Canadian Railway Construction Corps, and son of Frank Moberly, M.Can.Soc.C.E., Barrie, Ont., is reported missing since Mar. 25.

Major Leslie Mower, Canadian Rail-

way Troops, has been awarded the Distinguished Service Order for showing great skill and judgment in handling his company amid intense fire, and keeping the lines open until being ordered to withdraw. He then brought back all the railway stock and stores.

W. R. Smith, who is, at present, at the Engineers' Training Depot, St. John's, Que., as a lieutenant, was formerly a resident engineer on the Edmonton, Dunvegan & British Columbia Ry.

W. H. Stewart, formerly Assistant Superintendent, C.P.R., Farnham, Que.,

who has been with the Imperial Munitions Board for two and a half years, first at Ottawa and latterly at Washington, has been appointed Assistant Director of War Supplies, British War Mission, at Washington, D.C.

Lieut. B. L. Reid, Canadian Railway Troops, was awarded the Military Cross recently, for conspicuous gallantry and devotion to duty when in charge of a repair party maintaining a railway track. The track was broken in 28 places, and he succeeded in repairing all the breaks under heavy shell fire.

Notes to Steam Railway Statistics.

(1) The Bedlington & Nelson Ry. was abandoned and the track removed in 1916.

(2) The Detroit River Tunnel is operated by the Michigan Central Rd., which controls the Canada Southern Ry.

(3) The Inverness Ry. & Coal Co. is operating its railway in Nova Scotia, but no particulars except mileage are given in the statistical table. The Klondike Mines Ry. in Yukon Territory; the North Shore Ry. (formerly the Beersville Coal & Ry. Co.), in New Brunswick, and the Northern New Brunswick & Seaboard Ry. are not being operated.

(4) The Magnetawan Ry. and the St. Clair Tunnel are operated by the Grand Trunk Ry. The earnings of the first named are included in those of the G.T.R., while those of the tunnel are reported in a separate table.

(5) The Nobonsing & Nipissing Ry., 5.50 miles, was taken up several years ago.

(6) The Wabash Ry., while operating in Canada, does not own any railway in the country, but runs over the G.T.R. from Windsor to the Niagara River under a lease. It does both a through and local business in Canada, the officials and agents acting jointly for the G.T.R. and Wabash Ry.

International Railways:—The Dominion railways statistics for the year ended June 30, 1917, contain a new table giving information as to the following companies, all of which are of an international character, operating across the International Boundary. The Detroit River Tunnel is owned by the Michigan Central Rd.; the International Bridge Co. and the St. Clair Tunnel are owned by the Grand Trunk Ry., and the Pullman Co. operates sleeping and parlor cars over several lines in Canada.

	Total revenue.	Total operating expenses.	Total operating revenue.
Detroit River Tunnel.	\$1,050,000		\$1,050,000
International Bridge Co.	447,908	\$52,855	395,052
St. Clair Tunnel	339,618	135,107	244,510
Pullman Co.	865,668	487,589	378,078
Van Buren Bridge Co.	18,275	8,408	9,866

Steam Railway Statistics for Year Ended June 30, 1917.

Tables prepared by the Comptroller of Statistics, of the Railways Department at Ottawa, as to steam railway operations in Canada for the year ended June 30, 1917, give the following details:—

	Operating Mileage.	
	1916-17.	1915-16.
Ontario	11,049	11,320
Saskatchewan	6,124	5,378
Quebec	4,734	4,733
Alberta	4,444	3,894
Manitoba	4,194	4,310
British Columbia	3,885	3,604
New Brunswick	1,959	1,957
Nova Scotia	1,422	1,436
Prince Edward Island	278	275
Yukon	102	102
United States	413	426
Total	38,604	37,434

An additional 37.98 miles of second track and of 828 miles of yard track and sidings were laid during 1916-17, against 186 miles of second track, and 828 miles of yard track and sidings in 1915-1916.

	Capitalization.	
	June 30, 1917.	June 30, 1916.
Stocks	\$ 872,829,993	\$ 848,269,488
Consolidated debenture stock	216,284,882	176,284,882
Funded debt	896,005,116	869,323,449
Total	\$1,985,119,991	\$1,893,877,819

Cash subsidies paid during 1916-1917 amounted to \$774,285.68, against \$1,240,434.97 during 1915-1916. The total amount of guaranties authorized is \$407,092,064.

	Passenger Traffic.	
	1916-1917.	1915-1916.
Passengers carried	53,749,680	49,027,671
Passengers carried 1 mile	3,150,127,428	2,727,122,648
Passengers per mile of road	79,829	72,611
Passengers per mile of line	1,326	1,309
Receipts per passenger per mile (cents)	1.946	1.954
No. of passengers per train	59	53
No. of passengers per car	16	14
No. of cars per passenger train	5.7	5.5
Passenger journey (miles)	59	54

	Freight Traffic.	
	1916-1917.	1915-1916.
Products of agriculture	25,127,453	27,105,711
Products of animals	3,980,887	3,906,359
Products of mines	42,534,637	37,850,084
Products of forest	19,090,682	16,558,529
Manufactures	21,921,309	16,867,782
Merchandise	6,070,858	4,622,224
Miscellaneous	3,151,203	2,748,399
Undistributed	39,244	
Total freight carried	121,916,272	109,659,088

Tons carried 1 mile	31,186,707,851	28,195,364,264
Tons carried 1 mile per mile of line	807,946	753,202
Receipts per ton per mile, cents	0.690	0.653
Average train load, tons	436	411
Loaded cars per train	19.59	19.65
Tons per loaded car	22.24	20.91
Average haul, miles	256	199

	Earnings and Expenses.	
	1916-1917.	1915-1916.
Gross earnings	\$313,492,949	\$263,527,157
Less earnings by units		

like Pullman Co.	2,721,470	1,638,504
Gross earnings used for returns	\$310,771,479	\$261,888,653
Operating expenses	\$222,890,637	\$180,542,258

	Analysis of rail line earnings.	
	1916-1917.	1915-1916.
Freight	\$215,245,256.49	\$184,099,887.30
Passengers	61,290,290.70	53,097,642.59
Excess baggage	569,566.07	478,393.91
Sleeping cars	2,832,750.58	2,478,864.56
Parlor and chair cars	268,875.33	259,622.10
Mail	3,169,910.97	3,049,539.96
Express	8,999,073.85	6,845,234.69
Other passenger trains	72,110.40	60,728.85
Milk	538,486.82	493,234.12
Switching	2,380,706.18	1,706,280.33
Special service		
trains	113,832.01	94,954.08
Other freight trains	27,652.04	108,893.40
Water transfer freight	41,518.50	
Total	\$295,550,029.94	\$252,773,275.89

	Distribution of operating expenses.	
	1916-1917.	1915-1916.
Way and structures	\$41,154,193.11	\$36,040,945.06
Equipment	46,371,178.39	35,822,494.20
Traffic	6,236,810.91	5,560,515.12
Transportation rail	114,327,393.71	92,882,661.24
Transportation water line	3,271,892.62	184,824.13
Miscellaneous operations	3,962,543.94	3,279,588.42
General expenses	7,584,881.55	6,781,574.19
Transportation for investment (Cr.)	18,207.15	10,333.38
Total	\$222,890,637.08	\$180,542,258.98

	Train mileage.	
	1916-1917.	1915-1916.
Passenger trains	44,083,575	42,449,022
Freight trains	62,863,724	60,036,984
Mixed trains	8,746,811	8,499,073
Special trains	102,990	90,811
Total mileage	115,797,100	111,075,890

	Equipment.	
	1916-1917.	1915-1916.
Locomotives	5,626	5,490
Passenger cars	6,377	6,326
Freight cars	203,499	201,614
Cars in companies' service	18,641	17,708

	Accidents.			
	Killed.		Injured.	
	1916-17	1915-16	1916-17	1915-16
Passengers	24	20	410	291
Employees	177	149	1909	1455
Trespassers	150	191	124	141
Non-trespassers	64	77	193	158
Postal clerks and others	4	—	46	13
Totals	419	437	2682	2058

Canadian Northern Ry. Freight Clerks, Etc.—A board of conciliation and investigation has been appointed to deal with a dispute between the company and its freight clerks, etc., the members being Chief Justice Mathers, Winnipeg, chairman; C. E. Dafeo, Winnipeg, representing the company; and F. Urry, Port Arthur, Ont., representing the employees.

The Board of Railway Commissioners concluded its western sittings at Winnipeg, June 17, and left the same evening for eastern points.

The Dominion Power Board has been constituted for the purpose of co-ordinating the activities of all the government departments in the investigation of fuel and power resources of the Dominion. It consists of Hon. A. Meighen, Minister of the Interior, chairman; A. St. Laurent, Assistant Deputy Minister of Public Works, vice chairman; C. N. Monsarrat, Consulting Engineer, Department of Railways and Canals; W. J. Stewart, Consulting Engineer, Department of External Affairs, regarding International Waterways; John Murphy, Electrical Engineer, Department of Railways and Canals and Board of Railway Commissioners; H. G. Acres, Chief Hydraulic Engineer, Hydro Electric Power Commission of Ontario; O. Higman, Chief Electrical Engineer, Department of Inland Revenue; D. B. Dowling, Geologist, B. F. Haanel, Chief Engineer, Fuel Testing Division, Department of Mines; and J. B. Challies, Chief Engineer and Superintendent Water Power Branch, Department of the Interior, who acts as Secretary.

The Grand Trunk Ry. has entered into an agreement with the Quebec, Montreal & Southern Ry. by which there will be a joint use of the G.T.R. tracks between Napierville and Noyan Jct., Que. The agreement, which is dated Sept. 26, 1917, has been deposited with the Secretary of State at Ottawa only recently.

The Canadian Railway War Board's Work.

Accidents to Employes Switching.—The board does not think that the adoption of an additional rule, as suggested by the Board of Railway Commissioners recently, would be beneficial. Every endeavor is being made to enforce employes compliance with existing regulations. Safety first departments, and local officers of railways, have been directed to bring forcibly before the employes the fact that the latter must not be on the track unnecessarily and that when their work calls for their being so located a sharp look out for approaching trains must be maintained.

Cars Owned in Canada.—In the case of Canadian owned cars being received by a Canadian owned line, on car service section orders, for furtherance to another railway, the board considers that such cars, if belonging to the line receiving them should be retained, or if not belonging to the line receiving them should be forwarded to the owner without undue delay, in accordance with car service rules governing in Canada. Such diversions leaving a deficit in the orders as placed by the car service section, a report of the principal cars diverted, with full particulars of the order concerned, should be reported to the board so that the matter may be adjusted with Washington.

It having been reported that arrangements are in effect whereby Canadian owned cars are being placed for loading shipments to U.S. points, and that goods on arrival at boundary points are being transferred to foreign cars, it is the board's opinion that, in view of the present plentiful supply of U.S. cars, such arrangements should be cancelled.

As Canadian owned box cars are being loaded to U.S. points, contrary to instructions, by certain member lines, and the cars are accepted by the Canadian connections of such lines, the previous instructions have been amended to prohibit the acceptance by any member line of a Canadian owned car from a connection coming within the board's jurisdiction, loaded to a point in the U.S. in violation of existing regulations. The responsibility and expense of transferring the goods to a U.S. owned car will then devolve upon the railway at fault. This applies to cars offered in switching as well as road haul service.

Cars owned in United States.—The Canadian Fuel Administration has communicated with the board as to still further accelerating the return of coal cars to the U.S., and as some of the railways are still using these cars for return loading, which in many instances results in the equipment travelling long distances from coal mining territory, the board has again pointed out to lines at fault, the urgent necessity for expeditious return of cars to mines, and has notified the lines that their connections have been directed to refuse coal cars used for return loading in violation of the board's regulations. Steps have been taken to stop the practice of some industrial organizations, of using railway owned open top cars in intra-plant service, when such cars are needed for road haul movement of coal, ore, steel, etc.

Custom Delays.—Steps have been taken to have customs offices remain open on Saturday afternoons, Sundays and holidays, where necessary to avoid delay to traffic, and in the case of reputable firms for placing of customs cars for delivery on arrival at destination without waiting for clearance.

Demurrage.—In reference to the board's ruling on April 29 that demurrage is not properly assessable where shipper was unaware of embargo at time of commencement of loading of car, it has been learned that the practice on U.S. lines calls for assessment of demurrage where car is loaded or partly loaded in violation of embargo and bill of lading not signed by railway representative. It is felt that the adoption of a similar rule in Canada would greatly reduce delays to cars containing embargo shipments.

Exemptions for Railway Employes.—Reports having been made by a number of member lines, that there is danger of their operations being seriously impeded by the large number of employes drafted for military service, or who are enlisting voluntarily in anticipation of being drafted, the board decided to present the matter to the Dominion Government, and to seek exemption for railway employes to the extent necessary to ensure satisfactory handling of the country's commerce.

Explosives on Passenger Trains.—Application having been made that the regulations for movement of explosives by express in case of emergency remain as heretofore, the board feels that there is danger to passengers' lives when explosives are moved on passenger trains. If an emergency should arise, calling for express service in the movement of explosives, the shipment should be handled by special train.

Extra charges on freight diverted on account of congestion of billed route. Protests having been made against the charging of additional tolls for extra movement of diverted traffic, consignees contending that as the congestion which resulted in diversion was not due to any fault of theirs, the rate applicable via original or billed routing should govern, the board holds that when more freight is billed via a certain route than can be handled currently, action has to be taken to relieve congestion, either by embargo or diversion of overflow traffic to open route, and that as consignees undoubtedly benefit by having their goods delivered by some route other than that designated on the billing, rather than to have the movement shut off entirely by placement of embargo, a reasonable charge for extra services performed by the railways can be properly and justly assessed.

Competition for Labor.—Member lines have been requested to instruct superintendents and other officers to refrain from competing for employes, by offering increased rates of pay or shorter hours, in view of the interference with railway work and the unrest among labor that would be caused thereby.

Returned Soldiers Rates.—The Soldiers Employment Commission, having applied for reduced railway rates for returned soldiers travelling to take up farms, and for their effects, the board has declared itself in sympathy with any movement aiming to facilitate the settlement of returned soldiers on the land, and will deal with any properly established organization, recognized by the Dominion Government as such, on the question of reduced rates, etc.

Special Trains.—Several applications for running of special passenger trains for picnics, business excursions, etc., have been refused recently, it being felt that departure from the general policy of avoiding special passenger train movement, except in cases of extreme urgency, could not be made without creating a

precedent which would in all probability result in the operation of special trains for various other objects. The running of special trains to carry circuses has also been refused.

Suspension of M.C.B. Rules.—The U.S. Railroad Administration, having suspended the M.C.B. rules, governing interchange of cars, handling of repair bills, and similar matters, J. Coleman, Superintendent, Car Department, G.T.R.; C. W. Van Buren, General Master Car Builder, C.P.R., and G. E. Smart, Superintendent, Car Department, Canadian Government Railways, have been appointed a sub-committee to consider and recommend to the administrative committee what action should be taken to protect the interests of Canadian lines.

Vestibule Doors, Platforms, Guard Rails, etc.—The Canadian Railway War Board is not in favor of the Board of Railway Commissioners' proposed regulation, to require that on trains making frequent stops, vestibule doors and platforms are to remain open, and considers that, in the interest of safety of passengers, it is as necessary to have doors and platforms on local trains closed between stations as on through trains. Railway officials having practical knowledge in the matter do not consider the Board of Railway Commissioners' proposal feasible.

Wages of Railway Employes.—The negotiations between the railways, represented by a sub-committee of the board, of which S. J. Hungerford, General Manager, Eastern Lines, Canadian Northern Ry., is chairman, and representatives of car and locomotive shop employes, which was referred to in Canadian Railway and Marine World for June, page 238, were resumed at Montreal during June. No result had been announced up to the time of writing (June 22).

The board is prepared to give consideration to the establishment of equivalent working conditions and rates of pay in Canada, to those allowed in corresponding territory in the U.S., but arrangements to be made now with the Federation Trades Committee will refer only to war time conditions and during the war only. The board is willing for present yearly agreements to be amended to permit of cancellation upon 30 days notice by either party.

It is probable that in order to deal effectively with minor and local questions which may arise after the adoption of arrangements which may be made between the sub-committee on wage agreements and representatives of the railway employes' unions, an adjustment committee, somewhat similar to Railway Board of Adjustment No. 1, as described in the Director General of U.S. Railroads order of Mar. 22, will be appointed in Canada, to consist of four representatives of the railway companies and four employes' representatives, with an independent referee.

Geo. Hodge, Assistant to General Manager, Eastern Lines, C.P.R., and Robt. Patterson, representing the G.T.R. on the board's sub-committee on wage agreements, visited Washington recently to ascertain first hand the status of the U.S. wage situation.

The Toronto Transportation Club has decided not to hold its annual outing this year, on account of the abnormal conditions and the restrictions in many directions.

Steam Railway Statistics for Year Ended June 30, 1917.

In the following table the column head gross earnings includes passenger and freight earnings, as well as miscellaneous earnings from operation; the latter not being shown separately; the next four columns give the operating expenses classified under their various headings, while the last gives the net operating earnings, which are arrived at by deducting the totals of the four columns referred to from the figures in the gross earnings column. The minus (—) mark before figures in the net columns shows that there was a deficit in the operation of the line to the extent of the figures given. The cents have been omitted in all cases, and the figures in the totals show the aggregate earnings, etc., including the cents, omitted from the detailed items.

Name of Railway	Mileage	Passenger earnings	Freight and switching earnings	Gross earnings from operations	Maintenance of way and structures	Maintenance of equipment	Traffic and transportation expenses, etc.	General expenses	Net operating earnings
Alberta & Great Waterways.....	113.20	\$ 22,176	\$ 32,994	\$ 61,992	\$ 21,801	\$ 16,754	\$ 57,106	\$ 5,675	—39,345
Algoma Central & Hudson Bay....	347.80	70,949	809,003	1,156,478	286,489	147,253	416,292	119,476	186,996
Algoma Eastern.....	89.45	46,183	537,042	626,640	72,765	82,213	183,926	16,715	271,020
Atlantic, Quebec & Western.....	103.08	38,039	99,331	139,421	46,887	21,977	67,564	16,309	—13,316
Bedlington & Nelson (1).....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brandon, Saskatchewan & H.B....	69.45	22,405	20,845	48,107	60,145	16,235	51,994	4,125	—84,391
British Yukon.....	101.12	51,862	219,570	283,888	38,816	19,373	69,136	19,140	137,377
Canada Southern.....	380.54	3,371,483	9,440,972	13,529,977	1,127,943	1,361,934	4,789,677	314,187	5,936,234
Canada & Gulf Terminal.....	35.80	16,680	26,653	46,284	9,668	4,018	19,091	9,210	4,295
Canadian Government Railways									
Intercolonial.....	1,510.40	4,900,673	11,022,539	18,023,955	2,699,393	2,835,778	10,505,880	344,762	1,638,139
International of N. B.....	111.30	36,523	96,206	135,960	70,281	24,261	83,217	3,609	—45,409
St. John and Quebec.....	119.87	28,409	50,271	82,935	32,671	3,959	60,662	3,730	—18,115
Prince Edward Island.....	277.78	162,105	235,746	666,995	167,491	81,325	647,870	15,490	—245,183
National Transcontinental....	2,003.03	832,243	6,095,722	7,113,246	1,535,581	1,720,010	3,826,389	113,296	—82,032
Canadian Northern System.....	9,405.44	6,718,575	32,126,913	42,999,976	7,160,338	5,231,772	17,112,590	1,335,533	12,159,742
Canadian Pacific.....	12,895.40	27,936,712	101,482,004	146,713,115	16,828,216	21,654,950	55,265,923	2,908,351	50,055,673
Cape Breton.....	31.00	6,774	4,928	12,361	8,279	847	11,797	3,284	—11,847
Caracquet.....	84.78	22,904	53,621	80,741	18,344	9,061	44,119	8,433	782
Central Canada.....	48.50	4,192	6,619	11,300	12,616	2,827	12,207	2,785	—19,137
Central Vermont.....	125.20	115,764	191,745	340,645	88,739	31,573	144,447	8,980	66,305
Crows Nest Southern.....	74.18	12,358	83,458	100,762	117,661	19,643	64,346	6,058	—105,474
Cumberland Ry. & Coal Co.....	32.00	13,765	79,435	99,053	24,550	8,708	49,688	4,222	11,882
Detroit River Tunnel (2).....	1.45	.....	.....	.....	.....	.....	.....	.....	.....
Dominion Atlantic.....	274.16	447,767	614,285	1,152,274	200,133	83,088	493,100	53,955	321,996
Eastern British Columbia.....	14.00	1,697	25,894	29,466	9,703	7,655	15,628	1,967	—5,488
Edmonton, Dunvegan & B.C....	406.80	186,099	265,426	487,605	176,099	61,027	235,063	24,179	—8,764
Elgin & Havelock.....	27.00	1,707	7,450	10,285	5,099	1,287	5,033	481	—1,616
Esquimalt & Naniamo.....	199.20	180,391	428,910	656,711	110,958	94,769	212,585	9,972	228,426
Essex Terminal.....	11.00	.....	79,795	98,528	15,164	4,352	27,791	18,597	32,441
Fredericton & G. L. Coal & Ry. Co.	35.00	7,681	86,031	94,694	11,371	3,125	34,593	4,369	41,233
Grand Trunk.....	3,567.12	11,134,954	31,735,443	46,951,270	4,502,001	7,625,842	20,416,687	1,182,702	13,179,038
Grand Trunk Pacific.....	1,776.91	1,047,245	4,579,516	6,651,298	1,766,066	1,897,366	2,983,838	209,760	—205,734
Grand Trunk Pacific branch lines..	1,032.06	314,709	1,142,796	1,593,019	504,529	315,400	903,479	72,937	—203,327
Hereford.....	53.06	18,638	50,378	73,187	40,325	16,083	68,311	4,304	—55,837
Inverness Ry. & Coal Co. (3)....	60.91	.....	.....	.....	.....	.....	.....	.....	.....
Kent Northern.....	27.00	7,735	14,692	25,357	7,337	1,333	7,328	1,858	7,500
Kettle Valley.....	355.68	151,258	388,463	569,134	306,133	70,539	278,362	14,259	—100,159
Klondike Mines (3).....	31.81	.....	.....	.....	.....	.....	.....	.....	.....
Lotbiniere & Megantic.....	30.00	4,034	28,867	34,788	11,262	4,368	11,493	6,612	1,052
Magnetawan River (4).....	1.91	.....	.....	.....	.....	.....	.....	.....	.....
Maine Central (Princeton Branch)	5.10	11,618	7,037	19,767	2,113	2,171	11,291	761	3,429
Manitoba Great Northern.....	91.77	5,502	36,016	42,421	71,973	10,556	39,773	3,336	—83,218
Maritime Coal, Ry. & Power Co....	15.00	6,134	90,136	97,543	16,199	6,150	30,052	2,960	42,260
Massawippi Valley.....	35.46	66,812	147,176	221,550	73,718	40,004	158,240	11,354	—61,767
Midland of Manitoba.....	6.40	96,774	178,047	334,502	52,002	60,209	219,180	12,920	—9,810
Montreal & Atlantic.....	184.40	193,474	1,030,397	1,301,293	283,533	289,947	618,166	32,090	77,555
Moncton & Buctouche.....	34.00	12,368	21,024	35,963	11,326	4,083	16,606	5,177	—1,230
Morrisey, Fernie & Michel.....	10.85	11,307	69,931	88,964	9,613	15,494	33,996	21,131	8,729
Napierville Junction.....	27.06	10,215	147,092	158,752	20,195	6,420	56,923	4,866	70,346
Nelson & Fort Sheppard.....	55.42	17,501	28,962	52,559	44,036	8,621	43,481	4,251	—47,830
New Brunswick Coal & Ry. Co....	58.00	12,733	17,341	37,845	23,166	7,638	14,825	5,805	—13,591
New Brunswick & P.E.I.....	36.05	8,403	37,086	50,803	19,769	9,781	46,511	1,852	—27,112
New Westminster Southern.....	15.18	1,934	21,039	23,307	13,392	4,138	10,347	1,401	—5,971
North Shore (3).....	8.63	.....	.....	.....	.....	.....	.....	.....	.....
Northern New B. & Seaboard (3)...	19.80	.....	.....	.....	.....	.....	.....	.....	.....
Nosbonsing and Nipissing (5)....	5.50	.....	.....	.....	.....	.....	.....	.....	.....
Ottawa & New York.....	56.90	79,331	178,931	295,243	78,035	39,375	180,329	10,867	—13,364
Pacific Great Eastern.....	180.27	40,742	93,331	179,671	51,366	61,175	152,407	22,931	—108,209
Pere Marquette.....	198.81	112,974	3,032,750	3,203,336	300,858	258,048	1,078,070	76,668	1,489,691
Phillipsburg Ry. & Quarry Co....	6.00	.....	.....	.....	.....	.....	.....	.....	.....
Quebec Central.....	277.00	445,919	1,215,001	1,758,437	244,664	173,146	721,313	53,230	566,082
Quebec, Montreal & Southern.....	192.18	159,019	282,179	462,768	122,963	180,441	189,230	15,189	—45,055
Quebec Oriental.....	100.00	56,628	157,941	222,834	73,057	30,413	84,814	14,411	20,173
Quebec Ry., Light & Power Co....	30.82	8,608	91,361	100,291	9,656	22,013	37,137	11,933	19,550
Red Mountain.....	9.59	2,501	15,294	19,395	11,733	2,437	18,681	941	—14,398
Roberval-Saguenay.....	36.80	12,551	119,819	200,694	38,290	18,269	75,447	21,149	47,357
Rutland & Noyan.....	3.39	9,245	6,440	16,043	3,958	1,969	6,292	755	3,068
Salisbury & Albert.....	45.00	8,758	33,013	45,955	17,126	2,739	15,313	3,995	6,779
St. Clair Tunnel (4).....	1.23	.....	.....	.....	.....	.....	.....	.....	.....
St. Lawrence & Adirondack.....	46.12	222,998	768,884	1,045,605	118,669	57,432	400,026	12,209	457,268
St. Martins.....	30.00	3,694	14,499	19,544	9,744	906	10,750	952	—2,809
Sydney & Louisburg.....	70.27	48,994	691,339	765,763	108,327	205,009	291,385	33,194	127,846
Temiscouata.....	113.00	48,385	162,299	224,561	53,850	29,920	95,003	16,920	28,866
Thousand Islands.....	6.33	7,765	26,701	43,327	4,453	3,504	19,489	3,629	12,241
Timiskaming & Northern Ontario.	328.50	674,048	1,356,276	2,236,299	344,795	270,578	984,698	110,677	525,577
Toronto, Hamilton & Buffalo....	100.30	427,156	1,653,548	2,192,093	213,299	306,436	719,359	68,050	884,948
Vancouver, Victoria & Eastern....	271.22	119,620	334,313	547,186	299,200	104,304	454,465	23,196	—333,980
Victoria & Sidney.....	15.97	25,373	18,985	47,027	4,643	4,055	23,048	2,895	12,383
Victoria Terminal Ry. & Ferry Co.	0.99	1,860	1,035	3,138	469	86	1,345	192	1,044
Wabash (6).....	.....	383,060	3,372,555	3,969,001	307,332	652,744	1,698,321	103,641	1,207,668
York and Carleton.....	10.50	1,653	4,629	6,521	1,846	228	3,223	.....	1,223
TOTALS	38,604.90	\$61,900,200	\$217,625,962	\$310,771,479	\$41,154,193	\$46,371,178	\$127,798,591	\$7,584,881	\$87,900,842

Orders by Board of Railway Commissioners for Canada.

Beginning with June, 1914, 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.

General order 231. May 6.—Confirming conditions and specifications of rules for wires erected along or across railways, and rescinding general order 113, Nov. 5, 1913.

General order 232. May 14.—Prescribing minimum carload weights of tan bark, in box or stock cars under special commodity tariffs, and rescinding general order 221.

General order 233. May 11.—Amending order 227, Apr. 12, 1918, to provide that prescribed time during which Daylight Saving Act, 1918, shall be in force shall be until 2 a.m. on Sunday, Oct. 27, the day fixed in the U.S. for returning to usual time.

General order 234. May 22.—Ruling re protection of old rates on grain shipped prior to Mar. 15, 1918, to interior mills and elevators with published transit privileges and reshipped after new rates came into effect.

General order 235. May 22.—Instructions to agents and conductors for receiving and delivering freight at flag stations.

General order 236. May 20.—Revising rules governing protection of railway employes. This order is given fully on another page.

General order 237. May 31.—Ordering railway companies to adopt, for protection of employes, the rule that where two main tracks parallel each other and are less than 20 ft. from center to center, whether double or single track operation, employes in every instance, when stepping out of way of approaching trains, must move to right of way and not to other track.

27219. May 17.—Authorizing British Columbia Public Works Department to make highway crossing over C.P.R. near Wardner.

27220. May 18.—Dismissing complaint of Nanaimo Board of Trade against withdrawal of Pacific Coast terminal rates to Nanaimo and substitution of an arbitrary over Vancouver rates, with leave to move for further consideration when traffic conditions warrant.

27221. May 18.—Approving proposed location of C.P.R. A2 standard station at Hayter, Alta.

27222. May 15.—Ordering C.P.R. to restore relationship between International rates on wood-pulp from Ottawa on one hand and Sturgeon Falls and Espanola on the other, by filing same rates from Sturgeon Falls and Espanola as concurrently in effect from Ottawa through same frontier gateways to destinations in Central Freight Association territory.

27223. May 18.—Authorizing C.P.R. to make highway over its track on part of Sec. 35, Tp. 8, Osyoos Division, Yale District, B.C.; cost to be paid by Spallumcheen Tp., B.C.

27224. May 20.—Authorizing Canadian Northern Ry. to build spur for Port Arthur Pulp & Paper Co., Port Arthur, Ont.

27225. —May 15.—Ordering that storage yard at Current River, Port Arthur, Ont., consisting of 6 tracks connected with C.P.R. service track at west end and Canadian Northern Ry. track at east end, between points marked A and B on plan, of Dec. 6, 1917, hereby approved, be considered joint yard to be used by both companies for storing, switching and sorting in operation of elevator plants and tracks connected therewith; cost to be determined by board after hearing.

27226. May 21.—Approving Quebec Ry. Light & Power Co.'s Standard Passenger Tariff of Maximum Mileage Tolls, C.R.C. 34, effective June 2.

27227. May 20.—Authorizing C.P.R. to build extension to spur for B. Shrage Iron & Metal Co., and additional spur on Lot 1, Block 3, Parish Lot 35, St. John, Winnipeg.

27228. May 14.—Authorizing G.T.R. to build additional siding facilities for Dominion Steel Foundry Co., Hamilton, Ont.

27229. May 23.—Authorizing Mackenzie, Mann & Co. to build highway over Canadian Northern Ry. at First St. West, Canwood, Sask.; cost of construction to be paid by applicants and maintenance by Canwood municipality.

27230. May 21.—Approving revised location of Hull Electric Co.'s track at Montcalm St. and Chelsea Road, Hull, Que.; and authorizing it to build additional track on Montcalm St. and Chelsea Road and loop on Mountain Road, Fortier St. and Montclair Ave., Hull, and to cross C.P.R. at grade, at Montcalm St.

27231. May 21.—Authorizing Southern Canada Power Co. to erect wires along C.P.R. right of way at Eastman, Que.

27232. May 22.—Approving Crownsnest Southern Ry. bylaws, June 5, 1916, re tariffs of tolls.

27233. May 22.—Approving New Westminster Southern Ry. bylaw, June 2, 1916, re tariffs of tolls.

27234. May 16.—Ordering Canadian Northern Ry. to fence right of way on north side from mileage 62.8 to 65, west of Tollerton, Alta.; to erect cattle guard and return fencing from cattle guard to river on south side at end of fence, mileage 65; work to be completed by June 20, and re-

lieving it from fencing right of way on south side from mileage 62.5 to 65.

27235 to 27237. May 22.—Approving Manitoba Great Northern Ry. bylaw, May 5, 1916; Victoria Terminal Ry. & Ferry Co. bylaw, May 22, 1916, and Victoria & Sidney Ry. bylaws, dated May 22, 1916, re tariffs of tolls.

27236. May 21.—Ordering Michigan Central Rd. to install gates at crossing of Main St., Hagersville, Ont., to be operated by day and night watchmen; 20% of cost to be paid out of railway grade crossing fund; 75% by M.C.R. and balance by Hagersville village; maintenance to be paid, 85% by M.C.R. and balance by Hagersville; work to be completed within 90 days.

27239. May 18.—Amending index 68, p. 6 of proposed Supplement 11 to Canadian Freight Classification 16. This order is given fully on another page.

27240. May 14.—Ordering Kitchener & Northern Ry. to install half interlocking plant at crossing of G.T.R. spur on Lancaster St., Bridgeport, Ont., to be installed by Aug. 31, and rescinding orders 21780 and 22121, respectively May 7 and 26, 1914.

27241. May 21.—Ordering C.P.R. and Ottawa & New York Ry. to arrange train service for connection of certain trains at Finch, Ont., and rescinding orders 23657, May 4, 1915; 23738, May 25, 1915, and 26996, Feb. 16, 1918.

27242. May 23.—Approving Cumberland Ry. & Coal Co.'s Standard Freight Mileage Tariff C.R.C. 6. This order is given fully on another page.

27243. May 27.—Approving agreement, May 10, between Bell Telephone Co. and South Leeds & Pittsburgh Rural Telephone Co., Leeds and Frontenac Counties, Ont.

27244. May 22.—Ordering Kettle Valley Ry. to lay pipe culvert at least 12 in. diameter under its track on north side of public road, Lot 104, at Three Mile, B.C., as soon as Penticton municipality completes culverts under public road east and west of track; to lay similar culvert on north side Fairview Ave.; latter work to be completed by June 30, and rescinding order 26802, Dec. 6, 1917.

27245. May 28.—Authorizing London & Port Stanley Ry. to build siding for Beatty Bros., London, Ont.

27246. May 25.—Dismissing complaint Retail Merchants Association of Canada, Provincial Coal Section of Ontario, against reconignment switching charges by C.P.R. This is quoted fully on another page.

27247. May 27.—Authorizing C.P.R. to build spur for Leaside Munitions Co., Leaside, Ont.

27248. May 27.—Authorizing C.P.R. to build spur for Imperial Oil, Ponoka, Alta.

27249. May 28.—Authorizing C.P.R. to build spur for Vancouver Machinery Depot, Ltd., Vancouver, B.C.

27250. May 28.—Authorizing Winnipeg Electric Ry. to build second track across Canadian Northern Ry. at Portage Ave., Assiniboia municipality, near Westside station, Man.

27251. May 29.—Ordering Esquimalt & Nanaimo Ry. to continue passage of pedestrians over bridge across portion of Victoria harbor, where sidewalks have been built and used for that purpose.

27252. May 20.—Ordering C.P.R. to build two spurs for Imperial Oil, Swift Current, Sask.

27253. May 28.—Recommending to Governor in Council for sanction, agreement between Essex County, Ont., and Michigan Central Rd., Dec. 31, 1917, and dispensing with consent of shareholders and publication as required by sec. 364 of Railway Act.

27254. May 28.—Ordering Quebec, Montreal & Southern Ry. to restore train service in effect prior to Jan., 1918, between Montreal and Sorel; effective June 10.

27255. May 28.—Authorizing C.P.R. to remove regular agent at Oxford, Sask., pending further order.

27256. May 29.—Extending to June 30, time within which G.T.R. shall install gates at Rectory St., London, Ont.

27257. May 28.—Extending for two months from date time within which G.T.R. shall lower roadway at subway at Main St., Komoka, Ont., 1 ft., and raise track 1½ ft.

27258. May 29.—Relieving G.T.R. from providing further protection at first crossing south of Tansley station, Ont.

27259. 27260. May 28.—Extending to July 1, time within which G.T.R. shall install gates at St. Philippe and Ste. Marguerite Sts., Montreal.

27261. May 30.—Prescribing Dominion Express Co.'s delivery limits in Trail, B.C.; and rescinding order 25954, Mar. 22, 1917.

27262. May 30.—Authorizing Henry Ray, March Tp., Ont., to withdraw from Bank of Toronto, \$500 with accrued interest, from date of deposit.

27263. May 30.—Extending to July 31 time within which Great Northern Ry. shall complete rebuilding and repairing of right of way fences and install cattle guards at highway crossings in use on Victoria & Sidney Ry. from northern boundary of Victoria to McKenzie Ave., and make necessary repairs between McKenzie Ave. North and Sidney, B.C.

27264. May 30.—Authorizing C.P.R. to rebuild bridge 77.6 over Little Magog Lake, Que., and

rescinding order 26443, Aug. 18, 1917.

27265. May 30.—Authorizing Canadian Northern Ry. to build across highway between Secs. 20-29, Tp. 50, Range 10, west 4th meridian, Alta.

27266. May 31.—Authorizing Canadian Northern Ry. to make highway crossing over road allowance on Secs. 28 and 33, Tp. 36, Range 27, west principal meridian; cost to be paid by Swan River rural municipality, Man.

27267. May 28.—Ordering Canadian Northern Ry. to make clean out, deepen and widen certain ditches along its right of way in Worthington Tp., Ont., by July 1.

27268. May 23.—Ordering Michigan Central Rd. to divert North Talbot Road, Maidstone Tp., Ont., to Naylor Side Road by diversion to north side of its tracks; 20% of cost to be paid out of railway grade crossing fund; 35% by Maidstone Tp., and balance by M.C.R., also within 60 days to install bell at Naylor Side Road, 20% of cost to be paid out of railway grade crossing fund.

27269. May 31.—Extending for six months from date time limited by order 26784, Nov. 29, 1917, during which Lake Erie & Northern Ry. was authorized to operate cars and trains over Toronto, Hamilton & Buffalo Ry. at Brantford, Ont., pending installation of interlocking plant; crossing to be protected by watchmen.

27270. May 30.—Authorizing Brantford & Hamilton Ry. (electric) to increase its freight rates, except on coal and coke, by 15%, and rates on coal and coke by 15c a ton; increases not effective until company complies with sec. 327 of Railway Act.

27271. May 21.—Authorizing Canadian Northern Ry. pending further order, to remove regular agent at Malvern station, Ont., caretaker to be appointed to see station is kept clean and heated for passengers on arrival and departure of trains, and care for l.c.l. freight and express matter.

27272. June 4.—Approving U.S. Government express bill of lading for shipments of munitions, war materials and supplies. This order is given fully on another page under "Among the Express Companies."

27273. June 4.—Authorizing G.T.R., for 90 days from date, to build temporary track across Alma and Simpson Sts., Campbellford, Ont.

27274. June 4.—Approving plan showing interchange between G.T.R. and Toronto & York Radial Ry. on Lot 76, Con. 1, Whitechurch Tp., Ont., and authorizing Town of Aurora, Ont., to build said track, a derail to be installed and semaphores placed on G.T.R., and rescinding order 25616, Nov. 3, 1916.

27275. June 4.—Approving changes in location of G.T.R. sidings for Goodyear Tire & Rubber Co. of Canada, New Toronto, Ont., as authorized by order 25418; authorizing G.T.R. to build extension siding on Ninth St., and rescinding order 27186, May 6.

27276. June 1.—Ordering Chatham, Wallaceburg & Lake Erie Ry. to move derrails 200 ft. from crossing at Cedar Springs, Ont., by July 15.

27277. June 1.—Authorizing Quebec & Lake St. John Ry. (C.N.R.) to use bridge over Ste. Anne River at St. Raymond, Que.

27278. June 1.—Extending for one month from date time within which G.T.R. shall install bell at Main St., Komoka, Ont., as required by order 26942, Jan. 28.

27279. June 4.—Approving changes in location of G.T.R. sidings and spurs for Dominion Shipbuilding Co., Toronto.

27280. June 5.—Authorizing Southern Canada Power Co. to erect wires along C.P.R. right of way near Delaire station, Que.

27281. June 5.—Authorizing C.P.R. to build spur for Peters Coal Co. in Lot 20, Con. 13, Mendon, Tp., Ont.

27282. June 1.—Extending for six months from date time limited by order 26758, Nov. 22, 1917, during which Lake Erie & Northern Ry., pending installation of interlocking plant, was authorized to operate cars over G.T.R. at Brantford, Ont., crossings to be protected by L.E. & N.R. watchmen.

27283. June 5.—Authorizing Canadian Northern Quebec Ry. to open its revised location from Lot 1017, St. Theophilus parish, to Lot 87, St. Ploire Parish, 356 ft.; and use bridge over St. Maurice River at mileage 81.12; speed of trains not to exceed 8 miles an hour.

27284. June 6.—Approving location and plans of James Bay & Eastern Ry. (C.P.R.) station at St. Prime, Que.

27285. June 6.—Authorizing Grand Trunk Pacific Branch Lines Co. to divert road in s.w. ¼ Sec. 20 and s.e. ¼ Sec. 19, Tp. 22, Range 7, west 2nd meridian; and to build across highway, Yorkton District, Sask.

27286. June 7.—Authorizing Quebec, Montreal & Southern Ry. to discontinue Sunday trains, in effect prior to Jan. 1.

27287. June 6.—Ordering that speed of Grand Trunk Pacific Ry. trains operated over bridges at mileage 674.2, 675.0, 676.3, 680.2, 681.8, and 682.5 between Wainwright and Irma, Alta., shall not exceed 8 miles an hour.

27288. June 6.—Amending order 27269, May 31, re crossing of G.T.R. at Brantford, Ont., by Lake Erie & Northern Ry.

27289. June 7.—Relieving Chatham, Wallace-

The Necessity of Fuel Conservation.

By Thos. Britt, General Fuel Agent, Canadian Pacific Railway.

[Sir George Bury, Vice President, C.P.R., was invited to address the International Railway Fuel Association's annual convention in Chicago, May 23 and 24, under the auspices of the U.S. Railroad Administration and U.S. Fuel Administration, but being unable to go, sent the company's General Fuel Agent, who read a paper from which the following are extracts.—Editor.]

There is an apparent annual shortage of over 50,000,000 tons to be made up by elimination of wastage, and this is the main topic of my talk. What are we going to do, in other words, to conserve fuel and thus help to win the war? First of all, what are we doing? The most drastic feature of our programme has been the reduction in passenger service, with a simultaneous increase in freight traffic; this, of course, as a matter of sheer necessity to meet war requirements. In the handling of freight, we are seeking to apply the well established principle, that the greater the speed, the greater the consumption of coal. Hence fast freights are by no means a desideratum. In addition, we have endeavored to run our freights at full capacity tonnage, thus securing the maximum results with the minimum of fuel consumption. Another feature of fuel conservation is the elimination of needless delays by a careful arrangement of schedules and rapid dispatching.

To say that good engineering is an essential element in the process of conserving fuel is to mention a basic principle. Our locomotive and boiler house firemen cannot be too well instructed on this point; as with them, in the final analysis, rests the successful issue of our present campaign. Mechanical devices, such as superheaters, automatic fire doors, etc., may accomplish a great deal in the matter of avoiding unnecessary wastage, but certainly the human element is the dominant factor—we cannot get away from it. Give us a body of expert and conscientious firemen, and I dare say the problem is solved. You will understand me well. I would not for one moment impugn their motives. Our firemen are as loyal as any group in the service, but quite frequently they fail to grasp the seriousness of the situation that confronts us, as well as the importance of the occupation which is theirs.

Another tangible means of saving coal to win the war is to substitute wherever possible, utilizing gas house coke for heating stations, etc. A considerable amount of scrap wood can be utilized as fuel in shop boilers, old ties can be gathered up and burned for the same purpose. In many communities dead wood can be used to advantage instead of coal for domestic purposes, in this way affording economy both to the user and the country as a whole. In wooded districts the same suggestion may apply. If we stop to consider that one cord of hard wood is equivalent to a ton of coal, it is easily understood that for every cord of wood so substituted, a ton of coal is released for use in war work.

I might more earnestly ask in exchange for our share in this worthy enterprise that our railways be not overburdened any longer with a lot of foreign matter under the guise of coal. I have found it necessary to have whole carloads of this extraneous matter dumped into the ditch, it being absolutely worthless as fuel for any purpose. There is certainly no econ-

omy there. The situation is infinitely worse if such matter finds its way into ships' bunkers, transports especially, for then the lives of thousands are placed in needless jeopardy. A remedy must be found for all this, and I have no doubt that the government will insist upon the proper cleaning of coal at the mines.

The overloading of tenders has been the cause in the past of an incalculable waste. Thousands of tons have been lost by thus scattering coal along the line. Measures have been taken to avoid this frightful deficit, and yet observation along the right of way of our railways would indicate that there is still room for improvement. Ashpits also are frequently a source of wastage.

Now, looking at the question in a broad way, is it not quite evident that we are just beginning to wake up to the necessity of economy? Have we not been spoiled by a foolish idealism in relation to the resources of our respective countries? Moreover, have we not literally squandered our inheritance by failing to economize? Now that the times are critical, we are endeavoring to amend matters. The pinch of want, together with the soaring of prices, are making us all realize that our only salvation lies in saving.

There are two slogans, which we have all heard quite frequently. One is "Win the war" and the other "Business as usual." Permit me to suggest that one will have to be abandoned. To win the war, we cannot afford to have business as usual. Only a maximum of effort on our part can achieve the desired result. It is with that spirit that I appeal to all the people in the United States, as well as in Canada, to do their bit generously, wholeheartedly, fearlessly. To all those connected in any way with the railways in the United States and in Canada, I would say in closing: "Help Garfield to save fuel and thus bring victory to the allies," or "Keep the home fires burning" wisely.

International Railway Fuel Association. The annual convention was held at Chicago, Ill., May 23 and 24. The officers for this year are:—President, L. R. Pyle, Fuel Supervisor, Minneapolis, St. Paul & Sault Ste. Marie Ry., Minneapolis, Minn.; Vice Presidents, C. M. Butler, Supervisor of Fuel, Atlantic Coast Line; J. B. Hurley, General Foreman of Locomotives, Wabash Ry.; H. B. MacFarland, Engineer of Tests, Atcheson, Topeka & Santa Fe Ry. Executive Committee, for two years: B. P. Phillippe, Pennsylvania Rd.; A. N. Willsie, Chicago, Burling & Quincy Rd.; T. Duff Smith, Grand Trunk Pacific Ry.; R. R. Hibben, Missouri, Texas & Kansas Ry.; for one year, H. B. Brown, Lehigh Valley Rd.; L. J. Joffray, Illinois Central Rd., and H. Woods, Colorado & Southern Ry.

The Association of American Railway Accounting Officers held its annual convention at St. Louis, Mo., May 29 and 30. The officers for this year are:—President, R. E. Burger, Assistant Auditor, Wabash Ry.; Vice Presidents, A. D. McDonald, Vice President, Southern Pacific Co., and J. G. Drew, Vice President, Missouri Pacific Rd. J. Welch, Assistant General Auditor, Chicago, Milwaukee & St. Paul Ry., and John Leslie, Comptroller, C.P.R., Montreal, were elected to the executive committee in place of retiring members.

burg & Lake Erie Ry. from providing further protection at Fourth Concession about 3 miles north of Chatham, Ont.

27290. June 5.—Ordering that clearance order for westbound trains from Stoney Creek, B.C., be not issued until agent there is advised by fan operator at west portal of tunnel that fans are actually, and have been for 10 minutes immediately prior thereto, in operation, order to provide that fans continue until arrival of train at Glacier.

27291. June 6.—Authorizing Canadian Northern Ry. to cross and divert highway in n.w. ¼ Sec. 17, Tp. 43, Range 11, west 3rd meridian, near Speers, Sask.

27292. June 6.—Authorizing C.P.R. to operate trains over crossing at Delson Jet., without first stopping.

27293. June 7.—Authorizing C.P.R. to build spur for John Coughlan & Sons, Ltd., Vancouver, B.C.

27294. June 7.—Authorizing C.P.R. to carry highway over its track ordered at mileage 84.75, Three Rivers Subdivision, Quebec District, 20% of cost to be paid out of railway grade crossing fund.

27295. June 6.—Authorizing C.P.R. to build spur for John Lucas, Toronto.

27296. June 8.—Ordering Canadian Northern Ry. to stop train on flag at Camden East for passengers beyond Trenton, Ont.

27297. June 7.—Authorizing C.P.R. to build spur for Chisholm Milling Co., Toronto.

27298. June 7.—Approving clearances through warehouse doors on Dryden Timber & Power Co.'s siding at Dryden, Ont.

27299. June 10.—Approving Canadian Northern Ontario Ry. revised location at Achray, Ont.

27300. June 11.—Authorizing C.P.R. to build two additional tracks across road allowance connecting its terminals in Swift Current, Sask.

27301. June 11.—Authorizing Toronto, Hamilton & Buffalo Ry. to take lands in Saltfleet Tp., Ont., for second main track between Stoney Creek and Kinnear stations, and passing siding and other facilities, and for enlarging station grounds at Stoney Creek.

27302. June 12.—Approving agreement, May 15, between Bell Telephone Co. and Soulanges Rural Telephone Co., Soulanges and Vaudreuil Counties, Que.

27303. June 12.—Authorizing G.T.R. to build spur for Imperial Oil, Ltd., Hamilton, Ont.

27304. June 6.—Relieving G.T.R. from providing further protection at Queen St., Mount Forest, Ont.

27305. June 8.—Dismissing Canadian Manufacturers Association applications for reduction in classification of stove putty in barrels, and for order requiring railway companies to carry asbestos cement at 4th class rate, l.c.l.

27306. June 14.—Approving Brantford & Hamilton Ry. (electric) Standard Freight Mileage Tariff C.R.C. 4, effective July 1.

27307. June 12.—Dismissing complaint of Beaver Stove & Machinery Co., Grandmère, Que., against C.P.R. rates on stoves from Grandmère to points on Quebec Central Ry.

27308. June 15.—Authorizing Windsor, Essex & Lake Shore Rapid Ry. to increase freight rates, except coal, by 15%, and coal rates by 15c a ton; rates not to become effective until requirements of sec. 327 of Railway Act have been complied with.

27309. June 15.—Authorizing Chatham, Wallaceburg & Lake Erie Ry. to increase freight rates, except coal, by 15%, and rates on coal by 15c a ton; also passenger rates by 15%; not to become effective until requirements of secs. 327 and 331 of Railway Act have been complied with.

27310. June 15.—Approving Toronto, Hamilton & Buffalo Ry. location of shelter at Gerrie's Crossing near Dundas, Ont.

27311. June 15.—Rescinding order 26911, Jan. 16, and ordering C.P.R. to limit trains over Sanche St. crossing, Ste. Therese, Que., to 10 miles an hour.

T. & N.O. Railway Commission.—The Ontario Legislature at its recent session, by sec. 9 of the Statute Law Amendment Act, added a subsection to sec. 2 of the Timiskaming & Northern Ontario Ry. Act, under which a member of the executive council without portfolio may be appointed as one of the commissioners managing the railway, and may be paid a salary therefor without having to vacate his seat in the Legislature or incurring any of the penalties imposed by the Legislative Assembly Act for sitting or voting as a member of the assembly.

The Board of Grain Commissioners applied to the Board of Railway Commissioners at Winnipeg, recently, for an order fixing a uniform allowance to cover invisible loss or natural shrinkage of grain in transit on railways, in respect of which railways will not be held liable for claims for shortage.

Mainly About Railway People Throughout Canada.

Thomas Russell, who was for several years agent C.P.R. at Glasgow, Scotland, died there, June 16.

F. C. Salter, European Traffic Manager, G.T.R., London, Eng., arrived in Canada recently on a short visit.

Edward F. Fauquier, railway contractor, who died in Ottawa May 5, left an estate valued at \$862,924.

F. H. Crockard, President, Nova Scotia Steel & Coal Co., has been elected a member of the Engineering Institute of Canada.

Hon. Frank Cochrane, M.P., ex Minister of Railways and Canals, has rented Hayter Reed's house at St. Andrews, N.S., for the summer.

Mrs. Bassett, wife of W. J. Bassett, of the Bassett Steamship Co., Toronto, died there June 25, aged 59. She was buried at Collingwood, Ont.

Lady Mann, who has been staying in Montreal for some months with her son, has rented Lt.-Col. G. B. Winans' house on Cote St. Antoine Road there.

John Leslie, Comptroller, C.P.R., Montreal, has been elected a member of the Association of American Railway Accounting Officers' executive committee.

C. M. Odell, Chief Engineer, Sydney & Louisburg Ry., Glace Bay, N.S., addressed the Sydney Steel Works Engineering Society recently, on transportation.

J. H. Kerr, for 15 years Secretary of Canadian Westinghouse Co., Hamilton, Ont., died there June 24, after a short illness. He was buried at Pittsburg, Pa., his birthplace.

T. Duff Smith, Fuel Agent, Grand Trunk Pacific Ry., Winnipeg, has been elected a member of the International Railway Fuel Association's executive committee for two years.

R. H. Fish, Superintendent, Strafford Division, Ontario Lines, G.T.R., was presented with a silver cigarette case, by the Governor General, in appreciation of services rendered during a tour through that district recently.

G. R. Pratt, mechanical and fuel engineer, C.P.R., Winnipeg, has been elected an associate member of the Engineering Institute of Canada. He was formerly inspector and engineer on construction, C.P.R. Winnipeg shops.

J. G. McHattie, employed by the Imperial Munitions Board at Ottawa, who there, June 14, aged 28, after a short illness, was fourth son of T. McHattie, formerly Master Mechanic, Eastern Lines, G.T.R., Montreal.

G. B. Harris, Chairman of the Board, Chicago, Burlington & Quincy Rd., died at Chicago, Ill., June 10. He was born at Brookline, Mass., in 1848, and entered railway service in 1866. He was President of the road from 1901 to 1912, since when he was Chairman of the Board.

Stanley W. Crabbe, whose appointment as Superintendent, Schreiber Division, Ontario District, C.P.R., Schreiber, Ont., was announced in a recent issue, was born at Teeswater, Ont., Aug. 9, 1885, and entered C.P.R. service in 1903, since when he has been, to Mar. 11, 1918, section laborer, telegraph operator and agent, consecutively.

Acton Burrows, Managing Director, Canadian Railway and Marine World, and Honorary Secretary-Treasurer, Canadian Electric Railway Association, has been unanimously re-elected, for the

fourth successive year, as chairman of the Canadian Press Association's Trade and Class Paper Section, and as a director of the association.

H. B. Walkem, Assistant Engineer, C.P.R., Vancouver, B.C., was born at Montreal July 31, 1858, which should have been mentioned under "Birthdays of Transportation Men in July," on pg. 281 of this issue. He joined the C.P.R. engineering staff in British Columbia in 1881 and has been in that company's service continuously ever since.

F. M. Holland, General Manager of the Dominion Permanent Loan Co. up to the time of its assignment a short time ago, died at Toronto June 4. The company was concerned in the early construction of the Kettle Valley Ry., and made heavy investments in the Spokane & British Columbia Ry., which ultimately brought about the company's downfall. Mr. Holland was on bail at the time of his death



S. W. Crabbe,

Superintendent, Schreiber Division, Ontario District, Canadian Pacific Railway.

charged with breaches of law in connection with the conduct of the business.

Charles Clarke, Assistant Commissioner of Industries, G.T.R. lines west of Detroit and St. Clair Rivers, Detroit, Mich., died there May 27. He was born at Clarkson, Mich., Apr. 17, 1848, and entered railway service with the Detroit & Milwaukee Rd., Apr. 1, 1872, since when he was, consecutively, Commercial Agent at Detroit, Mich., and at Buffalo, N.Y., and since Dec. 1, 1912, Assistant Commissioner of Industries at Detroit, for the G.T.R. and subsidiary companies.

J. Louis Santerre, whose appointment as acting Locomotive Foreman, Canadian Government Railways, Doucet, Que., was announced in our last issue, was born at St. Roch, Que., Oct. 10, 1891, and has been, from Feb. 22, 1913, to Aug. 13, 1915, fireman, C.P.R., Quebec, Que.; Aug. 13 to Dec., 1915, laborer Quebec Engineering Co., Quebec, Que.; Dec., 1915, to Jan. 14,

1916, in other service at Toronto; Jan. 14, 1916, to Feb., 1918, fireman, Canadian Government Railways, Parent, Que.; Feb. to May, 1918, hostler, C.G.R., Parent, Que.

Cesaire Senay, who has been appointed General Agent, C.P.R., Quebec, Que., was born at St. Cesaire, Que., Jan. 31, 1873, and entered C.P.R. service in Oct., 1894, since when he has been, to June, 1902, freight clerk and telegraph operator, Mile End, Que.; Mar., 1904, to July, 1912, agent, Atwater, Que.; July, 1912, to Jan., 1913, agent, St. Henry, Que.; Jan. to Dec., 1913, agent, Mile End, Que.; Dec., 1913, to May, 1916, General Agent, Quebec, Que.; May, 1916, to May, 1918, Assistant Superintendent, Laurentian Division, Quebec District, Montreal.

Maurice B. Helston, who has been appointed Superintendent, Division 3, Western District, Canadian Northern Ry., Edmonton, Alta., was born at Michigan City, Ind., Aug. 24, 1869, and entered railway service in 1885, since when he has been, to 1890, operator, Michigan Central Rd.; 1890 to 1898, dispatcher, same road; 1898 to 1909, dispatcher, and chief dispatcher, Northern Pacific Ry.; 1909 to 1914, chief dispatcher, Canadian Northern Ry.; 1914 to Feb. 1, 1917, Superintendent, Duluth, Winnipeg & Pacific Ry., Virginia, Minn.; Feb. 1, 1917, to June 1, 1918, Superintendent, Division 4, Western District, Canadian Northern Ry., Calgary, Alta.

Edward Greig Bowie, who has been appointed General Foreman, C.P.R., McAdam Jct., N.B., was born at Winnipeg, Aug. 20, 1892, and entered C.P.R. service in May, 1907, since when he has been, to Aug., 1912, machinist apprentice, Winnipeg; May, 1912, to Sept., 1914, machinist, Winnipeg and on Western Lines; Oct., 1914, to Apr., 1915, Master Mechanic's clerk, Calgary, Alta.; Apr. to July, 1915, machinist, Angus shops, Montreal; July to Oct., 1915, dynamometer car operator, Eastern Lines; Oct., 1915, to Apr., 1916, Assistant Locomotive Foreman, Ottawa; Apr. to Nov., 1916, Assistant Foreman and Locomotive Foreman, Outremont, Que.; Nov., 1916, to May, 1917, Locomotive Foreman, Sherbrooke, Que.; May, 1917, to June, 1918, Locomotive Foreman, Smiths Falls, Ont.

P. R. Todd, heretofore President, Bangor & Aroostook Rd., Bangor, Me., who has been appointed Assistant to District Director, U.S. Railroad Administration, and General Manager, Bangor & Aroostook Rd., Bangor, Me., was born at Toronto, Dec. 4, 1859, and educated at Ottawa. He commenced railway work as clerk and telegraph operator, St. Lawrence & Ottawa Ry., now part of the C.P.R., and from 1875 to 1882 was Canadian Agent, Ogdensburg & Champlain Ry.; to 1885, General Travelling Agent, National Dispatch Line, Chicago, Ill.; July to Dec., 1885, Commercial Agent, New York, West Shore & Buffalo Ry., Albany, N.Y.; to Oct., 1886, chief clerk, General Freight Department, same road, New York; Oct., 1886, to Dec., 1889, General Freight and Passenger Agent, Canada Atlantic Ry., now part of the G.T.R., Ottawa; Dec., 1889, to Feb., 1901, General Freight Agent, West Shore Rd.; Feb., 1901, to Nov., 1903, Second Vice President, New York, New Haven & Hartford Rd.; Nov., 1903, to 1905, First Vice President, same road; Jan., 1907, to Jan., 1913, Vice President, Bangor & Aroostook Rd., and subsequently President, same road, Bangor, Me.

Canadian Northern Railway Construction, Betterments, Etc.

The Dominion Government has authorized the expenditure of \$7,185,300 for construction and betterment work on various parts of the C.N.R. system during this year. Following are details of the various works proposed to be done:—

The Montreal Terminals are reported to be over 90% completed, and it is expected that they will be ready for operation by the end of August. It is important that the small amount of work yet to be done be completed in order to make the terminal ready for use. The temporary station on Lagachetiere St. was reported practically completed at the end of April, and the tunnel work was very nearly finished at the end of May. The principal work to be done consists of the final completion of the various sections and the linking together of the whole work.

The Duncan-Toronto connecting line which the C.N.R. has partially completed extends from the Duncan station, 11.1 miles from Toronto on the Toronto-Sudbury line to the east end of the C.P.R. bridge over the west Don River. Track has been laid, but before the line can be operated it requires to be ballasted and otherwise finished up, and the interlocking appliance with the C.P.R. tracks have to be installed. The C.P.R. tracks between Leaside Jct. and North Toronto and westerly for a short distance will be used by the C.N.R. as a joint section under an agreement. The completion of the line from Duncan to the C.P.R. line will enable the C.N.R. to operate its trains into North Toronto station, and to utilize its terminal yards at Leaside.

The Leaside Terminal adjoins the C.P.R. freight yard at Leaside Jct., Toronto, and the expenditure will provide for laying out the yards and building shops, etc., for taking care of the equipment on eastern lines.

The buildings to be erected will comprise a 10 stall locomotive house of solid brick on concrete foundation. Each stall will be 14 ft. wide in front, 30 ft. wide at the rear, and 100 ft. long, with drop-pits for drivers, tender trucks and locomotive trucks. It will be steam heated from the boiler room attached, which will also be built of solid brick on concrete foundation and will contain 4 locomotive type boilers. In connection with these buildings will be a turntable 80 ft. in diameter, built on concrete with air tractor. An office for the locomotive foreman, and store house for petty stores will be in close proximity. It will be of solid brick on concrete foundations, and will be one story high with basement. It will be 27 x 46 ft., and will contain locomotive foreman's private office, general office and booking office. The petty stores room will be equipped with an oil storage system. A 60,000 gall. water tank, of wood on concrete foundations, will adjoin. The last building of this group will be a bunk-house for locomotive men, a one story frame building, 24 x 32 ft., on post foundations, and will contain washroom, with shower baths, lavatories, sitting and bedrooms.

The other terminal buildings will consist of a passenger car yard work shop, a one story frame structure on post foundations, 21 x 48 ft., for car cleaners, etc., and a 2,000 ton capacity frame ice house, 30 ft. wide, 176 ft. long and 24 ft. high at wall plate. It will be built of 7/8 in. outside t. and g. sheathing, insulation paper, 7/8 in. t. and g. sheathing, 2 x 6 in. studs, 3/8 in. t. and g. sheathing, insula-

tion paper, 2 by 3 in. studs, and 7/8 in. t. and g. interior sheathing.

The office building will be a 2-story frame structure, 36 x 60 ft., on concrete foundation. 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.

The stores and office building will be of brick on concrete foundations, 60 x 180 ft.; the stores section will be 2 stories high, and the offices section will be 3 stories high.

There will be three shops, a locomotive shop, 151 x 300 ft., of brick on concrete foundation, with 12 pits; a car shop, 140 x 283 ft., of brick on concrete foundation, and containing 12 tracks; a blacksmith shop, 70 x 100 ft., also of brick on concrete foundation. In connection with these buildings will be a transfer table, 80 x 372 ft., on concrete.

Construction was started early in February, and it is expected to have the whole work completed by the autumn. The yards, etc., have been planned under the direction of A. T. Stewart, Chief Engineer, Eastern Lines. The plans for the buildings were prepared by G. C. Briggs, Supervisor of Buildings, and they are being built direct by the company under his supervision. The site was graded by Franceschini & Co.

Central District.—On the Port Arthur-Winnipeg section of the line, the 129 miles between Twin City Jct. and Atikokan will be relaid with 85 lb. steel. The traffic on this section is very heavy. The present rails will be utilized on branch lines.

The Thunderhill branch extends from Swan River, Man., to Preeceville, Sask. An extension of 27 miles has been graded from Preeceville westerly, on which track is to be laid and the extension completed. This work has been delayed hitherto owing to inability to obtain rails.

From Avonlea, Sask., on the Moose Jaw-Radville line, a line is in operation westerly to Gravelbourg and it is proposed to complete the extension to mileage 93 this year, to give facilities to settlers.

A branch from the Saskatoon-Calgary line runs from Delisle, mileage 25.6 from Saskatoon, southerly to Elrose Jct., 50.7 miles from Delisle, and then another branch runs 8.9 miles easterly to Dunblane. The latter extension, known as the Luck Lake branch, is partly graded and it is expected to complete 14 miles this year. It is stated that the settlers have petitioned the company to have the whole of the branch completed, and that they have offered to purchase bonds for \$300,000 to enable this to be done.

A line from Elrose Jct. westerly is in operation to Eston, 84.4 miles, and it is intended to extend it 43 miles to Alsask, where the Saskatoon-Calgary line crosses the Saskatchewan-Alberta boundary. There is a large settlement along the projected route, and some grading has been done. The difficulty of obtaining rails having been overcome, it is expected to have the extension completed in the autumn.

Moose Jaw Station.—The Minister of Railways for Saskatchewan is reported to have stated June 2 that an agreement

between the C.N.R. and the Grand Trunk Pacific Ry. for the erection of a union station at Moose Jaw had been approved and only awaited the Board of Railway Commissioners' formal approval. It is expected that the work of linking up the G.T.P.R. tracks with those of the C.N.R. will be taken in hand at once, and that the station will be located on Main St.

Alberta District.—Some grading has been done from Hanna, Alta., on the Saskatoon-Calgary line, southeasterly, the branch being intended ultimately to reach Medicine Hat, Sask. It will serve a considerable area of territory north of the Red Deer River, in which there has already been a large settlement. It is intended to complete the first section of 47 miles to the Red Deer River. We were officially further advised recently that tenders for construction have been asked. An Alberta Government official was reported subsequently to have stated that a contract has been let to W. A. Dutton, Winnipeg, for the grading on this branch, and that it is expected to have track laid this year.

On the Goose Lake line, which is another name for the Saskatoon-Calgary branch, it is proposed to lay heavy steel rails from Hanna westerly to Drumheller, 52.2 miles, with a double track from Wayne to Manson Jct., 20.1 miles, to properly service the Drumheller coal district, the mines in which 21,376 tons for the three months ended Mar. 31, and are capable of increasing their output considerably if adequate facilities are provided.

The line from Oliver, Alta., 8 miles east of Edmonton, northerly and easterly to St. Paul de Metis has been graded to mileage 100, and track has been laid on 44 miles, but owing to the difficulty of obtaining rails, nothing more could be done. It is intended to complete the track laying to mileage 100, and to provide a train service to the settlers. The ultimate aim is to extend the line easterly, in order to meet the branch from North Battleford, now running north westerly to Turtleford, 55.7 miles.

Vancouver Terminals.—It is proposed to complete the False Creek terminals at Vancouver at the earliest date possible. The funds accruing from the British Columbia bonds are lying at the credit of a trust account in a bank. Tenders are under consideration for additional filling to be done on this site.

Entrance Into Vancouver.—The Dominion Parliament has ratified an agreement dated Aug. 11, 1913, made between the Vancouver, Victoria & Eastern Ry. & Navigation Co. (a subsidiary of the Great Northern Ry., U.S.) and the Canadian Northern Pacific Ry. The V.V. & E.R. & N. Co. grants to the C.N.P.R. the equal joint possession and use of its line from the International Boundary at Sumas to the southerly approach of the Fraser River bridge at New Westminster, owned by the Province of British Columbia, and from the northerly approach of the bridge to Vancouver, at a rental of 2 1/4% a year upon a capital value of \$3,985,448.75, to be increased by 2 1/4% a year on any additional capital expenditure necessary and agreed upon, provided always that if similar facilities shall be granted to any other railway company, the rental shall be reduced to 2% for the first additional company, and to 1 1/2% for additional companies. The C.N.P.R. is also to pay on a mileage basis the cost of maintenance and operation of the property leased. Either company may connect branch lines with

the railway, but the C.N.P.R. is not to use the V.V. & E. Ry. spur tracks, or industrial sidings in New Westminster, except to reach its own station and team tracks. The agreement contains provisions as to the operation of trains, the settlement of differences by arbitration, and the declaration that the C.N.P.R. shall make its own agreement with the B.C. Government for the operation of its trains across the Fraser River Bridge.

Dominion Legislation.—The Dominion Parliament has extended the time within which the Toronto, Niagara & Western Ry. may build its projected railway from Toronto to Hamilton and thence to the International Boundary at Grand Island or Niagara Falls, Ont., and with the consent of the authorities, to a point in the State of New York, with a branch from St. Catharines through Thorold to Welland. The bill met with considerable opposition, but was passed on a statement by the Minister of Railways that the company is absolutely owned by the C.N.R., and that therefore all its property and rights will pass to the Dominion Government on the taking over of that company; and that all restrictions heretofore made with regard to the route of the line in Toronto still exist and will be observed by the government. No construction has been done on the line, but \$1,500,000 has been expended upon surveys and right of way.

The Dominion Parliament has authorized the company to build a line from near the head of Long Lake, near Longue-lac, by the shortest possible route northerly and westerly to a junction with the National Transcontinental Ry. east of Lake Nipigon, Ont.

Expenditures Necessary for Completion. In connection with the second reading of the bill supplementary to chap. 24 of the statutes of 1917, respecting the Canadian Northern Ry. and the Dominion Government relationship thereto, during the recent parliamentary session, Hon. A. K. Maclean, acting Minister of Finance, gave a great many details respecting the company's affairs. One of the tables gave estimates of the amounts necessary to complete lines and terminals in Western Canada which were under construction at Sept. 30, 1917. It is as follows:—

	Miles	Estimated cost.
Manitoba—		
Portage Jct.—Paddington.....	4.58	\$681,822
Saskatchewan—		
Swift Current	55.75	825,771
Elrose extension	50.00	383,673
Vonda north easterly	25.00	240,212
Thunderhill branch	47.27	452,772
Luck Lake Branch	35.00	473,626
N. Battleford—Turtleford	5.21	52,876
Alberta—		
Hanna—Medicine Hat	144.76	3,344,296
Calgary—MacLeod	103.28	1,609,392
Strathcona—Calgary	32.66	566,029
Peace River	42.52	571,178
Oliver northerly	115.00	911,978
MacLeod—Pincher Creek	34.00	463,836
British Columbia—		
Vancouver Island lines (ABC)	100.00	682,368
(D)	45.57	1,182,603
Okanagan branches	141.00	4,460,335
New Westminster to Steveston	13.35	138,049
Total	994.95	\$17,040,236

Following are the details as to terminals, etc.:—

	Miles	Estimated cost.
Moose Jaw, Sask.	7.95	\$461,794
British Columbia—		
Vancouver	2,162,309	
Car ferry	99,169	
Steveston	60,745	
Port Mann	54,679	
New Westminster	226,085	
Victoria	853,125	
Total	\$3,917,906	

The grand total of the estimated cost of the completion of the lines is therefore \$20,958,142.

Freight and Passenger Traffic Notes.

The Canadian Northern Ry. is reported to have resumed its train service from Quebec to Valcartier Camp, Que.

The Reid Newfoundland Co. put an increased passenger fare schedule in operation on its railway June 1, by authority of an order-in-Council.

The C.P.R. has not, up to the time of writing, made any provision in its summer time-table for running a special boat train between Fort William and Winnipeg.

The C.P.R. in its summer schedule for the B.C. coast steamship service has provided for a stopover of an hour and a half at Victoria. The steamship continues to arrive at Victoria from Seattle at 1.15 p.m., but leave for Vancouver at 2.45 o'clock instead of 2 p.m. as formerly.

The Canadian Northern Ry. is giving up to Sept. 30, in conjunction with the Grand Trunk Pacific Ry., a special passenger rate from Calgary, Edmonton and intermediate points, under which a rail and steamship trip may be taken to Prince Rupert, Victoria, Seattle and Vancouver, the return journey to be completed by Oct. 31.

The United States Shipping Board held a sitting at Seattle, Wash., June 5, when the position of the Grand Trunk Pacific Steamship Co., in relation to the Alaska freight and passenger rate question was discussed. Members of the board started work on May 11, and visited every Alaskan port and the several ports in the State of Washington interested in the Alaskan traffic.

The Grand Trunk Pacific Ry. started, on June 1, to issue at Calgary, Edmonton and intermediate points round trip tickets to Vancouver, Victoria or Seattle, good to return to Oct. 31. The are available on G.T.P.R. to Prince Rupert, and on the G.T.P.R. steamships to Vancouver, etc., and from Vancouver back to starting point by Canadian Northern Ry. They will be issued to Sept. 30.

The railways starting from Edmonton,

Alta., of which J. D. McArthur is president, are running a series of settlers excursions to the Grande Prairie, Pouce Coupe and Peace River districts of Alberta. The first excursion, which left Edmonton June 4, consisted of about 50 men, representing groups of farmers in various parts of Canada and the United States desirous of investing money and settling in the new country.

A regular train service was put in operation for the first time for some months on the Pacific Great Eastern Ry.'s North Vancouver - Whytecliffe section, with Sergt.-Major Jas. Robinson, a returned soldier, in charge of traffic. The company, which is now owned by the British Columbia Government, also put in operation on June 2 a tri-weekly train service between Squamish and Clinton, B.C., connecting at Squamish with steamboat to Vancouver. The trains to Clinton leave Squamish on Tuesdays, Thursdays and Saturdays, and the return trains on Mondays, Wednesdays and Fridays.

The car ferry service between Tormentine, N.B., and Port Borden, P.E.I., was discontinued June 15, but it is expected it will be resumed early in August. Trains 13 and 14 running to and from St. John in connection with the car ferry, are discontinued as between Moncton and Tormentine. Through rail and steamer service between New Brunswick and Prince Edward Island, via Point du Chene and Summerside, was resumed June 24. The steamship leaves Summerside at 9.10 a.m. and arrives at Point du Chene about noon, connecting there with a train leaving for Moncton at 12.45 p.m., and connecting with the Ocean Limited for Montreal, and train 13 for St. John and Boston. The steamship leaves Point du Chene for the return trip to Summerside at 5.30 p.m.

Coal Production in Alberta.—During the three months ended Mar. 31, 810,972 tons of coal were mined in Alberta against 744,700 tons for the same period of 1917. The quantity shipped to Manitoba increased from 33,003 tons to 98,195; the quantity shipped to Saskatchewan and British Columbia is not given.

Canadian Pacific Railway's Honor Roll 35.

Beaumont, Harold Sykes	Cranesman	West Toronto	Gas poisoning
Bird, John	Storeman	Cranbrook	Gas poisoning
Breen, Joseph	Locomotive fireman	Kenora	Wounded
Brown, Joseph A.	Clerk	Winnipeg	Killed in action
Colyer, Walter	Freight carpenter	North Bay	Wounded
Cook, Daniel	Boiler maker	West Toronto	Shell shock
Currie, Walter A.	Cook	Montreal	Wounded
Daniel, George	Clerk	Winnipeg	Died of wounds
Davidson, Walter	Trainman	Schreiber	Killed in action
Donaldson, David	Clerk	Calgary	Killed in action
Elliott, Sidney	Checker	Toronto	Wounded
Favreau, Hector	Car carpenter	Angus	Gas poisoning
Gerhart, Albert Howard	Apprentice	Vancouver	Gassed
Gordon, Henry Hartley	Material delivery man	West Toronto	Killed in action
Greenwood, R. J. A.	Laborer	West Toronto	Gassed
Halliday, Wm. Charles.	Fireman	Kenora	Killed in action
Harrison, Alfred G.	Bridgeman	Ontario District	Wounded
Harrison, Geo. Jerod	Boiler washer's helper	Moose Jaw	Wounded
James, William	Fireman	West Toronto	Killed in action
Johnson, Jas. Albert	Porter	Fort William	Died of wounds
Kelly, Benjamin	Sheeter	Winnipeg	Wounded
MacDonald, Angus Norman	Conductor	Moose Jaw	Wounded
McDonald, Hugh John	Fitter	Lambton	Wounded
McLardy, Frank Edgar	Night operator	Woodstock, N.B.	Killed in action
McLeod, John	Wiper	Regina	Wounded
Matthews, George	Locomotive fireman	Moose Jaw	Wounded
Murphy, James	Train clerk	Kenora	Killed in action
Murray, Jack Beattie	Brakeman	MacLeod	Gassed
Ogilvy, Ralph Wardlaw	Clerk	Vancouver	Wounded
Owen, William	Fitter's helper	Lambton	Killed in action
Reinstein, Louis Frederick	Clerk	Montreal	Wounded
Rothwell, John G.	Billie	Ottawa	Killed in action
Seaton, William	Messenger	Edmonton	Wounded
Stewart, Charles	Section foreman	Milverton	Wounded
Stewart, Robt. Henry	Fitter	Winnipeg	Wounded
Stiles, Bedford Allen	Locomotive fireman	British Columbia Dist.	Killed in action
Thorogood, T.	Ice man	Winnipeg	Wounded
Ward, John Charles	Brush hand	Winnipeg	Wounded
Watt, John	Car repairer	Vancouver	Wounded

Shown on Honor Lists to June 1: Killed 633; Wounded 1,478; Total 2,111.

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.

Algoma Eastern Ry.—W. H. FARRELL, heretofore Superintendent Toronto Terminals, G.T.R., has been appointed General Manager, A.E.R., vice A. L. Smith, resigned. Office, Sudbury, Ont.

Boston & Maine Rd.—WOODWARD HUDSON, General Counsel, has been elected President and director, B. & M.R. and its subsidiaries, vice J. H. Hustis, Temporary Receiver, resigned. Office, Boston, Mass.

Canadian Government Railways.—W. A. DUFF, heretofore Assistant Superintendent, District 2, Transcontinental Division, Grant, Ont., has been appointed Assistant Superintendent, District 1, Transcontinental Division, vice J. J. McManus, who has left the service. Office, Parent, Que.

W. G. WILSON has been appointed acting Assistant Superintendent, District 2, Transcontinental Division, vice W. A. Duff, transferred. Office, Grant, Ont.

W. A. HILL, heretofore dispatcher, Graham, Ont., has been appointed Chief Dispatcher there, vice S. A. Lawless, transferred to Quebec, Que.

W. F. CRESSALL, heretofore accountant, Cochrane, Ont., has been appointed chief clerk to Superintendent, Fort William, Ont., vice H. A. Irving, now in military service.

W. J. QUINLAN, District Passenger Agent, C.G.R. and Grand Trunk Pacific Ry., Winnipeg, has also been appointed acting General Baggage Agent, C.G.R. and G.T.P.R. there, vice E. McDonald, enlisted for military service.

See also Elgin & Havelock Ry., Moncton & Buctouche Ry., St. Martins Ry., Salisbury & Albert Ry., and York & Carleton Ry.

Canadian Northern Ry.—W. M. PUNTER, heretofore Manager, Saxby & Farmer, Ltd., Montreal, has been appointed Signal Engineer, lines east of Port Arthur, Ont., reporting to Chief Engineer. Office, Toronto.

P. K. HUNT, heretofore Manager, Prince Edward Hotel, Brandon, Man., has been appointed Manager, Prince Arthur Hotel, Port Arthur, Ont., vice G. A. Keeler, resigned.

J. VAN WYCK has been appointed Manager, Prince Edward Hotel, Brandon, Man., vice P. K. Hunt, transferred.

J. IRWIN, heretofore Superintendent, Division 3, Western District, Edmonton, Alta., has been appointed Superintendent, Division 4, Western District, vice M. B. Helston, transferred. Office, Calgary, Alta.

M. B. HELSTON, heretofore Superintendent, Division 4, Western District, Calgary, Alta., has been appointed Superintendent, Division 3, Western District, vice J. Irwin, transferred. Office, Edmonton, Alta.

Canadian Pacific Ry.—E. BOWIE, heretofore Locomotive Foreman, Smiths Falls, Ont., has been appointed General Foreman, McAdam Jct., N.B., vice L. A. Cleary, transferred.

W. W. NOYES has been appointed Roadmaster, McAdam Jct., N.B., vice P. Chicoine, transferred.

C. SENAY, heretofore Assistant Superintendent, Laurentian Division, Quebec District, Montreal, has been appointed General Agent, Quebec, Que., vice J. S. Lalonde, transferred.

J. S. LALONDE, heretofore General Agent, Quebec, Que., has been appointed Assistant Superintendent, Laurentian Division, Quebec District, vice C. Senay, transferred. Office, Montreal.

L. A. CLEARY, heretofore General Foreman, McAdam Jct., N.B., has been appointed Locomotive Foreman, Smiths Falls, Ont.

P. CHICOINE, heretofore Roadmaster, McAdam Jct., N.B., has been appointed Roadmaster, Winchester Subdivision, Smiths Falls, Ont.

E. E. THACKER, heretofore Assistant Passenger Car Yard Foreman, Winnipeg, has been appointed Car Foreman, Field, B.C., vice A. E. Chesterman, resigned.

J. W. MARSHALL, heretofore Assistant Car Foreman, Transcona, Man., has been appointed Freight Shop Foreman, Fort William, Ont., vice H. Dibley, transferred, and not Car Foreman there, as announced in our last issue, which position is held by T. E. Higgins.

G. A. DAVIDSON, heretofore Chief Dispatcher, Nelson, B.C., has been appointed Chief Dispatcher, Calgary, Alta., vice R. Douglas.

J. V. MURPHY, General Agent, Portland, Ore., having resigned, the work of that department is being carried on by B. E. CHACE, City Ticket Agent there.

Central Vermont Ry.—J. W. WARDLAW, heretofore Assistant to President, and Purchasing Agent, has been appointed General Manager, C.V.R., under the District Director, New England District, U.S. Railroad Administration. Office, St. Albans, Vt.

See also National Despatch—Great Eastern Line.

Delaware & Hudson Co.—F. P. GUTELIUS, heretofore Vice President and General Manager, has been appointed General Manager, D. & H. Co., under the Regional Director, Eastern Regional District, U.S. Railroad Administration. Office, Albany, N.Y.

Elgin & Havelock Ry.—The operation of this railway having been taken over by Canadian Government Railways, June 1, all employes now report to C.G.R. Eastern Lines officials.

Grand Trunk Ry.—L. G. COLEMAN, heretofore Superintendent, Ottawa Division, Eastern Lines, Ottawa, Ont., has been appointed General Manager, Grand Trunk Ry. in New England, under the District Director, New England District, U.S. Railroad Administration. Office, Portland, Me.

J. A. BURNETT, Electrical Engineer, has resigned, on appointment as technical assistant with the British War Mission at Washington, D.C.

F. L. LAMPLOUGH, heretofore Trainmaster, Ottawa, Ont., has been appointed Superintendent, Ottawa Division, Eastern Lines, vice L. G. Coleman, appointed General Manager, Grand Trunk Lines in New England under the District Director, New England District, U.S. Railroad Administration. Office, Ottawa.

W. E. WEEGAR, heretofore Passenger Trainmaster, Montreal has been appointed Trainmaster, Ottawa Division, Eastern Lines, vice F. L. Lamplough, promoted.

G. A. STOKES, heretofore Terminal Superintendent, Port Huron, Mich., has been appointed Terminal Superintendent, Toronto, vice W. H. Farrell, resigned to enter another company's service.

J. E. ELLIS, heretofore acting Locomotive Foreman, Hamilton, Ont., has been appointed Locomotive Foreman there.

JOHN VASS, heretofore Road Foreman of Locomotives, Nichols, Mich., has been appointed Assistant Master Mechanic, Ontario Lines. Office, Allandale.

H. E. WHITTENBERGER, heretofore General Superintendent, Western Lines, Chicago, Ill., has been appointed General Manager, Grand Trunk Western Lines, under the Regional Director, Eastern Regional District, U.S. Railroad Administration. Office, Chicago, Ill.

See also National Despatch—Great Eastern Line.

Grand Trunk Pacific Ry.—W. J. QUINLAN, District Passenger Agent, Canadian Government Railways, and G.T.P.R., Winnipeg, has also been appointed acting General Baggage Agent, C.G.R. and G.T.P.R. there, vice E. McDonald, enlisted for military service.

S. A. MILLER, heretofore conductor, has been appointed Assistant Superintendent, Edmonton, Alta.

W. E. SIMMONS, heretofore dispatcher, Biggar, Sask., has been appointed first trick dispatcher, Edmonton, Alta.

Grand Trunk Pacific Coast Steamship Co.—F. L. NORMAN, heretofore Commercial Agent, G.T.R., Seattle, Wash., has been appointed Commercial Agent, G.T.P.C.S. Co. there.

Grand Valley Ry., Lake Erie & Northern Ry. (Electric).—A. McL. CAMPBELL, heretofore Travelling Auditor, C.P.R., Montreal, has been appointed Chief Accountant, G.V.R. and L.E. & N.R., Galt, Ont.

Hudson Bay Ry.—ALEX. D. PORTER, Mechanical Engineer, having completed his work on the H.B.R., has been appointed to a position in the Imperial Munitions Board's service at Ottawa, under the Director of Shell Contracts. His position on the H.B.R. will not be filled for the present at least.

Michigan Central Rd.—E. D. BRONNER, heretofore Vice President, has been appointed Federal Manager, M.C.R. and Chicago, Kalamazoo & Saginaw Ry., under the Regional Director, Eastern Regional District, U.S. Railroad Administration. Office, Detroit, Mich.

Moncton & Buctouche Ry.—The operation of this railway having been taken over by Canadian Government Railways, June 1, employes now report to C.G.R. Eastern Lines officials.

The National Despatch-Great Eastern Line was abolished June 30. All matters affecting traffic waybilled over this line prior to June 1, have been dealt with by C. J. PIERCE, Manager, and all correspondence in respect to business transacted after June 1, is addressed to G.T.R. or the Central Vermont Ry. officers, as their interests appear.

New York Central Lines.—W. K. VANDERBILT, Jr., heretofore Vice President, has been elected President, vice A. H. Smith, resigned on account of his appointment as Regional Director, Eastern Regional District, under the U.S. Railroad Administration.

Pere Marquette Ry.—F. H. ALFRED, heretofore President and General Manager, has been appointed Federal Manager, P.M.R., under the Regional Director, Eastern Regional District, U.S. Railroad Administration. Office, Detroit, Mich.

Rutland Rd.—G. T. JARVIS, heretofore Vice President and General Manager, has been appointed General Manager, under the District Director, New England District, U.S. Railroad Administration. Office, Rutland, Vt.

St. Martins Ry.—The operation of this railway has been taken over by Canadian Government Railways, June 1; all employees report to C.G.R. Eastern Lines officials.

Salisbury & Albert Ry.—The operation of this railway having been taken over by Canadian Government Railways, July 1, all employees now report to C.G.R. Eastern Lines officials.

York & Carleton Ry.—The operation of this railway having been taken over by Canadian Government Railways, June 1, all employees now report to C.G.R. Eastern Lines officials.

The Traveling Engineers' Association Convention.

The Railroad Administration has authorized the Traveling Engineers' Association to hold its next convention at Chicago, Ill., commencing Sept. 10. Following are the subjects to be discussed:—

Fuel economy, under the following heads: Value of present draft appliances; can they be improved to effect fuel economy. Best practice for handling locomotives at terminals to reduce coal consumption. How can locomotive men and firemen effect the greatest saving of fuel when locomotives are in their charge? Whether it is more economical to buy cheap fuel, at a low heat value or a higher price fuel at a greater heat value. The most economical method of weighing fuel when delivered to locomotives, in order that individual records of coal used by enginemen and firemen may be kept. Superheat applied to locomotives as effecting coal consumption.

Locomotive failures, causes and remedies, best methods of investigating same, and placing responsibility.

The use of superheat steam in slide valve locomotives. Drifting, relief, and by-pass valves, or the absence of any one or all, on superheated locomotives equipped with piston valves.

Cab and cab fittings on modern locomotives, from the viewpoint of the locomotive man.

How can the traveling engineer and general air brake inspector best co-operate to improve and maintain the air brake service.

Such other matters as may be considered of interest to the association and railways under the changed conditions.

New York Central Railroad Report for 1917.

The New York Central Rd. directors' report for the calendar year 1917 shows a total of 5,685.43 miles of railway operated, of which 3,702.75 are main line and branches owned, 1,527.02 are leased lines and 455.66 are operated under trackage rights. The leased lines include the following in Canada:—St. Lawrence & Adirondack Ry., International Boundary to Valleyfield, Que., 20.17 miles, and Beauharnois to Adirondack Jct., Que., 13.27 miles, total 33.34 miles; Grand Trunk Ry., Valleyfield to Beauharnois, 12.70 miles; Ottawa & New York Ry., International Boundary to Ottawa, 56.90 miles. The lines operated under trackage rights in Canada are:—Canadian Pacific Ry., Adirondack Jct. to Montreal, 8.80 miles, South Junction to Outremont, Que., 5.46 miles, in Ottawa 1.09 miles, total 15.35 miles; Grand Trunk Ry., in Ottawa, 0.81 mile.

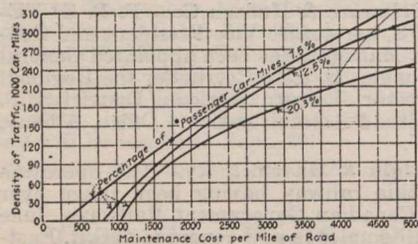
The report does not give details of the operations of Canadian railways, but includes them in the general statement.

Information as to the Ottawa & New York Ry. and the St. Lawrence & Adirondack Ry. for the year ended June 30, 1917, is given in the steam railways statistical table on another page. The financial statements, however, contain the following items:—Expenditures for improvements to property, \$31,795.37 on Ottawa & New York Ry., and \$45,706.29 on St. Lawrence & Adirondack Ry., the work on both lines being classified as bridge strengthening and track improvements.

The company's investments include:—Ottawa & New York Ry., \$64,362.67; St. Lawrence & Adirondack Ry., \$54,407.38, on account of improvements; Ottawa & New York Ry., \$1,000,000, par value shares of common stock; St. Lawrence & Adirondack Ry., \$1,615,000, par value of common stock, being in each case the entire share capital; Michigan Central Rd., \$16,819,300, out of \$18,738,000 par value common stock outstanding; Toronto, Hamilton & Buffalo Ry., \$1,676,600, par value out of \$4,512,500 common stock outstanding; Ottawa & New York Ry., \$8825,000 1st and \$275,000 2nd mortgage bonds; Toronto, Hamilton & Buffalo Ry., \$500,000 bonds. The rental paid to the St. Lawrence & Adirondack Ry. was \$64,000, being interest on 1st and 2nd mortgage bonds, and the rental paid to the G.T.R. was \$10,000.

Railway Maintenance Cost Increased by Fast Trains.

That speed of trains affects the cost of maintenance of way and structures to the extent that the higher the proportion of passenger traffic, which may be assumed as high speed traffic, the greater the cost of maintenance, is the conclusion arrived



at in a preliminary report presented by the track committee at the American Railway Engineering Association's recent annual meeting.

In the accompanying diagram, the curved lines represent traffic of which the passenger-car miles constitute 7.5, 12.5 and 20.3% of the total car mileage. The vertical ordinates represent the annual cost of maintenance per mile of road; the horizontal lines represent the density of traffic in 1,000 car-miles per mile of road.

It is recognized by the committee that the assumption of high speed and low speed traffic, as synchronous with passenger and freight traffic, is not entirely correct, but this, the committee says, offers the only opportunity for classifying expenses in accordance with differences of speed. The car-mile was taken as the unit for comparison on the ground that it gives the best measure of the facilities required by each class of traffic.

The Grand Trunk Ry. car ferry will give a freight and passenger service between Cobourg, Ont., and Rochester, N. Y., daily except Sunday, from July 1 to Sept. 2, inclusive, and on Mondays, Thursdays and Saturdays from Sept. 5 to Sept. 30.

Patronage on Canadian Government Railways.

J. H. Sinclair, M.P. for Antigonish and Guysboro, complained in the House of Commons recently of political patronage still being exercised in connection with employment on the Canadian Government Railways, and read a letter sent on April 22 by W. N. Ingram, Master Mechanic at Stellarton, to the Secretary of the Returned Soldiers' Employment Committee at Halifax, as follows:—"You letter of the 16th inst. to hand, in regard to the employment of returned soldiers. If you have two machinists, I could place them at Sydney. In regard to wipers and cleaners employed at the roundhouses, I would refer them to A. McGregor, M.P., New Glasgow, for a recommendation, as this has always been the practice when taking on employes on the railway."

The Minister of Railways said in reply: "I stated in the House a few days ago that I had informed the General Manager of the Intercolonial Ry., Mr. Hayes, that in operating the road he could employ any one he saw fit without regard to the political party to which the applicant belonged. I am sorry the party mentioned in that letter should take the stand he does as far as returned soldiers are concerned. The only recommendation any returned soldier wants to get a position on the Intercolonial or in any department of this government is himself. The returned soldier will be given preference over everybody else. With reference to patronage outside of returned soldiers, I gave instructions to Mr. Hayes that he was to employ people on their merits, and those instructions, I suppose, he would circulate among all the officials serving under him who had authority to employ only today, for I have received a copy of the letter my hon. friend has read, and I will expect those instructions to be carried out. I do not think the member for New Glasgow, hon. member for Guysboro, or any other member, wants to be bothered with patronage if he can get out of it; that is the way I feel about it, and I have not been bothered with patronage either on the railway or anywhere else since civil service reform was brought about. Neither Mr. McGregor nor any other member has recommended me to employ any person on the Intercolonial."

Canadian Northern Rolling Stock Ltd., has been incorporated under the Dominion Companies Act, with authorized capital of \$100,000, and office at Toronto, to manufacture, own and deal in engines and locomotives, rolling stock of every description, rails, ties, machinery, tools, etc., for the building, operation, maintenance and renewal of railways, steamships and vessels of every description, and for other purposes. The incorporators are: D. B. Hanna, G. Ruel, A. J. Reid, R. H. M. Temple, R. P. Ormsby, all associated with the Canadian Northern Ry., Toronto. This company will be under Dominion Government control and will perform the same services for the C.N.R. in future as the Imperial Rolling Stock Co., a Mackenzie & Mann Company, has heretofore.

St. John & Quebec Ry. Financing.—The New Brunswick Legislature has passed an act providing for the initiation of legal proceedings against certain directors and others to secure the return of the company's funds which a royal commission found recently to have been improperly applied. The total amount particularly referred to is \$153,000.

Railway Rolling Stock Orders and Deliveries.

Grand Trunk Pacific Railway Betterments.

The Canadian Copper Co. has ordered 12 special steel transfer cars, 200,000 lb. capacity for quick delivery, from Canadian Car & Foundry Co.

The C.P.R., between May 14 and June 15, received the following additions to rolling stock, from its Angus Shops: 12 express refrigerator cars, 80 steel under-frame coal cars, 1 snow plough, and 1 decapod locomotive.

The G.T.R. received between May 7 and June 12, the following additions to rolling stock:—10 mikado locomotives from American Locomotive Co.; 300 box cars, 80,000 lb. capacity, from American Car & Foundry Co., and 2 snow ploughs from Russell Snow Plow Co.

The G.T.R. has received 35 mikado locomotives ordered by the Dominion Government last year from Canadian Locomotive Co., and will get two more out of that order. Of the 60 mikado locomotives ordered by the government, 40 will go to the G.T.R. and 10 to the G.T.P.R.

The Dominion Government has ordered, for the Canadian Northern Ry., one rotary snow plough, from Montreal Locomotive Works, for \$48,500, f.o.b. Montreal, subject to an additional payment of \$7,500 for a locomotive tender for the plough, should one be required. Delivery is to be made in December. We have since been advised that a tender is not to be provided for this plough.

The Canadian Copper Co. has purchased from Hart-Otis Car Co., 125 improved ore and general service, all steel cars, 50 tons capacity. Following are the chief particulars,—

Length over end sills 24 ft. 4½ in.
 Length inside 22 ft. 5 in.
 Width over all 9 ft. 11¼ in.
 Width inside 9 ft. 6 in.
 Height 5 ft.
 Height from rail 9 ft. 4 13/16 in.
 Number of doors on each side 4

The Dominion Government's rolling stock orders placed during the last few months, for the Canadian Government, Canadian Northern and Grand Trunk Railways, amount to \$35,490,665, as follows:—

Cars and locomotives as detailed in Canadian Railway and Marine World for July	\$33,620,665
Further orders.	
Montreal Locomotive Works—	
15 Pacific locomotives at \$60,000....	900,000
20 switching locomotives at \$40,500..	810,000
1 rotary snow plough	48,500
Canadian Car & Foundry Co.—	
24 snow ploughs at \$8,000	12,000
	\$35,491,165

In reference to the additional order given by the Dominion Government to Montreal Locomotive Works for 15 Pacific type locomotives, and 20 switching locomotives, as mentioned in Canadian Railway and Marine World for June, we are officially advised that the 15 Pacific locomotives and 10 of the switching locomotives are for the G.T.R. and the other 10 switching locomotives are for the G.T.P.R. They are all of the same types as the locomotives ordered recently for the Canadian Government Railways, except that the specifications for a number of parts have been changed to conform to G.T.R. standards, with a view to effecting economy and interchangeability of parts. The prices are the same as for those ordered for Canadian Government Railways, viz., \$60,000 each for the Pacifics and \$40,500 each for the switchers. The Dominion Government has ordered 24 snow ploughs at \$8,000 each, f.o.b. Montreal, from Canadian Car & Foundry Co., subject to certain conditions as to price of steel plates over certain sizes,

and also to the furnishing to the car company, by the railways, of certain parts free of charge. They will be all steel ploughs, with drop point, and wings operated by compressed air, the type being similar to those ordered last year for Canadian Government Railways, with an improvement made on the wing of the plough to elevate snow, also a hand attachment for raising point, in case of air failure. They will be equipped with electric headlights and an improved form of ice cutter. The weight of each plough will be approximately 65,000 lb. Delivery is to be made in November, subject to reasonably prompt delivery of material. Fifteen of the ploughs are for Canadian Government Railways, Eastern and Western Lines, and 9 for Canadian Northern Ry., Eastern and Western Lines.

The Toronto, Hamilton & Buffalo Ry. has received 6 six wheel switching locomotives from Canadian Locomotive Co. Following are the chief details:—

Weight in working order, drivers.....	166,000 lbs.
Wheel base, rigid	11½ ft.
Wheel base, engine and tender	45 ft. 4½ in.
Heating surface, firebox and arch tubes.	142 sq. ft.
Heating surface, tubes	1,879 sq. ft.
Heating surface, total	2,021 sq. ft.
Driving wheels, diam.	51 in.
Driving wheel centres	Cast steel
Driving journals	9 by 12 in.
Cylinders, diam. and stroke	21 by 28 in.
Boiler, type	Radial stayed
Boiler pressure	180 lbs.
Tubes, no. and diam.	165-2 in.; 22-5½ in.
Tubes, length	16 ft.
Brakes	Westinghouse American
Packing	King metallic
Superheater. Locomotive Superheater Co's Type A	
Fire door	Franklin butterfly type
Brick arch	American Arch Co.
Valve gear	Walschaert
Reverse gear	Casey-Cavin power type
Weight of tender, loaded	110,000 lbs.
Water capacity	5,500 galls.
Coal capacity	8 tons
Tank, type	U shape, steel coal gate
Truck type	Arch bar
Wheels	Solid steel 33 in.
Journals	5 by 9 in.
Brake beams	Buffalo
Axle boxes	McCorrd

Rules for wires erected along or across railways.—The Board of Railway Commissioners having received inquiries in regard to the scope of General Order 231, May 6, 1918, containing rules for wires erected along or across railways, and as there appears to be some misunderstanding as to whether an order is necessary where construction is along the railway, it is announced officially that the amending provision, sec. 7, chap. 22, Statutes of 1911, dispensing with the necessity of an order where the railway company consents, as set forth in General Order 231, on page 2, as printed, applies only to construction across the railway. Where the wires or other conductors are to be erected along the railway an order of the board is therefore necessary.

We have been officially advised that the G.T.P.R. proposes to make the following betterments, etc., during this year:

Light ballasting on certain sections of the main line divisions and on branch lines.

Eight temporary bridges to be filled and permanent roadbed provided, including a diversion of the line over Pine and Mule Creeks, Man.

Water supplies to be developed at 14 points.

Seven new station buildings to be built, one of which will be Prince Rupert, B.C. In regard to Prince Rupert we were advised by another officer that other terminal buildings were projected there, but that no arrangements for their immediate construction had been made.

Additions are to be made to 5 locomotive houses; 20 bunk houses and section houses, and 12 portable bunk houses are to be built. Four coaling plants are to be installed; 2 store houses are to be built and an addition is to be made to another.

Additional yard tracks are to be laid at Biggar, Tofield, Edmonton and Calgary, Alta.; and Prince Rupert, B.C.

An entrance will be provided into Saskatoon, Sask., over the C.P.R.

A coal mixing plant will be installed at Edson, Alta., together with a yard.

A locomotive house and a freight shed is to be built at Calgary.

On the Mountain Division there will be a general cleaning of mud cuts, and riprap and crib protection will be provided.

A press report states that work has started completing the ballasting and finishing up of the line from Talmage, on the Regina-International Boundary line, into Weyburn, Sask., and that the work is estimated to cost about \$45,000. (June, pg. 240.)

Deputy Minister of Railways.—Graham Airdrie Bell, C.M.G., heretofore Assistant to the Minister, and Financial Comptroller, Department of Railways and Canals, has been appointed Deputy Minister of Railways and Canals, as well as Assistant to the Minister, the positions having been amalgamated. A. W. Campbell, heretofore Deputy Minister, will, it is said, be appointed to another position. Mr. Bell was born Aug. 13, 1874, and his first temporary appointment in Government service was dated Dec. 1, 1890, his first permanent appointment July 6, 1893. He was appointed Financial Comptroller Sept. 1, 1908, and Assistant to Minister June 1, 1917. He is also a Government director of the Canadian Northern Ry. He is a captain, Corps Reserve, 2nd Battalion, 43rd Regiment, Duke of Cornwall's Own Rifles.

Fuel Consumption on Railways in 1916-1917.

The consumption of fuel of all kinds by locomotives on Canadian railways increased from 8,995,123 tons in the year ended June 30, 1916, to 10,130,799 tons

in the year ended June 30, 1917. The average cost per tons for the latter year was \$3.63 a ton, against \$3.11 for the previous year. Following are the figures:

Class of locomotive.	Coal		Hard.	Wood.	Other fuel.			Total.	Miles run.
	Anthracite.	Bituminous.			Soft.	Oil.	Charcoal.		
	Tons.	Tons.	Cords.	Cords.	Gallons.	Bushels.	Tons.		
Freight	2,700	5,474,665	360	20,351	31,460,382	62,130	1,675,606	68,983,629	
Passenger	1,194	2,026,452	240	10,113	15,460,382	39,812	2,127,621	44,005,835	
Mixed	1,000	515,564	125	4,643	995,070	3,965	524,917	8,612,666	
Switching		1,436,563	100	7,916	3,871,171	20,747	1,463,820	28,509,069	
Special		330,280	...	1,805	1,285,448	207	338,835	153,099	
Total	4,900	9,783,524	825	44,828	53,471,269	126,861	10,130,799	150,264,298	

Widening Cuts Through Snow Drifts with a Spreader.

After heavy snow storms last winter, a Jordan spreader was used most successfully in widening cuts through drifts on the C.P.R. main line between Toronto and London. The prevailing wind, throughout the storm, was from the south, and at times attained a velocity of 60 miles an hour. The snow was sandy, and packed in heavy drifts, which were amazingly hard, as at no time during the storm was the temperature above zero. The snow ploughs kept the line open with fair success. The ploughs would go through the drifts, but the hard snow on the south side of the cuttings would force the wing on that side of the plough shut. Thus when the storm was over and normal traffic could be resumed, there were many drifts on the south side of the track with a vertical face, that barely cleared the sides of the passenger cars. These walls of snow were from 4 to 10 ft. high, and in many cases over half a mile long. In almost every case, the wing of the plough on the north side remained open, making a fairly wide cut.

The spreader served a double purpose in widening the narrow cuts through the snow, first by cutting back the side of the drift with the end of the main wing, by pulling the spreader backward through the cut with the wing partially open, and second, by pushing the spreader forward through the cutting and using the extension on the nose, all the snow cut from the bank was thrown to the wide side of the cut.

In widening a cut, the spreader was

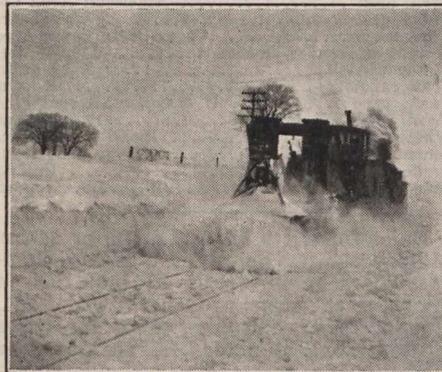
ened snow to the wide side of the cutting, where it could later be winged out by the plough. This extension nose is supplied with the spreader, and can be attached in 10 minutes. After it is attached to the nose proper, it is raised and lowered with the nose, by compressed air, while running, without delay. Figs. 3 and 4 show the spreader being pushed forward,



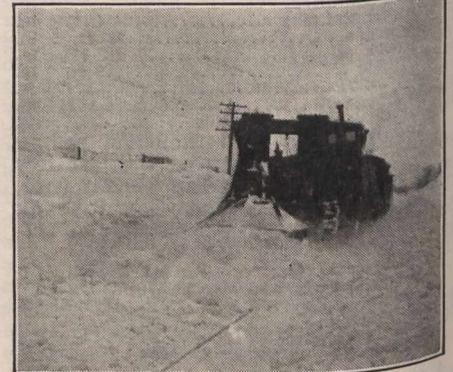
Fig. 1. Spreader with wing chained for final widening of 6 ft. 4 in. from rail.



Fig. 2. Spreader with extension nose attached.



Figs. 3 and 4. Backing through cut, throwing loosened snow away from drift with extension nose.



operated as follows: The main wing of the spreader was opened slightly, and held securely by a chain passed around the wing and frame of the car, the edge of the wing projecting about 6 in. wider than the cut through the snow. The spreader was then drawn backward through the drift, the end of the wing becoming a cutting edge and chiselling off about 6 in. of snow, which was forced to the track by the wing and passed out beneath the wing and nose of the spreader. The amount the wing was allowed to project, depended upon the height of the cutting, but more snow should not be cut loose at one time than will pass out beneath the nose of the spreader (about 6 in. above the rail) without clogging. Fig. 1 shows the wing open and chained for the final cut of 6 ft. 4 in. from the rail.

To clear the track of the snow cut down, the locomotive was reversed and the spreader pushed through the cut in the opposite direction with the nose down, cutting a full flange, while the plate attached to the nose (fig. 2) extended 3½ ft. outside the rail and threw all the loos-

throwing all the snow that has been cut, clear of the track, preparatory to the next widening.

The train undertaking this work was made up as follows: A snow plough ahead, followed by the locomotive, then the van with the spreader behind, the nose of the spreader to the rear of the train. The plough was operated as usual, until a heavy drift was encountered which the wings would not throw back. The wing of the spreader was opened slightly and secured by a chain, and the train run through the cut at the rate of 20 or 25 miles an hour, cutting off about 6 in. from the bank of snow. The locomotive was reversed, the nose lowered and the train backed through the cut at about the same speed. This was repeated three or four times, the wing being allowed to open about 6 in. further on each cut, until the snow had been cut back to over 6 ft. from the rail. The train was then backed up a quarter of a mile, and a run made through the cut, the wings of the plough throwing all the loose snow well back from the track. By this method a very

heavy cut half a mile long could be completely cleared in 30 minutes, with only four men, beside the train crew.

The photographs from which the accompanying illustrations were made were taken while working in light drifts. When the snow wall was over 6 ft. high, it was necessary to break down the overhang with shovels, although this difficulty can be overcome by bolting a bar of steel to the end of the spreader wing, in an upright position, projecting 4 or 5 ft. above the top of the wing. This will cut off snow projecting inside of the end of the wing in the deeper drifts.

This method of cutting snow with the spreader was devised and carried out, with complete success, by J. M. Silliman, who was, at the time, acting Roadmaster Resident Engineer, C.P.R., London, Ont., on the Galt Subdivision.

The Quebec and Saguenay Railway Purchase.

A press report from Quebec, on June 13, stated that all legal details in connection with the transfer of this line to the Dominion Government had been settled, and that the purchase price would be paid over by the end of the month.

The Dominion Parliament at its recent session appropriated \$3,489,313.53 to acquire, free and clear of all charges, encumbrances or claims at any public sale, the Q. & S. Ry., extending from its junction with the Quebec, Montmorency & Charlevoix Ry. to Nairn Falls, Que., 62.3 miles. Sir James Lougheed stated in the Senate that the value placed upon the line by the judge of the Exchequer Court,

according to the terms of the reference to him, was \$2,886,939.06, to which has to be added interest amounting to \$228,519.63, and interest from July 1, 1916, to July 30, 1918, when the Government expected to take the line over, making altogether the amount appropriated.

Canadian Government Railways have received the following rolling stock since Mar. 1:—804 box cars from Eastern Steel Co.; 5889 box cars from National Steel Car Co., completing contract; 1,380 box cars from Canadian Car & Foundry Co., Fort William, Ont.; 508 stock cars from Canadian Car and Foundry Co., Amherst, N.S.; 1,797 box cars from Canadian Car & Foundry Co., Montreal; 22 Mikado locomotives from Canadian Locomotive Co., and 1 Santa Fe locomotive from Montreal Locomotive Works.

The Dominion Ex. Co. service has been withdrawn from the Canada & Gulf Terminal Ry., running between Mont Joli and Matane, Que., the railway company now operating its own express service at points along the line.

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**The Railway Gateways Between Canada and the
United States.**

Newspaper comment on a shipment of Chinese eggs received at Ogdensburg, N.Y., recalls to the student of railway work in Canada the fact that many of the most important gateways between this country and the U.S. are practically unknown to the general public, and even many railway men are not familiar with all of them. The observant reader, not knowing that Ogdensburg is one of these important gateways, wonders why Chinese eggs should be reported from that point instead of from New York or San Francisco, or some other well-known port of entry to the U.S. As a matter of fact, they land in Vancouver from China. Ogdensburg (opposite Prescott, Ont.) merely happens to be the end of their journey through Canada.

There are 34 railway gateways between Canada and the U.S. That does not mean mere points at which the boundary line is intersected by the railway lines, but points of exchange or clearance between Canadian and U.S. carriers. Out of these 34 gateways, 14 may be said to be main entrances and the balance of slightly less importance. The 14 main entrances are: Vanceboro, Me.; Island Pond, Vt.; Newport, Vt.; Rouse's Point, N.Y.; Malone, N.Y.; Niagara Falls, Windsor, Sarnia and Sault Ste. Marie, Ont.; Emerson, Man.; Portal, N.D.; Kingsgate, Huntingdon and Vancouver, B.C.

Vanceboro exchanges chiefly Canadian potatoes and pulpwood, for U.S. coal and general merchandise. It links the Canadian Government Railways, C.P.R., and Maine Central.

Island Pond, Vt., is a G.T.R. point, for general export—chiefly grain and munitions just now, and imports of general merchandise. U.S. interstate traffic passing over Canadian lines also crosses here.

Newport, Vt., is a very heavy focus of traffic, exports chiefly of flour and livestock and imports of general merchandise. This is an important l.c.l. handling point, where the cars of l.c.l. are made up.

Rouse's Point, N.Y. (G.T.R., Q.M. & S., and D. & H.) exchanges Canadian forest products for U.S. coal.

Niagara Falls (including of course Black Rock, Victoria Park, Bridgeburg and Niagara Falls) is common to G.T.R. and C.P.R. and handles all classes of traffic. The same is true of the Windsor-Detroit and Sarnia-Port Huron connection.

Sault Ste. Marie is noteworthy for the heavy paper, lumber, steel and ore, grain and flour traffic. One of the features of the gateway before the war was the danger of congestion due to speculation in flour. So long as flour prices remained high, the flour cars were kept moving east, but if the market dropped or looked weak, the shippers made Sault Ste. Marie a holding point—detaining the cars there so as to be able to divert them at a moment's notice to the most favorable market. This port, like Detroit, is also affected by U.S. interstate traffic crossing to Newport, Vt.

Portal, N.D., opposite North Portal, Sask., may never have been heard of in London or Berlin, but in the days of heavy export from Canada and the U.S. to Russia, it was the place where the Canadian railways accepted cars destined for the piers at Vancouver. In one day there have been as many as 800 cars of freight at Portal for Canadian roads to forward to Russia. This has always been a key posi-

tion in the handling of trade between Russia, China and Japan on the one hand and the U.S. on the other. Incoming trains of silks, lily bulbs, rattan, curios, antiques, from the celestial republic, and gunnies and sheepskins from Australia—all stop at this point. Fifteen cars of Chinese lily bulbs in one train passing through Portal, are on record. In addition to this trans-Pacific traffic there is also an important exchange of cattle, forest products and general merchandise.

Kingsgate, B.C., opposite Eastport, Idaho, is the western end of another short cut across Canada for U.S. interstate traffic. The eastern ends of this connection (so far as Canada is concerned) are Coutts, Alta., and North Portal, Sask. Much westbound traffic from Chicago for points on the U.S. west coast crosses at Coutts and North Portal and traverses Canadian territory as far as Kingsgate, and vice versa. Otherwise the traffic there consists of coal, ores and forest products southbound, and imports of general merchandise.

Vancouver and Huntingdon, B.C., like Windsor and Sarnia, Ont., are ports of general import and export.

Of the remaining 20 lesser gateways, several on the St. Lawrence River and Lakes Ontario and Erie are served by railway ferries, similar to the ferries on the Detroit and St. Clair rivers. These ferry points are Prescott-Ogdensburg; Cobourg-Charlotte; Port Maitland-Cleveland; Port Dover-Cleveland; Port Burwell-Ashtabula; and Port Stanley-Cleveland. The remaining 14 gateways are: Sherbrooke, Que.; Fort Frances on the C. N.R. opposite International Falls, Minn.; Coutts, Alta. (already mentioned) opposite Sweet Grass, Mont.; New Gate, B.C.; Creston, B.C.; Bonita, B.C. (opposite Boundary, Wash.); Peterson, Grand Forks, Midway, and Chopaka, B.C.

Railway Finance, Meetings, Etc.

Guelph Junction Ry.—The directors, on May 27, declared a quarterly dividend at the rate of 6% per annum, after allocating \$1,700 of the quarter's revenue for taxes. The line is owned by the city and leased to the C.P.R.

Minneapolis, St. Paul & Sault Ste. Marie Ry.—This C.P.R. subsidiary shows the following results for the calendar year 1917:—

Gross earnings	\$34,540,491.39
Operating expenses	22,964,793.67
Net earnings	11,575,697.72
Income from other sources	1,652,231.40
Total income	12,227,929.12
Fixed charges, taxes, etc.	8,799,490.15
Surplus income	4,428,438.97

Timiskaming & Northern Ontario Ry. Passenger receipts for April, \$55,547.60; freight receipts, \$238,616.16; total receipts, \$294,163.76, against \$56,651.73 passenger receipts; \$142,236.20 freight receipts; \$198,977.93 total receipts for Apr., 1917. Aggregate receipts for four months ended Apr. 30, \$869,346.15, against \$658,493.91 for same period 1917.

Toronto, Hamilton & Buffalo Ry.—The annual meeting of shareholders was held at Hamilton, Ont., June 4. The directors elected for the current year are:—E. W. Beatty, K.C., J. N. Beckley, Sir George Bury, H. B. Ledyard, W. H. Newman, D. W. Saunders, W. L. Scott, Lord Shaughnessy, A. H. Smith, W. P. Torrance and W. K. Vanderbilt, Jr.

Traffic Orders by Board of Railway Commissioners.

Cumberland Railway and Coal Co.'s Tariffs.

27242. May 23. Re application of Cumberland Railway and Coal Co., under secs. 327 and 331 of the Railway Act, for approval of a standard passenger tariff to supersede its Standard Passenger Tariff C.R.C. 3, and for approval of Standard Freight Mileage Tariff C.R.C. 6 to supersede its Standard Mileage Freight Tariff C.R.C. 1, it is ordered that the Standard Freight Mileage Tariff C.R.C. 6, be approved subject to and upon the condition that the company publish and file carload mileage commodity rates on the following articles at the rates authorized by the board in the Eastern Rates Case as increased under the board's general order 212, Jan. 15, 1916, in the Fifteen Per Cent. Case; scale A to apply to all grains, also to grain products as enumerated in the proposed schedule filed by the company's General Traffic and Transportation Manager May 8, 1918; scale B to apply to lumber, lath and shingles; scale C to building sand, gravel and rubble, cobble and field stone; and scale D on other rough or partly dressed building stone, common brick and lime; the said rates to be as follows in cents per 100 lb.:

Distances To 5 miles	Scale A		Scale B		Scale C		Scale D	
	C.L.	L.C.L.	C.L.	C.L.	C.L.	C.L.	C.L.	C.L.
" 10 "	3	4½	3½	2¾	3½	3	3½	3½
" 15 "	4	6	4	2¾	4	4	4	4
" 20 "	4	7	4½	3¼	4	4	4	4
" 25 "	5	8	6	3¾	4½	4½	4½	4½
" 30 "	5	8	6	3¾	4½	4½	4½	4½
" 35 "	5	9	6½	4¼	5	5	5	5

It is further ordered that the company be permitted to file for the board's approval a standard maximum passenger tariff of one-way fares on the basis of 3.45c a mile. And it is further ordered that the Standard Freight Mileage Tariff herein approved may be made effective after it has been published, with a notice of this approval, in at least two consecutive weekly issues of the Canada Gazette, as required by sec. 327 of the Railway Act.

Reconsignment Switching Charges.

27246. May 25. Re complaint of Retail Merchants Association of Canada, Provincial Coal Section of Ontario, against reconsignment switching charges assessed by C.P.R. for the replacement of cars loaded with coal from the United States, which is not consigned in the first instance direct to the unloading point, and the consideration of further submissions of Canadian Manufacturers' Association and Toronto Board of Trade, also of Robin Boyle, representing shippers of crushed stone under similar circumstances. Upon hearing the matter at Toronto, April 13, 1917, and at Ottawa, July 5, 1917, the Canadian Manufacturers' Association, the Montreal and Toronto Boards of Trade, the Coal Dealers' Association, the Dominion Millers Association, and the shippers of crushed stone, being represented at the hearing, and upon reading the further submissions filed, it is ordered that the complaint be dismissed.

Stove Putty and Asbestos Cement.

27305. June 8. Re application of Canadian Manufacturers' Association for reduction in classification of stove putty, shipped in barrels; and for an order requiring railway companies to carry asbestos cement shipped by G. F. Sterne & Sons, Brantford, Ont., at 4th class rates in less than carloads: Upon hearing the application at Ottawa, April 16, 1918, the

complainant, the Canadian Freight Association, and the G.T.R. being represented, and upon reading the further submissions filed; and upon the report of the board's Chief Traffic Clerk, concurred in by its Chief Traffic Officer, it is ordered that the applications be dismissed.

Rate on Stoves.

27307. June 12. Re complaint of Beaver Stove & Machinery Co., Grandmere, Que., against rates charged by C. P.R. on stoves from Grandmere to points on the Quebec Central Ry.: Upon hearing the complaint at Montreal, June 10, in the presence of counsel for the railway company, no one appearing for the complainant; and its appearing that the Quebec Central Ry. Company is not under the board's jurisdiction, it is ordered that the complaint be dismissed.

Wooden Snow Shovels' Classification.

27321. June 15. Re application of Rugg-Ball Manufacturing Co., Ayers Cliff, Que., for reduction of classification of wooden snow shovels: Upon hearing the application at Montreal, June 10, 1918, the Canadian Freight Association and the Toronto Board of Trade being represented, and no one appearing for applicant, it is ordered that the application be dismissed, without prejudice to a renewal of the application at a later date if so desired.

Interswitching of Freight Traffic.

General order 239, June 19. Re general order 230, May 17, 1918, in matter of interswitching of freight traffic (as published in full on page 282 of this issue): Upon reading what is filed on behalf of the Canadian Manufacturers' Association, it is ordered that the effective date of the schedules to give effect to general order 230 be postponed from July 1, 1918, to Aug. 1, 1918.

Freight Facilities at Flag Stations.

General order 255, May 22, as amended by general order 283, May 31.—Re complaint of Ontario Associated Boards of Trade, alleging insufficient and inadequate facilities furnished by railway companies for receiving and delivering freight at flag stations: Upon hearing the complaint at Hamilton, Oct. 22, 1917, it is ordered that every railway company be directed to provide its agents with rubber stamps reading as follows:—

UNLOADED WITHOUT EXCEPTION
EXCEPT AS NOTED

.....
Conductor.

Date.....
and to issue a bulletin requiring agents issuing waybills for shipments of less than carload freight destined to flag stations to place the above stamp thereon; requiring conductors in charge to unload such freight on the platform at the flag station after the train has been brought to a full stop, and wherever shelters have been provided, to place therein all such freight as would be liable to damage from the weather or exposure, and to certify, as above, on the waybill; requiring conductors who have unloaded freight at flag stations to deliver the waybill therefor at the first agency station reached by the train after the unloading of such freight; notifying such conductors that they will be held responsible for the proper carrying out of the requirements set forth in this order and as covered by the said bulletin, and requiring the agent at the first agency station reached by the train after the unloading of the freight, as in this order provided, to notify the

consignee of the arrival of such freight by postal notice mailed within 24 hours after receiving the waybill from the conductor.

Canadian Pacific Railway Construction, Betterments, Etc.

New Brunswick District.—A press report states that work will be started at an early date on the rebuilding of the conveyor at the St. John, N.B., elevator. The material was reported to have been ordered at the beginning of June, and it was stated, June 12, that it was expected to have the conveyor ready for use at the opening of the winter navigation season.

C.P.R. officials have been discussing with the St. John, N.B., city authorities the agreement as to the removal of the tracks on Germain St. west. The agreement called for the removal of these tracks by May 1 in connection with plans for the development of the port. The reclamation of the area between Fort Dufferin and Sand Point was held up, consequently the company was not able to carry out the proposal. It is not possible to do so at present because the new lay out would be unsatisfactory and would have to be shifted when the dock work is taken in hand. It is suggested that the work be postponed until after the war.

Algoma District.—C.P.R. officials have been in Fort William, Ont., discussing with the city authorities the closing up of street ends and the opening of other streets in connection with necessary improvements of the company's terminal facilities there.

Alberta District.—Tenders are under consideration for the erection of farm buildings on two farms for returned soldiers, one near Chancellor, Alta., and the other near Coaldale, Alta. The buildings on each farm will consist of a house 38 x 26 ft.; a barn, 52 x 28 ft.; implement shed, dairy and bunk house.

British Columbia District.—The company has been directed to remove and replace the Kitsilano bridge span over False Creek, Vancouver, B.C., when necessary for ship launching, and the question of liability as between the Dominion Government and the company is to be settled later. The question at issue is whether the bridge was erected legally by the company. The draw span is not wide enough to let large vessels through, consequently a fixed span 100 ft. wide has to be removed to let through the vessels being built at the Coughlan yards and then replaced to permit of the operation of the C.P.R. Lulu Island Branch, which is leased to the British Columbia Electric Ry. (June, page 239.)

Railway Employes Statistics.—The total number of railway employes of all grades in Canada, classified under 65 groups, was 146,175, at June 30, 1917, against 144,770 at June 30, 1916. The total salaries and wages paid were \$129,626,187, against \$104,300,647 for 1915-16. The employes were on duty altogether 449,278,533 hours, the wages paid running from 11.7c an hour for messengers and attendants in the offices to 68.8c an hour for passenger locomotive men. The Railway Department report for June 30, 1917, for the first time uses the hour as the unit of compensation instead of the day, as formerly; the general classification is also changed. These two changes make it impossible to compare with previous years.

Electric Railway Department

Electric Railway Statistics for Year Ended June 30, 1917.

The figures in the following table are reproduced from statistics issued by the Railways Department at Ottawa. The following abbreviations are used in the names of railways:—E, electric; E.R., electric railway; E.S.R., electric street railway; S.R., street railway. The minus mark (—) in the column for net income or deficit, shows that there was a deficit in the operation of the line to the extent of the figures given.

Name of Railway	1st Main track mileage	Gross earnings from operation	Miscellaneous income	Operating expenses	Taxes funded debt, etc.	Net income or loss	Total car mileage	Fare passengers carried	Freight carried tons
Berlin and Waterloo S.R. (1)	3.28	\$ 55,673		\$ 39,489	\$ 7,832	\$ 8,351	199,303	1,229,753	
Berlin and Northern Ry.	3.15	7,962		6,589	2,721	—1,348	34,600	185,055	
Berlin, Waterloo, Wellesley & L. Huron Ry.	17.81	229,944	\$ 1,040	151,043	22,733	55,208	276,779	1,218,383	168,617
Brandon Municipal Ry.	10.31	39,323		32,450	22,550	—17,677	305,878	839,375	
Brantford and Hamilton Ry.	23.00	170,854		114,937	91,894	—35,977	365,779	624,560	6,026
Brantford Municipal Ry.	29.96	102,098		70,653		31,445	402,990	1,625,146	180
British Columbia E. R.	245.59	2,700,733	1,093,009	2,448,207	922,159	423,375	12,458,725	43,234,384	327,559
Calais S. R. (2)	7.00	42,411		34,138	5,790	2,481	183,960	758,065	
Calgary Municipal Ry.	55.50	585,466	16,542	387,934	133,138	100,936	2,587,233	13,909,238	7,707
Calgary Resources Development	1.75	204		1,128		—923	6,388	4,097	
Cape Breton E. R.	30.59	243,392	125,133	150,977	112,842	104,705	696,081	4,643,990	
Chatham, Wallaceburg & Lake Erie Ry.	36.94	134,274		89,628	39,353	5,291	468,705	348,774	106,390
Cornwall E. R.	4.00	34,443	81	28,268	1,168	5,088	223,273	438,996	93,318
Edmonton Radial Ry.	52.37	497,117		391,276	253,992	—148,150	1,905,922	10,148,382	260
Fort William S. R.	19.88	117,452		94,177	56,190	—32,914	629,688	2,672,114	
Guelph Radial Ry.	8.50	46,873	302	36,756	1,753	8,666	232,700	1,097,503	14,000
Halifax Tramways	12.29	399,105	224,651	249,230	61,848	312,678	1,380,474	8,935,380	
Hamilton and Dundas E. R.	7.00	74,628		61,945	6,265	6,417	157,464	935,628	361
Hamilton, Grimsby & Beamsville E. R.	22.00	133,235		130,222	14,598	—11,585	396,500	660,420	40,113
Hamilton S. R.	33.70	741,349		451,891	95,443	194,014	2,783,918	16,542,136	
Hamilton Radial Ry.	25.00	170,742		140,491	58,829	—28,578	503,467	1,322,615	29,026
Hull Electric Co.	15.67	197,785	35,190	129,849	78,723	24,393	817,016	3,102,929	8,583
International Transit Co.	4.30	140,625	914	76,261	10,695	54,583	283,129	2,121,868	
Kingston, Portsmouth & Cataraqui E. R.	8.00	52,429		38,865	10,075	3,489	199,680	1,055,982	
Lake Erie and Northern Ry (3)	51.00	169,211	128	124,463	5,396	39,479	942,613	373,299	55,512
Lethbridge Municipal Ry.	11.00	48,540		42,439	27,031	—20,930	268,659	991,678	
Levis County Ry.	11.75	95,069	2,665	100,769	22,543	—25,578	435,437	2,061,998	2,260
London S. R.	36.02	416,366		301,937	40,401	74,027	1,932,316	11,234,977	
London & L. Erie Ry. & Transport'n Co.	29.75	60,516	48	70,181		—9,615		333,669	6,500
London and Port Stanley Ry.	23.60	516,685		207,356	71,833	37,495	844,062	726,799	471,114
Moncton Tramways, Elec. and Gas. Co.	4.47	16,883		16,873		9	100,838	414,781	
Montreal Tramways Co. (4)	124.26	7,725,498		4,601,771	2,248,373	875,353		179,974,549	
Montreal & Southern Counties Ry.	52.20	264,231	303	274,236	71,699	—81,399	767,918	2,057,574	10,450
Moose Jaw E. R.	9.00	104,982		80,733	6,389	17,859	445,814	2,347,484	
Nelson S. R.	2.13	14,092		12,532	3,355	—1,795	61,594	323,148	
Niagara Falls Park and River Ry.	11.91	173,404	6,211	92,941	35,518	15,155	262,221	1,335,579	
Niagara, St. Catharines & Toronto Ry.	61.58	756,590		547,174	71,721	137,694	1,461,776	5,643,150	405,051
Niagara, Welland & Lake Erie Ry.	1.87	32,011	27	12,521	3,254	16,262	87,834	693,843	
Nipissing Central Ry.	15.37	98,889	371	78,073	11,794	9,393	251,516	1,297,298	5,982
Oshawa Ry.	9.00	145,836	1,346	87,404	2,846	56,932	90,138	286,486	213,888
Ottawa E. R.	28.11	1,194,731		696,528	104,060	394,142	4,913,611	28,286,233	
Peterborough Radial Ry.	6.55	68,225		45,349	9,950	12,925	437,896	1,550,610	
Pictou County Electric Co. (5)									
Port Arthur Civic Ry.	12.43	114,609		91,986	69,097	—46,474	650,885	2,624,461	
Quebec Ry., Light and Power Co.									
Citadel Division	21.04	560,953		357,753		203,200	2,277,121	13,165,318	
Montmorency Division	28.60	229,109		186,126		42,983	473,406	1,947,667	
Regina Municipal Ry.	32.12	223,364		190,722	91,827	—59,185	943,162	4,914,140	25,618
Sandwich, Windsor and Amherstburg Ry	41.34	383,816	31,776	229,339	48,900	137,353	1,163,765	6,988,316	
Sarnia S. R.	8.25	70,353		50,739	5,565	14,048	209,196	1,270,288	207,801
Saskatoon Municipal Ry.	12.63	185,261		134,596	39,068	11,595	757,734	3,624,268	
St. Thomas S. R.	7.00	17,381		24,689		—7,307		436,332	
Schomberg and Aurora Ry.	14.40	17,087		21,210	28,747	—32,871	52,296	39,931	9,706
Shawinigan Falls Terminal Ry (3)	3.75	45,300		38,855	8,779	—2,334			22,398
Sherbrooke Ry. and Power Co.	9.00	55,333	61,997	52,054	64,152	1,124	390,681	1,237,760	
Suburban Rapid Transit Co. (Winnipeg)	21.02	64,307	27,516	84,509	35,310	—27,996	578,130	1,189,190	640
Sudbury-Copper Cliff Suburban E. R.	6.24	25,980		11,315	10,360	4,304	54,626	251,053	
Three Rivers Traction Co.	7.10	60,275		43,904	15,726	644	328,199	1,150,050	
Toronto Ry. (6)	60.69	6,081,604	90,000	3,403,846	1,381,895	1,385,862	20,585,398	152,782,659	
Toronto and York Radial Ry.	72.17	608,967		450,968	147,066	10,932	1,696,145	6,688,327	48,409
Toronto Civic Ry.	9.75	249,505		216,516	90,245	—57,255	1,334,650	14,696,841	
Toronto Suburban Ry.	18.79	207,317	1,863	104,406	58,545	46,230	502,357	3,534,616	866
Windsor, Essex & Lake Shore Rapid Ry.	36.17	180,809		104,508	59,050	17,249	401,716	701,066	
Winnipeg Electric Ry.	110.20	2,103,344	554,829	1,445,509	615,584	597,479	10,362,151	53,679,957	40,630
Winnipeg, Selkirk & Lake Winnipeg Ry.	40.69	131,920	16,205	90,760	43,490	13,873	420,663	697,594	4,574
Yarmouth E. R.	3.00	41,126	40	14,607	12,575	14,019	86,870	237,390	
Total	1,743.54	\$30,237,663	\$2,292,200	\$20,098,634	\$7,552,368	\$5,528,763	84,073,046	629,441,997	2,333,539
(4) Montreal Tramways Co., additional mileage	7.65								
(5) Pictou County Electric Co.	9.10								
(6) St. John Ry. (New Brunswick Power Co.)	18.15								
Total	1,178.34								
Less Deficits						—649,902			
Total net income						\$4,878,861			

See notes on page 303.

Snow Clearing on Ottawa Electric Railway.

During the last two winters the Ottawa Electric Ry. had considerable trouble about snow removal, teamsters demanding more pay whenever a specially heavy snowfall occurred. Early in February last the teamsters struck for 10c a load increase, and the management decided it was time to try some other method. A Ford truck, with a capacity of 1½ tons, was put into operation, and tests showed that it could dispose of twice as many loads in a day as the ordinary team of horses and a sleigh. The work of the truck was facilitated by the city authorities allowing the snow to be dumped through manholes into the sewers, and providing a list of manholes that could be so used at points where a very strong current of water was passing. The company followed this up by putting on 14 more trucks, which, with the help of its own teams, enabled it to get through the winter. It was intended to have 30 trucks ready for the first snowfall next winter. One advantage of the trucks will be that at the close of the day new drivers and a fresh gang of men can be put on to work

Proposed Purchase of Ottawa Electric Railway by the City.

The Ottawa City Council has for some time past had under consideration the question of the Ottawa Electric Ry.'s franchise, and the conditions under which it might be extended, or under which the city might acquire the property. The question was taken up by a committee and suggestions were made to the council on Feb. 18 passed a resolution stating that the company's franchise would expire Aug. 13, 1923; that the directors had announced that they did not propose to make any extensive alterations or improvements to the system until the expiration of the franchise, and that under such a policy the street railway service might deteriorate during the next five years. The board of control was asked to consider the appointment of a committee of three or more selected from the board, from the council or from outside to investigate the question of the street railway service and to open negotiations with the company for the purchase of the railway, for the further extension of the franchise or any alternative plan, with a view to submitting whatever was decid-

the opinion that the present is not an opportune time to take over the property owing to war conditions, but that it is not too soon to prepare for the taking over of the line in 1923, and recommends that a question on the matter be submitted to the ratepayers at the next municipal elections.

Other sections of the report deal with the future proceedings. It is recommended that in the event of the line being taken over its management should be entrusted to a commission of three, one of whom should be the mayor, and that they should hold office for say three years. Then a form of question for the plebiscite is given with a recommendation that each elector should have one vote to be cast where the elector is entitled to vote for mayor. The board recommends that if the question is settled in the affirmative the council shall then draft and obtain the necessary legislation. It may be possible to appoint a commission under existing legislation, but it might be advisable to secure special powers; it also might be desirable to secure power to enable the portions of the line in Ontario outside the city, as well as the portions in Quebec; the rights of the city and company in regard to the part of the railway in the former village of Hintonburg should be considered and provided for; the method of arbitration should be provided for; the waterpower rights should be looked into, and council should have power to acquire such powers either in Quebec or Ontario; and finally the board suggests that the commission should be in office well in advance of the period when the line should be taken over, and that the commissioners should carry on the negotiations with the company.

The report was taken into consideration at a special meeting of the council June 24.



Ottawa Electric Railway Motor Truck for Snow Removal.

throughout the night, as the trucks will not tire out as horses do. In the meantime the teamsters' strike was broken, and the men feel they made a mistake in acting as they did.

The accompanying illustration shows a snow box body, as mounted on a Ford 1-ton truck by the Ottawa Car Mfg. Co. Following are the dimensions of the box inside:—

Length	8 ft. 5 in.
Width	5 ft. 4 in.
Height	3 ft.
Thickness of material in sides and ends.....	¾ in.
Thickness of material in bottom.....	1½ in.
Thickness of material in bolsters.....	1¼ x 3 in.
Thickness of material in sub-sills.....	1¼ x 5 in.

The bodies are built in sections, and are held together by tie rods, battons and strap bolts. The sides are constructed with a door 2 ft. 2 in. wide, extending full length of body and attached to the top boards by 4 hinges, permitting the snow to be loaded and unloaded in a speedy manner; hooks are provided at the rear end to hold the door open when unloading. The bottom is constructed of 1½ in. pine, securely screwed to the hardwood bolsters, which are divided along the body, giving sufficient wheel clearance. The bolsters are bolted to the subsills, which are securely clipped to the chassis frame.

ed upon to a vote of the electors at the next municipal elections. While the matter has been mentioned at different meetings of the board of control and of the council since February, no committee was appointed, and on June 4 the council again referred the resolution of Feb. 18 to the board of control. We are officially advised that up to June 14 the company had not been approached in any way upon the matter.

The board of control considered the council's resolution on June 20, when a report was prepared. It deals with the franchise agreement entered into between the city and the company on June 28, 1893, to run for 30 years from Aug. 13, 1893, and giving the council the right, after giving 6 months notice to acquire so much of the system as is situated in Ontario, during the currency of the agreement, and it also sets out the property to be acquired in connection therewith, and the method by which its value is to be arrived at. At the expiration of the agreement the city can take over the line as a matter of course, but if it does not do so at that time it has the right, upon giving a year notice, to take over the system at the end of any fifth year thereafter. The board in its report expresses

The Toronto Railway and Women Conductors.—As mentioned in our last issue, the Toronto Ry. Co. has decided to engage women conductors for service on its cars. This decision was strongly opposed by the members of the Toronto Ry. Employes Union in a resolution passed at a meeting of members called to discuss the matter, which was mentioned in the same issue. The General Manager of the company stated recently that it was the intention to place women conductors in charge of the cars, which are to be altered and provided with prepayment platforms and doors. In preparation for this, suitable dressing and rest rooms are being prepared at the sheds, and these will be in charge of a matron.

Public Utilities Commission for Brantford.—As the result of a conference between representatives of the Brantford, Ont., City Council and members of the Brantford Municipal Ry. Commission, the Mayor stated, June 20, that he would take steps to have a public utilities commission organized to take over the control of the municipal railway, the waterworks, and the other public utilities.

The American Electric Railway Association's Convention will be held at Atlantic City, N.J., Oct. 8, 9 and 10. Owing to war conditions, the convention meeting period has been somewhat curtailed, and there will be no exhibits in connection with it.

The Calgary, Alta., City Council's finance committee decided June 13 to recommend that a tax of 5% on the gross receipts of the municipal railway and other public utilities be levied towards general municipal purposes.

Notes to Electric Railway Statistics.

- (1) The Berlin & Waterloo S.R. is now called the Kitchener & Waterloo S.R.
 - (2) The Calais S.R. is the line reported in previous years as the St. Stephen S.R. of New Brunswick, Calais being the contiguous town in Maine, where the line is owned and from which it is operated. The mileage given is not in Canada.
 - (3) The only additional companies in the list for the year ended June 30, 1917, are the Lake Erie & Northern Ry., 51 miles, and the Shawinigan Terminal Ry., 3.75 miles. The former is a new line, the latter has been operating for a number of years.
 - (4) The figures given for the Montreal Tramways Co.'s first main track mileage, 124.26, are those used in the 1915 statistical tables, in which they were stated to be the figures used in 1911 report. The actual first main track mileage at June 30, 1917, was 131.91 miles, the difference between which and the figures given by the Department we have added at the bottom of the column in the table showing mileage. The earnings, expenses and passengers carried are apparently taken from the company's report for the year ended June 30, 1917, as given in Canadian Railway and Marine World for Oct., 1917., pg. 404.
 - (5) The Railways Department does not receive returns from the New Brunswick Power Co. and the Pictou County Electric Co. The latest figures we have of those companies' first main track mileage 18.15 and 9.10 miles respectively have been added by us at the bottom of the table to show the total mileage in Canada, viz.:—1,778.34, against 1,743.54 shown by the Railways Department.
 - (6) The Toronto Ry. first main track was reported at June 30, 1916, to be 116.44 miles, with second track of 2.51 miles, while this year the track is described as: First main track, 60.69 miles, second main track, 58.36 miles.
- The Edmonton Interurban Ry., which has 8.19 miles of track, is omitted from the table. It was not operated during the year.
- The New Brunswick Power Co.'s line, formerly the St. John Ry., is also omitted from the table. It does not make returns to the Dominion Railways Department.

Assessment of Municipally Owned Street Railways in Ontario.

The Ontario Legislature, at its recent session, by sec. 39 of the Statute Law Amendment Act, added a section and a subsection to the Assessment Act relative to the assessment of land used by municipal public utilities. The section no. 45a, provides that land owned by or vested in any body acting for or on behalf of a municipal corporation and used for public purposes "or for the purpose of a railway, electric railway, street railway or tramway," shall be liable to assessment and taxation for municipal and school taxes in the municipality in which it is situate. at its actual value, according to the average value of land in the locality." The subsection excepts buildings, machinery, works, structures, substructures, superstructures, rails, ties, pipes, poles and other properties, and easements, etc., and declares that all these "shall continue to be exempt from assessment and taxation as heretofore."

The Regina, Sask., city council is considering a proposal for carrying returned wounded soldiers free on the municipal railway.

Answers to Questions on Electric Railway Topics.

In response to questions addressed to the American Electric Railway Association's question box, answers have been sent, as follows, by W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver, B.C.

Car Record Forms.—Does any company make use of a car record form on which appears an outline picture of a car and on which defects are shown by reference to the picture; if so, will you kindly furnish a sample?

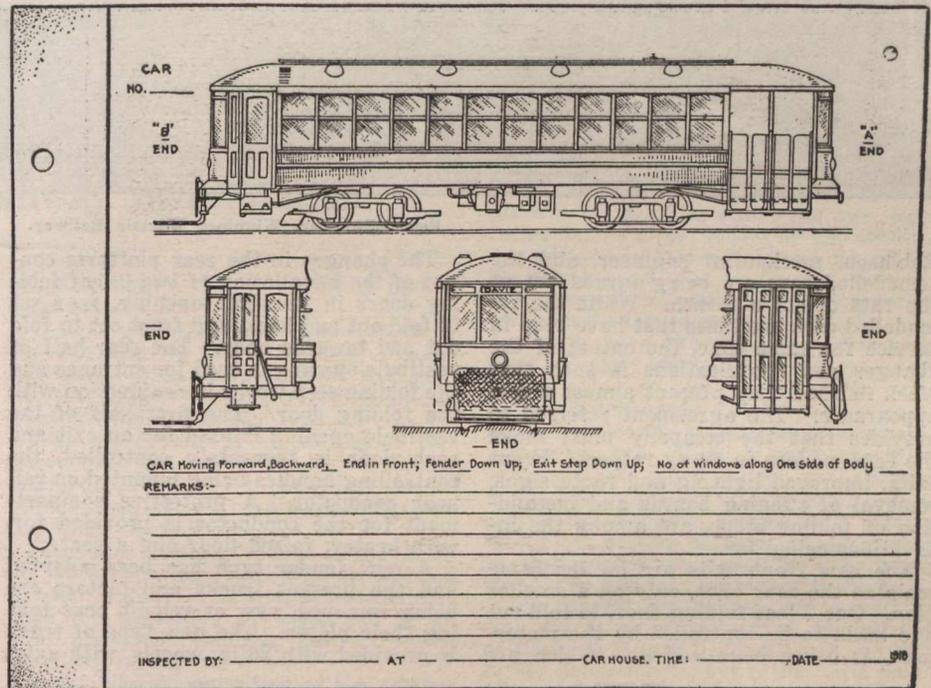
We have recently considered the advisability of using such a form, and while we have not yet put it into practice, herewith is a copy of the form we contemplate using.

Extra Fare Collection.—What system of fare collection would you recommend under the following circumstances,—a 5c fare is charged within the city limits,

In British Columbia no licenses such as mentioned are required. A motorman is required to pass an oral examination in connection with the operation of his car. He is given considerable instruction in connection with the electrical apparatus, which he has to become acquainted with before he is permitted to take out a car. In addition to this examination he is required, of course, to pass eyesight and hearing tests.

Ontario Railway Act Amendments.

An Act amending the Ontario Railway Act was passed at the Ontario Legislature last session. A new section, 260a, referring to penalties for neglect or refusal to obey any order of the Ontario Railway and Municipal Board, by any company operating a railway or street railway, to supply additional cars, given in full in Canadian Railway and Marine World for May. The act deals with devia-



Suggested car and record form, British Columbia Electric Railway.

and if the trip is continued an additional cent is collected, p.a.y.e. cars used. The passenger cannot be expected to come to the rear platform to deposit his extra fare; how then should the extra fare be collected?

It all depends on the type of farebox used. We have similar conditions on our lines in the city, where a second fare is collected at the city limits when cars are about to enter the suburban districts, or vice versa. We use the Coleman portable farebox and p.a.y.e. cars. When the cars reach the city limits the conductor goes through the car and collects the additional fares. In the case of payment of settlers' tickets, a passenger is handed a transfer when boarding the car, which indicates that a settler's ticket has been paid, and this transfer is collected at the city limits. We do not use registers on our city cars.

Licensing of Motormen.—Are the motormen of any member companies compelled to secure state or municipal licenses before they can operate a car; if so, under what provisions of law; are they licensed as electricians or do you know of any place where an electrician's license is required; what form of examination is required, if any?

tions of lines, and the operation of cars by a motorman-conductor.

The first matter is dealt with by the addition of a subsec. to sec. 79, providing that any deviation, change or alteration made in the railway or any portion thereof shall not impair, abridge or affect the company's right to operate the balance of the railway along any public street or highway of any municipality through which the railway runs under the terms of its agreement with the municipality, provided notice of the application to the Ontario Railway and Municipal Board for approval of the deviation plans shall have been given to the municipalities affected. A subsection, similar in principle, although not in language, has been added to sec. 243 of the act, and it is provided that these additional subsections shall not take effect as to any company until the Lieutenant-Governor-in-Council shall so order.

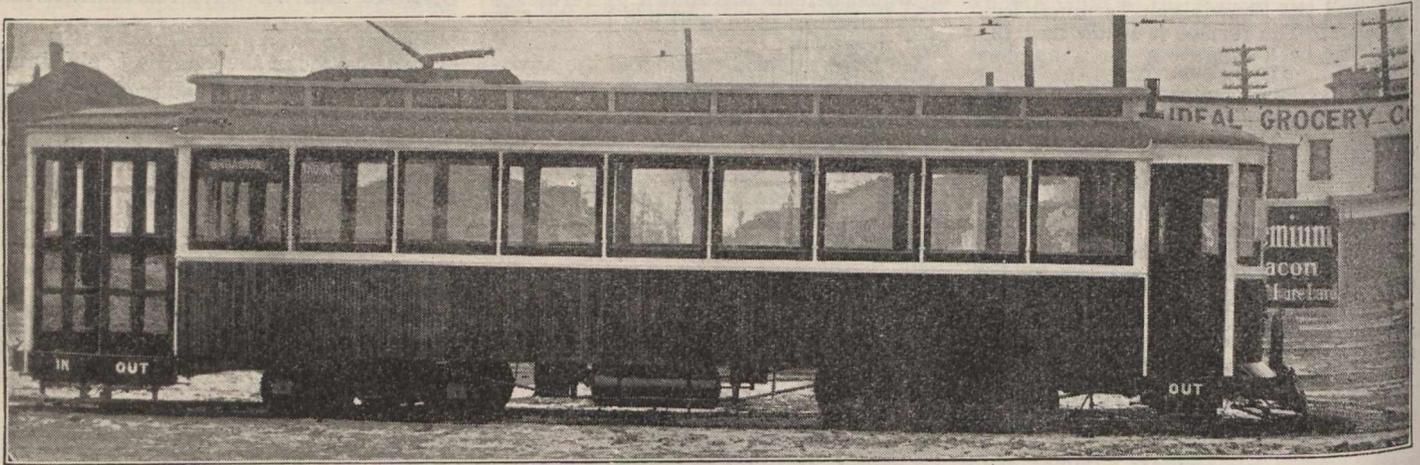
The enactment as to one-man cars is contained in a new section, 256a, and provides that no street or electric railway car, when carrying passengers, shall be operated with one man performing the duties of both motorman and conductor without the approval of the Ontario Railway and Municipal Board.

Remodelled and New Cars for Winnipeg Electric Railway.

The remodelling of the Winnipeg Electric Ry.'s rolling stock, which has been under way for some time in accordance with an agreement entered into with the city in the latter part of April and published in Canadian Railway and Marine World for June, is being proceeded with rapidly in the company's shops at Fort Rouge, under the supervision of T. L.

with swinging door on left side, full panneling and sash in center, arranged to care for sliding door to be installed on right hand side, swing door arranged to swing in and towards side of car, sliding door at exit to close toward body post, center double dash arranged to allow conductor to make announcements without opening doors.

steps will be favored and 6 shaded lights in the body and 2 in each vestibule will be installed. The route signs will be of same pattern as on the remodelled cars. The 15 open cars for summer use, with the side running boards, are also slated for treatment. The running boards will be eliminated and a center aisle cut through.



Remodelled Car, Winnipeg Electric Railway.

Robinson, mechanical engineer, and the remodelled cars are being turned out at the rate of six a month. While the remodelled cars are those that have been in service for some time, the extent of the changes and modifications is such that when finished they present almost a new appearance. The agreement referred to provides that the company must make the cars modern in every respect. Front exits, improved lighting and route signs, removal of running boards and installation of folding steps, are among the innovations called for.

The new front exits are on the same scale as the rear ones, only on a smaller plan. One 2-leaf folding door, to fold out and back, to be controlled by the motorman, is being installed, with which are

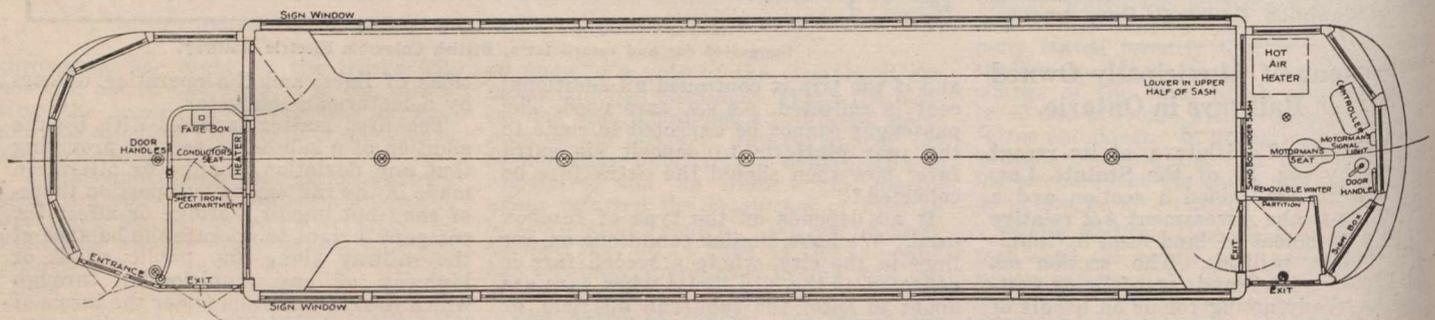
The changes in the rear platform consist of the installation of two 2-leaf folding doors in vestibule opening, rear set to fold out and back, and front set to fold out and towards body. The rear half of vestibule opening is used for entrance and the folding step works in conjunction with the folding door. The first half of the vestibule opening is used for an exit and each door is separately controlled, the controlling handles being mounted on rail near conductor. A protective compartment for the conductor is provided for, with heater, raised floor and a seat.

A new fender type has been adopted and the present trucks and motors are being removed, new or rebuilt ones taking their places. The new type of truck is provided with 26 in. wheels, with axles

Proposed Sale of the London and Lake Erie Ry. and Transportation Co's Property.

After a number of ineffectual endeavors to sell this undertaking to the City of London, or to other municipalities through which it passes, the company advertised the property for sale by tender, the same to be submitted by June 29. Tenders were asked for the whole of the railway and undertakings as a going concern, or in the alternative, for the purchase, in separate parcels, of the right of way, lands, buildings, materials, equipment and rolling stock thereof, as follows:—

The company's railway and undertaking as now built and in operation from



Remodelled Car, Winnipeg Electric Railway.

operated a folding step, provided with anti-slip tread and kick plate. In the right hand vestibule window an illuminated keystone sign box is being placed. There is removable winter proof partition for the motorman, between the bulkhead exit and the vestibule door, glazed to allow the motorman full view of exit door and step and provided with door for motorman. The interior lighting arrangements include five shaded lights in the center of monitor deck, through selector switch on rear platform, the sixth light to be on rear platform over conductor's position. Keystone illuminated side window signs are being installed in each rear window.

The rear bulkhead is being installed

for G.E. 258 C motor or equivalent and having 3 3/4 in. x 7 in. journals. The present brake equipment and rigging is being modified to work efficiently with the new truck and motor equipment. The bolster is being modified to allow the use of roller side bearings which are being installed. The remaining present electrical equipment is being modified to meet requirements of new motor equipment.

Twenty-five end entrance p.a.y.e. double truck trailer cars will be built. They will be 41 ft. long and have a seating capacity of 48. They will be patterned after the same style as the remodelled cars and will be equipped with 2 baby motors and straight air brake equipment with emergency feature. Folding doors and

the City of London to the Village of Port Stanley, including power stations at Lambeth, St. Thomas and Union, the London terminal passenger and freight station, the London paint shop, substation and car barns at St. Thomas, and substations at Lambeth and Union; also all cars, locomotives, tenders, tools, machinery and supplies now owned and used by the company, together with the company's franchise.

The right of way, lands, buildings, materials, equipment and rolling stock belonging to the railway are briefly described as follows:

About 2,820 gross tons of 60 lb. steel rails. About 218 kegs of bolts and 1,200 kegs of spikes. Other iron and steel, con-

sisting of frogs, switches, broken rails, motor casings; snowploughs and worn shop material and the bridges at or near London, Lambeth, and St. Thomas. About 75,000 ties and 2,200 cedar poles, some 40 ft. long and none under 30 ft. Copper wire and bonds, consisting of 40 miles of no. 9 copper wire; 60 miles of no. 2, 30 miles of no. 0 (trolley), and 30 miles of no. 0000 feeder copper wire, and 10,560 copper bonds, the total weight of the copper herein mentioned being approximately 223,500 lb.

Equipment: 6 passenger cars, 2 combination passenger and baggage cars, 1 passenger car body without trucks, 3 passenger cars for summer use only, 2 baggage and express cars, 1 locomotive with 4 motors, 1 snowplough with 4 motors, 3 box and 6 flat cars and 8 spare motors. The cars are equipped with Westinghouse 93-2 60 h.p. motors, 2 to each car, and all equipment is standard and interchangeable.

Power stations at Lambeth, St. Thomas and Union. About 14 miles of privately owned right of way 33 ft. wide. Gravel pit, near Lambeth, containing about 12 acres. Stores, consisting of stationery, office supplies and fixtures, tools, line ma-

terial and various miscellaneous articles. Other real estate and buildings: London, terminal passenger and freight station, and lands used in connection therewith. London, paint shop, steam-heated and fully equipped for 4 cars. Lambeth, sub-station and lands used in connection therewith. St. Thomas, sub-station and car barns and lands used in connection therewith. Union, sub-station and lands used in connection therewith.

Deliveries of material and supplies to be made at St. Thomas.

While the property was thus offered for sale, negotiations with London, St. Thomas and adjoining municipalities for the sale of the line either as a complete whole or in sections had not been finally broken off. At a meeting of representatives of several of the municipalities through which the line passes, held at Lambeth, Ont., June 18, a committee was appointed to meet the directors, and to arrange for holding public meetings with a view of having bylaws passed to provide for the operation of the line. The immediate suggestion is apparently to secure the continued operation of either a part or the whole line, the municipalities guaranteeing the expense.

Regina Municipal Railway Investigation.

The Regina, Sask., City Council favors the holding of a judicial investigation into a number of matters affecting the Regina Municipal Ry., which have given considerable trouble for some months past. A sub committee has had the matter of the reference under consideration for some time, and approved of its terms on June 13. The committee's report is as follows: "As directed, the street railway sub committee has had under consideration the question of the matters to be investigated by a judge in connection with the administration of the street railway department. The committee have conferred with the City Solicitor and attaches hereto a memorandum containing some nine questions. The sub committee consider that questions 1, 2, 3, 4, 6, 7, 8 cover the matters which should be referred to the judge for investigation. It would seem that the matters mentioned in questions 5 and 9 can only be properly enquired into by a street railway expert.

"The opinion having been expressed that a judicial investigation should be held, the sub committee suggests that the City Solicitor be instructed to take whatever steps may be necessary to request a judge to hold such investigation in accordance with sec. 53 of the city act at the earliest possible date.

"The sub committee further suggests that the City Solicitor be instructed to write Wilford Phillips or Wilson Phillips of Winnipeg, requesting one of them to arrange to enquire into and report upon the matters mentioned in questions 5 and 9 of the attached memo, so as to be in a position to submit his report thereon at the same time as that of the judge. (Noté.—Since this recommendation was made, Wilford Phillips has died.)

"The sub committee further suggests that the City Solicitor be appointed to represent the city's interests during the investigation."

The Regina Leader gives the following as the questions upon which the judicial investigation, which will be held by Judge Hannon, will be made:—

Have street railway tickets been im-

properly used? If so, by whom and in what manner?

Has there been gross carelessness in the handling of street railway tickets, cash fares, or in checking same with conductor's returns? If so, by whom, and in what did the negligence consist?

Was the system of accounting in this department put into effect by the Treasurer's department? If so, when and to what extent has it been departed from, and who is responsible?

Has there been any change in the methods of accounting, care and destruction of used tickets, or in operating methods since the beginning of 1918, and if so, what are those changes, and by whom were they made, and when?

Is the efficient operation of the system lessened to any appreciable extent by the attitude of the management to the men; a want of co-operation among the employees; a spirit of disloyalty on the part of the men engendered by lack of confidence on the part of the council, the public or any other body towards said management? If the efficient operation of the road is lessened by reason of the matters referred to above, what is the remedy?

Has any officer, servant or employe of the street railway, or connected in any way therewith been guilty of dishonesty, negligence or incompetency in the discharge of his duties, or otherwise, and if so, in what particular?

Have the mechanical and traffic conditions in connection with the operation of the Regina street railway system been satisfactory? If not, in what way can they be improved, having particular reference to the following: Breakdown of cars en route; prompt arrival of relief cars; proper spacing of cars.

Taking the system as handed over to the present management, has the equipment been maintained and used to the best advantage in order to get the largest revenue consistent with satisfactory service? If not, is the failure to get these results attributable to the management or to other causes?

The Winnipeg Sympathetic Strike.

Street railway transportation in Winnipeg was tied up for three days during the week which began on May 18, owing to 1,000 employes of the Winnipeg Electric Ry. striking, in sympathy with civic employes who struck for advances in wages. The strike, which involved 15,000 workers, in over a dozen unions, was the most disastrous in the history of the city and from the time that the first civic employes walked out until a settlement was effected was over a month.

The city was without street car service on one of the most important holidays of the year, viz., May 24, being the first summer holiday, and the tie up, while it only lasted three days, caused inconvenience to thousands of workers, who, living in the outlying districts, had to walk in many cases as much as six miles to get to their places of employment. Hundreds of owners of motor cars co-operated, at the request of the civic authorities, and at the rush hours a continuous string of cars could be seen passing up and down the busy thoroughfares.

The street car men went out on the morning of May 22, and a settlement was reached at noon on May 25, as a result of the visit of Senator Gideon Robertson, who acted as a mediator, and who, at the time the street car men struck, was on his way west. The street car men were called out as a last resort by the striking committee and this action was considered the trump card.

A magnificent spirit of co-operation was manifested throughout the city in a desire to keep the public utilities running. Society women, who did not know the meaning of work, manned the telephone switchboards and helped to maintain a service for a week that the operators were out. Girls in railway offices dropped their pens, donned overalls and hustled trucks when the freight handlers joined the striking unions, and private motor car owners acted as jitney drivers in their desire to assist to their work those who had long distances to travel.

The underlying motive of the strike was not based entirely upon the refusal of the city to grant increases in the different departments, but rather on a point of principle. The city maintained that employes should arbitrate matters of this kind in war time. Labor spokesmen asserted that the life of unionism rested solely upon the right of labor to strike to procure their demands. The thorn in the flesh, in so far as the city was concerned, was due to the fact that about three-quarters of the firemen, who had lately formed a union, were the first to go out in sympathy, leaving the city without adequate fire protection. The basis of the agreement finally reached was that all matters affecting increases in wages should be arbitrated, with a strike as the last resort.

The Winnipeg Electric Ry. suffered the loss of thousands of dollars in revenue as a result of the rolling stock being tied up over the holiday. May 24 came on a Friday and preparations had been made on a large scale for entertaining the public at the various parks. Up until noon of the holiday hopes were held out that an agreement would be reached that day, and crews were at the various barns waiting to take their cars out. The walkout, from a street railway standpoint, was very regrettable, owing to the fact that only a short time before a new schedule had been drawn up for the street car men, providing for increases in all branches, and the best of relations exist between the company and its employes.

Increases in Electric Railway Freight and Passenger Rates.

The Board of Railways Commissioners has passed the following orders, in addition to those given in Canadian Railway and Marine World for May and June:—

Brantford & Hamilton Electric Ry.—27,270, May 30. Authorizing B. & H.E. R. to increase its freight rates, except on coal and coke, by 15%, and its rates on coal and coke by 15c a ton, the increased rates to become effective on the company complying with requirements of sec. 327 of the Railway Act.

27306, June 14. Approving B. & H.E. R. standard mileage freight tariff C.R.C. 4, to become effective July 1, same having been filed with board on basis permitted by order 27,270.

Chatham, Walalceburg & Lake Erie Ry. 27,309, June 15. Authorizing C.W. & L.E. R. to increase its freight rates, except on coal, by 15%, its rates on coal by 15c a ton, and its passenger rates by 15%; the increases to become effective on the company complying with secs. 327 and 351 of the Railway Act.

27312, June 18. Approving C.W. & L. E.R. Standard Freight Mileage Tariff C. R.C. 430, and Standard Passenger Tariff C.R.C. 37, which have been filed on the basis permitted by the board in order 27309, June 15, 1918, the tariffs to become effective July 1.

OTHER APPLICATIONS AND INCREASES.

Edmonton Radial Ry.—Canadian Railway and Marine World for June contained some particulars of increased fares put in effect on the municipal railway in Edmonton, Alta., on May 1. We have since received the following official information: The cash fare, heretofore 5c at all hours, has been increased to 7c up to 11 p.m., after which it is 10c. Tickets are sold on the cars at 4 for 25c and at ticket selling stations at 5 for 25c. Two tickets are required for night fares.

Workmen's tickets have been abolished. Heretofore they were sold 8 for 25c, good in the early morning to 8 a.m. Up to July, 1914, they were also good between 5 and 6.30 p.m.

Children under 6 years of age are carried free. Children over 6 and under 15, including high school pupils carrying certificates, are sold 10 tickets for 25c, against 12 for 25c as heretofore. After 11 p.m. children pay half fare.

No change has been made regarding transfers. Between 5 and 6.30 p.m., baby carriages and large parcels are charged for at 5c each. The Superintendent, J. H. Moir, advises us that the ticket system is of great benefit on the one man cars, saving considerable time in collecting fares and making change.

Fort William Municipal Ry.—The Fort William, Ont., City Council on June 14, amended the fare schedule for the municipal railway, subject to the Ontario Railway and Municipal Board's approval, as follows:—Adults, 5c cash; tickets, 5 for 25c; children, 5 to 12 years, 5c or one ticket; children's tickets, 8 for 25c. Double fares will be charged on cars running between 12 midnight and 5.30 a.m. The privilege of riding free heretofore granted to Dominion policemen has been abolished.

The London St. Ry. put into operation a straight 10c cash fare for the round trip on its Springbank line, June 20, and discontinued the issuance of transfers to and from the city lines. The new fare is at the rate of a cent a mile.

The Hamilton Radial Electric Ry.'s ap-

plication to the Board of Railway Commissioners, for permission to file tariffs providing for a general advance in passenger fares to a maximum of 2½c a mile, and a general advance in freight rates of 15%, as was permitted by the board in the case of steam railways, was heard by the board at Toronto, June 24.

The Montreal & Southern Counties Ry.'s application to the Board of Railway Commissioners, for authority to file tariffs providing for a general advance in freight and passenger rates, to the same extent as the board has permitted in the case of steam railways, was heard at Montreal June 10, when decision was reserved.

Montreal Tramways Co.—The question of increased passenger fares in Montreal has been under consideration for some time, and was to a certain extent mixed up with the question of the increase of employes wages. Towards the end of May there was a conference at the Montreal City Hall of representatives of the municipalities within which the M. T. Co. operates, upon the wages question. There was a general agreement that the men were entitled to some increase of wages, but their demands were considered excessive. The effect of increased wages upon the fares to be charged was discussed and a resolution was passed favoring an increase. While it was felt that an increase of fares was justifiable, the conference did not pass any resolution favoring it.

Another conference was held June 20, at which the commissioners submitted figures showing the following estimated increases in cost of operation:

Estimated increase in wages.....	\$ 750,000
Deficit since contract put into force...	400,000
Estimated increased cost of material..	1,000,000
Additional fixed charges	280,000

Total \$2,430,000

The commissioners are also reported to have pointed out that these figures were not the fares they would fix, that there was the question of free transfers or transfers to be paid for, and probably other changes in the general traffs which would bring the general city fare down below the actual cost per car mile based on the estimate of the revenue and the number of car miles covered. It was stated that the cost per mile for operating last year was 18.67c and for maintenance 7.22c., making a total cost per car mile of 25.89c. The estimate for the ensuing year was placed at 30.505c per car mile, meaning an increase in the cost per car mile of 4.61c, and of this amount 2.74c represented the increased cost of operating, and 1.87c the increased cost of material.

On June 22 the commissioners announced the changes they had decided on, to be put into effect about the middle of July. An official copy of the new schedule has not been received and the following figures are taken from press reports and are subject to correction.

Cash fares, heretofore 5c; new rate 6c. Midnight to 5 a.m., heretofore 10c; new rate, 15c.

Unlimited tickets, heretofore 6 for 25c; new rate, 5 for 25c.

Workmen's limited tickets, heretofore 8 for 25c; apparently abolished.

School children's tickets, no information as to old rate; new rate, ages 5 to 16, week days only, from 8 a.m. to 6 p.m., 7 for 25c.

Transfers heretofore free, in future free to all passengers between 5 and 8 a.m. At other hours 1c extra.

Representatives of the City of Montreal and of other interested municipalities stated at once that the commissioners' decision would be appealed against to the Quebec Public Utilities Commission.

Windsor, Essex & Lake Shore Rapid Ry.—27,308, June 15. Authorizing W.E. & L.S.R. Ry. to increase its freight rates, except on coal, by 15%, and its rates on coal by 15c a ton; the increases to become effective on the company complying with sec. 327 of the Railway Act.

Quebec Railway, Light & Power Co.—Full particulars of this company's application to the Quebec City Council, for authority to increase its passenger fares on its city division, also its gas rates, were given in Canadian Railway and Marine World for April, pg. 161. The city council, on May 31, approved of the proposed increase in gas rates and favored granting the request for increased passenger fares in part only, but at a meeting on June 14 a compromise was arrived at. Following are particulars of the fares heretofore in force, of the increases asked and of what the city council has agreed to:

Cash fare 5c, no change asked. Tickets, former rates, unlimited tickets 6 for 25c and 25 for \$1. The company's request to change to 5 tickets for 25c and 21 for \$1 was approved by the council.

Workmen's tickets, heretofore sold 8 for 25c, and were good between 6 and 8 a.m. and 5 and 7 p.m., for either males or females. The company wishes to abolish these tickets altogether, but the council would not consent, and it was finally agreed to sell 7 tickets for 25c to be limited for workmen and good between the same hours as formerly. These tickets will not be honored if presented by females, in connection with which it may be mentioned that the Civil Code, article 2013A, as amended by 7 George V, chap. 52, provides that: "The word 'workmen' includes the artisan, the laborer and generally everyone who makes his living by manual labor."

School children's tickets, old rate 10 for 25c. No change was asked. Children under 7 years of age, when accompanied by parents or guardians, were carried free. The company asked that all children under 7 years, except those in arms, pay 3c cash fare or buy 10 tickets for 25c. The council agreed to this.

Transfers have been issued free, and permission was asked to charge 1c each for them, or to sell 5 transfer tickets for 5c, which the council did not agree to.

The company asked to be relieved of its obligation to pay the city 4% of its gross earnings, but the council would not consent.

A Quebec press dispatch of June 19 said many citizens were preparing for the higher street car fares about to go into effect, by buying tickets wholesale at the old rate of 6 for 25c.

British Tramway Fares.—At the request of Sir Albert Stanley, President of the British Board of Trade, the House of Commons has appointed a select committee to investigate the need of increasing tramway fares in Great Britain. A deputation from the tramway associations, both municipal and company, appealed to him recently for financial assistance, which they maintained had been made imperative by the enormous rise in wages and the heavy increase in charges for material.

The Winnipeg Electric Railway's Motor Omnibusses.

The Winnipeg Electric Ry. Company is operating 4 motor busses, in a section of the city that is not served by the electric railway lines, in accordance with the agreement entered into with the city recently that the street car service in outlying districts be supplemented by motor busses until the trolley lines are extended into that area. The service is very satisfactory from the public standpoint and as only three busses are in operation at one time, one is kept for emergency use should a breakdown occur. They are standard one ton, 16 passenger type. The busses are finished in gun metal with an ivory stripe, weigh 3,700 lb. and cost \$2,295 f.o.b. Walkerville, Ont.

The specifications of the busses are as follows: Wheel base, 125 in.; frame of pressed steel channel section 5 x 3 x 3/16 in., width 36 in., length overall 186 in.;

shifting clutch. Pedal adjustable. Brakes, emergency expanding band type. Service, contracting band type. Brake bands faced with woven wire asbestos material 2 in. wide acting on 15 in. brake drum. Brake rods equipped with equalizer beams. Brake pedal adjustable. Hand control, centre control. Lamps, electric dash lamp, tail lamp and head lamps (the latter provided with dimmer switch).

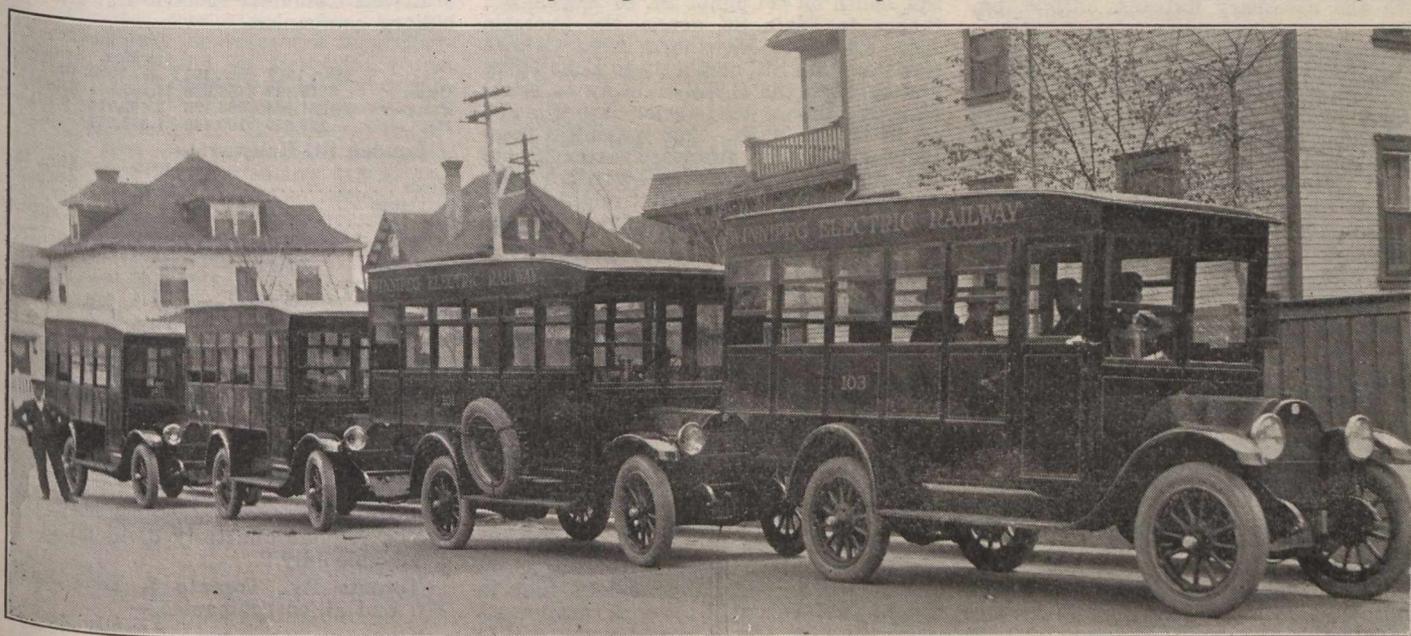
Complaints Against Halifax Electric Railway Service Disposed of.

The Nova Scotia Board of Public Utilities had before it recently a complaint against the Nova Scotia Tramways & Power Co. The Halifax Chronicle reports the board as having given judgment as follows:—

The complaint filed against the tramway company was divided into these particulars: 1. Irregularity of service. 2. Failure to stop at street intersections to take passengers. 3. Failure to operate

be necessary. Whether snow banks should be permitted to remain on the business streets of a city the size of Halifax, tramway or no tramway, in view of the very considerable additional cost thereby thrown on merchants, truckmen, teamsters and others engaged in transportation, as well as the inconvenience experienced by pedestrians at times of rains and thaws, is a matter of policy which must be determined by the civic authorities, and with which this board has nothing to do. For some years the city and the company jointly removed the snow under an alleged agreement, which was not produced. If satisfactory service is to be furnished, the snow must be removed and the gutters and catch-pits kept open, and it is not enough to remove merely the snow thrown up by the ploughs. The company and the city should be jointly responsible, and each should bear the cost of removal, the one doing the work, and the other bearing a proportion of the cost.

The traffic conditions—the slowly mov-



Winnipeg Electric Railway's Motor Omnibusses.

transmission, selective type mounted on rear axle, 3 speeds forward and reverse; gear ratios, 1st, 18.2:1; 2nd, 10:1; 3rd, 5:1; reverse, 23.7-8.1. Equipped with roller bearings, aluminum transmission case. Propeller shaft, equipped at either end with universal joints, tubular 1 3/8 x 3/16 in. wall. Axles, front, forged L-beam section; rear, full floating, equipped with roller bearings. Cast steel housing. Axle shafts, 1 3/8 in. in diameter. Chrome nickel steel, radius rods. Drive is through radius rods. Torque arm, pressed steel channel section, firmly bolted to transmission case and secured in axle housing by forged braces. Springs, semi-elliptic in front, semi-elliptic in rear. Spring centers, front, 37 11/16 in., 2 in. wide; rear, 51 in., 2 1/2 in. wide. Steering gear, left hand drive, 18 in. steering wheel, irreversible worm and gear. Spark and throttle control, hand control on steering wheel, carburetor accelerator operated by foot. Wheels, wood, artillery type, 12 spokes. Heavily constructed for truck purposes. Brake drums securely bolted to spokes. Tires, plain tread tires in front, 35 x 5 x 5 pneumatic. Safety tread tires in rear, 35 x 5 pneumatic. Clutch, cone type faced, with woven wire asbestos material. Clutch pedal mechanism connected to ball thrust bearing on propeller shaft for

the so-called Gottingen street extension. 4. Failure to operate the line from North street to Richmond. 5. Failure to operate the Armdale line.

As to the first ground of complaint, the company admitted that the service was not as satisfactory as could be reasonably desired, but this was owing to the following conditions which the company could not control: 1. Severe weather. 2. Failure of city authorities to remove snow shovelled off sidewalks. 3. Failure of city authorities to open catchpits and clear gutters, or cause same to be cleared. 4. Difficulty on the part of the company of obtaining necessary labor to promptly remove snow thrown up by company's sweepers. 5. Traffic conditions.

The board states that weather conditions threw a heavier burden on the company than usual, and from the facts brought out at the investigation, and always bearing in mind the labor available, it would seem that the company bent all its energies to meet the weather conditions and to keep its tracks open.

The city authorities, during the past winter, removed no snow from the streets on which the car tracks are placed, taking the position that were it not for the tram service the removal of such snow as is shovelled from the sidewalks would not

ing heavily laden auto trucks travelling in the tramway and disregarding the motorman's signals, and the practice of leaving autos and other vehicles close to the tracks—was largely responsible for the many delays and bunching of cars which occurred during the past winter. The older motormen on the tramway testified that conditions were never so bad as during the past year, and, given the track free from obstructions, they would be able to give a reasonably satisfactory service.

As to the complaint that cars had failed to stop at street intersections for passengers, the board found that in many instances the cars were running "express" in order to recover lost time. It was in the interest of passengers farther on who were waiting for cars that the foremost cars of a bunch should not stop at every corner. It is not in the company's interests to run empty cars.

As to the Gottingen St. line, it was found that it was blocked on account of the blizzard following the explosion and the scarcity of labor, but it had been opened as speedily as possible, and to the mayor's satisfaction. The operation of the Richmond section was impossible on account of the damage to overhead construction. The Armdale line has been in

operation continuously, and there was no evidence to the contrary.

The board made the following certain recommendations: 1. The city and the company should reach an agreement for the joint removal of snow. 2. The city authorities should see that all catchpits and gutters on streets draining toward tram tracks are open. 3. Traffic ordinances should be passed to give the right of way to tram cars, and to prevent ob-

struction. 4. If Militia and Defence Department motor trucks are operating without numbers, as alleged, they should be required to conform to the rules. 5. To separate cars that are bunched, the company may run the leading cars "express," that is, without stopping, but should indicate the fact by a sign. 6. As to whether the staff of inspectors is adequate, this is a matter of management with which the board will not interfere.

company's power plant, which it was proposed to incorporate into a lengthy electric railway. The company also owns the Burrard, Westminster & Boundary Ry. (May, pg. 211.)

Winnipeg Electric Ry.—A press report of June 12, states that the company will instal a Y at the western terminus of the Logan Ave. West line on Keewatin St., so that the new type of cars may be operated on the line. (June, pg. 255.)

Electric Railway Projects, Construction, Betterments, Etc.

Electric Railway Finance, Meetings, Etc.

Edmonton Radial Ry. results for April:

Earnings	\$42,206
Expenses	32,477

Net earnings	\$ 9,729
Capital charges	9,328
Depreciation	2,191

Deficit \$ 1,790
 In April, 1917, the gross earnings were \$42,015.
 Passengers carried 900,551
 Average receipts 4.6c

British Columbia Electric Ry. and subsidiary companies.

	Mar. 1918	Mar. 1917	3 months to Mar. 31, 1918	3 months to Mar. 31, 1917
Gross	\$510,892	\$456,626	\$4,495,271	\$4,067,005
Expenses	381,234	356,178	3,462,714	3,194,692
Net	129,659	100,448	1,032,557	872,313

London St. Railway.

	May, 1918	May, 1917
Gross	\$38,446.29	\$32,247.56
Expenses	31,483.10	27,855.82
Net	6,963.19	4,391.74

Regina Municipal Ry. results for May:

	1918.	1917.
Earnings	\$19,182.65	\$15,536.75
Passengers carried	401,984	371,653
Average revenue per passenger	4.77c	4.18c

Toronto Civic Ry.—Receipts for May, \$27,064.10; passengers carried, 1,606,741, against \$22,412.68 receipts, and 1,325,856 passengers in May, 1917.

Toronto Ry.—Earnings for May, \$548,777.80; city percentage, \$109,755.57, against \$510,869.55 total earnings, and \$102,066.98 city percentage for May, 1917.

The regular quarterly dividend of 1% is payable July 2.

Toronto Ry., Toronto & York Radial Ry. and allied companies.

	Mar. 1918	Mar. 1917	3 months to Mar. 31, 1918	3 months to Mar. 31, 1917
Gross	\$1,113,472	\$991,192	\$3,163,724	\$2,926,228
Expenses	581,747	515,586	1,720,890	1,588,605
Net	531,725	475,606	1,442,834	1,387,623

Winnipeg Electric Ry. results for March:

	1918.	1917.
Gross earnings	\$307,289	\$293,094
Expenses	240,629	209,453
Net earnings	66,661	83,641

Three months ended Mar. 31—
 Gross earnings \$940,830 \$893,756
 Expenses 723,974 643,083
 Net earnings 216,856 250,673

The Guelph Radial Ry. is managed by a board of directors nominated by the Guelph, Ont., City Council. Under an act passed at the Ontario Legislature's last session, the present constitution of the board will be discontinued, and the members of the city council to be elected for 1919, and thereafter, will be the directors of the G.R. Ry. under the acts relating to the company.

The Ottawa & Montreal Transmission Co. has been granted an extension of time for three years within which it may construct its power transmission lines, authorized to be built by the statutes of 1910, chap. 142, and confirmed by the statutes of 1913, chap. 169.

The Vancouver Transportation Club June 4 discussed the transportation of explosives, the opening speech being by D. W. McNab, of the Bureau of Explosives.

British Columbia Electric Ry.—The new sub-station at King Edward Ave., on the Lulu Island line, was expected to be completed by June 30. It is of reinforced concrete, 100 x 60 ft., and is equipped with 2 rotary convertors of 1,000 k.w. each and 1 motor generator of 1,500 k.w. with the necessary fixtures. (June, pg. 255.)

Calgary Municipal Ry.—The Calgary, Alta., City Council is considering a plan for straightening and shortening the Ogden line in the interests of efficiency of service and economy of working. If the plan is approved, some time will be taken up in negotiating for right of way, etc. (May, pg. 211.)

Edmonton Radial Ry.—The car line on Twenty-seventh St., Edmonton, Alta., has been rebalanced, and is reported to be in good condition. (Mar., pg. 117.)

Fort William Electric Ry.—Application has been made to the commission operating this railway by the Mount McKay & Kakabeka Falls Ry. to grant it running rights over the city lines in the vicinity of the market. C. H. Jackson and W. F. Hogarth, directors, attended a recent meeting of the commission and presented their case, but up to the time of writing no decision has been announced.

The Hull Electric Co., according to a press report, proposes shortly to build an extension of its line. G. Gordon Gale, Hull, Que., is Vice President and General Manager.

We are officially advised that the extension referred to in recent press reports is the work on the Chelsea Road, of which mention was made in our April issue, pg. 164. The company does not contemplate any other extensions at present.

The Levis County Ry., we are officially advised, proposes to undertake the reconstruction of 10 miles of track with stone ballast, and to build two miles of new line, using new ties on the whole. The work is to extend over practically the whole system in the municipalities of Levis, St. Joseph, Bienville and St. Romuald as far as the southern approach of the Quebec bridge. A contract has been let for 200 tons of 60 lb. steel rails, and the company is in the market for 16,000 ties, 70 kegs track bolts, 300 kegs track spikes and 2,500 continuous rail joints. H. E. Weyman, Levis, Que., is Manager.

Nipissing Central Ry.—The Dominion Parliament has granted an extension of time within which the company may make a number of extensions on branch lines, details of which were given in our May issue. (May, pg. 211.)

Ottawa Electric Ry.—The Ottawa City Council, on June 4, discussed the question of a proposed extension to Ottawa East and to the cemeteries, and a suggestion was made that in the event of the company refusing to make the extensions,

the council enter into an agreement with the Hydro Electric Power Commission to build them. It was stated that the extensions would probably cost \$800,000 at the present price of labor and materials. The route of the suggested extension to Ottawa East is from Sparks and O'Connor Sts. south on O'Connor St. to Argyle St., thence to Elgin St. across the Pretoria Ave. bridge to Hawthorn Ave., Ottawa East, to Main St., northerly to Echo Drive and through the G.T.R. subway to Nicholas St., thence to Laurier Ave E., and on to O'Connor St., thus making a complete loop. The proposed extension to the cemeteries would start at the corner of Beechwood Ave. and Creighton St., running along Beechwood Ave., Oakville Road and Hemlock Road. (May, pg. 211.)

Port Arthur Civic Ry.—The city council has decided to reconstruct the line on Arthur St. between Court and Cumberland Sts. The 80 lb. steel rails at present on Hodder Ave. will be removed for placing on Arthur St., and will be replaced with lighter rails. (Sept., 1917, pg. 368.)

Quebec Ry., Light & Power Co.—Plans for some small extensions in the city have been approved and the Quebec City Council was advised June 1, that work on these would be commenced as soon as the rails and other materials necessary were available. We are officially advised that in Sept., 1916, amongst other arrangements with the city, the company undertook to build its line on the Beauport Road, extending to the city limits, 1.5 miles. This should have been completed by Dec. 31, 1917, but owing to the high cost of labor and materials and the practically isolated section of country through which the main part of the line would operate, the company decided to defer construction to a later period. A number of the residents of Beauport district have petitioned the council to insist upon the construction being carried out, which, under existing conditions, the company considers unreasonable. However, the company is having a survey made, with a view of building at least a part of the line. (Jan., pg. 22.)

Regina Municipal Ry.—Plans are under consideration by the city council for the extension of the line into the North Annex. The Regina Leader, on June 12, questioned the wisdom of constructing any extension whatever and added: "With taxation mounting year by year and no prospect of it lessening, the citizens might expect their representatives in council to better defend them from schemes that will benefit a few people, at a cost that is really unnecessary." (July, 1917, pg. 286.)

The Western Power Co. of Canada has been authorized by the Dominion Parliament to own and operate a railway built by its predecessor, the Western Canada Power Co. This consists of a line built originally during the construction of the

Increases in Electric Railway's Employes' Wages.

The Brantford Municipal Ry. conductors and motormen asked early in May for increases ranging from 9c to 10c an hour, according to length of service. The commission granted advances which are shown below, together with the rates paid formerly per hour:—

	New rate.	Old rate.
First year	29c	23c
Second year	31c	25c
Third year	32c	26c

British Columbia Electric Ry.—The Minister of Railways has appointed a board of conciliation and investigation, to deal with the dispute between this company and its employes; F. Buscome, Vancouver, representing the company, and T. J. Coughlin, Vancouver, representing the men.

Calgary Municipal Ry.—In the particulars of increases in wages on this line given in Canadian Railway and Marine World for June, pg. 259, mention was made of conductors and motormen and also of motor conductors. As we could not understand the reference to conductors and motormen, in view of the fact that the entire system is operated with one-man cars, we communicated with Superintendent T. H. McCauley, who advises us that conductors and motormen are only used on sight seeing, trailer and freight cars, and street sprinklers, and that all other cars are each operated by one man. The railway does a large freight business to Sarcee camp, and, in addition, runs a combination freight and passenger car to Ogden, Sarcee, and Bowness. This car is operated by one man, and operated on regular schedule. The two-man freight cars carry wood, lumber, and supplies, and require two men, as also do sprinklers.

The Cape Breton Electric Co. is reported to have put in force a new wage schedule on June 1, which gave increases to conductors and motormen varying from 2 to 3½c an hour. The maximum wage for the senior men is now 36c an hour.

Dominion Power & Transmission Co.'s Wages.—Canadian Railway and Marine World for June gave particulars of conductors' and motormen's wages on the Hamilton St. Ry., as agreed upon, following a board of conciliation's recommendations. Particulars were also given of new rates put in force voluntarily on the company's interurban lines, viz., Brantford & Hamilton, Hamilton & Dundas, Hamilton, Grimsby & Beamsville, and Hamilton Radial. We are officially advised that there was a slight error in the figures furnished us by the company for the interurban lines, which stated the wages for the second year as 34c an hour, for the 3rd and 4th years as 34c, and for the 5th year and thereafter as 37c. The correct figures are given below, showing both the new and old rates.

	New rate.	Old rate.
First 6 months	25c	22c
Second 6 months	30c	24c
Third year	32c	25c
Third, fourth and fifth years	34c	26c
Sixth year and thereafter	37c	30c

Guelph Radial Ry.—Conductors' and motormen's wages on this municipally owned railway were advanced in April 1c an hour, but as it was found impossible to get new men at the rates offered, a further advance was made in May, for the duration of the war only. The following table gives: 1, the old rate prior to April; 2, the April rate; 3 the present rate:

	Old rate.	1st advance.	2nd advance.
1st year	24½c	25½c	27c
2nd year	25½c	26½c	28c
3rd year	26½c	27½c	28½c

The company supplies one uniform suit a year free and uniform caps as required.

Hull Electric Co.—Two members of the board of conciliation appointed by the Minister of Labor to investigate the dispute between this company and its employes as to wages, viz., Judge Gunn, chairman, and Fred. Bancroft, of Toronto, representing the men, made a majority report on May 25 recommending increases. The report was not concurred in by the company's representative, G. D. Kelly, barrister, Ottawa, but the management decided subsequently to accept the majority report. Following is a comparison of the new and old rates, as far as information in regard to the latter is available:—

	New rate.	Old rate.
Aylmer station agent, per mo. \$100		
Conductors and motormen—		
1st six months, per hr.	29c	22c
2nd six months, per hr.	31c	22c
Second year	34c	23c
Third year	36c	24c
Fourth year	36c	25c
Snow plow and sweeper work, per hr.	39c	
Freight crew, per month—		
Conductor and motorman. \$105		
Brakeman	75	
Trolleyman	80	
Power plant employes, per mo.—		
Flagmen or switchmen, per day 2.25		
Runners or operators	80.00	62.50
Oilers	65.00	62.50
Substation employes	80.00	
Trackmen, per hr.	31c	20c
Laborers, per hr.	30c	
Linemen, per hr.	36c	24c
Trolley linemen	33c	

Car barn and shop men, among whom are truck repairers, carpenters, cleaners, blacksmiths, helpers, machinists, troublemen, air inspectors, apprentices, and metermen, got a general increase of 10c an hour.

The company employs about 140 men, who demanded increases averaging about 60%, which the company refused to make, and then arbitration was suggested. The new rates apply from May 1.

London St. Ry.—The conciliation board appointed to consider the dispute between this company and its employes, consisting of Judge Livingstone, chairman; F. H. McGuigan, Toronto, representing the company, and C. C. Ferguson, London, representing the men, waited upon the London City Council on May 29, and laid the then position before that body. The chairman of the board stated that the company showed that its financial condition did not warrant granting higher wages, and that by the agreement with the city precluded the company from charging increased fares. After hearing from representatives of the company and the men, the council decided not to interfere between the company and its employes. On May 31 the conciliation board made a unanimous report, following which increased rates of pay were put in force from May 1. Following is a comparison of the old and new rates per hour for conductors and motormen:—

	New rate.	Old rate.
On spare list		23c
Rest of first year		25c
First year	30	
Second year	33c	26c
Third year	35c	27c
Fourth year and after	35c	28c

Regular conductors and motormen to be paid 10c an hour in addition to regular rates for working after scheduled working hours.

Barnmen's and linemen's wages were increased 3½c an hour, and trackmen's wages 2c.

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Montreal Tramways Co.—After somewhat protracted negotiations, the company's offer of wage increases was accepted by the men on June 11 and was made to date from June 1. Following is a comparison of the old and new rates per hour:—

	New rate.	Old rate.
First and second year	31c	25c
Third year	33c	26c
Fourth year	35c	26c
Fifth year	35c	29c
Sixth year and after	37c	29c

Overtime is to be paid as time and a half, and motormen teaching learners, also men employed on snow sweepers, ploughs, milk cars and interswitching, get 2½c an hour extra. Increases have also been granted the other employes; but up to the time of writing (June 22) we have no official information in regard to them. J. E. Hutcheson, General Manager, is reported to have stated that the increases will add \$600,000 a year to the company's operating expenses.

Port Arthur Civic Ry.—The Port Arthur, Ont., Public Utility Commission has fixed the wages for employes at barns and maintenance of way department as follows:—Master Mechanic, \$140 a month; machinists, 44c an hour; painters, 44c an hour; 1st class pitmen, 42½c an hour; general handyman, 37½c an hour; other pitmen and laborers, 32½c an hour; apprentices, 20 to 25c an hour. Maintenance of way department—Traffic Manager, \$100 a month; Assistant Manager, \$105 a month; Roadmaster, \$110 a month; boundaryman, \$100 a month; laborers, 32½c an hour.

Toronto Ry.—A board of conciliation consisting of Judge Ruddy, of Whitby, Ont., chairman; H. H. Dewart, K.C., representing the company, and Fred Bancroft, representing the men, has been appointed to consider Toronto Ry. machinists' demand that they be given the rates of pay and conditions as other machinists in the city have. They ask for a 9-hour day instead of 10 as at present; that tool-makers be given 60c an hour for day work, and 65c for night work; machinists 55c for day work and 60c for night work, and specialists 45 and 50c an hour for day and night work respectively.

Winnipeg Electric Ry. has entered into a new agreement with its conductors and motormen, for a year, from May 1, 1918, to May 1, 1919. Following are the new and old rates per hour:—

	New rates.	Old rates.
1st 6 months	30c	28c
2nd 6 months	32c	30c
2nd year	33c	31c
3rd year	35c	33c
4th year and after	39c	36c

Overtime work on public holidays, exhibition and other similarly busy days to be paid at rate of time and a half. Sunday work to be paid at rate of 10 hours for 8½ hours work. Conductors and motormen training students to get 5c an hour extra while so engaged. Extra conductors and motormen reporting regularly every day during week, and ready and able to work, to be paid a minimum wage of \$12 a week.

Increased Street Car Fares in England. Members of the London County Council have been asked not only to raise the fares on the municipal street cars, but to abolish transfers on certain routes. The reasons given are the increased cost of coal, war allowances, and the recent increase in wages allowed when tramway workers were brought into line with railway workers.

Mainly About Electric Railway People.

F. H. Williams has been appointed Publicity Agent, Winnipeg Electric Ry., succeeding H. C. Howard.

Mrs. James Gunn, wife of the Superintendent, Toronto Ry., died in Toronto, June 23, after a long illness.

D. N. Gill, heretofore Purchasing Agent, Ottawa Electric Ry., is training at Niagara camp, Ont., preparatory to going overseas to join the Canadian Railway Troops.

J. M. Ahearn, Assistant Superintendent, Ottawa Electric Ry., Ottawa, Ont., has also been appointed Purchasing Agent, vice D. N. Gill, who has entered military service.

Frederick E. Hayes has been appointed General Superintendent, Sandwich, Windsor & Amherstburg Ry. and Windsor & Tecumseh Electric Ry., Windsor, Ont.

M. W. Kirkwood, General Manager, and C. J. Whitney, G.F. & P.A., Grand River Ry., have been authorized by the Board of Railway Commissioners to prepare and issue freight and passenger tariffs for the company.

J. J. Ahearn has been appointed Inspector of Rolling Stock, Ottawa Electric Ry., succeeding R. A. Baldwin, promoted.

R. A. Baldwin, heretofore Inspector of Rolling Stock, Ottawa Electric Ry., has been appointed Master Mechanic.

C. A. Lee, of the British Columbia Electric Ry. engineering staff, has enlisted with the U.S. Navy Civil Engineering Corps. While in the company's service, he was engaged on work on the Coquitlam dam, and the hydro electric installation at Jordan River, near Victoria.

E. L. Tait, heretofore Assistant Engineer, Maintenance of Way, British Columbia Electric Ry., has been appointed Engineer, Maintenance of Way, succeeding A. C. Eddy, who has been granted extended leave of absence for military duty, having joined the U.S. Army, and been appointed a captain in the 55th Engineers.

A. W. Ormsby, Superintendent, Light and Power Department, City of Edmonton, Alta., has been appointed acting Utilities Commissioner by the city council in succession to Commissioner Harrison. Mr. Ormsby will retain his position with the light and power department and will perform his new duties for the present without salary.

Angus McLeod Campbell, who has been appointed Chief Accountant, Grand Valley Ry. and Lake Erie & Northern Ry., Galt, Ont., was born at Embro, Ont., July 4, 1874, and entered C.P.R. service, Nov. 3, 1890, since when he has been, to May, 1893, junior freight clerk, Woodstock, Ont.; May, 1893, to May, 1898, abstract clerk, London, Ont.; May, 1898, to June, 1902, chief clerk at Galt, Windsor and London, consecutively; June 1, 1902, to May 15, 1918, Travelling Auditor, Montreal.

Wilford Phillips, formerly General Manager, Winnipeg Electric Ry., died June 12, at Rochester, Minn., where he went for treatment after a comparatively lengthy illness. He was born in Prince Edward County, Ont., Oct. 8, 1858, and commenced electric railway work on the Metropolitan Ry., North Toronto, Ont., now the Toronto & York Radial Ry.'s Metropolitan Division, in Mar., 1890, in which service he remained until July, 1892, since when he was to Mar., 1893, Engineer and Superintendent, North Toronto Water Works and Electric Light; Mar., 1893, to 1896, Mechanical and Elec-

trical Engineer, Niagara Falls Park & River Ry.; 1896 to June, 1900, Manager, same railway; Aug., 1900, to Oct. 1, 1917, General Manager, Winnipeg Electric Ry. At the last mentioned date he retired on account of ill health, and was elected a director. In speaking of his retirement, Sir Augustus Nanton, Vice President, said: "Everybody connected with the company will regret Mr. Phillips' retirement. He remains in office at the board's request, and will stay with the company in an advisory capacity. He came to Winnipeg about 17 years ago, from the Niagara Falls Park & River Ry., which he managed with success, and to him is very largely due the past great successes of the Winnipeg Electric Ry. in all its branches. He extended the railway lines, completed its power plant, built substa-



Wilford Phillips,
Formerly General Manager, Winnipeg Electric
Railway.

tions, built a suburban line, extended its gas mains, in fact, the company's properties when he arrived were of a minor character, and have all been developed under his management." On leaving Winnipeg for a trip to the south, he was presented with a gold watch and chain by the company's employes, and he spent considerable time in California subsequently. He was buried at Toronto, June 15.

Sandwich, Windsor & Amherstburg Ry. employes struck June 19, following the refusal of the General Manager to order the reinstatement of conductor Saunderson, who was dismissed by Superintendent Hayes. It appears that the Superintendent being without his pass book, was ordered by the conductor to pay his fare or get off the car; the next day the conductor received his dismissal. The employes went to S. S. Anderson, General Manager, who backed up the Superintendent in his determination not to reinstate the conductor without an apology. The men demanded an immediate reinstatement without an apology. The matter was subsequently arranged and the men returned to work.

Electric Railway Notes.

The Nipissing Central Ry. is reported to be in the market for a snow plough.

The Regina Municipal Ry. has contracted to pay for employes' uniforms for this year \$19.85 each, against \$17.75 for 1917.

The Fort William Electric Ry. Commission favors a general increase of passenger fares, and is negotiating with the Port Arthur Civic Ry. commissioners about it.

The Toronto Railway Men's Union has unanimously re-elected City Controller W. D. Robbins as Financial Secretary, and Alderman Jos. Gibbons as business agent and treasurer.

The Winnipeg Electric Ry. has ordered 10 double truck car bodies, 33 ft. long, semi steel construction with folding doors and steps, for single end operation, from Ottawa Car Manufacturing Co.

The city of Hamilton, Ont., is said to have protested to the Board of Railway Commissioners against granting the Hamilton Radial Electric Ry.'s application for increased freight and passenger fares.

The Nipissing Central Ry., which is operated by the Timiskaming & Northern Ontario Ry. Commission, for the Province of Ontario, has ordered two interurban car bodies from Preston Car & Coach Co.

The Calgary, Alta., City Council on June 18, by a vote of 6 to 4, decided to put a tax of 4% upon the gross earnings of the electric railway and the electric light plant, instead of 5% as recommended by the finance committee.

The hearing of the Toronto Ry.'s appeal against the fine of \$24,000 for alleged non-compliance with an order of the Ontario Railway and Municipal Board, as to the building of additional cars, is not expected to come on until the autumn.

The Calgary, Alta., City Council having proposed to assess the Calgary Municipal Ry. for municipal taxes, the commissioners are considering the question of increasing fares. Superintendent McCauley has suggested that the sale of special workmen's tickets be stopped.

The Grand River Ry.'s operations are liable to serious restriction, as a result of the reduction in the allotment of power by the Hydro Electric Power Commission of Ontario. A considerable quantity of traffic moved over this line is required in connection with munitions manufacture.

The Port Arthur, Ont., City Council is considering the matter of advertising in the civic railway cars. The present contract is expiring, and the contractor is asking for a renewal for 10 years at \$600 a year. The same contractor has the advertising privileges on the Fort William Electric Ry. at \$600 a year.

The Ontario Railway and Municipal Board has approved the sample prepayment car which the Toronto Ry. proposes to place in service on its lines, and which was described in our last issue. It is probable that sufficient cars will be remodelled on this plan, for service on one selected route, to test the feeling of the public on the matter.

The Quebec Ry., Light & Power Co. informed the Quebec City Council's public works committee, June 12, that if there was any possibility of the company being able to undertake the work of snow removal in the city, as well as to successfully operate the street cars, it would not hesitate to tender. The chief difficulty in the way is lack of equipment, which cannot very well be procured at present.

Marine Department

General Shipbuilding Notes Throughout Canada.

B. Belliveau & Co., Belliveau Cove, N.S.—Work is reported in progress on the construction of a three masted schooner of about 250 tons, similar to the company's recently launched schooner Emma Belliveau, now on her maiden voyage to the West Indies.

Canadian Car & Foundry Co., Fort William, Ont.—Work is proceeding on the 12 mine sweepers under construction for the French Government. The shipbuilding sheds are practically completed, and electrical cranes have been installed.

Cape Breton Shipbuilding Co., Johnstown, N.S.—This company, which was incorporated recently with capital of \$45,000, to build wooden ships, is building a schooner with carrying capacity of 350 tons. N. A. MacMillan, K.C., North Sydney, is Secretary.

Ernst Shipbuilding Co., Mahone Bay, N.S., launched the schooner William Duff June 6, for the William Duff Shipping Co., Lunenburg, N.S., for the West Indies trade. Her dimensions are, length 127 ft., breadth 32½ ft., depth of hold 12½ ft.; tonnage, 450 gross, 400 register.

Fauquier & Porter, Hantsport, N.S.—Two schooners are under construction at this yard, where, it is said, that four-masted schooners of approximately 1,000 tons will be built. J. B. North & Sons shipbuilding yard was acquired towards the end of 1917, and some adjoining lands were taken in and woodworking mills with compressed air plant erected. The partners are, G. E. Fauquier and J. P. Porter, railway and general contractors. G. E. Fauquier, who lives in Ottawa, had contracts on the National Transcontinental Ry. and is a member of the firm of Foley Bros., Welch, Stewart & Fauquier, who are carrying out work on the Canadian Government Railways ocean terminals at Halifax, N.S. J. P. Porter has had some railway contracts in the U.S., including one on the Spokane, Portland & Seattle Ry., in partnership with P. Welch. He is Manager of Construction, under Foley Bros., Welch, Stewart & Fauquier, on the Halifax ocean terminals.

Grand Trunk Pacific Ry. Dry Dock at Prince Rupert, B.C.—A press report from Vancouver, B.C., credits W. P. Hinton, Vice President and General Manager, with the statement that arrangements are being made for the leasing of the dry dock and shipbuilding plant at Prince Rupert, to a U.S. company, and that work will be commenced shortly on the building of 8 steel steamships of 8,500 tons each.

Grant & Horne, St. John, N.B.—A wooden steamship of 2,800 tons capacity, which has been under construction at this yard for some time, is expected to be ready for launching very shortly.

O. Ham, Mahone Bay, N.S.—The schooner The Dazzle was launched here recently, and was expected to be ready for her maiden voyage to the West Indies during June. She is owned by Jos. Conrad, Upper La Have. Her dimensions are, length 122 ft., breadth 26 ft., depth of hold 11½ ft. The keel of another schooner for the same owner has been laid.

International Shipbuilding Co., Newcastle, N.B., has practically completed a

4-masted schooner, and expects to proceed at once with two more of a similar type. These are to be arranged for the accommodation of auxiliary power, which can be added at any time if desired.

W. C. McKay & Sons, Shelburne, N.S. The schooner Selma Creaser, which was launched at this yard, fully rigged, left Halifax recently for the banks, on her first fishing trip. Her dimensions are: length 124 ft., beam 26.6 ft., depth of hold 11 ft.; tonnage, 99 register.

Marine Construction Co., St. John, N.B., launched the four masted schooner Dornfontein June 11. The keel was laid at the end of Oct., 1917. Her dimensions are, length 185 ft., beam 40 ft., depth moulder 14½ ft.; 1,400 tons deadweight capacity. This is stated to be the first sailing vessel to be launched at St. John since 1890, and the launch was broadside one, the customary way on all Canadian inland waters, but apparently new to St. John, an old-timer saying that it was the first he had heard of there. The vessel is being loaded for Durban, South Africa, by J. T. Knight & Co. She was designed by J. M. Watts, Philadelphia, Pa. D. H. Saker is President of the company, and J. M. Densmore is Superintendent of the yard.

B. W. Melanson, Gilberts Cove, N.S. The small wooden steamship M. Sigogne, owned by the builder, underwent her trial trips recently and successfully maintained a speed of nearly 10 knots an hour. The machinery was supplied by the Union Foundry & Machine Works, West St. John, N.B., and the boiler by I. Matheson & Co., New Glasgow, N.S. The vessel has about 400 tons deadweight capacity. The builder has now a 250 ton schooner in the framing.

New Liverpool, Quebec.—W. H. Hutchinson, of Baldry, Yerburgh & Hutchinson, contractors, St. Catharines, Ont., and President of National Shipbuilding Co., Goderich, Ont., and H. Dussault, President, General Public Enterprises Co., Levis, Que., are among the promoters of a company to establish a shipbuilding plant at Benson's Cove, New Liverpool, in St. Romuald Parish, on the south side of the St. Lawrence River, near the Quebec Bridge.

The National Shipbuilding Co., Ltd., Goderich, Ont., incorporated under the Dominion Companies Act, has been licensed to carry on business in Ontario, the amount of capital used within the province being limited to \$42,000. W. B. Wadsworth, Toronto, has been appointed attorney. At present the company appears to be confining itself to building marine engines.

Pacific Construction Co., Port Coquitlam, B.C.—Canadian Railway and Marine World was officially advised from Ottawa recently that the company had applied to the Marine Department for licenses to build five steamships for French interests, but that no decision had been reached.

Quinlan & Robertson, Ltd., Quebec, Que.—It is announced that this company, which received an order for four wooden steamship hulls from the Imperial Munitions Board, has prospects of further orders for wooden vessels from private sources, but nothing definite has as yet

been arranged. The discontinuance of the policy of ordering any further wooden vessels, by the British Government, leaves companies equipped for wooden shipbuilding at liberty to take contracts for such from other buyers.

Reinhardt & Conrad, Lunenburg, N.S. The ship under construction at this yard for Capt. Chas. Conrad was expected to be ready for launching by the end of June.

St. John Drydock & Shipbuilding Co. Referring to the particulars published in Canadian Railway and Marine World for June, on pg. 264, an Ottawa press dispatch of June 6 stated that an amended order in council had been passed respecting the continuation of the harbor works at Courtenay Bay, St. John, N.B., by this company, which is taking over the Norton Griffiths Co.'s contract, and that provision is made only for the expenditures necessary to meet the harbor requirements of the dry dock and shipbuilding plant to be established by the company. We are officially advised that not more than \$500,000 will be expended by the Dominion Government during this year, and that the rate of prosecution of the work will depend largely upon financial conditions. The government will grant the usual subsidy for a drydock of the first class, which the company has arranged to build as speedily as possible.

We are advised from New Brunswick that the company has asked that province and the City of St. John, to give subsidies of \$250,000 each to aid in the establishment of a shipbuilding plant.

In giving in our last issue the names of the persons particularly interested in the St. John Drydock & Shipbuilding Co., we mentioned Senator H. W. Richardson and Jas. Playfair as being President and Vice President respectively of the Great Lakes Transportation Co. Mr. Playfair is President and General Manager of that company and Mr. Richardson is Vice President. It was also stated that the harbor work would "probably be carried out by the Great Lakes Dredging Co., in which Jas. Playfair and some of the others mentioned are interested." Mr. Playfair is interested in the Canadian Dredging Co., not the Great Lakes Dredging Co.

St. John Shipbuilding Co., St. John, N.B.—T. Nagle, promoter of this project, is reported to have stated on his return from Ottawa, recently, that he was going right ahead with plans for the establishment of a steel shipbuilding plant in or near St. John, that the company had received an order from the government for two steel steamships of 8,000 tons, and that he was endeavoring to have the order increased to four. He added that it was expected that a shipyard would be laid out in Courtenay Bay at an early date, and that the project of the St. John Dry Dock & Shipbuilding Co. in the same district would not affect the St. John Shipbuilding Co.'s plans. Up to the time of writing, Canadian Railway and Marine World has received no confirmation that the government has placed any order with this company for two steel steamships. When Sir Robert Borden made his announcement regarding the government's policy regarding steamship build-

ing, in the Commons recently he said, "The intention is to confine at present the awarding of contracts for the construction of steel steamships to yards already established and actually engaged in constructing steel ships." It is therefore not likely that the company has an order from the government for building steel steamships, though some negotiations may have taken place regarding the possibility of orders after the plant is established.

Victoria, B.C.—Representations were made to the British Columbia Premier,

Steel Shipbuilding Plant for Halifax, N.S.

In consequence of the increased shipbuilding activity in Canada, opportunities are continually being sought for points of vantage for the establishment of shipbuilding plants. When the demand was urgent for wooden steamships, it was desirable that such plants should be located as conveniently as possible to the source of supply of the requisite building material, and in most cases this was done. So far as immediate war purposes are concerned, it is considered that wooden steamships are not equal to steel vessels, so following on the same line, it is desirable to erect steel steamship building plants at points where the supply of building material is easily accessible.

Concurrent with the rehabilitation of the port of Halifax after the disastrous explosion of last December, it is natural to assume that considerable attention will be paid in carrying out the schemes to any proposal involving the creation of a shipbuilding plant, and the extension of drydock and other similar facilities there. On this reasoning, and following on the declaration of the Dominion Government's policy as to shipbuilding and as to its method of dealing with the ship plate question, it has been thought desirable to establish a large shipbuilding plant at Halifax, and for this purpose, Halifax Shipyards, Limited, has been incorporated under the Dominion Companies Act, with \$6,000,000 authorized capital stock, to build, own and deal in steam and other vessels of every description, steamship and railway terminals, and all other facilities incidental to the operation of such business. We are advised officially that the plant will consist of complete berths for the construction of 10,000-ton steel steamships, with dry docks, repair plants and workshops in connection therewith. It is said that the company is assured of orders for several vessels, immediately the plant is ready to assume the work of construction, and it is semi-officially stated that a number of the vessels which the Dominion Government intends to build, as outlined in the Commons by the Minister of Marine recently, and dealt with in Canadian Railway and Marine World for May, will be built at this plant. The officers of the company had not been decided on at the time of writing, but it is known that Jas. Carruthers and J. W. Norcross, President and Vice President and Managing Director respectively of Canada Steamship Lines, and R. M. Wolvin, President Montreal Transportation Co., are the chief movers in the project.

It is reported that the site occupied formerly by the Acadia Sugar Refinery, alongside the existing dry dock, has been acquired, and that three shipbuilding berths are to be built at once. It is also stated that an immediate outlay of from \$3,000,000 to \$4,000,000 is to be made on pushing on the construction of the plant and its equipment, so that vessels may be launched within 15 months.

June 11, regarding the possibility of leasing a site for a shipbuilding yard on the Songhees Reserve. After hearing the proposals, the Premier is reported to have said that a satisfaction of bona fides, and an agreement as to ordinary business conditions were the only obstacles in the way of further expansion in the district.

Windsor, N.S.—It is planned to lay the keel of a reinforced concrete vessel here, July 1, making it an item in the Dominion Day celebration programme, which is being carried out for the benefit of the Navy League.

Messrs. Carruthers and Norcross visited Halifax June 19 and 20, accompanied by M. J. Haney, of Toronto, Vice President Canada Steamship Lines, and H. W. Brown, of the Canada West Coast Navigation Co., Vancouver, and looked over the existing dock yard and the proposed site of the new plant. Mr. Norcross is reported to have said that work on the new plant would be commenced before the end of June and that the keels of three 10,000 steel cargo steamships would be laid within three months. The Halifax City Council has granted the company exemption from taxation.

A Halifax press dispatch credits Mr. Norcross with saying: "When our plant is completed, we will have established at Halifax one of the finest shipyards on the American continent. We have chosen the best site available, and which is admirably suited for the purpose. Halifax harbor possesses natural advantages which make the general location an ideal one, and adequate arrangements for procuring the steel plates necessary to ship construction have been made. Our first step, of course, will be to start building the three 10,000-ton steamships for which we have a contract with the Dominion Government, but our building berths will not be limited to that capacity. They will be of sufficient dimensions to admit of the construction thereon of ships of the same size and type as the Allan Line passenger steamers Alsatian and Calgarian. The general arrangements will also permit the construction of other berths, so that the company will be able to undertake the building of more than three ships at one time. We want to use all the local labor that is available in Halifax. We will employ some 3,500 men at our plant. We want good men, and we believe Halifax has them. We can provide employment for the shipwrights at work here, including those engaged in steamer repair work at the dry dock, and for the men at work on the dock. Then, too, there are in this province a large number of men proficient in wooden shipbuilding. As we hope to educate men having this knowledge to the somewhat different work of steel ship construction, there will be further opportunity for Nova Scotians with us."

The same dispatch says that the site for the company's plant extends from the Halifax graving dock, which has been purchased by the company, to pier 6, a water frontage of 2,500 ft. After the debris occasioned by the explosion has been cleared away, the work of constructing the building berths will be commenced at once. Arrangements have been made for equipment, which will be shipped immediately, and will be installed as soon as the ground has been cleared. All of the machinery and other apparatus will be new.

Asked as whether the graving dock would be enlarged, Mr. Norcross is re-

ported to have said that they intended first of all to devote all their energies to ship construction. The drydock with its present capacity will serve immediate needs, and the first call is for ships, so that they will proceed at once with the building of those for which they have contracted with the government.

The dispatch adds that the Halifax Shipyards, Ltd., officers include the following: Chairman of Board of Directors, Jas. Carruthers; President, J. W. Norcross; Vice President and Managing Director, R. W. Wolvin; Vice President, M. J. Haney.

S. M. Brookfield, who was connected with the Halifax Graving Dock Co., which owned the dry dock the new company has acquired, is said to have been retained in advisory capacity.

Tenders have been invited to July 3, for the supply of material and the performance of the necessary work in connection with the construction of a shipyard at Halifax, by Halifax Shipyards, Ltd. The immediate construction to be undertaken covers the piling and grading of three shipways, each 530 ft. long; the excavating, filling and grading of the shipyard for buildings, tracks and storage; excavation for Canadian Government Railways relocation and grading, track laying and ballasting same, equal to about a mile of double track railway; construction of 580 ft. of concrete sea wall and back filling same; construction of reinforced concrete retaining wall along the right of way of the railway relocation, and the extensions to sewers, water mains, etc. The work will require approximately 270,000 cu. yds. of earth and rock, dry excavation, and 20,000 cu. yds. of concrete. The tenders must cover the entire work, and plans may be seen at the office of the engineers, Picking & Roland, Tramways Bldg., Halifax, N.S.

War Risk Concessions to Seamen.—The British Board of Trade have informed the shipping associations that it is extending concessions to crews of ships lost by enemy action. By recent arrangement the master and men became entitled to a full month's pay after the time of the loss of the vessel, and this arrangement is now to apply to men whose vessels have been damaged through war risks, but not sunk, provided that the damage necessitates the discharge of the crew. It has also been decided to provide for the payment of one month's extra wages to any master, officer or seaman who has been captured by the enemy and interned after his ship has been sunk or damaged through war risks; the payment to be made on his ultimate release and return to England.

The International Mercantile Marine Co. is stated to have concluded negotiations with a British syndicate for the transfer for all of the company's vessels now on the British register, for approximately \$125,000,000, considered to be considerably below the present market price of the vessels, which aggregate 960,000 tons. Included in those composing the syndicate, are mentioned, Lord Pirrie and Sir Owen Phillips, both of whom have been active during the war in consolidating several of the larger steamship companies under a central management.

St. Marys River Traffic.—It has been proposed by the Lake Carriers' Association, that double courses be provided for the upbound and downbound vessels in St. Marys River, between Sweets Point and Watsons Reef. The proposal has the approval of the Dominion Marine Association, but it will not be put into operation until the Dominion Government approves.

Steamship Building in Canada for British Government.

B. C. Marine Railway, Vancouver, B.C.—The installation of the machinery in the hull of the War Puget, built by Wm. Lyall Shipbuilding Co., Vancouver, and launched Feb. 16, is being rushed at this company's yards.

Cameron-Genoa Mills Shipbuilders Ltd., Victoria, B.C.—The wooden hull War Haida, which was launched Apr. 25, left the builders' hands, June 5, and was hauled to the Ogden Point assembly plant, where she took aboard her machinery, and was later taken to the Victoria Machinery Depot's plant, where the machinery will be installed.

Canadian Vickers, Ltd., Montreal.—The steel cargo steamship War Earl was launched June 8. She has been built under order from the Imperial Munitions Board on behalf of the British Government, under the direct supervision of a Lloyd's representative. Immediately after the launch, the keel of a sister vessel was laid in the vacant berth, and the vessel is expected to be launched early in

engines were converted from compound to surface condensing, a complete wireless telegraph equipment has been installed, and the crew's accommodation has been thoroughly overhauled. The average speed of the vessel since reconstruction is 12 knots an hour, but during her trials she attained 15½ with the tide and 14½ against it. The work was carried out under the supervision of Major D. H. Oliver, R.E., on behalf of the British Government, and the vessel has been manned by a crew attached to the Royal Engineers.

New Westminster Construction & Engineering Co., New Westminster, B.C.—The launch of the second wooden hull, under order from the Imperial Munitions Board, was arranged for June 8, the name chosen for the vessel being War Edenshaw. Unfortunately, owing to a series of accidents, the vessel stuck on the ways, and the launch was postponed.

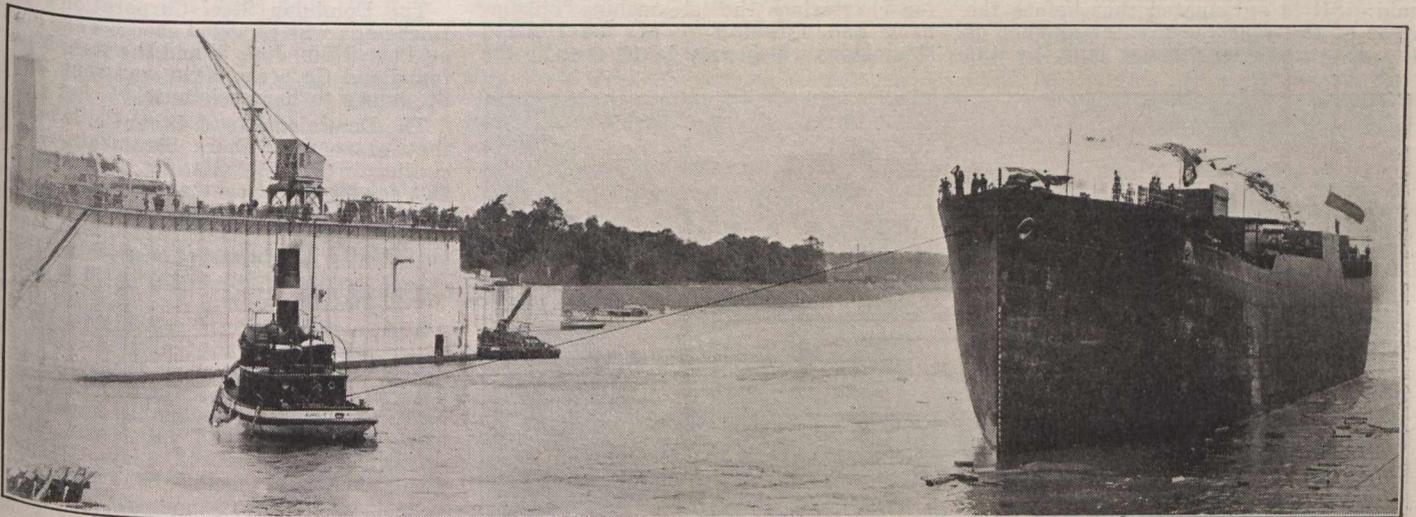
Port Arthur Shipbuilding Co., Port Arthur, Ont.—Some details were given in

is being equipped at the Louise docks, and is named War Quebec.

Quinlan & Robertson Ltd., Quebec, Que.—The second of the 4 wooden hulls under order from the Imperial Munitions Board for the British Government was launched June 14, and named War Seneca. The installation of the machinery in the War Mohawk, launched by the company May 11, is proceeding satisfactorily, notwithstanding the trouble experienced obtaining the help of sufficient experienced machinists.

Yarrows, Ltd., Victoria, B.C.—The installation of the machinery in the hull of the s.s. War Masset, built by the Foundation Co., Victoria, is proceeding as rapidly as possible, so that she may be ready for sea at an early date.

Launchings of Steamships.—Following are particulars of steamships ordered by the Imperial Munitions Board for the British Government, and which had been launched up to June 15, giving in each case the date of the launching, the name



Steel cargo steamship War Earl, for British Government, immediately after launching by Canadian Vickers, Ltd., at Montreal, June 8, 1918. The floating drydock Connaught is shown at the left of the illustration.

October. Three similar vessels are under construction at the plant, all of which are expected to be launched during July. The illustration given on this page shows the War Earl being towed alongside after the launch. This vessel, which, with the others of the same order, are being built completely, hull, engines and boilers, by the company, all according to Lloyd's requirements, is equipped with vertical, direct acting, triple expansion, surface condensing engine, with cylinders 27, 44 and 73 in. diam. by 48 in. stroke, for a speed of 11 knots an hour, and supplied with steam by three Scotch marine boilers, each 14¼ by 11¼ ft., under forced draft. Her dimensions are, length between perpendiculars 380 ft., beam moulded 49 ft., depth moulded 30 ft. She is of the single screw, single deck type of cargo vessel, with deadweight carrying capacity of 7,000 tons.

The s.s. Porsanger, a vessel of similar type to the foregoing, and which was launched Nov. 29, has been completed and handed over to Furness, Withy & Co., on the British Government's behalf.

Davie Shipbuilding & Repairing Co., Lauzon, Que.—The steam tug Gray, which was acquired by the British Government recently, has been practically rebuilt at this yard. Her dimensions are, length 135 ft., breadth 28 ft., draft 15 ft. The

Canadian Railway and Marine World for June of the company's programme and work on vessels under construction for the British Government, and illustrations were given of the launching of the s.s. War Isis, with the s.s. War Osiris and a trawler in the background. The War Osiris was launched May 25, and on June 5, two trawlers, TR-31 and TR-32, were launched. These trawlers are similar to the Castle class N.D. trawler, and are for the Dominion Naval Service Department. They have 2 masts, full wireless telegraph equipment, and are schooner rigged. The propelling machinery consists of triple expansion engine, with cylinders 12¾, 21½ and 35 in. diam. by 24 in. stroke, supplied with steam by a single ended Scotch boiler 13½ by 10½ ft., and have approximately 500 i.h.p. The principal dimensions are, length over all 135 ft., length between perpendiculars 125 ft., beam 23.4 ft., moulded depth 15.1 ft.; tonnage, 295 gross, 117 net.

The s.s. War Osiris is of the same type as the War Isis, full details of which have already been given.

Quebec Shipbuilding & Repairing Co., Quebec, Que.—The rudder and tail shafts for the first of the two wooden steamships under construction for the Imperial Munitions Board, were received June 9, and the propeller shortly after. The hull

of the steamship, the name of the builder and the deadweight tonnage:—

Steel Steamships.		Tonnage.
May 18, 1917—	War Dog, Wallace Shipyards North Vancouver, B.C.	4,500
July 9, 1917—	War Wasp, Nova Scotia Steel & Coal Co., New Glasgow, N. S.	1,800
Aug. 19, 1917—	War Fish, Port Arthur Shipbuilding Co., Port Arthur, Ont.	4,300
Nov. 3, 1918—	War Dance, Port Arthur Shipbuilding Co., Port Arthur, Ont.	3,400
Mar. 16, 1918—	War Camp, J. Coughlan & Sons, Vancouver, B.C.	8,800
Mar. 23, 1918—	War Power, Wallace Shipyards, North Vancouver, B.C.	4,600
Apr. 3, 1918—	War Isis, Port Arthur Shipbuilding Co., Port Arthur, Ont.	3,400
May 8, 1918—	War Wizard, Collingwood Shipbuilding Co., Collingwood, Ont.	2,900
May 21, 1918—	War Bee, Nova Scotia Steel & Coal Co., New Glasgow, N.S.	2,400
May 27, 1918—	War Osiris, Port Arthur Shipbuilding Co., Port Arthur, Ont.	3,400
June 8, 1918—	War Earl, Canadian Vickers Ltd., Montreal	7,000
Total, 11 steamships		46,500
Wooden Steamships.		
Dec. 28, 1917—	War Songhee, Foundation Co., Victoria, B.C.	3,080
Jan. 4, 1918—	War Nootka, Western Canada Shipyards, Vancouver, B.C.	3,080
Jan. 24, 1918—	War Yukon, Cameron-Genoa Mills, Victoria, B.C.	3,080

Feb. 16, 1918—	War Puget, Wm. Lyall Shipbuilding Co., Vancouver, B.C.	3,080
Mar. 6, 1918—	War Selkirk, Western Canada Shipyards, Vancouver, B.C.	3,080
Apr. 10, 1918—	War Caribou, Wm. Lyall Shipbuilding Co., Vancouver, B.C.	3,080
Apr. 11, 1918—	War Comox, New Westminster Construction & Engineering Co., New Westminster, B.C.	3,080
Apr. 11, 1918—	War Massett, Foundation Co., Victoria, B.C.	0,080
Apr. 13, 1918—	War Tyee, Pacific Construction Co., Coquitlam, B.C.	3,080
Apr. 25, 1918—	War Haida, Cameron-Genoa Mills, Victoria, B.C.	3,080
Apr. 27, 1918—	War Cayuse, Wm. Lyall Shipbuilding Co., Vancouver, B.C.	3,080
May 11, 1918—	War Mohawk, Quinlan & Robertson, Ltd., Quebec, Que.	3,080
May 11, 1918—	War Sioux, Port Arthur Dredging Co., Port Arthur, Ont.	3,080
May 21, 1918—	War Atlin, Wm. Lyall Shipbuilding Co., Vancouver, B.C.	3,080
May 23, 1918—	War Tatla, Western Canada Shipyards, Ltd., Vancouver, B.C.	3,080
June 12, 1918—	War Skeena, Cameron-Genoa Mills Shipbuilders, Ltd., Victoria, B.C.	3,080
June 13, 1918—	War Seneca, Quinlan & Robertson, Quebec, Que.	3,080

Total, 17 wooden steamships 52,360
 Total deadweight tonnage 11 steel and 17 wooden steamships launched, 98,860.

An Ottawa press despatch of June 24 said:—"It is anticipated that before the close of the year the greater number of the 46 vessels now being built by the

Atlantic and Pacific Ocean Marine.

The Cunard Line s.s. *Ascania*, while bound from Liverpool, Eng., to Montreal, ran on the rocks near Rose Blanche, Nfld., during a fog, June 14, and is said to be a total loss. The few passengers and the crew were removed in safety. She was built at Newcastle upon Tyne, Eng., in 1911, for the Canadian trade, and was of the 2-class type of vessel. Her dimensions are, length 466 ft., breadth 56 ft., depth 29½ ft.; gross tonnage, 9,121.

The Cunard Co.'s s.s. *Ausonias* was reported recently as sunk by a German torpedo in mid Atlantic. She was reported to have sailed from a British port on May 25. Just about a year ago she was attacked by a submarine and was damaged, but reached port, where she was repaired. She was built in 1911, at Newcastle upon Tyne, Eng., for service between London, Southampton and Canada, and was of the 2-class type, with a speed of about 14 knots an hour.

Canadian Railway and Marine World for June mentioned a report that Canadian Pacific Ocean Services had arranged for chartering the steamships *Tjikembang* and *Tjison*, two of the Holland steamships which were taken over by the

Maritime Provinces and Newfoundland.

The s.s. *Lake Houghton*, built at one of the U.S. yards on the Great Lakes, was reported ashore near Canso, N.S., June 14.

The Reid Newfoundland Co. is reported to have chartered the sealing steamship *Neptune* for a few trips in its Labrador service.

The Dominion Public Works Department will receive tenders to July 9, for improvements to the harbor at Inverness, N.S.

The St. John, N.B., City Council is receiving tenders to July 2 for the rebuilding of a part of the ferry wharf at West St. John.

The Dominion Public Works Department received tenders, June 25, for repairs to the department's s.s. *Tyrian*, lying at Halifax, N.S.

The s.s. *Alvor*, a steamship of 3,500 tons, owned in Holland, now operating under the U.S. flag, was reported ashore on the Devil's Ridge, off Yarmouth, N.B., June 14.

The Dominion Steel Corporation's s.s. *Hochelaga* was reported ashore near Port au Port, Nfld., June 5, and the Reid Newfoundland Co.'s s.s. *Kyle* was sent from St. John's to her assistance.

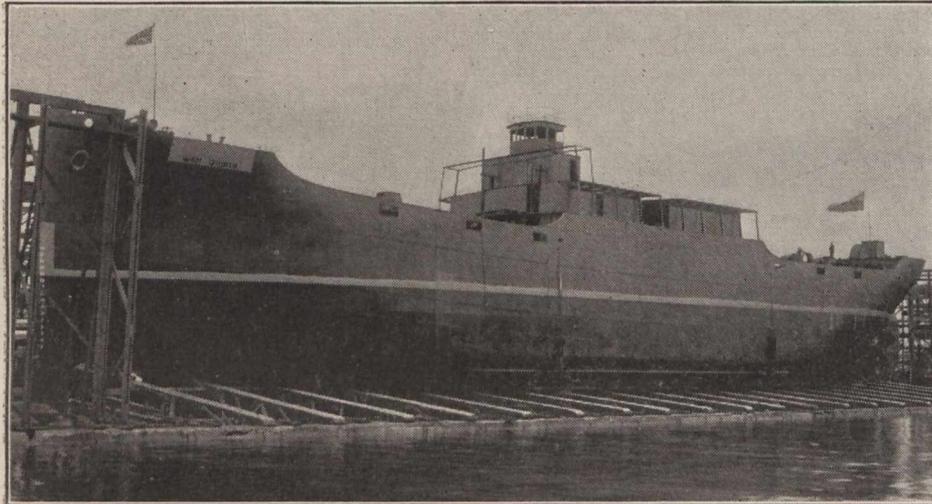
The Dominion Iron & Steel Co. is suing the Corono Joint Stock Steamship Association, in Philadelphia, Pa., for \$1,302,000, for breach of contract relative to the chartering of the Norwegian steamship *Sandefjord*. The vessel, which was loaded recently at Philadelphia, with a cargo for Rotterdam, was released on a bond for \$1,000,000.

The small coasting steamship *La Have*, which was wrecked at Southern Head, near Tancook, N.S., during May, is expected to prove a total loss. She was built at Pocomoke, Md., in 1888, and was formerly named *Isaac N.* She was screw driven by engine of 18 n.h.p., and her dimensions were: length 96 ft., breadth 17.4 ft., depth 7.6 ft.; tonnage, 89 gross, 60 register. She was operated between *La Have* and Halifax.

The small steamboats *J. C. Miller*, owned by W. B. Snowball, Chatham, N.B., and *J. W. Brankley*, owned by the Miramichi Lumber Co., have been requisitioned by the Dominion Government for overseas service. It is stated that they have been taken to Montreal, where they are to be taken aboard other vessels for transportation across the ocean. The *J. C. Miller* was built at Douglastown, N.B., in 1910, and is screw driven by engine of 12 n.h.p., her dimensions being, length 54 ft., breadth 14.9 ft., depth 5 ft.; tonnage, 33 gross, 15 register. The *J. W. Brankley* was built at Chatham, N.B., in 1914, and is screw driven by engine of 16 n.h.p., her dimensions being, length 64 ft., breadth 16 ft., depth 7 ft.; tonnage, 61 gross, 19 register.

Military Service and Navigation Interests.—A consultation took place recently between the Dominion Marine Association and the Chief Public Representative (military), to whom representations were made as to the urgent need of leniency in the enforcement of the Military Service Act, in view of the great difficulty experienced in procuring certificated officers and crews.

The Montreal Harbor Commissioners have announced an increase in rates on grain in the harbor elevators, to stop the practice of using elevators for storage purposes.



The s.s. *War Osiris*, launched by the Port Arthur Shipbuilding Co., May 25.

Imperial Munitions Board on the Pacific and Atlantic will be ready for launching. The first will have her trial trip at Vancouver, and the whole fleet will be practically completed by September. On the Pacific, 27 are being built, and on the Atlantic, 19. They are of 3,100 tons each. The manufacture of machinery for the vessels is being speeded up, and it is expected that the greater part of it will be installed by the year end. At the completion of these contracts the Imperial Munitions Board will go out of the shipbuilding business, and the Dominion Government will thereafter carry on the industry as a national enterprise."

This dispatch evidently refers only to the 46 wooden steamships which the Imperial Munitions Board has ordered for the British Government, in addition to which the board has ordered 41 steel steamships.

The s.s. *War Yukon*.—This vessel's trials were conducted in the early days of June, in the direction of Albert Head, out of Victoria, B.C. It was reported that everything was satisfactory, a speed of 12 knots an hour having been maintained for three consecutive hours. The contract speed was 10 knots.

allies under arrangement. At the time the item was inserted it was impossible to obtain confirmation or denial of the report, but we have since been officially advised that the company has not chartered the vessels named.

The *Troja Steamship Co., Ltd.*, has been incorporated under the Dominion Companies Act, with \$1,000,000 authorized capital stock, and office at Montreal, to own and operate steam and other vessels, and to carry on a general transportation business within and without Canada. The incorporators are connected with a legal firm in Montreal, and apparently the company has been formed for the purpose of owning and operating the s.s. *Troja*, launched recently at the Thor Iron Works, Toronto, an illustration of which is given on another page in this issue.

U. S. Control of New York State Barge Canal.—In order to remove an incorrect impression relative to the operation of the canal by the federal authorities, it is pointed out that the U.S. Government has merely assumed control of the traffic on the canal, the State of New York being concerned only with the physical features. All officials are working in close harmony.

Province of Quebec Marine.

The Public Works Department received tenders June 21 for dredging in the east channel of the St. Maurice River, at Three Rivers.

Canada Steamship Lines' s.s. Rochester is announced for service during the summer, between Montreal and Murray Bay, in connection with the company's s.s. Saguenay, to summer resorts on the Lower St. Lawrence. Capt. Legendre, of the s.s. Quebec, has been appointed master of the Rochester, and is succeeded by Capt. J. Dugal, of the s.s. Ste. Irene.

Ontario and the Great Lakes.

The Detroit & Wallaceburg Steamship Line, under the management of H. B. Smith, Wallaceburg, Ont., has chartered the s.s. Thousand Islander from Canada Steamship Lines, for service on that route.

James R. Lawrence, at one time paymaster on the Welland Canal, was arrested at St. Catharines, Ont., June 16, on a charge of theft of \$16,000 from the Railways and Canals Department. The defalcations are stated to date back to 1892.

The s.s. Tonto, which was launched at Polson Iron Works, Toronto, Oct. 22, 1917, under Dominion Government license, for Norwegian owners, and subsequently requisitioned by the British Government, and stated recently to be in Dominion Government survey service, was docked at Kingston, June 6, some leaks having developed in the bottom plates.

The Pioneer Steamship Co.'s s.s. Australia was rammed and sunk by the s.s. B. F. Jones in the St. Clair River, June 15. The master of the B. F. Jones, immediately after the casualty, is said to have ordered the wheelman to be locked in his cabin, and subsequently handed him over to the Dominion authorities, charging that he made a deliberate attempt to block the Canadian channel.

The U.S. Lake Survey reports the levels of the Great Lakes in feet above mean sea level, for May, as follows:—Superior, 601.74; Michigan and Huron, 581.64; St. Clair, 575.11; Erie, 572.20; Ontario, 247.13. Compared with the average May levels for the past ten years, Superior was 0.19 ft. below; Michigan and Huron, 1.15 ft. above; Erie, 0.59 ft. below; and Ontario, 0.31 ft. above.

The Lake Carriers' Association has received complaints recently that masters of some lake steamships are subjecting their own and other vessels to danger by anchoring in foggy weather in mid channel just below the entrance from Lake Huron into the St. Clair River. This practice should be discontinued, as several vessels have been reported to have had narrow escapes of collisions during the past few weeks.

The Port Huron & Sarnia Ferry Co.'s ferry James Beard ran into the Northern Navigation Co.'s dock at Sarnia, May 31, during a fog, doing considerable damage to her bow and port side, finally sinking in about 20 ft. of water. She was subsequently floated and taken to Port Huron. The vessel was built of wood in 1873, and is stated to have been run without a license since 1912, when the Sarnia council refused one on account of her condition.

The steam tug Salvor, which was purchased recently by the Reid Wrecking & Towing Co., Port Huron, Mich., foundered in Lake Huron, June 11, near South

Bay, the crew being saved. The tug was formerly owned by the Great Lakes Dredging Co., Port Arthur, and was built at Bay City, Mich., in 1898, and was screw driven by engine of 56 n.h.p. Her dimensions were, length 105.8 ft., breadth 21 ft., depth 12 ft.; tonnage, 126 gross, 72 register.

The wreck of the whaleback s.s. Henry Cort, near Colchester reef lighthouse at the western end of Lake Erie, has been marked by two striped spar buoys, one at the bow and one at the stern, and also by a gas buoy showing a green light occulting at intervals of 3 seconds, moored abreast the middle of the wreck. The wreck lies north and south, about 800 ft. south of the charted course for down-bound vessels, and is entirely submerged with about 8 ft. of water over the deck.

British Columbia and Pacific Coast.

The small steamboat Ravalli, owned in Seattle, Wash., was burned at Low Inlet, June 14. There was no loss of life.

The s.s. Birdswell, recently acquired by Wallace Fisheries, Ltd., Vancouver, has had her name changed to P.W.

The Grand Trunk Pacific Coast Steamship Co.'s Queen Charlotte Islands service, by the steamships Prince John and Prince Albert, has been changed from a weekly sailing by each vessel alternately, to a sailing every ten days.

The Coastwise Steamship & Barge Co. is reported to have acquired the s.s. Marmion, owned formerly by the Vancouver Portland Cement Co., for the ore carrying trade between Alaska, British Columbia and Puget Sound ports.

The motor ship Malahat, owned by Canada West Coast Navigation Co., was overhauled and re-caulked at the Cameron-Genoa Mills Shipbuilders' yard at Victoria, during June, after completing her first journey to Australia. She has also had her auxiliary machinery of the Bolinder type installed, and is expected to commence loading lumber for South America, about July 1.

The Canadian Merchant Service Guild has applied for the appointment of a board of conciliation under the Industrial Disputes Investigation Act, to determine a new scale of wages for officers of coastwise vessels plying in and out of British Columbia ports. The men are asking for a general increase of 15%, and there have been considerable negotiations without anything definite having been arrived at.

The C.P.R. has, as reported in our last issue, purchased the s.s. Daily, from M. MacDowell, Seattle, Wash., and has had her name changed to Island Princess. She was placed on the Gulf Island route June 1. Before being placed in this service, she was thoroughly overhauled and some changes were made in the passenger accommodation, all the work being done by the company's own staff. Her dimensions are: length 116 ft., breadth 23 ft., depth 8.5 ft., and she is equipped with single screw, triple expansion engine with cylinders 11, 18 and 29 in. diam. by 18 in. stroke, supplied with steam by a water tube boiler equipped for burning oil fuel.

The steam tugs Point Ellice and Point Grey, owned by the Dominion Public Works Department, and generally operated on the Pacific coast, are reported to have been leased to the Imperial Munitions Board, which, it is said, will call for tenders shortly for lengthening each by about 20 ft. The Point Ellice was built at North Vancouver, B.C., in 1911, and is

screw driven by engine of 47 n.h.p. Her dimensions are: length 79.6 ft., breadth 20 ft., depth 11.6 ft.; tonnage, 163 gross, 69 register. The Point Grey was built at North Vancouver, B.C., in 1912. She is screw driven by engine of 62 n.h.p., and her dimensions are: length 93.4 ft., breadth 22 ft. 3 in., depth 14.5 ft.; tonnage, 238 gross, 162 register.

Mainly About Marine People.

Capt. Elias Casey, master on Great Lakes vessels for about 50 years, died at Cobourg, Ont., June 3, aged 91.

Commander John Forester, Canadian Pacific Ocean Services, has been made an officer of the Order of the British Empire.

Hon. J. D. Hazen, Chief Justice of New Brunswick, and ex Minister of Marine and Fisheries, has been made a Knight Commander of St. Michael and St. George.

Capt. Norman McKay, of Owen Sound, Ont., who has been appointed master of the Canadian Northern Ry. car ferry Canora, which was launched at Lauzon, Que., June 10, was formerly master of Canada Steamship Lines s.s. Hamiltonian, and prior to that had been master of the steamships Canadian, J. H. Plummer and H. M. Pellatt, operating largely on the Great Lakes and in the Gulf of St. Lawrence to Anticosti and to Sydney, N.S.

William Byers, who has been appointed chief engineer of the Canadian Northern Ry. car ferry Canora, which was launched at Lauzon, Que., June 10, was formerly chief engineer on the s.s. H. M. Pellatt, and has been engaged in a similar capacity on a number of other vessels owned or operated by Canada Steamship Lines. In Jan., 1917, he was chief engineer on the s.s. Empress of Midland, when she was sunk by torpedo or mine in the English Channel.

W. S. Roberts, chief officer of the s.s. Lord Erne, was the recipient of presentations by Lloyd's and by the former master of the s.s. Percesien, in connection with his conduct in saving the crew of the Percesien, when she foundered in mid-Atlantic recently. The Admiralty authorities, in expressing appreciation of the fine seamanship and courage of all concerned, stated that their actions were worthy of the best traditions of the British mercantile marine. The s.s. Percesien was owned formerly by the Gaspé & Baie des Chaleurs Steamship Co., Quebec.

Capt. Archibald Reid, Port Warden, Montreal, died there, June 19, aged 72. A native of Liverpool, Eng., the greater part of his life was spent at Montreal, or at sea. He was, for many years, Superintendent, Dominion Steamship Co., at Montreal, and for the past 25 years was port warden there, and also acted as Lloyd's surveyor. He frequently acted as nautical assessor on investigations into marine casualties, and his intimate knowledge of navigation problems in connection with Canadian waters, was exceptionally valuable. While in Portland, Me., recently, he fell and displaced some ribs. A few days before his death, he was reported to be progressing satisfactorily.

T. E. Higgins, Car Foreman, C.P.R., Fort William, Ont., writes:—"Canadian Railway and Marine World's Transportation Appointments Department is very widely read and is always looked for, as a person is always interested in reading as to where the associates and partners of earlier years are stationed."

Government Shipbuilding in the United States.

The U.S. Shipping Board announced early in June that the delivery of steel steamships under the Emergency Fleet Corporation programme had reached and passed 1,000,000 dead-weight tons. With 8 requisitioned ships completed and accepted by the Shipping Board during the week ended May 25, an aggregate tonnage of 51,136, and 2 contract ships with a total tonnage of 12,350, the d.w. tonnage of all of the vessels completed to that date amounted to 1,010,093 tons.

The completion of a million tons, of course, marks only a milestone in the long route U.S. shipbuilders have to travel. A million tons of shipping in one year is an output that would have been called extravagant if predicted a few years back. It represents a total of 153 vessels, ranging from 3,000 to 12,000 tons d.w., which have been completed and turned over to the U.S. Government.

The high-water mark in U.S. shipbuilding was attained in May. There were completed and delivered to the Shipping Board 44 steel and wood steamships, totalling 263,571 tons. The greatest production in any previous month was in March, 1917, when 21 steel ships, totalling 172,611 tons were delivered to the Shipping Board. Thus, over March, the advance was 23 ships, or 90,960 tons; over April the advance was 14 ships, or 103,285 tons. The output of May was three times that of January. The May output brings the total deliveries since September, 1917, up to 170 ships, aggregating 1,112,897 tons. The record prewar year in U.S. shipbuilding was 1901. The output (exclusive of the Great Lakes) was 402,136 tons, or a monthly average of 33,511 tons.

Following is the ship production to date this year in the two leading shipbuilding nations of the world (given in dead-weight tons):

	United States.	United Kingdom.
January	88,507	87,852
February	123,625	150,057
March	172,611	252,511
April	160,286	169,000
May	263,571	*

*Figure not yet at hand.

The greatest year in the history of shipbuilding in the United Kingdom was 1913, when the output was 2,898,229 d.w. tons, or a monthly average of 241,519 d.w. tons. Last year, the United Kingdom produced 1,741,500 d.w. tons, or a monthly average of 145,125. The best month was March, with 238,239 d.w. tons.

During the first two weeks of June there were completed and delivered to the Shipping Board 16 steel vessels of a total d.w. tonnage of 89,162. The output of contract steel vessels was one-third of the total of that class to date. Of contract steel vessels there were 5 deliveries, totalling 33,500 tons; of requisitioned steel vessels, 11 deliveries, totalling 55,662 tons. The output, geographically, was as follows: Atlantic coast shipyards, 3 vessels, totalling 17,100 tons; Great Lakes shipyards, 8 vessels, totalling 26,362 tons; Pacific coast shipyards, 5 vessels, totalling 45,700 tons.

The U.S. Shipping Board's Emergency Fleet Corporation has ordered from the Submarine Boat Corporation, Newark Bay, 150 ocean going steel steamships, of the fabricated type, with a displacement of about 7,800 tons when loaded to the Plimsoll mark. The deadweight carrying capacity will be 5,500 tons. The vessels will have a length of 343 ft., a beam of 46, and a speed of 10½ knots an hour. As every vessel to be built at this shipyard will be of the same size and

type, the time required for construction and completion will be much less than has heretofore been required for such work, and it will be possible to launch hulls on an average of at least two and possibly three every week. The main machinery will consist of a Westinghouse steam turbine operating at 3,600 r.p.m., driving the single screw propeller at 90 revolutions per minute through a Westinghouse balanced floating type reduction gear.

Five new yards for the building of concrete ships and the construction of a total of 42 new concrete steamships have been authorized by the U.S. Shipping Board. Of these 42 concrete ships, contracts for 18 have already been given by the Emergency Fleet Corporation. Contracts for the building of the remainder will shortly be let. The 42 ships will nearly all be tankers of 7,500 tons each, with a capacity of 50,000 barrels of oil. Each of the 7,500-ton ships will have 2,800 h.p. and a speed of 10½ knots an hour. Others will be cargo ships of 3,000 and 3,500 tons. The 42 ships will have a total of 298,500 d.w. tonnage.

The five Government yards for the building of concrete ships are to be located at various points on the coasts. The construction of one of these yards at Wilmington, N. C., is already under way. Other yards are to be at Jacksonville, Fla., Mobile, Ala., and San Diego, Cal. The fifth yard is that at San Francisco of the San Francisco Shipbuilding Co., which built the Faith, the first U.S. concrete vessel. This company has been given a contract for 8 concrete ships. There are also two private concrete shipbuilding yards, one at Brunswick, Ga., the other at New York City.

The estimated cost of building a wooden ship in the U.S. is about \$165 a ton complete and that of a steel ship about \$180 to \$220 a ton complete. The estimated cost of concrete ships is between \$100 and \$110 a ton complete.

Concrete barges are to be built as soon as possible for use on the New York State Barge Canal, which is now under the direction of the committee on inland waterways of the U.S. Railroad Administration's Committee on Inland Waterways. The committee has asked bids for the construction of 21 reinforced concrete barges, of approximately 500-tons carrying capacity each.

Steamboats in the Far Northwest.—The Peace River Development Co.'s steamboats are the only ones trading from Peace River Landing to Herschel Island, 2,000 miles, this season. The route is not a continuous one. The steamers connect with the Edmonton, Dunvegan & British Columbia Ry., and the first piece of navigation extends to Vermillion Chutes, whence a motor road is being completed to Lower Peace River, where there is steamboat connection to Chipecyan on Athabaska Lake. From this point there is a steamboat route to McMurray on Athabaska River, which is the terminal point of the Alberta & Great Waterways Ry., extending to Edmonton. The tourist possibilities of this area are being developed by the railway company.

The outturns of grain cargoes are being adjusted on the same basis as during 1917, pending a decision by the Board of Grain Commissioners. At the time of writing (June 22), no settlements had taken place on new cargoes, but vessels were carrying on, on the understanding mentioned.

Cargo Steamship Building for Dominion Government.

Orders for Steamships.—As stated in Canadian Railway and Marine World for April, the Dominion Marine Department had then ordered 4 steel cargo steamships, 2 from Canadian Vickers, Ltd., Montreal, of 4,300 and 8,100 tons dead weight respectively; 1 from Collingwood Shipbuilding Co., 3,750 tons d.w., and 1 from Wallace Shipyards, Ltd., North Vancouver, B.C., 4,300 tons d.w. No further orders were placed for some weeks, but we are now advised officially that the following have been given:

Collingwood Shipbuilding Co., Collingwood, Ont.—1 steel steamship, 3,750 tons d.w., making 2 of similar size from that company.

Tidewater Shipbuilding Co., Three Rivers, Que.—2 steel steamships, each 5,100 tons d.w. This is a company organized recently, and in which Canada Steamship Lines is interested. Its yard is at Cap de la Magdalene, near Three Rivers. J. W. Norcross is President, the other directors being H. W. Cowan, F. S. Isard, F. P. Smith and A. A. Wright.

Wallace Shipyards, Ltd., North Vancouver, B.C.—1 steel steamship, 4,300 tons d.w., making 2 of similar size ordered from that company. Provisional arrangements have also been made for building 4 steel cargo steamships, each 5,100 tons d.w., by this company.

A press report stated recently that the Dominion Government had taken an option on 6 steamships to be built by the Dominion Shipbuilding Co., Toronto. We are advised officially that this is not the case; also that no order has been given the St. John Shipbuilding Co., St. John, N.B.

The Collingwood Shipbuilding Co., Collingwood, Ont., immediately after launching the s.s. War Wizard on May 8, for the British Government, laid the keel of an ocean going cargo steamship of 3,800 tons d.w. for the Dominion Marine Department.

Patrol Service at Sault Ste. Marie Canal.—The Dominion Marine Association has agreed to join with the Lake Carriers' Association to maintain a patrol service at the canal locks at Sault Ste. Marie, to govern vessel traffic there, on the same basis as applies to U. S. vessels. A suggestion that the service be developed to include the delivery of mail is being considered.

Locking Vessels at Sault Ste. Marie.—Arrangements have been made for placing a man on the south lower pier of the Canadian lock at Sault Ste. Marie, to take the lines from upbound vessels.

Ferry Licenses.—Following the amalgamation of the Dominion Customs and Inland Revenue Departments, the licensing of ferries has been transferred to the Public Works Department.

Canada West Coast Navigation Co., Ltd., has changed the number of its directors from 10 to 5, and has passed a bylaw taking power to change the number to not more than 15 and not less than 3, should occasion warrant, such changes to be approved by two-thirds of the stock represented at a meeting to be called for such purpose or at a general meeting of shareholders. The company's head office is in Montreal, and the home port of its vessels is Vancouver.

The C.P.R. s.s. Tees, which struck a rock off Vancouver Island, near Sidney, Apr. 4, was replaced on her route to the west coast of the island, during June.

Welland Canal Accidents.

While upbound, June 5, without cargo, the Ontario Transportation & Pulp Co.'s s.s. Linden struck the two upper gates of lock 4 on the Welland Canal, and unmitigated them. The water released from the reach above, which is a comparatively short one, carried out the two gates, the tow path foot gate and the vessel all passing into the level below. The vessel was jammed between the banks crosswise, and a tug had to be requisitioned to release her. It was necessary to place four spare gates in position, as a bad leak developed between the gate that remained and the miter sill. Navigation was resumed during the evening of June 6, after traffic had been interrupted for about 25 hours. The canal banks on the heel path side at the foot of lock 3, and at the head of lock 2, were washed out to some extent, but not seriously. The s.s. Linden received minor injuries to her stem and rudder, and was docked at Port Dalhousie for repairs. The damage to the canal was about \$7,000.

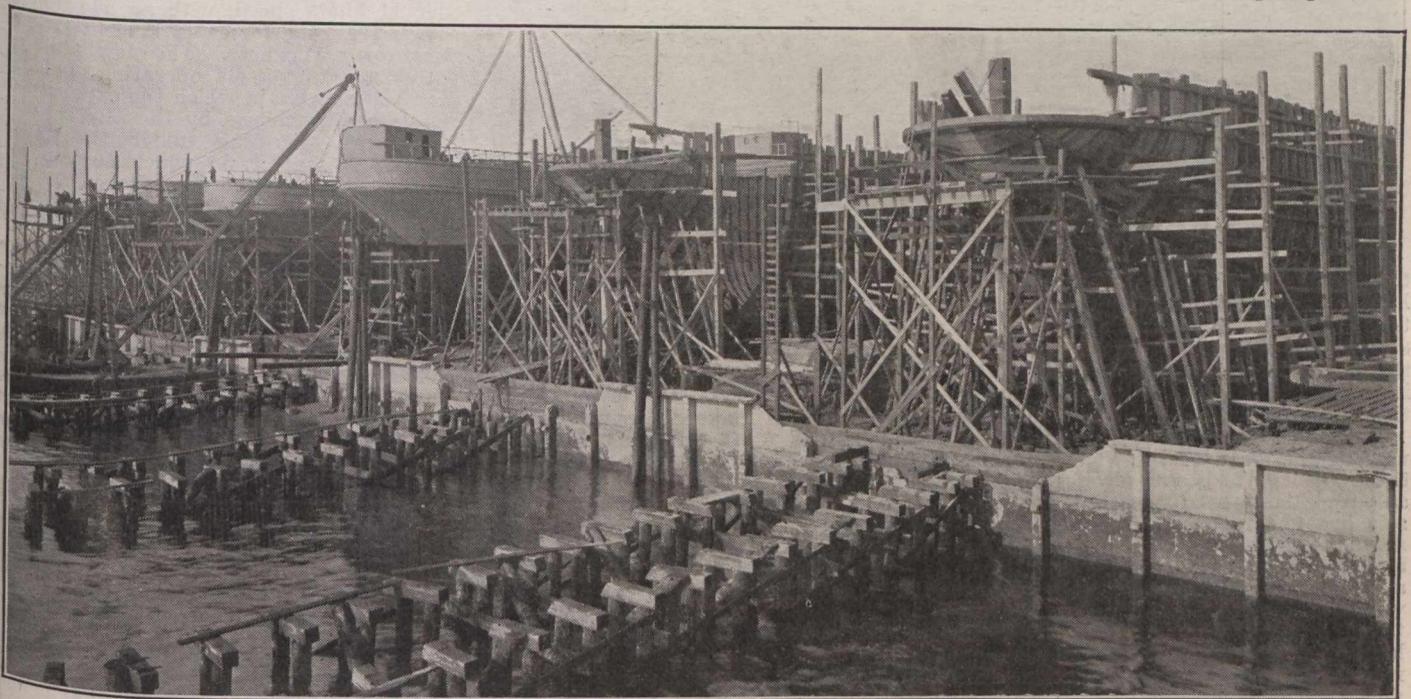
In connection with these lock gate acci-

inconvenience. For pedestrian traffic, a ferry was operated, a round trip being made every 10 minutes. Vehicular traffic had to cross at the feeder junction highway bridge, about 1¼ miles to the south. As the damaged bridge is operated by electricity, it is surmised that the severe electrical storm of the previous night cut off the current, and the bridge was being operated by hand. In doing this, it stuck and could not be moved. The usual signal that the bridge could not be operated, was given to the vessel, and the bridge tenders claim that this was given in sufficient time to stop the to the strong current at this point, it was not seen, or not heeded until the barge was very close to the bridge, and owing to the strong current at this point, it was too late to avert an accident. The barge struck the long arm, swinging it in a contrary direction to that in which it opens, until the short arm stopped against some concrete steps on the easterly side of the canal, when both bridge and barge came to a stop. The bridge was bent badly out of line, the chief damage being to the bottom chords and the top and bottom laterals. The operating machinery

Fabricated Shipbuilding in the United States.

Intensive production of ships reached a new stage in the United States recently when the Agawam was launched at New-ark Bay. The event marks an epoch. The Emergency Fleet Corporation's great bulk order yards have started to produce ships. Quantity production of ships as developed by these yards means the application of factory methods, standardization and division of functions; it means the fabricated ship. A year ago this was nothing more than a dream, but on the dream were founded the agency yards. It has become a reality, a tangible fact.

As the mere addition of one more vessel to the U.S. supply fleet the Agawam's entrance into the water is of only momentary interest. But it is memorable as an event signaling the success of a new conception: that of using existing shops, though far inland, to take the place of shipyard shops that are lacking. This simple idea created the fabricated ship, which the shipbuilding art is encumbered, a new design—for the design, apart from



Five wooden cargo steamships for British Government, under construction by William Lyall Shipbuilding Co., North Vancouver, B.C.

dents, which have been rather numerous during the past few years, it is noticed that in practically the whole of them, the cause given is mistaken signals between the bridge and the engine room. The case mentioned above is another added to the list, the engines being put ahead, when the master signalled a reverse.

An accident of a different nature occurred June 7, when the Montreal Transportation Co.'s barge Brookdale, in tow of the tug Escort, while down bound and loaded, collided with the steel swing highway bridge in Welland, damaging it somewhat and rendering it unsafe for operation until repaired. Much cutting of concrete on the face of the westerly abutment had to be done before the bridge could be swung to the open position, after navigation had been interrupted for about 13 hours. About 12 vessels were delayed for varying periods. The bridge was left open until repairs could be effected, and as it carries the heaviest highway traffic of any of the bridges over the canal, the city suffered considerable

was not damaged nor was the bridge shifted on the pivot. The damage and expense incidental thereto is estimated at \$7,500. Temporary repairs were rushed by the Hamilton Bridge Co., and highway traffic was resumed June.

We are indebted to L. D. Hara, Superintending Engineer, Welland Canal, for the details of both accidents.

Carter, Wood Shipping Co., Ltd., has been incorporated under the Dominion Companies Act, with \$40,000 authorized capital, and office at Montreal, to build, own and operate steam and other vessels of every description, and to carry on a general shipbuilding, navigation and carrying business.

Quadra Steamship Co., Ltd., has been incorporated under the British Columbia Companies Act, with \$100,000 authorized capital, and office at Britannia Beach, B. C., to own and operate steam and other vessels and to carry on a general navigation business.

modifications in detail that sweep away many of the traditional peculiarities with which the shipbuilding art is encumbered, is that of the conventional ship—but the result of a new method of production.

The simple idea has had a remarkably far reaching effect. Through it the entire bridge building industry has been drafted into shipyard service. Well over a hundred steel fabricating shops scattered over the U.S. are working on ships, a noteworthy contribution to the great war problem of using every pair of hands in the country far behind the lines work. The great labor and equipment resources of these shops have brought into action a virtually limitless reserve of shipbuilding capacity. Today shipbuilding is the occupation of inland cities as well as of coast towns.

It was a civil engineering industry that supplied the great reserve of labor, technical ability and equipment needed for emergency shipbuilding. Of this the profession may justly feel proud. For, had that industry been less thoroughly de-

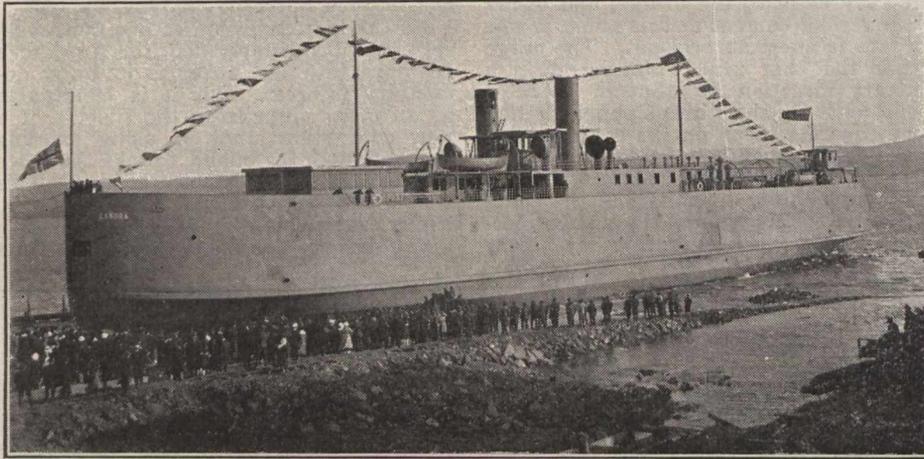
veloped, less highly organized, it would not have been ready to take up the new service. There is cause for equal gratification in the excellence of the results. Predictions have been made that endless trouble would be experienced from the failure of parts to fit at the ways, due to inherent unsuitability of bridge fabricating and erecting methods to the highly specialized ship work. It was asserted that the processes of making straight members for bridges and buildings would be found inadequate for shaping and fitting the intricately curved and beveled pieces of which a ship is built. No doubt there was opportunity for such troubles

Canadian Northern Car Ferry Canora Launched at Lauzon, Que.

The Canadian Northern Ry. car ferry steamship Canora, which has been built to carry passenger and freight cars between Port Mann, on the south side of the Fraser River, opposite New Westminster, and Patricia Bay, Vancouver Island, B.C., where the company has rail connection with Victoria, was launched at Lauzon, Que., June 10. The christening ceremony was performed by Mrs. R. C. Vaughan, wife of the Assistant to the

It is anticipated that the voyage will take about 40 days. Capt. Norman McKay, Owen Sound, Ont., and formerly master of the s.s. Hamiltonian, has been appointed master, and William Byers, formerly chief engineer of the s.s. H. M. Pellatt, has been appointed chief engineer.

A full description of the vessel was given in Canadian Railway and Marine World for June, page 273, and illustrations are given herewith.



Launching of Canadian Northern Railway Car Ferry Steamship Canora at Lauzon, Que., June 10, 1918.

to develop; but the facts show that they have been avoided. The ships are going together well. Structural designers and shop men have proved equal to solving the new problems put before them. Faith in the possibilities of bridge shop fabrication and shipyard assembly is vindicated.

Half a million tons cargo capacity is now on the ways of the Fleet Corporation's agency yards, and altogether probably a million tons of fabricated steel vessels are under construction. The enormous shipbuilding machine which has been created is already in successful operation. In a few months this vast fleet will be on the ocean, its place on the ways taken by steel for more ships. Daily launchings soon will signalize the final realization of quantity production.—Engineering News-Record.

The Mathews Steamship Co., Toronto, bought the s.s. Saxona recently, formerly owned by G. A. Tomlinson, Duluth, Minn., and has changed her name to Laketon. She was built at Cleveland, Ohio, in 1903, of steel, on the channel system, with steel tank top, 3 watertight and 2 non watertight bulkheads, steel boiler house, steam pump wells, and hatches 24 ft. centers. She is equipped with triple expansion engines with cylinders 20, 33½ and 55 in. diam. by 40 in. stroke, 1,200 i.h.p. at 90 r.p.m., and supplied with steam by 2 Scotch boilers, 13 ft. 2 in. by 11½ ft., at 170 lb. under induced draft. Her dimensions are: length 316 ft., breadth 50 ft., depth 28 ft.; tonnage, 4,716 gross, 3,441 register.

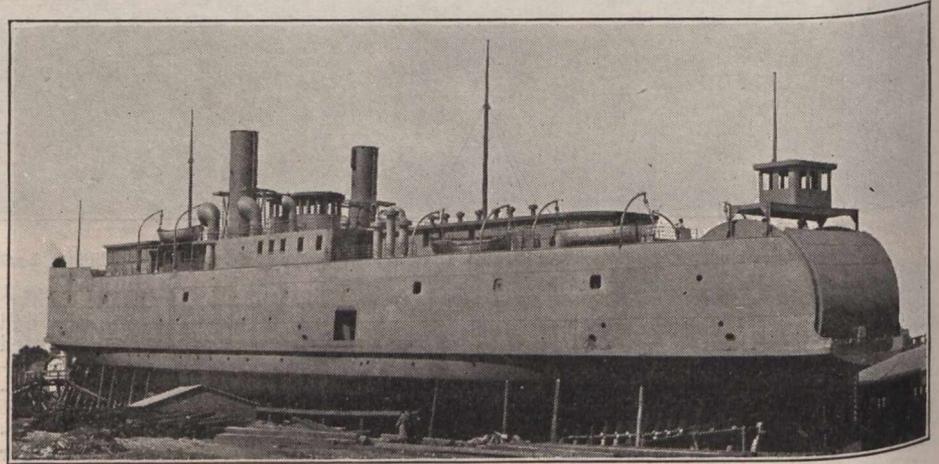
Hugh Cann & Sons, Ltd., Yarmouth, N.S., are reported to have sold the s.s. John L. Cann to a company for operation between Shelburne, N.S., and Gloucester, N.B. The John L. Cann was built at Yarmouth, N.S., in 1891, and is screw driven by engine of 34 n.h.p. Her dimensions are, length 97.8 ft., breadth 19.8 ft., depth 9 ft.; tonnage, 166 gross, 77 register.

Third Vice President, C.N.R. Among others present at the launching, were:—R. C. Vaughan, and Capt. J. B. Foote, Managar, Marine Department, Toronto Insurance and Vessel Agency, representing the owners; G. D. Davie, General Manager, Neil Baker, General Superintendent, and A. C. Campbell, Naval Architect, Davie Shipbuilding & Repairing

Ship Charter Rates in United States.

The U.S. Shipping Board announced on June 1 that the charter rate for requisitioned ships operating on a "bare-boat" basis will be reduced by 50c. The new rate is \$3.65 per deadweight ton for cargo ships (including tankers) under 11 knots speed, with an addition of 50c a ton for every knot or part of knot over 11 knots. For passenger ships the new rate will be \$5.25 per gross ton for ships under 11 knots speed, with an addition of 50c a gross ton for every knot or part of knot over 11 knots. The new scale of rates affects vessels operating under a form of charter in which the expenses of operation are borne by the U.S. Rates for ships operating under the "time form" of charter, in which certain expenses of operation are borne by the owners, are not affected by the new ruling.

The Pacific Construction Co., Port Coquitlam, B.C., is reported to be in negotiation with representatives of French interests relative to the construction of five steel steamships of 8,800 gross tons each, and to be endeavoring to obtain the consent of the Dominion Government to the acceptance of the order. It is said that the price offered for the vessels is at the rate of \$215 a ton. The company has two



Canadian Northern Railway Car Ferry Steamship Canora, on the ways, showing rolling gate at stern to close in space between decks.

We are advised that as soon as the vessel is ready for sea, she will probably bunker at Quebec, and then proceed to Vancouver, by way of the Panama Canal. The route to be taken, and the distances between the various points are as follows:

	Miles.
Quebec to Newport News	1,498
Newport News to Colon	1,907
Panama Canal	50
Panama Canal to San Francisco	3,245
San Francisco to Port Townsend	770
Port Townsend to Vancouver	80
Total	7,550

wooden steamships under construction for the Imperial Munitions Board, one of which, the War Tyee, was launched in April.

The Miami Navigation Co., Ltd., the incorporation of which was announced in our last issue, has arranged for the operation, under contract, of the steamboat Miami. The President of the company is J. J. Stockwell, master mariner; Vice President, W. Harrington; Secretary, T. Scullard; Treasurer, T. King; other directors, F. Granville and T. Donovan. The head office is at Chatham, Ont.

The Trent Valley Canal Opened from Lake Ontario to Lake Simcoe.

The stretch of inland navigation known as the Trent Canal, extending from Lake Ontario at Trenton, to Rice Lake, was opened for navigation June 3. There was no formal ceremony at Trenton, where the Minister of Railways and Canals, accompanied by a party of members of Parliament, officials of the department

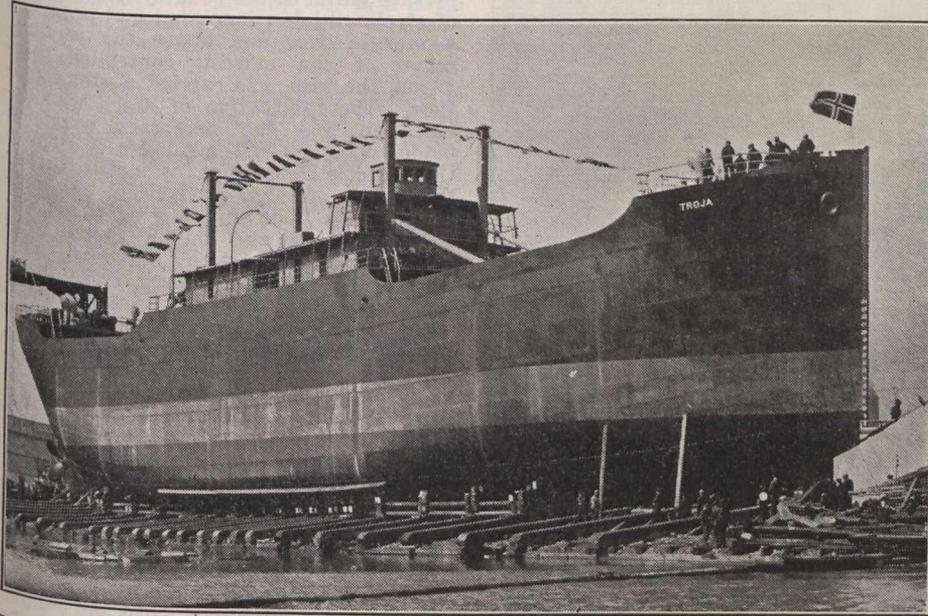
as possible.

The Minister and his party left Peterborough on June 5 and continued the trip through the various stretches of the canal to Lake Simcoe.

The stretch of the Trent Canal opened for navigation on June 3 is the Ontario-Rice Lake division, and is 56½ miles long,

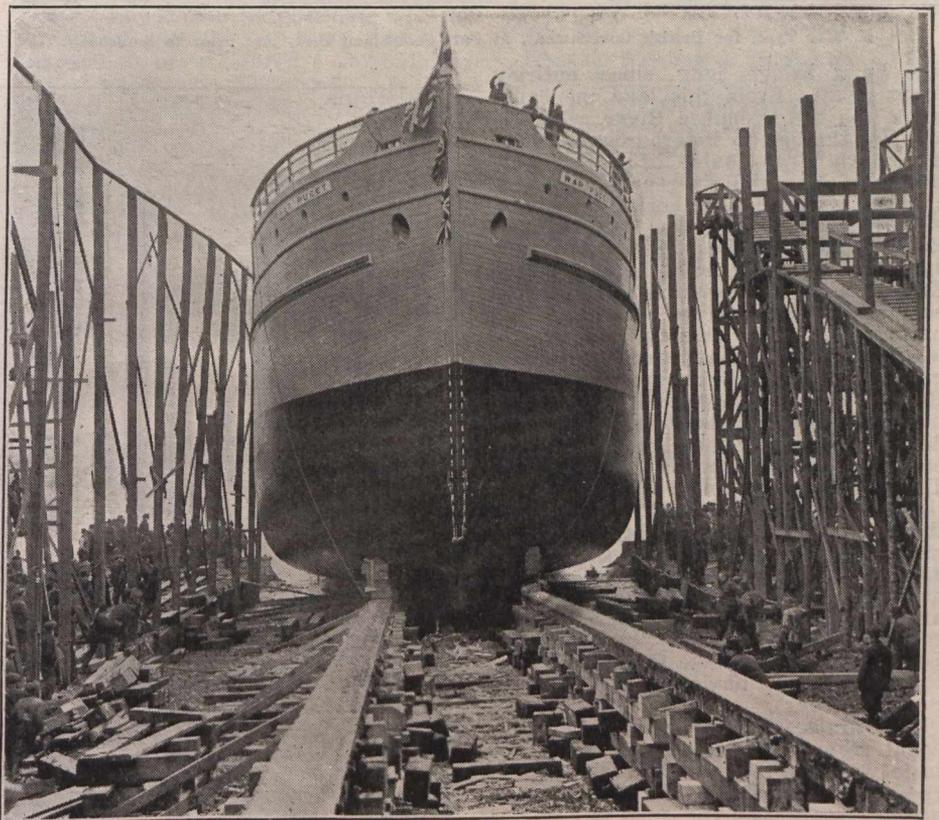
and the normal navigation level at Rice Lake is 369 ft., which is overcome by 18 locks. The river level is controlled by 14 concrete dams and the section of waterway is crossed by 16 bridges, of which 6 carry railway lines. With one exception the bridges are of the swing or bascule type of span. The locks are of concrete, 175 ft. long, 33 ft. wide, and having 8 ft. 4 in. of water on the sills. They are capable of accommodating barges 150 ft. long and 30 ft. wide, drawing 8 ft. of water and having a capacity of 1,000 tons. The work done included the excavation of about 1,500,000 cubic yd. of earth, 1,250,000 cu. yd. of loose and solid rock and the building of about 400,000 cu. yd. of concrete. The estimated cost of the entire work was \$6,750,000. For convenience of construction the work was divided into seven sections, the contracts for which were let as follows:—Sec. 1, Trenton to Glen Millar, 4½ miles, Larkin & Sangster; sec. 2, Glen Millar to Frankfort, 4½ miles, Dennon & Rogers; sec. 3, Frankfort to 3 miles beyond Glen Rose, 7½ miles, Canadian General Development Co.; sec. 4, Adams Landing to Campbellford, 14 miles, Haney, Quinlan & Robertson; sec. 5, Campbellford to Crow Bay, about 3 miles, Brown and Aymer; sec. 6, Crow Bay to Heely Falls, about 3 miles, Haney, Quinlan & Robertson; sec. 7, Heely Falls to Rice Lake, about 19¾ miles, Randolph Macdonald Co. Sec. 4 was the last to be put under contract in 1916.

The Trent Canal now extends from Lake Ontario at Trenton to Lake Simcoe,



Steel Cargo Steamship Troja, built for Norwegian interests, by Thor Iron Works, Toronto, just prior to launching, May 15, 1918.

and local public men, embarked on a steamer for Peterborough, stopping at a number of points on the route. At Peterborough the party was given a banquet, at which the Minister was the principal speaker. He said the trip from Trenton to Peterborough had convinced him of the Government's wisdom in undertaking the construction of the waterway. The government had nothing to regret, and he trusted that the people would benefit to the full extent of the canal's capacity. For the first time he realized something of the possibilities of the development of the country which would follow the opening of the canal. The mineral deposits which are contiguous to the northern sections of the waterway would find a cheaper outlet than has been possible at present, consequently an extensive development of mining might be expected. It was estimated that along the route of the canal 75,000 h.p. could be developed by using water powers to generate electricity, which could be distributed for manufacturing purposes. The power possibilities of the waterway would be brought to the notice of the Ontario authorities by the department. The total cost of the work to date had been approximately \$16,000,000. The country opened up by the canal is remarkable for its scenery, and offers unequalled advantages for tourist travel. The opening of the new section of the canal will give opportunity for motor and other vessels of considerable size, carrying tourists, to spend a considerable time in the country. The business possibilities of the canal are of considerable importance from all points of view. The final section of the undertaking is intended to give an outlet from Lake Simcoe, via Lake Couchiching and the Severn River, to Georgian Bay. The Minister added that he would do all he possibly could to urge the completion of this section at as early a date



Launching of s.s. War Puget, by William Lyall Shipbuilding Co., at North Vancouver, B.C.

extending from Trenton, on Lake Ontario, to Rice Lake. It follows the Trent River, and comprises 34 miles of deep river, 13 miles of subaqueous channel, and 9½ miles of canal proper. The total rise between low water at Lake Ontario

178.70 miles, with a branch from Sturgeon Lake to Lindsay, and via Lake Scugog to Port Perry, 174 miles from Trenton. The route is via the Trent River to Rice Lake, the two most important places on the route being Campbellford and

Hastings. This section is 56½ miles long. On Rice Lake is the one time important lumbering and ore exporting point of Harwood, the terminus of an abandoned branch of the G.T.R. from Cobourg, which branch was formerly carried across the

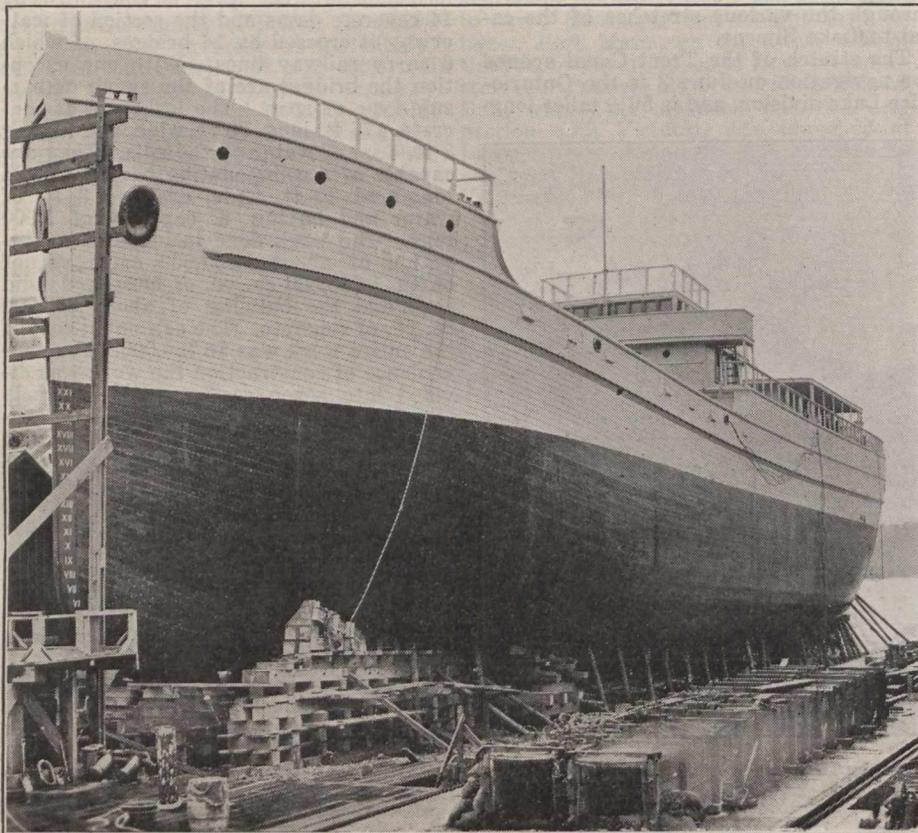
Fabricated Shipbuilding in Great Britain.

One of the most interesting but least known developments of the present ship-

component parts are transported to shipbuilding yards, assembled there, and put together as complete ships.

It is pointed out that when the state undertook the reorganization of the United Kingdom's shipbuilding industry, the principle of standardization was naturally adopted because in mass production of a specific object the highest possible speed of output is obtainable. A series of standard ships were designed and contracts to build them were given out to the private yards of the country. As supplies of steel and labor increased and promised a margin over and above the requirements of the existing controlled shipyards, the idea was carried a stage further. The fabrication of ships was decided on and the necessary provision made. The aim of the Admiralty Deputy Controller's Department was still further to increase speed of production. As matters stood, all the shipbuilding yards, engine factories and boiler shops were largely occupied with standard ship work. There were, however, many other industrial establishments in the country doing work closely resembling shipbuilding and marine engineering. Among them were bridge building yards and land engine factories. The majority of them were in inland centers and remote from launching water; but, taken altogether, their resources were so great that it was felt that they ought to be used.

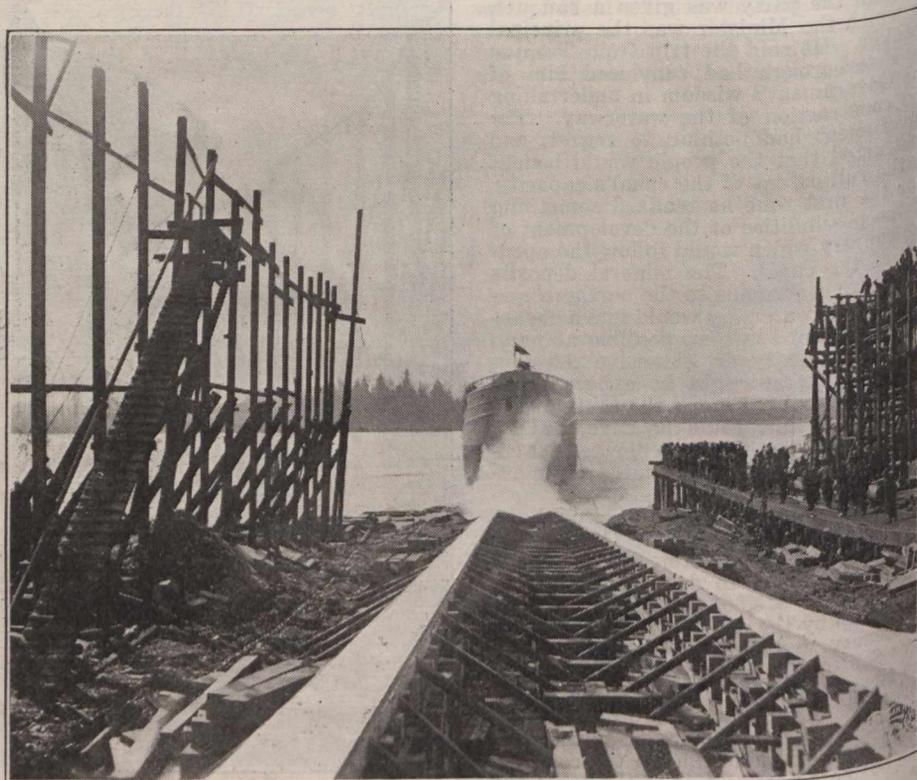
Fabrication solved the problem, and a ship was designed the material of which could be satisfactorily fabricated in the bridge yards. It is a bigger vessel than most of the standard ships, and there is not a curved frame in it. Size and weight of unit of construction are limited, so that transport is easy and powerful gear for placing it in position is unnecessary. To avoid the same difficulties as regards machinery supply, geared turbines have been adopted instead of reciprocating en-



S. S. War Tyee, for British Government, at Port Coquitlam, B.C., just prior to launching.

lake by a bridge, long since entirely swept away. From this lake the canal turns into the Otonabee River, which is followed through to Peterborough, where there is a large double lift lock. This stretch of lake and river navigation has a length of 32 miles. Following the course of the Otonabee River from Peterborough to Lakefield, 10 miles, the canal enters upon the series of lakes known as the Kawartha Lakes, terminating with Balsam Lake, which is the summit of the navigation. This stretch has a total length of 62 miles, and touches Bobcaygeon, Lindsay and Fenelon Falls. At Balsam Lake is the second of the large lift locks. From Balsam Lake the canal descends to Lake Simcoe, which is reached in 18.20 miles, near Groomsbridge. The canal gives an 8 ft. navigation throughout, but it is stated by some authorities that it will not be possible to maintain this throughout the season of navigation owing to possible lack of water at Bobcaygeon. The government plans are to complete the system of navigation through to Georgian Bay, by connecting Lake Simcoe with Lake Couchiching and the stretches of navigable water in the Severn River.

The project for the construction of a canal from Georgian Bay to Lake Ontario was conceived in the early days of the settlement of Ontario, and work was actually started on the canal in 1817. A report was made about 1848 by W. H. Baird, an engineer attached to the office of the commissioner of the projected waterway at Cobourg. He advocated the completion of the locks at Fenelon or Cameron's Falls, and the lock or dam at the outlet of Balsam Lake, at an estimated cost of \$27,000.



Launching of s.s. War Tyee, for British Government, at Port Coquitlam, B.C.

building effort in which Great Britain has led the way is that of fabricated ships. A fabricated ship is a vessel, the component parts of which are manufactured in other than shipbuilding yards. These

engines. Every part of the complete ship can, in fact, be fabricated in inland establishments selected near the steel mills which have never done ship or marine engine work, and can be transported by or-

inary means to the seaboard. With all the slips in private yards filled it was necessary to look elsewhere for sites for assembling yards. The national shipyards on the Bristol Channel were laid out for the purpose, and private undertakings of the same character exist or are projected with the Admiralty's concurrence elsewhere. The bulk of the labor is unskilled, but is, however, being trained in the use of pneumatic riveters and caulking tools, and will be (already it is in a large number of instances) sufficiently expert to put the assembled fabricated ships together.

The fabrication of material for ships and engines has been organized over a considerable area, local committees being responsible in certain districts for definite deliveries of a ship, or a number of ships, in specified periods. Moreover, fabricated ships are taking shape in several assembling yards. Before long, vessels of the type should represent a very considerable addition to the tonnage output.

Additional Votes for Navigation, Etc.

In addition to the sums voted in the main estimates at the Dominion Parliament's recent session, as detailed in Canadian Railway and Marine World for May, the following amount was voted in the supplementary estimates for the year ended Mar. 31, 1918:—

Public Works, chargeable to Income.	
Harbors and rivers—Laprair, Que., protection works, Governor General's warrant, Dec. 17, 1917	\$68,750.54
The following amounts were voted for the year ending Mar. 31, 1917:—	
Railways and Canals, chargeable to Income.	
St. Peter's Canal, improvements, further amount required	\$3,000.00
Welland Canal, to rebuild bridge at Dunnville, washed out by floods	50,000.00
Arbitrations and awards, further amount required	110,000.00
Public Works, chargeable to Capital.	
Quebec harbor, River St. Charles, improvements to navigation, further amount required, revote	386,000.00
St. John harbor, improvements, further amount required	250,000.00
Toronto harbor, improvements, further amount required	152,000.00
Harbors and Rivers.	
Nova Scotia.	
Generally, construction and repairs ...	\$55,000.00
Fort Dufferin, reconstruction of breastwork, further amount required	14,000.00
St. Andrews, repairs to wharf	1,200.00
Tynemouth creek, to repair and reconstruct breakwater, revote	4,000.00
Welchpool, repairs to wharf, revote \$800	950.00
Prince Edward Island.	
Mink River, repairs to wharf	1,500.00
Quebec.	
Anse a Beaufils, repairs to breakwater and jetty	2,400.00
Anse aux Gascons, repairs to wharf, further amount required	2,000.00
Barachois de Malbaie, to repair approach to training jetty	2,400.00
Beloeil, repairs to protection piers	1,900.00
Chicoutimi, repairs to wharf, further amount required	500.00
Grindstone, M.I., repairs to wharf, revote	1,000.00
Lanorie, repairs to wharf	1,775.00
Lavallrie, repairs to wharf	550.00
Les Escoumains, rebuilding outer end of wharf	3,500.00
L'Islet, repairs to wharf	1,500.00
Malbaie, in final settlement of all claims of John Burns in connection with contract for construction of pier	2,907.63
Matane, repairs to wharf	600.00
Mile Vaches, repairs to wharf	650.00
Ste. Anne des Monts, repairs to pier	600.00
Sorel, repairs to wharf	3,000.00
Vaudreuil, wharf repairs and improvements	2,500.00
Vercheres, wharf	845.00
Ville Marie, repairs and improvements	10,300.00
to wharf	4,000.00
	\$42,927.63

Ontario.	
Belleville harbor, improvements to wharf and warehouse, revote \$2,800	\$3,000.00
Brockville, in final settlement of claims of W. M. Leacy in connection with contract for wharf improvements	1,219.63
Burlington channel, repairs to pier, further amount required	7,500.00
Cobourg, repairs to east pier	4,600.00
Haileybury, repairs to wharf, revote	600.00
Kingston dry dock, renewal or revetment wall, revote	12,500.00
North Bay, in settlement of claims of C. McGuire in connection with contract for construction of breakwater	658.62
Port Dover, repairs to piers, revote	6,000.00
Portsmouth, repairs to pier	3,100.00
Wheatley, repairs to pier	1,400.00
	\$40,578.25

British Columbia.	
Fraser River, improvements, revote	\$100,000.00
Hardy Bay, landing float	1,250.00
Ladysmith, reconstruction of wharf	7,100.00
	\$108,350.00

Dredging.	
Ontario and Quebec, further amount required	\$70,000.00
Yarmouth harbor	50,000.00

Mail and Steamship Subventions.	
Schooner service between Pictou, New Glasgow, Antigonish County Ports and Mulgrave	1,000.00
Steam service between St. John and St. Andrews, N.B., calling at intermediate points	4,000.00
Steam service between Pictou, N.S., and Montague, P.E.I., calling at Murray Harbor and Georgetown, P.E.I.	5,000.00
Steam service from opening to closing of navigation in 1918, between Port Mulgrave, St. Peter's, Irish Cove and Marble Mountain, and other ports on Bras d'Or Lakes	2,000.00

Light House and Coast Service.	
Salaries and allowances to lightkeepers, further amount required	55,000.00
Administration of pilotage, and maintenance and repairs to vessels, further amount required	120,000.00
Further amount required to pay pension of \$300 each per annum to retired pilots	1,993.55

The Cape Breton Shipbuilding Co., incorporated recently in Nova Scotia, is reported to have secured a shipbuilding yard at Johnstown, Richmond County, N. S., and to have leased certain areas. Amongst those forming the company are: F. L. Kelly, Mayor of North Sydney, President; D. H. McDougall, General Manager; Dominion Steel Corporation, Vice President; William Hackett, ship broker, Treasurer; N. A. McMillan, K.C., Secretary; R. T. Sainthill, Manager, Nova Scotia Marine Railway Co.; R. Musgrave, contractor; C. McKenzie, R. Hickey and A. Finlayson, railway contractor.

Wheatless Meals on Lake Steamships.
The United States Food Administrator has issued the following:—"The wheat-saving campaign has been given a substantial boost by the announcement that all passenger steamship lines operating on the Great Lakes have decided to eliminate wheat from their menus until the next harvest. There are 54 of these lines, and the saving will be considerable. This is voluntary co-operation with the Food Administration. A number of railways took similar action several months ago."

The Webster Steamship Co., Ltd., Quebec, Que., is operating the steamships Colin W., Eric W., Howard W., Marian W., Muriel W., Richard W., and Stuart W., each of which is owned by a separately incorporated company bearing the name of the particular vessel, and all of which, including the operating company, are subsidiary companies of the Canadian Import Co., coal importers, of Quebec, Que.

The St. Lawrence Shipping & Trading Co. is announced to have been organized with a capital of \$1,500,000, to operate a passenger and freight line from Montreal to Quebec and intermediate ports, and to Gaspe, Sydney and Magdalen Islands. The s.s. Guide is reported to have been purchased. Capt. J. E. Bernier and J. deS. Bosse, are mentioned as those chiefly interested in the company.

Power Development in the St. Lawrence River.—The New York & Ontario Power Co. has applied to the International Joint Waterways Commission for approval of its plans for further power development in the little river channel of the St. Lawrence River south of Ogden Island, at Waddington, N.Y. The application is being opposed by St. Lawrence navigation interests.

Electric Welding & Shipbuilding Co. of Canada, Ltd., has been incorporated under the Dominion Companies Act, with \$50,000 authorized capital stock, and office at Montreal, to carry on shipbuilding and general contracting business, and to use electric and other welding processes.

The White Pass & Yukon Route's sailings commenced June 10, when the steamboats Casca and Yukon sailed from Whitehorse for Dawson, the latter connecting with the s.s. Tanana for St. Michaels.

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie canals during May, 1918.

	Eastbound		
ARTICLES.	Can. Canal.	U.S. Canal	Total.
Lumber	1,709	33,738	35,447
Flour	319,840	538,230	858,070
Wheat	1,081,517	1,551,055	2,632,572
Grain, other than wheat	3,660,836	4,526,614	8,187,450
Copper	2,034	12,202	14,236
Iron Ore	2,202,509	6,589,653	8,792,162
Pig Iron .....	.....	.....	.....
Stone	3,850	1,540	5,390
General Merchandise	1,391	9,005	10,396
Passengers	246	40	286
	Westbound.		
Coal, soft	151,440	1,726,533	1,877,973
Coal, hard	13,505	152,650	166,155
Iron Ore .....	.....	14,671	14,671
Mfgd. iron and steel	1,541	6,376	7,917
Salt	1,000	1,835	2,835
Oil	1	31,670	31,671
Stone .....	.....	41,254	41,254
General Merchandise	25,233	25,493	50,726
Passengers	325	2	327
	Summary.		
Vessel passages	700	2,087	2,787
Registered Tonnage	1,822,046	7,117,504	8,939,550
Freight—			
Eastbound	2,351,575	6,849,268	9,200,843
Westbound	192,720	2,010,482	2,203,202
Total Freight	2,544,295	8,859,750	11,404,045

Wreck Commissioner's Enquiries and Judgments.

Enquiries have been held recently into the following casualties, and judgments delivered:—

Loss of the s.s. Louisburg.

Held at Sydney, N.S., before Capt. L. A. Demers, Dominion Wreck Commissioner, with Lieut.-Commander J. H. Knight, R.C.N., and Lieut. H. C. Owen, R.N.R., as nautical assessors. The s.s. Louisburg was owned by the Dominion Coal Co., and was wrecked in St. Mary's Bay, near Cape English, Nfld., May 4, when bound from Sydney, N.S., to St. John's, Nfld., with coal. The court found Capt. Kemp, master of the s.s. Louisburg, in default, for not insisting, or demanding, that the patent sounding lead be repaired, it having been out of order for nine months, and no steps were taken to call the owner's attention to it, so that it could have been remedied. The master's statement that he preferred the hand lead, or rather a marked line, is not rational. Either he does not understand the manipulation of the patent sounding machine, or he felt that having it in working order he would be expected to use it frequently. He is also considered in default for trusting too implicitly on his course, without making allowances based on actual calculations, instead of on supposition and assumption. It is well known that currents vary as to their direction and velocity in Cabot Straits and in the vicinity of Newfoundland. Because a course by compass had carried him safely in former trips, it is no reason to surmise that such a condition would always exist. He admitted the deviation of his compass had varied since he had been master of the vessel during the last two years. His education in navigation problems being very limited, there was very little left for him but the frequent use of the lead, to discover the erratic movements of his compass. His course and bearings were plotted on a blue black chart, and the court concluded that it was not of a late edition. It was not shown that he had applied himself to become acquainted with the vagaries of the currents by reference to any book on the subject. On the whole, the court considered that necessary care and precaution were not exercised by the master, under such foggy conditions as existed during the trip.

Regarding the total loss of the vessel, the court considered that poor judgment was shown, in view of the calm state of the seas which practically existed, to have insisted on going astern when it was found that water was entering the engine room. From the evidence it was gathered that there would have been greater wisdom demonstrated in beaching the vessel, by reversing the order and going ahead, thus leaving the possibility of salvaging her, but it is a point that the court did not desire to press.

Capt. Kemp has been in the company's service for some 30 years, which undoubtedly speaks in his favor. His straightforward evidence, coupled with the precarious conditions existing, are points which cause the court to deal leniently with him, though it considered the loss of the vessel under such conditions and at such time of stress, a very great offence indeed. It therefore suspended his certificate no. 3203, as master, for six months, but recommended during such suspension, a lower grade certificate be granted to him, that of mate, so as to permit him to improve himself in navigation matters.

Stranding of the s.s. Lyacon.

Held at Montreal, before Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. F. Nash and C. Lapierre, as nautical assessors. The court found that from the evidence adduced, it could not arrive at any other conclusion than that the pilot alone was at fault. From the master's testimony it was evident that the compasses had not been deviating from their former errors and the deviation given to the pilot, from the time he left Rimouski to the time of stranding. The pilot did not allow sufficiently for the spring tides which were beginning to form on that flood tide, and did not allow sufficient for the strength of the current, and enough on the course to obviate this, especially as at Red Island lightship he had to alter his course, due to the current. From this, it seemed to the court that it would have been rational to take extra care and be a little suspicious of the working of the current, or the effect on the vessel, especially one of the speed of the Lyacon. That he had ordered slow, and half speed, and gave an order for soundings, was quite proper, but before the sounding was reported the vessel touched. It did not appear to the court that there was any culpable negligence in the navigation of the vessel, but that there was miscalculation, or lack of calculation, is evident, and also a lack of judgment.

The court expressed its opinion that while it had been severe in dealing with pilots when conditions were different, it felt, that seeing they were exempt from military duties on account of their need, it would be wrong to suspend the pilot's license for any term short or long. Therefore to meet conditions as they exist, the pilot was severely reprimanded and fined the maximum amount, \$400, payable at \$50 a month, and was warned that should he appear before the court again, severe measures would have to be adopted. The officers' evidence showed that all precautions were taken, and as they are absolute strangers in these waters, they relied more or less on the pilot's knowledge and experience for guidance, although it is evident that the master suspected that something was wrong, but before he realized the exact conditions, the vessel grounded.

Stranding of s.s. Lake Como.

Held at Montreal before Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. F. Nash and C. Lapierre, as nautical assessors. After weighing the evidence the court found that Capt. John H. Dizer, master, was in default for careless navigation. His evidence as to courses and the behavior of the vessel was contradicted by other witnesses. He stated that the compasses were but casually and incompletely compensated, owing to lack of facilities to obtain solar observations. Such being the case, continuing on a doubtful course, at full speed, with uncertainty as to errors of compasses, was unjustified, and there did not seem to be any serious attempts to obtain soundings. Much of the evidence of the officers went to show that there had been considerable drinking, but that while the master could not be said to be intoxicated during the morning of the casualty, it was felt that after effects of days of hard drinking existed, and prevented proper judgment being exercised. The master was requested by the court to remain and hear his crew's evidence,

but he chose to absent himself, therefore whatever was said as to his intemperate habits was uncontradicted. The court felt that had proper measures been taken, the vessel would have floated off at the next tide, and considered that the use of a small kedge placed astern with a view to pulling the vessel off, was a farcical attempt to protect property. Altogether the court felt that the master did not take elementary measures of precaution, and as it has no jurisdiction over his license, a copy of the finding was forwarded to the U.S. Consul at Montreal, for the information of his government.

The court announced that the evidence showed that the Pointe des Monts light and the fog horn were in working order, and that the casualty was not due to any defects in the operation of the lighthouse system.

Government Operation of Erie Canal.

The Director General of U.S. Railroads, acting upon the recommendations of the committee on inland waterways of the Railroad Administration, has decided to construct as quickly as possible and put into operation a line of barges to be operated by the government on the Erie Canal. The barges will be of the most approved type and will be operated in conjunction with and as a part of the general railway and waterways transportation system of the country under the control of the Director General of Railroads. This will ensure the complete co-ordination of the Erie Canal facilities with the railway facilities, and it is hoped will greatly enlarge the available transportation facilities throughout eastern territory. G. A. Tomlinson, of Duluth, Minn., has, as stated in Canadian Railway and Marine World for May, been appointed General Manager of the Erie Canal operations, including the construction of the barges and general equipment. Under government control of the railways and the canal there will be diverted to the canal all of the traffic that can be handled to the best advantage by water, and the canal will be made in the highest degree serviceable in the present situation.

Combination of United States Express Companies under Government Control.

The Director General of U. S. Railroads has announced that, with a view to handling the express business in the most efficient and economical manner, he has sanctioned the plan of the four principal express companies (Adams, American, Wells Fargo, and Southern) forming a new express company, with which he will make a contract for the carrying on of the express business for all of the railways under federal control. Under this arrangement the new express company will be the Director General's agent for carrying on the express business. The character of the service and the character of the rates will be under the Director General's control and subject to initiation by him.

An important feature of the arrangement is that the new company is to be capitalized only to the extent of actual property and cash put into the business, and the government will share on a progressively increasing scale in any profits

derived from the business. The general method of determining the compensation is that the Director General will receive 50 1/4% of the operating revenues (or gross earnings), and out of the balance the express company will pay operating expenses and taxes and a dividend of 5% on its capital stock. Out of the next 2% available for distribution the express company will receive 1% and the government 1%; out of the next 3% available for distribution the express company will receive 1% and the government 2%; any further amounts available for distribution will be divided, one-quarter to the express company and three-quarters to the government.

The new express company will put into the business physical properties of the actual value of \$30,000,000, for which capital stock to that amount will be issued. No other capital stock will be issued, except at par for cash.

While the new express company is permitted, upon arranging therefor with the Director General, to use railway employes in express service, the entire compensation of all such employes, both for railway and express services, will be fixed and paid by the Director General; and the new company should remunerate the Director General for services rendered by such employes to the express company.

It is announced that the combination outlined above is for the continuance of the war only, and that the companies will then revert to their original status.

Among the Express Companies.

W. J. Wilson has been appointed Assistant Treasurer, Dominion Ex. Co., Toronto, vice P. A. Keeler, promoted.

P. A. Keeler, heretofore Assistant Treasurer, has been appointed Treasurer, Dominion Ex. Co., vice G. A. Newman, deceased. Office, Toronto.

The Dominion Ex. Co. service has been withdrawn from the Canada & Gulf Terminal Ry., running between Mont Joli and Matane, Que., the railway company now operating its own express service at points along the line.

The Express Traffic Association of Canada has issued a notice advising that in the next supplement to classification which will be submitted to the Board of Railway Commissioners for approval, it is proposed to include a rule to the effect that express companies shall not be required to pick up or deliver shipments above the ground floor in any building or residence, when such shipments are of such size or weight as not to permit of them being handled by one man, and where elevator facilities are not available.

The Board of Railway Commissioners passed order 27272, June 4, on the application of the Express Traffic Association of Canada, on behalf of express companies, under sec. 340 of the Railway Act, providing that the form of bill of lading issued by the U. S. Government for use in respect of all shipments of munitions, war materials and supplies by or on behalf of that government or any of its contractors, copies of which are on file with

the board, be approved, and that notwithstanding the provisions of order 12953, Feb. 10, 1911, the form approved may be used by all such express companies in respect of said shipments of munitions, war materials and supplies.

Telegraph, Telephone and Cable Matters.

Girls are being employed on the Western Union Telegraph Co.'s cable service, for the first time in the company's history.

H. Hulatt, Manager of Telegraphs, G.T.R. and Grand Trunk Pacific Ry., made a trip of inspection over the companies' lines during June, spending the greater portion of the month in the west.

Two operators employed by the Great North Western Telegraph Co., who were charged recently with using the company's wires fraudulently in connection with the transmission of betting news, were acquitted at Toronto, May 18. It is stated that the prosecution was undertaken at the company's instance, and employes have made a demand that the men be reinstated, or a strike will be called.

The Great North Western Telegraph Co. has opened offices at Kiskisink Club House and Valcartier Camp, Que.; Helderleigh, Petewawa Camp and Waubamic station, Ont.; East Selkirk, Grand Beach and Scanterbury, Man.; Haynes and Victoria Beach, Alta.; and has closed its offices at Batiscan and New Richmond, Que.; Beachburg and Salem, Ont.; Dropmore, Man.; Chandler, Sask.; and Dodds, Alta.

Telegraph and Telephone Lines Votes.

The Dominion Parliament, at its recent session, voted the following additional amounts for the Public Works Department for the year ending Mar. 31, 1919:

New Brunswick.	
Chatham-Escuminac and Point Sapin telephone line—extension to Kouchibouguac, revote	\$3,000.00
British Columbia.	
Mainland telegraph and telephone lines, general repairs and improvements . . .	29,400.00
Mainland telegraph and telephone lines, extensions in Kootenay district, further amount required, revote, \$1,000	2,000.00
Vancouver Island lines, repairs and renewals, revote	6,500.00

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.

L'Air Liquide Society, Toronto, has issued a 50 page catalogue describing and illustrating its oxy-acetylene welding and

cutting apparatus and supplies. It contains a comprehensive outline of the oxy-acetylene process and its many applications.

Canadian-Ingersoll Rand Co., Limited, Montreal, has issued a 32 page catalogue, describing and illustrating Ingersoll-Rogler air compressors. It gives a sketch of the development of the Ingersoll-Rogler valve, particularly the application of the valve to large air compressors having direct synchronous motor drive. Other special features of the compressors described are the rolling mill engine type frames, special intercooler design, and clearance controller with automatic maximum load stop.

Locomotive Superheater Co., New York, N.Y., has issued bulletin 3, "Superheater Dampers," dealing with them under the following headings:—Construction and operation of damper; effects of improper installation or maintenance; prevention of freezing; switch locomotive dampers; what to do in installing dampers; what to do and what not to do in maintaining dampers. The bulletin has an illustration showing arrangement of superheater damper mechanism when a locomotive is working, and also several plans.



Department of the Naval Service.

TENDERS FOR WHARF.

Sealed tenders, addressed to the undersigned, and endorsed "Tender for Coaling Jetty," will be received up to noon on the 15th July, 1918, for the reconstruction of the Coaling Wharf at H. M.C. Dockyard, Esquimalt, B.C.

Tenders should be accompanied by certified cheque for Ten Per Cent. of the amount of the tender.

Plans, specifications and permission to view the site may be obtained from the undersigned or from the Captain Superintendent, H.M.C. Dockyard, Esquimalt.

G. J. DESBARATS,

Deputy Minister of the Naval Service, Department Naval Service,

Ottawa, May 31, 1918.

Unauthorized publication of this advertisement will not be paid for.

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