

Canadian Railway and Marine World

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Terminal Handling of Locomotives.

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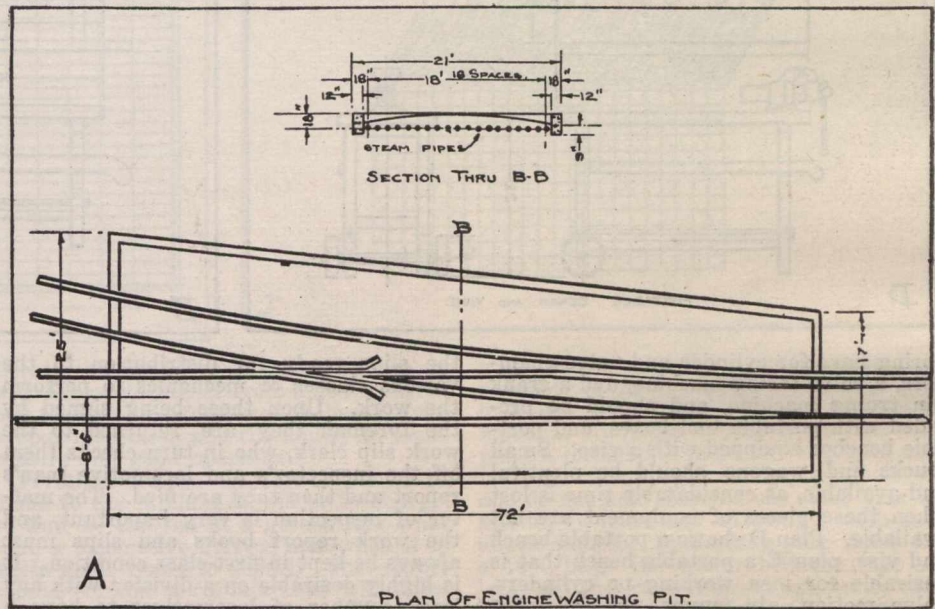
Efficiency and conservation are more expedient at this time than ever before. We are forcefully reminded at this time of the efficiency of the naval and military service, the conservation of man power, food, fuel and electric power. We are face to face with the transportation problem, the second of the country's great industries. The country needs locomotives as it does ammunition and big guns. We are engaged in a business of transporting necessities from where they are produced to where they are needed and the connection between these two places is a railway, its motive power, vehicles for conveyance, tracks, etc.

The locomotive must be kept as near 100% efficiency as possible and be detained at the terminal as little as necessary. With this view in end we offer a few suggestions: First, when the locomotive arrives at the terminal, the first operation is the cleaning of the fire, or removing it entirely from the locomotive. To conserve man power, one of the best is the water type of pit, open on one side containing sufficient water space, to extinguish the hot cinders and to be served by a gantry crane, and with this kind of pit one man can readily serve 125 locomotives per 24 hours, that is, the handling of the cinders. The labor for cleaning of the fires can be handled to the best advantage on a piecework basis.

Cleaning Locomotives—After the fire has been cleaned, the next operation is to thoroughly clean the machinery and running gear of the tender, so that it can be carefully inspected. The time of wiping locomotives, especially beneath the running board and the tender, is past history.

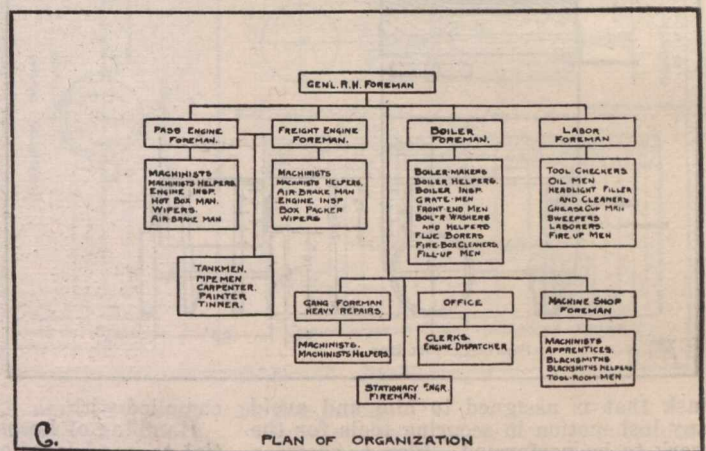
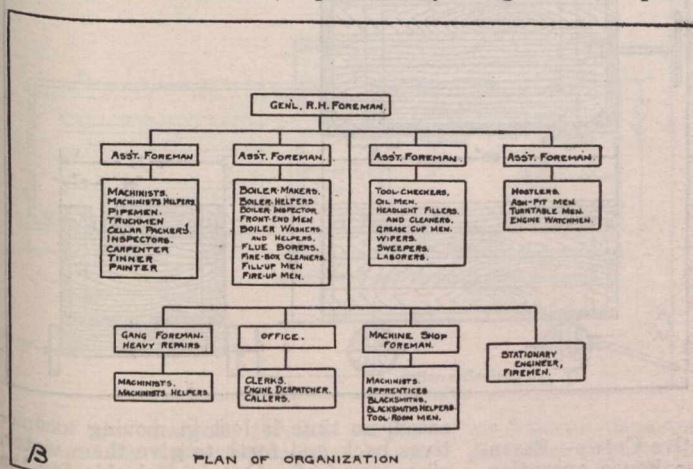
est to the lowest. Above the running board and the cistern can be successfully washed, but we recommend periodical wipings. We submit a ground plan A, showing a suitable design for a locomotive washing pit.

should be long enough to take in the entire locomotive and tender, and equipped with sufficient lighting facilities to enable the inspector to accomplish his work readily. It is more desirable to have an outside entrance, reached by a suitable



Organization—Now that we have the locomotive in the house, essential to good operation, there must be a well defined organization. Each individual terminal has its own characteristics, but basing an organization upon a terminal caring for

stairway. **Turntables**—Necessary to the handling of locomotives at a large locomotive house, is a first class turntable of ample length and sufficiently strong in design, so that it will not spring under the heavy



By improved methods which are now on the open market, the largest types of locomotives can be thoroughly cleaned in from 7 to 10 minutes, by washing with a combination of fuel oil and water at about 90 degrees, aided by air pressure, which should be 100 lb. to derive the best result, and at the same time realize the greatest saving in labor, material and time. The success of it depends upon the enthusiasm of all the attaches of the motive power department, from the high-

approximately 100 locomotives per 24 hours, we submit for your consideration plan B, for use where it is not desired to specialize between the different classes of power. This is covered by plan C.

An inspection pit is desirable, immediately after the locomotive has left the washing pit, so that when it arrives on the pit in the locomotive house, the various gang foremen can promptly distribute to their workmen the reports of work required upon the locomotive. This pit

est load, and supported upon a suitable foundation. One very essential matter that is overlooked by designing engineers is the alignment of tracks across the table. Every mechanical man appreciates the layout of tracks to match up across the table so that handling locomotives in and out of the house or moving back and forth for valve setting, or switching out for back shop, or vice versa, when the tracks line up, it is a great assistance to the prompt handling of the power. When

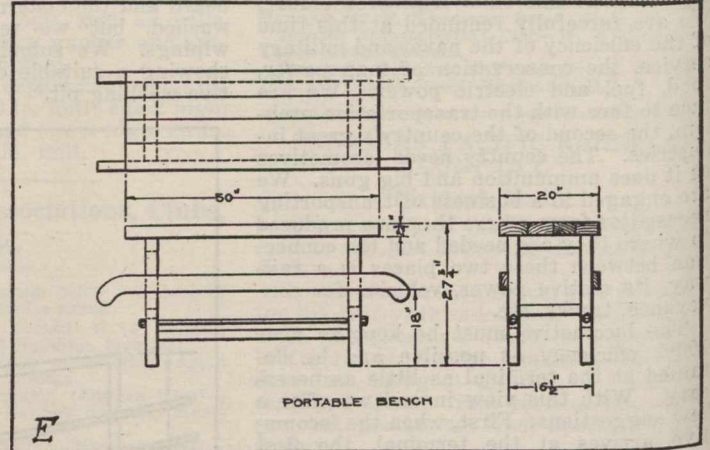
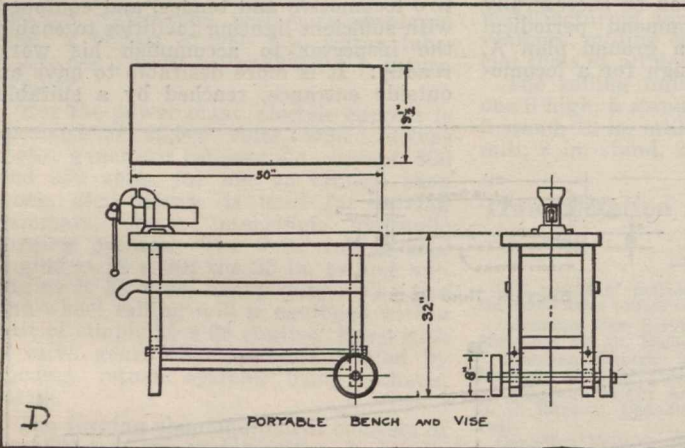
you are putting in a table, make it large enough. In climates where considerable snow is experienced a double drive is desirable, that is, a motor on each end of the table coupled in multiple.

Toolroom and Tools—A locomotive house is not complete, unless it is equipped with a toolroom that contains suitable and enough tools to properly and promptly handle the work, located at the locomotive house, so that unnecessary time is not wasted by men in travelling back and forth for tools. Each locomotive house of any considerable size, should be equipped with all of the portable tools, such as

The handling of work reports, etc., is a very important question and suitable facilities must be at hand to properly receive, file and record the work. There should be a suitable place where the locomotive man can, on arrival, make out his report, being careful to fill out the details requested on the form. Plan J is a ground plan of the office building with suitable quarters for the foremen, clerks, register room for locomotive men and locker room. The locomotive man can dictate his report to a slip clerk and this clerk in turn can classify from the locomotive men and locomotive inspectors reports and place

far smaller space than one of a greater surface. The dispatcher's office must be equipped with a telephone system, and an air signal system for the various foremen extended throughout the locomotive house, which will enable him to secure information promptly or call the foremen when they are wanted at the telephone or for other information.

Specializing Locomotive House Work—There is a very great advantage to be obtained in specializing the mechanics. They can have suitable tools for doing their individual work and when better equipped can do it more promptly and

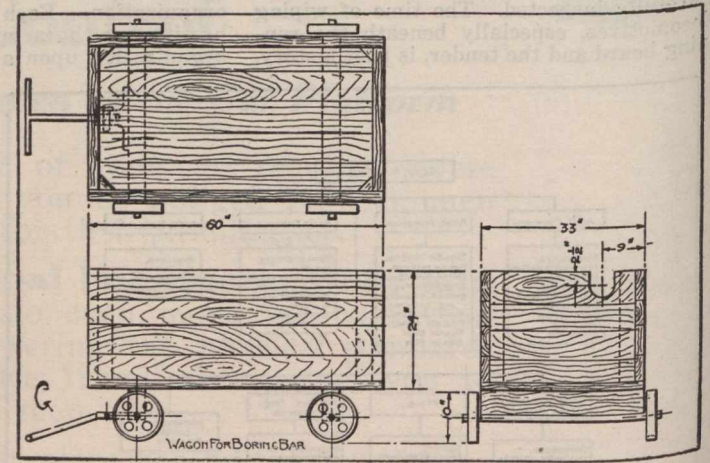
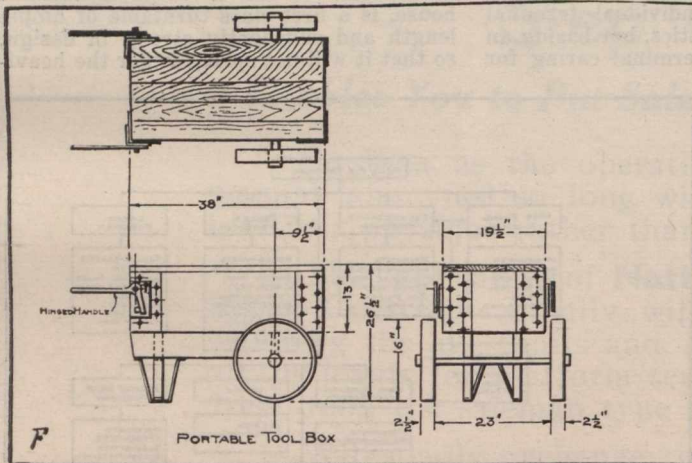


boring bars for cylinder and valve chambers, a valve facing machine, and a crank pin truing machine, and should be provided with portable tool boxes, and portable benches equipped with a vise. Small trucks and wagons should be plentiful and available, as considerable time is lost when these pieces of equipment are not available. Plan D shows a portable bench and vise, plan E a portable bench that is desirable for men working on cylinders, valve motion, air pumps, air reversing gears, etc., and plan F a portable tool box for the individual mechanic that contains all of his tools and can be handled to the

slips ready for distribution to the various classes of mechanics to perform the work. Upon these being signed by the foreman they are returned to the work slip clerk, who in turn checks them off the inspector's and locomotive man's report and then they are filed. The matter of inspection is very important, and the work report books and slips must always be kept in first-class condition. It is highly desirable on a division with any large number of locomotives to have a special man assigned as general inspector to cover the entire locomotive and to see that all requirements of the laws are

with better results. In locomotive houses of considerable size, men can be specialized on passenger locomotives, fast freight or slow freight locomotives as well as switch locomotives. In any large locomotive house, I would suggest that a man be specialized on cab work and one on piston and valve stem packing. The air jobs should be specialized and suitable quarters provided for foremen and organization. The boiler work can be divided and specialized in the same way.

Water cranes should be located on tracks leading to and from a locomotive house suitably. With these properly lo-



task that is assigned to him and avoid any lost motion in securing tools for the work to be performed. Plan G shows a portable wagon for a boring bar.

Information Board—A board suitably located in the locomotive house, that will give the information as to the status of the work by the various classifications is desirable. Of course, these boards have to be arranged for each individual terminal and should cover all of the operations that are specialized, machine, boiler, air, tender and all other operations. Plans H and I show two of these boards.

complied with.

Handling of Locomotive Crews—Essential to good locomotive house operation, facilities for the handling of engine crews is very important. Plan K is a sketch of a circular locomotive and crew board, which serves the purpose, takes up very little room in the office and is visible to the crews from the register room by the means of a glass. On the other side, it is open to the locomotive dispatcher and handy for him to mark up his crews and locomotives. By this means, a large board covers a great number of locomotives and crews and takes up

located, no time is lost in moving locomotives back and forth to give them water, when required. One is desirable for the switch locomotive movement and another for the road and passenger locomotives.

Blower System—Every locomotive house should have sufficient steam pressure to properly provide a blower system for getting locomotives hot. Permanent fittings should be made so that each pit in the locomotive house can be coupled by the means of flexible joints, hose or otherwise so that no time will be lost in making these connections.

Hot Water Washout Plant—No locomo-

tive house is complete unless with a hot water washout plant of sufficient capacity to take care of all the washouts. It does away with the breakages that are due from expansion and contraction, caused by the quick change of the temperature of a locomotive boiler when it is undergoing the washing process. It also tends to the conservation of fuel, as it takes about double the amount to get a locomotive up to the required steam pressure when cold water is used. It also enters into the time element.

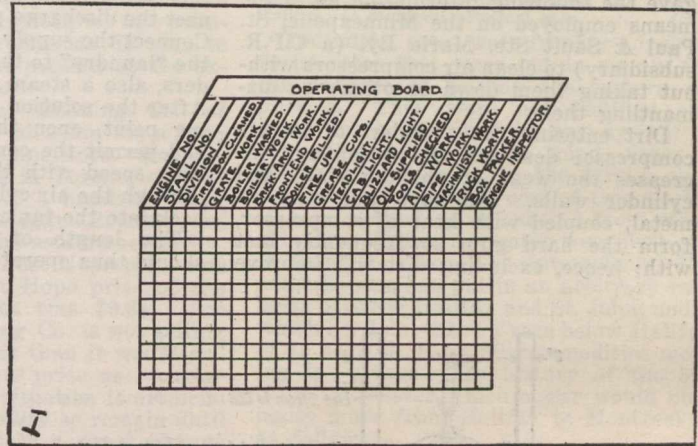
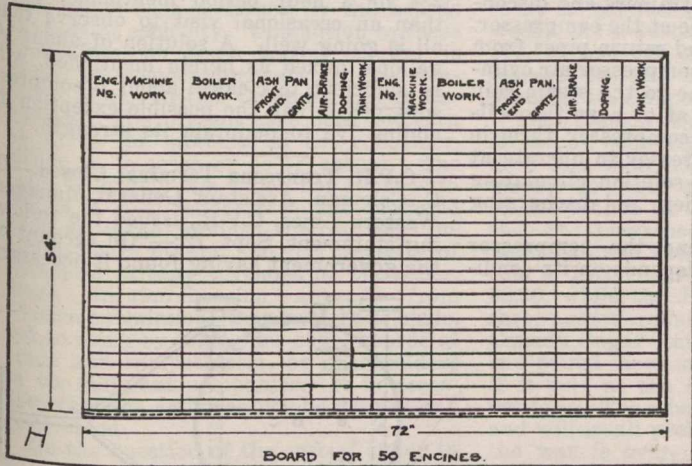
Electric and Autogenous Welding—No other appliance is of more assistance to

desirable on account of delays in coaling when the locomotives are being dispatched.

Locomotive Performance—The standard of comparison as to what constitutes a non-performance varies so greatly throughout the country, except within the boundaries of a state where the performance is based on rules laid down by a public service commission, that a conclusion cannot be drawn. As a rule, the performance of a locomotive depends upon the general conditions, so to speak, viz., shopping facilities for general repairs and properly equipped locomotive houses.

much as shrapnel. Ordinarily, 15% of all the locomotives on our railways are in the repair shop. By reducing that percentage to 10, we can add 3,325 locomotives to the number available for use. If we can keep more locomotives in good running order, we will help our country in the war with Germany."

Check up your locomotive houses at night, check up your locomotive houses in the morning and finish the day's work with as few locomotives held as possible. Go the limit on putting them into service. It may be that a tender from one locomotive can be switched to another and thus



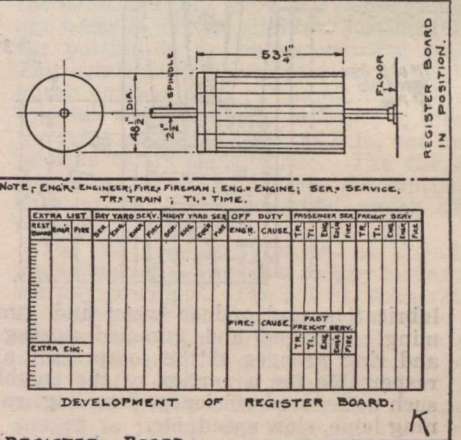
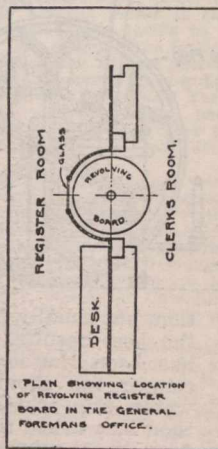
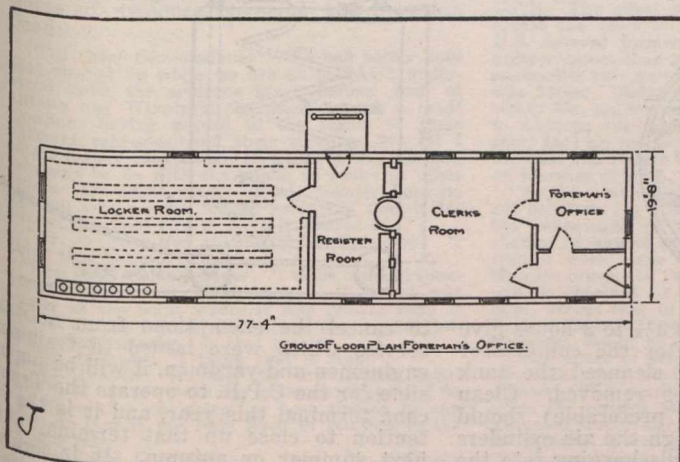
the prompt dispatching of power than electric and autogenous welding. It is a time saver and an increased boiler efficiency can be obtained by the welding of the firebox end of the flues as well as the time to be obtained in stripping or the removal of staybolts with the autogenous welding.

Drop Pits—Each locomotive house should have suitable pits for the removal of locomotive truck wheels, tender wheels and drivers. This pit should be equipped with a suitable jack of sufficient capacity to readily handle the heaviest pair of wheels. It does not seem that a suitable

Local conditions have a great deal to do with the performance from a boiler standpoint. Good performance is based upon proper inspection and the ability to make repairs and good operations.

Terminal Delays—A report should be made to the mechanical officer in charge, so that he can tell at a glance just what time a locomotive arrives and when it is again made ready to depart. This report should contain a column that will show the arrival of the locomotive at the cinder pit, when it is reported to the operating department as ready for a call and when it is ordered. It also should show the

a locomotive gained or, if you have two locomotives of the same class that are held over, maybe the switching of certain material from the one to the other will place a locomotive in service and hold out but one. Check up your shop locomotives and do not hold more of one class than is absolutely necessary to comply with the above request. In working your shops on a 10% basis the writer believes that at large railway centers great assistance can be rendered by all of the local mechanical men in keeping locomotives in service, hence the transferring of material and in that way helps to produce more loco-



jack has been designed for this purpose, or at least the writer never came in contact with one. This pit should have good drainage and proper lighting facilities.

Coaling Facilities—No part of the layout is more important than the handling of locomotive fuel at a terminal. There are many varieties of docks of the gravity and mechanical type. While there are a number of the latter that are highly successful, it seems to the writer that the least delays are incurred by the former. This coal dock should be located so that it will cover the locomotives as they approach the locomotive house, this being

mechanical department and the transportation department delays, separately.

Present Facilities—Of course, we all talk about ideal conditions, and there is no doubt that improvements are needed at almost every terminal, but they are harder to obtain now than at any other time, so we must take the present facilities and do the best we possibly can and speed up and take up the lost motion and follow the little things that go to bring about prompt dispatching and furnish the locomotives that the country needs.

The U.S. Railroad War Board said recently: "Our nation needs locomotives as

motive miles.

Questionnaire—The following questions should be carefully considered:—

- Do you clean fires by day or piecemeal?
- Have you washed locomotives? Are you washing at present?
- Do you approve of an inspection pit and where would you locate it?
- Do you have drop pits and how heavy repairs do you recommend being carried on in the locomotive house?
- Do you approve of air or hydraulic jacks for drop pit work?
- What do you think of two motors on the turntable?

Do you find more supervision necessary under the present labor conditions, if so, to what extent?

Have you employed women in the locomotive house, if so, what work, and how do they compare with men?

What tool system do you prefer on

locomotives? Do you approve of each locomotive man having an individual tool box or do you prefer a set of tools for each locomotive?

How do you coal your locomotives, going in or out of locomotive house? Which plan do you prefer?

What plan of organization have you? What do you think of a toolroom connected to the locomotive house, and what are the advantages to be gained?

The foregoing paper was read before the Central Railway Club in Buffalo, N.Y., recently.

A Railway Air Compressor Laundry.

A committee report presented at the Air Brake Association's last convention gave the following information as to the means employed on the Minneapolis, St. Paul & Sault Ste. Marie Ry. (a C.P.R. subsidiary) to clean air compressors without taking them down or otherwise dismantling them.

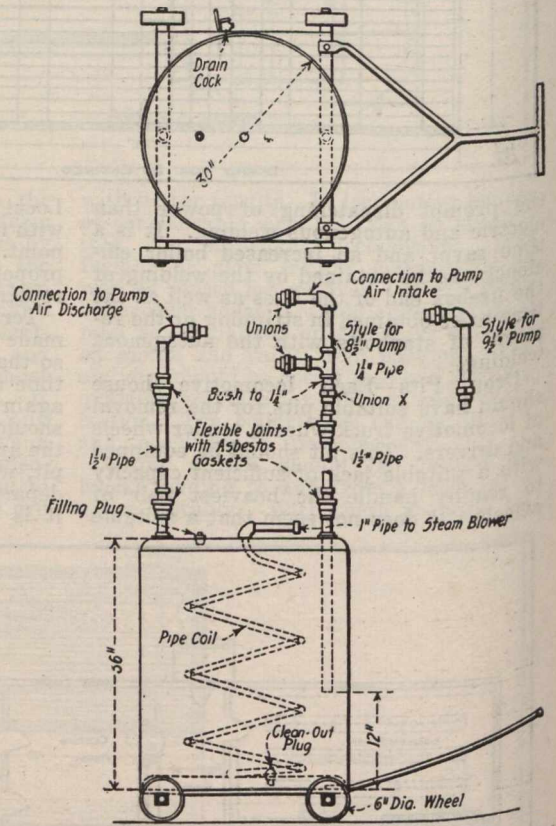
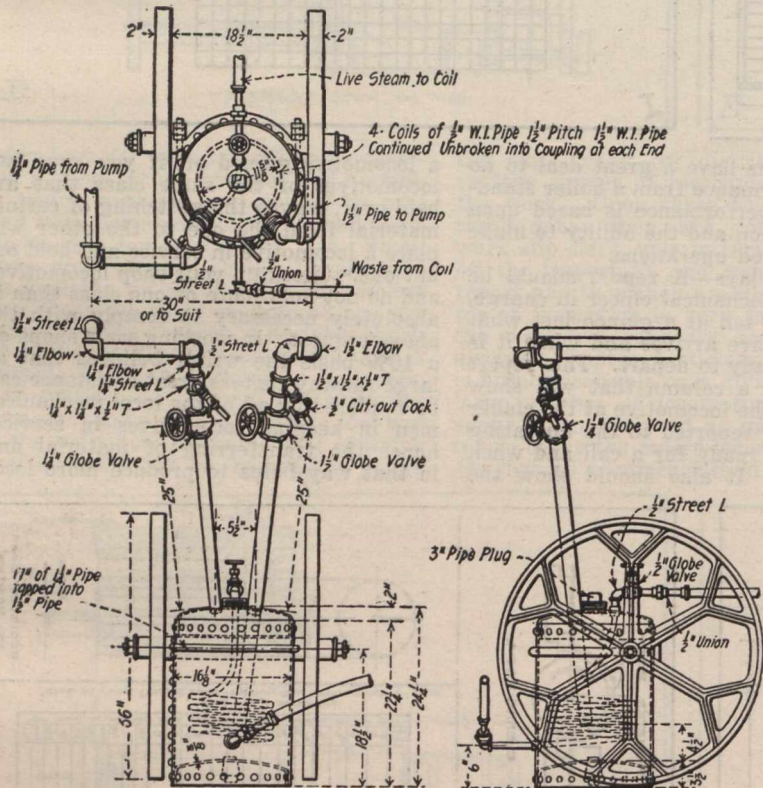
Dirt entering the cylinders of an air compressor destroys lubrication and increases the wear of packing rings and cylinder walls. The dirt and worn-off metal, coupled with heat of compressor, form the hard gum so frequently met with; hence, excluding dirt will improve

To operate the outfit, first see that the air cylinder piston rod packing is tight, then remove the air strainers and disconnect the discharge pipe at the compressor. Connect the supply and return pipes from the "laundry" to the compressor air cylinders, also a steam line to the steam coil. After the solution is at or near the boiling point, open the compressor throttle and permit the compressor to operate at slow speed with the solution circulating through the air cylinders and discharging back into the tank.

The length of time the compressor should thus operate depends on its condi-

outfit is connected to the compressor it does not require an attendant during the 2½ or 3 hour period mentioned, other than an occasional visit to observe that all is going well. A solution of about 10 gallons, mixed as herein mentioned, will be sufficient to cleanse about 5 compressors, other than the possible exception of adding lye to maintain its strength.

C.P.R. Transcona Terminal Closed.—D. C. Coleman, Assistant General Manager, Western Lines, C.P.R., issued the following statement, Sept. 12:—"On account of the government having found it necessary



lubrication and reduce wear and gumming. Clogged and gummy passages and ring grooves of the compressor are responsible for a portion of the trouble, such as reduced efficiency, pounding, running lame, slow speed, etc.

A very effective and economical way to remove this deposit is by means of the compressor "laundry," which should be on the service and protection afforded the compressor against dirt. The accompanying illustration shows two types of air compressor "laundry" outfits, as developed by the M.St.P. & S.S.M. Ry. They consist in general of an enclosed tank mounted on wheels, for a lye solution, a steam pipe coil inside the tank and suitable pipe connections to join the tank to the suction and discharge openings of the compressor. The solution should consist of about one pound of concentrated lye to one gallon of water, and should be kept hot by steam circulating through the coil while the compressor is being cleaned.

tion, but usually from 2½ to 3 hours give the best results. After the compressor has been thoroughly cleansed the tank connections should be removed. Clean water (hot water is preferable) should then be worked through the air cylinders for several minutes, discharging into the pit, to insure all of the solution being removed, after which the compressor should run idle until all the water is worked out of the cylinders. The air cylinders should then be well lubricated, the strainers re-applied and the discharge pipe connected. If soft packing is used the air ends may need to be repacked.

The method here outlined for removing the gummy deposits from air cylinders of a compressor is far superior and more economical than to cut it out with chisel and scraper. When the old method is used it involves much labor in the removal and replacement of lower cylinder heads and air pistons, and then the ports only can be cleaned. After the "laundry"

to cancel the exemptions from military service which were issued to trainmen, enginemen and yardmen, it will be impossible for the C.P.R. to operate the Transcona terminal this year, and it is the intention to close up that terminal until next summer or autumn. It is figured that with the embargo placed on grain shipments originating at points west of Moose Jaw and Saskatoon, the railway will be able to handle the full volume of business through Winnipeg terminals without inconvenience to the public."

The C.P.R. has reopened its St. John's ambulance classes at Winnipeg for the winter. In connection with the work, the company has equipped a hospital at its Winnipeg shops, for first aid treatment of accidents.

Grand Trunk Pacific Ry. Hotel at Regina.—A Regina, Sask., press report states that there is every prospect that construction on the G.T.P.R. hotel there will be resumed next spring.

Commodity Rates on Refined Sugar in Carloads.

Sir Henry Drayton, Chief Railway Commissioner, made the following report to the Dominion Government, Aug. 20:— Since reporting on the complaint of the Toronto Board of Trade, other complaints have been received by the cabinet, having particular regard to the spread in the new sugar rates, and a further report is required. The present complainants are the Atlantic Sugar Refineries, of St. John, N.B., and the Acadia Sugar Refining Co., of Halifax, N.S. The complaints of both companies have since been endorsed by the boards of trade of each city. In addition to these complaints, an issue largely similar is raised in western territory by the complaint of the British Columbia Sugar Refineries. The present case does not turn at all on the interests of the consumer, either as to price or as to output. The issue is largely one which has to do with claims of rival refineries on the one hand (not so much against the railways as against each other), and the necessity of increased railway revenues on the other. Much misapprehension appears from written submissions that have been made, not so much by companies as by boards of trade and sympathizers, or shareholders in the different companies. It is necessary that the actual issues be defined and understood.

On the question of the cost of sugar to the consuming public, I find that sugar sells in the different markets without the slightest regard to the freight rate. For example, in western territory, while the British Columbia Refinery at Vancouver pays freight rates to Winnipeg, which have varied from 78 to 89½c, effective Mar. 15, 1918, that company sells its sugar in Winnipeg at the same price as in Vancouver, where it pays no freight rate at all. As a matter of fact, in certain instances, and for practically short periods, sugar was actually sold in Winnipeg at a less price than in Vancouver. In the east the situation is very similar. The fact is admitted by everybody. The notes of evidence covering the question read:

"The Chief Commissioner: 'We had better have that cleared up while we are at it. As I understand from the evidence given before, both at Ottawa and Winnipeg, the question was a trade question, having regard to the rights of these different refineries, and their right to live (if I might loosely express it), and that it had nothing whatever to do with the public as such; in other words, that sugar prices in this country bore no relation whatever to freight rates. If that is incorrect, I would like to have it cleared up.'

"Mr. O'Grady (of the St. John Refinery): 'I think that is quite correct.'

"The Chief Commissioner: 'I think we had illustrations given that sugar in some instances was dearer at the point where it was refined than it was at distant points where there was competition with other factories. Is that right?'

"Mr. O'Grady: 'I think that is right.'

"Mr. Chrysler (counsel for the eastern refineries): 'I did not make any point about that. I do not know that our price has been limited in any way, or that it has been fixed in relation to the freight rate.'

"The Chief Commissioner: 'Well, Mr. O'Grady has covered the point.'

"Mr. Chrysler: 'Other agencies have been at work fixing prices beside the refineries, but I do not know enough about it to discuss that. I mean the grocers fix prices, but how I do not know.'

"The Chief Commissioner: 'The only thing I wanted to know was whether the public was interested in this, from a cost of living standpoint.'

"Mr. Chrysler: 'I think not. It was a question of our right to exist in competition with Montreal refineries.'

The interests of the public, having regard to a proper supply of sugar, is also not at stake. The sugar output does not at present depend on refinery capacity. The sugar shortage is not in the slightest related to any question of capacity. It is related entirely to scarcity of the raw

article. Allotments of the raw article have been made by the Canada Food Board. Under these allotments the Canada Sugar Co. at Montreal receives 70,400 long tons; St. Lawrence Sugar Refineries, Montreal, 67,200; Dominion Sugar Co., Wallaceburg, 38,400; Acadia Sugar Refining Co., Halifax, 41,600; Atlantic Sugar Refinery, St. John, N.B., 51,200. This allotment falls far short of the full melting capacity. The Atlantic Sugar Refinery, as an instance, has a capacity of 6,000,000 lb. a week, and under its allotment is producing only 2,000,000 lb. a week. As a further result, no one refinery, or one set of refineries, is able to increase its output at present at the expense of its competitor.

The Canada Sugar Refining Co., of Montreal, sells sugar at some 45c a hundred less than its competitors. For example, its sugar sold in Toronto at first of the month at \$8.76 a hundred, while the St. Lawrence Sugar Refinery, of Montreal, and both the eastern refineries, sold at \$9.21. Their Port Hope price was \$8.90, while the Port Hope price of the three other refineries was \$9.35. The Canada Sugar Refining Co. is not selling one pound more sugar than it would sell if it sold at the same price as its competitors. The whole situation is artificial and will in all probability so remain until the war is over, unless a great change takes place in the supply of raw material before that event.

Under the McAdoo order, sugar rates are dealt with in such a way as not only to increase the revenues of carriers, but also to place the movement of sugar on a relatively fair basis, having regard to the value of the service rendered and the charges exacted on other competitors.

The main report, dated July 25, 1918, in which the order in council now appealed against was made, reads:

"Sugar classifies 5th class, and only moves on 5th class, in so far as the all-rail movement from eastern to western Canada is concerned. The district covered by sugar commodity tariffs stops at North Bay, on the G.T.R., and at Sudbury, on the C.P.R. The effect of the McAdoo order is to increase the rates on sugar between points in the U.S. covered formerly by commodity tariffs to a greater extent than 25%. For example, the former commodity rate on sugar from New York to Detroit was 24½c. Under the McAdoo order it now becomes 35c, an increase of 42%. From New York to Chicago the commodity rate was 31½c; new rate, 45c; an increase of 43%. The New York to St. Paul and Duluth rate was 38½c; new rate, 65c; an increase of 69%.

"As the commodity rates in Eastern Canada were not based on any fixed proportion of the 5th class, the percentage of the resulting increase would change in almost every instance. As similar increases were made in both countries before the McAdoo order, the parity of treatment in increases will be obtained by providing for an increase of 25%, except that in Canada, where the Canadian Freight Classification applies, the 5th class rate as increased would be substituted.

"The effect of the McAdoo order on the sugar movement from Montreal to Toronto would be as follows: The present rate is 18½c per 100 lb., while the present 5th class rate is 26½c, and as increased under the McAdoo order would be 33c. As a result, the rate would be increased 14½c per 100 lb., or 78.3%. The increase would make the freight costs 0.33c a pound, as against 0.185c a pound, and on a 10 lb. purchase by the consumer, 3.3c, as against 1.85c."

It is unnecessary to refer in detail to the more recent report made on the Toronto Board of Trade's complaint, but merely to repeat that an anomaly existed, in that sugar moved on a low commodity basis from Montreal and eastern refineries in the more confined area, bounded by North Bay on the G.T.R., and Sudbury on the C.P.R., while, in violation to all proper practice, the longer haul took a higher basic charge, namely, the appropriate 5th class classification. The order simply removes rate preferences and puts

the sugar movement where it legitimately belongs.

The foregoing considerations apply to the sugar situation generally. The complaint of the eastern refineries and the movement of sugar from the Maritime Provinces to Montreal and points west is now considered. The tariff situation is as follows:

St. John to Montreal—Rate effective prior to Mar. 15	15c
St. John to Montreal—Effective Mar. 15.....	20½c
St. John to Montreal—Present rate	42c
Halifax to Montreal—Prior to Mar. 15.....	19c
Halifax to Montreal—Effective Mar. 15.....	22c
Halifax to Montreal—Present rate	43c

The initial rates were frankly admitted to be rates that were put in simply for the purpose of helping the eastern refineries. They were not justified and could not be justified on any system of ratemaking, bearing in mind either a proper remuneration to the carrier or a fair proportion of the cost of transportation as against rates exacted from other shippers. These low rates were first put in from Halifax. The Intercolonial Ry. management has put in an arbitrary rate basis between Halifax and St. John, under which St. John takes a rate below Halifax of 1c per 100 lb. on all commodities moving in carlots. The history of the 5th class rate under which sugar would normally move from Halifax to Montreal is as follows:

Fifth-class rate, Halifax-Montreal, when first sugar rate made.....	25c
Fifth-class rate, Halifax-Montreal, 1911.....	28c
Fifth-class rate, Halifax-Montreal, 1916.....	30c
Fifth-class rate, Halifax-Montreal, Mar. 15.....	34½c
Fifth-class rate, Halifax-Montreal, present rate	43c

Both the low sugar commodity rates and the 5th class rates are Intercolonial rates. The C.P.R. meets the Intercolonial-St. John commodity rate. The shorter mileage from St. John to Montreal is that of the C.P.R. of 487 miles. The actual mileage on the Intercolonial is 735. While, for purposes of rate-making, railway companies are entitled to construct their rates on the shorter mileage basis, and the shorter mileage basis governs, the mere fact that there is a shorter mileage basis is not the slightest justification for putting in an unremunerative rate. The principle in the present case would go no further than to permit the Intercolonial, with its longer mileage, to meet the rates published by the C.P.R., and applicable to its shorter line. The C.P.R. supports and strongly urges the continuance of the rates reserved under the order in council.

The old commodity rates, as already stated, cannot be justified on any business railway principle. The old St. John rate of 18c yielded the Intercolonial 0.4898c a ton per mile. The 20½c commodity rate, which was effective prior to the effective date of the order in council, yielded a return of 0.5578 a ton per mile. It was sought to justify the rates for the purpose of building up industries in the Maritime Provinces. These provinces, however, are equally interested in the production of coal and lumber. The rate on bituminous coal from Stellarton, N.S., to Montreal, effective prior to Aug. 12 last, was 17c; the mileage involved is 811 miles; and the resultant rate per ton per mile is 0.419c; while sugar moving on a 19c rate from Halifax to Montreal, involving a mileage of 831 miles, gives a return of 0.457c, and on the increased commodity rate of 22c a hundred, yields a rate per ton per mile of 0.529c.

The value of coal moving from Stellarton may today be put at \$10 a ton. The

value of a ton of sugar can conservatively be placed at \$180. Coal rates do not stand by themselves. The price of lumber per ton is also very much less than sugar; on the movement from Elmsdale to Montreal, lumber has a commodity rate of 18c, the mileage 801, and the resultant rate per ton per mile 0.449c. To get nearer to the St. John movement, the lumber rate from St. John to Montreal is 16c, the actual mileage 731, and the resultant rate per ton per mile 0.437c. Iron and steel constitute a very important movement and a great industry of the Maritime Provinces. The general iron and steel rate from New Glasgow to Montreal was 43½c per hundred, a rate more than double the sugar rate, and yielding, on the mileage involved of some 804 miles, 1.08c a ton per mile. These illustrations are not given for the purpose of attacking either the coal, lumber, or iron and steel rates as abnormally high. As a matter of fact, they are not. The illustrations merely emphasize the fact that there was no justification for the low sugar commodity rate that could be made from any legitimate railway standpoint. I need only point out that with practically the same rate on sugar and coal, while the sugar takes generally a 5th class rating, coal belongs to the lowest classification of all, namely, 10th.

In view of the suggestion that notwithstanding the abnormal railway costs of today, that the Intercolonial should put in a particularly low rate, I now consider the question as to whether the Intercolonial can afford to make sacrifices in its revenue or not. Comparisons based upon different rates per ton per mile are merely illustrative; they are not absolute. A company whose business consists of an abnormally large proportion of carload movement, as against a company the majority of whose business consists in l.c.l. movement, can carry on business successfully at a very much lower rate per ton per mile. Again, a much higher per ton per mile return must be earned on a system whose average haul is short, than need be earned by a company whose haul is long. For example, the C.P.R.'s operations are much more profitable than the Grand Trunk's, yet the C.P.R. rate per ton per mile, as given in the railway statistics, is 0.676, while the G.T.R.'s is 0.738. The C.P.R., however, enjoys an average haul of 477 miles, while the G.T.R.'s is but 195 miles. Subject to these qualifications, and applying the rate as given, I find from the railway statistics of 1917, that the ton miles on the Intercolonial amount to 1,900,097,294. The rate per ton mile of the Intercolonial is shown as 0.576, with a resultant total earning of \$10,946,071. The following table applies to the Intercolonial's total of ton miles and the ton mile earnings not only of the Intercolonial, but of the different systems:

	Rate.	Results.
Intercolonial		\$10,946,071
Intercolonial freight carried		
at C.N.R. rate of.....	0.638	13,072,669
At C.P.R. rate.....	0.676	12,844,657
At G.T.R. rate.....	0.738	14,022,718
At average Canadian rate	0.690	13,110,671

It is perfectly apparent that the Intercolonial returns are abnormally low. The increases which the adoption of the other rates per ton per mile would yield are as follows:

Per ton per mile basis.	Increased revenue	Increase in per cent.
Canadian Northern ..	\$2,126,598	19
Canadian Pacific.....	1,898,586	17
Grand Trunk	3,076,647	28
Average	2,164,600	19

The average haul on the different systems, as shown by the statistics, work out as nearly as may be as follows:

Intercolonial	266 miles
Canadian Northern	319 miles

Canadian Pacific	477 miles
Grand Trunk	195 miles
Average, all lines.....	255 miles

As a ton mile rate must increase with a decreasing mileage, it would not be at any rate unreasonable to compare the Intercolonial ton mile rate with the average rate in Canada, the average haul in Canada being 255 miles, against 266 miles on the Intercolonial, and on this basis the earnings of the Intercolonial are entirely too low. The status of the Intercolonial can also be approached from the basis of its operating ratios in comparison with those of other lines. I again use the statistics of 1917. The ratios are as follows:

Intercolonial	90.9
Canadian Northern	71.7
Canadian Pacific	65.7
Grand Trunk	71.9
Average, all lines.....	71.7

These operating ratios are capable of an exact definition when the system's whole business is considered. In the absence of a system of accounting which distinguishes freight costs from passenger costs, in the same way that passenger earnings are distinguished from freight earnings, the ratios can be applied only illustratively to either movement. Taking, however, the different ratios and applying them to the Intercolonial line freight movement, the net freight operating revenue would vary as follows:

At ratio of	Revenue.
Intercolonial	\$ 996,092
Canadian Northern	3,207,198
Canadian Pacific	3,754,502
Grand Trunk	3,185,306
Average, all lines.....	3,207,198

These seems to be some issue as to what the exact Intercolonial operating mileage is. It is given in one figure in the statistics and in another figure in the Railways Department report. For the purposes of the following table, I have taken the mileage operated as 1563, and the results of earnings per mile of line as applied to the Intercolonial and based on the foregoing table, are as follows, viz., net freight operating receipts per mile of line:

On Intercolonial ratio.....	\$ 637
On Canadian Northern ratio.....	2,051
On Canadian Pacific ratio.....	2,402
On Grand Trunk ratio.....	2,037
Average all lines.....	2,051

I do not consider at all the question as to whether the Canadian taxpayer is or is not entitled to any return from his investment in the Intercolonial, but unless that investment must constantly grow, without at the same time a proportionate increase in value, substantial surpluses have each year to be earned, reserves must be set aside, or else the capital account must constantly be unduly inflated. Railways from time to time must be practically renewed, in order to keep the systems on a proper basis. I think it is practically conceded that with interest on only a 4% basis, 2% on the actual investment ought to be yearly set aside. Eliminating all question of interest charges and payments of past deficits, the necessity of such a reserve is easily shown by taking the cost per mile of the Intercolonial to the country. In 1899 it was \$37,957, in 1911 it was \$57,419, and the cost per mile today on the mileage actually owned is over \$79,000; the cost of the road to Mar. 31, 1917, being returned as \$120,275,032. A percentage of this increase can undoubtedly be justified, but it is equally certain that a very large percentage of it cannot be justified on any basis of normal values and business accounting. Under the circumstances there is no question that any rate reductions on the Intercolonial are really not made at the expense of that system, but at the expense of Canadian taxpayers generally.

Mr. Chrysler urged that different treatment had been accorded under the McAdoo order to refiners in the different districts. He is absolutely correct. The adoption of the 5th class was made in official classification territory. This official classification territory covers territory contiguous to Eastern Canada. He pointed out that the refiners at New Orleans were specially provided for by the McAdoo schedule, and argued that their commodity rates and differentials were preserved. The New Orleans refineries did not lie in official classification territory, consequently the matter had to be dealt with on a different basis. All the eastern refineries in Canada, however, are in the same classification territory. The results, however, in New Orleans show that increases were made on very much the same parity, although on a different basis. The evidence shows that the old rate, New Orleans to Chicago, was 24.3c, new rate 45c, an increase of 85.2%; to St. Louis, old rate, 18.3c, new rate 44.5c, an increase of 143%; to Cincinnati, old rate 19.8c, new rate 46c, an increase of 132%; to East Burlington, old rate 28.8c, new rate 50c, an increase of 73.6%. Mr. O'Grady, of the St. John Refinery, urged that the Montreal rate should be reduced to 27c. He leaves the matter in this way:

"The proposal of the railway company is 42c, St. John to Montreal, which you think should be reduced to 27c. You get at that reduction by taking, as I understand you, the new New York-Montreal rate on raw sugar at 21½c and add to it the 5½c which you think you should absorb, thus making a 27c rate?"

"Mr. O'Grady: 'Yes, sir. That is the basis we have been competing on ever since we started.'"

While the eastern refiners are willing to accept a 27c rate to St. John, they insist that the differential of 11½c should be continued on movements west. How this would work out can be illustrated by the Toronto movement. The record covering the question reads as follows:

"Chief Commissioner: 'Your Toronto rate today is what?'"

"Mr. O'Grady: '30 cents.'"
 "Chief Commissioner: 'The Montreal rate is, what, the last rate to Toronto?'"

"Mr. Tilston: '18½c.'"
 "Chief Commissioner: 'My recollection is that the Montreal to Toronto rate is 18½c.'"

"Mr. Tilston: 'That is correct.'"
 "Chief Commissioner: 'Your rate to Toronto is 30c, Mr. O'Grady?'"

"Mr. O'Grady: 'Yes.'"
 "Chief Commissioner: 'That gives you a differential, as you put it, of 11½c?'"

"Mr. O'Grady: 'Yes.'"
 "Chief Commissioner: 'And the new Montreal to Toronto rate is what?'"

"Mr. Tilston: 'Standard 33.'"
 "Chief Commissioner: 'It goes 33c as against 18½c.'"

"Mr. Tilston: 'Yes.'"
 "Chief Commissioner: 'As I understand your submission, Mr. O'Grady, you want your St. John rate to have the same differential of 11½c. That would make your St. John-Toronto rate 44½c.'"

"Mr. O'Grady: 'Yes.'"

It will be observed that the new St. John rate of 44½c would be made up by the continuance of the old arbitrary or differential of 11½c from St. John to Montreal and the addition of the new 33c rate to Toronto. The result is that while the rate from Montreal to Toronto would be increased by approximately 80%, there would be no increase whatever in that portion of the through rate which is represented by the St. John-Montreal haul, although there is, of course, a substantial increase, treating the matter in percentages, in the through rate, the increase being some 41%. But the rate, St. John to Montreal, is even more out of line than the Montreal to Toronto rate. Both were unduly low, but the Intercolonial rate was much more out of line. The weaknesses and injustices of the tariff situation would be merely accentuated by the adoption of this suggestion. Traffic is infinitely heavier between Montreal and

Toronto and points west than it is between St. John and Montreal. Usually rates relate to traffic, to its volume, and to its earnings. To carry out Mr. O'Grady's suggestion would be to do violence to all cardinal principles. Further, if a proportionate rate basis was put in on any such theory, the Dominion Sugar Refineries, situate at Wallaceburg, Chatham and Kitchener, with far shorter hauls to Toronto, would naturally demand similar treatment to that which St. John would receive. The Montreal refiners, as well as the Dominion Sugar Co., do not object to the advance in rates, but they are insistent that if concessions are given to one refiner they should be given to all, and that the inequalities of the past cease. Mr. Hauson, who appeared for the Dominion Sugar Co., is reported as follows:

"Our raw sugar rate from New York to Wallaceburg or Chatham is 27c, which I believe is as high or higher than the rate paid by any of the other Canadian refiners. I wish to endorse the statements made by Mr. Tilston. Our company is fully in accord with those sentiments. We consider that it would be a mistake to re-open the order of July 27. I would like further to add that should the Atlantic seaboard refineries be given any consideration by the board, we would respectfully request the board to give us similar consideration from Wallaceburg and Chatham to Montreal and points east."

The statements made by the Montreal refiners are to the effect that the order for the first time gives them fair rates, having regard to hauls from other refineries, and that for the first time they properly enjoy their geographical and commercial position, not only as against Atlantic refineries, but also as against western refiners. The claim is, however, advanced that because investments were made in refineries in Halifax and St. John, when a certain scale of freight rates were in force, the freight rate situation cannot be disturbed; that the relationship of rates, not in percentages, but as to the actual spread, must remain constant. This argument cannot be regarded as sound, either under the provisions of the Railway Act or from any accepted economic commercial standpoint. There is only one thing certain about freight rates and that is, that the carrier, under the act, will not be permitted to make an undue profit. Just as soon as rates are unreasonably high they must be reduced, and, conversely, just as soon as rates are unreasonably low, they ought to be raised to a fair, equitable, and just basis, without regard to one section of the country or the other, but having regard to the inhibitions of the Railway Act, which prohibit one locality being discriminated against in ease of another. To accept the proposition, as a logical result, the principle would not only apply to railways, but would also mean that the industry's tax rate could not be increased and its cost of doing business locally ought not to be advanced. As a further corollary, any protective customs tariff in force when the investment was made must always be regarded as fixed, unless changed in the interests of the industry as against its foreign rival.

Mr. Chrysler argues that the Intercolonial is removed from the inhibitions of the Railway Act. In this he is absolutely right. The effect of the argument is that any illegal and improper preference under the Railway Act may safely be practised by the Intercolonial. The position used to be just the same, as far as private railway companies were concerned, before the act was passed. Discriminations and preferences could be and were from time to time practised. I do not for one moment, however, suppose, that as Parliament by the Railway Act has adopted the principles of equality in railway rates not only as between shippers, but as be-

tween localities, that these principles ought not to be considered because the Intercolonial, as well as a private corporation, is involved. Dealing with the matter entirely as a railway question, there is no just ground from which the Halifax and St. John refineries can escape paying the appropriate 5th class rates and contributing, in equal proportions with the other refineries, to the cost of the services which they enjoy, differing as that cost must differ, having regard to the length of the haul. If there should be a different rate system adopted in the different localities for the transportation of sugar, from a railway standpoint the lower rate basis would have to be given to those territories in which traffic and railway profits are the greater. Railway earnings are much larger in the prairie provinces and in Ontario than they are in New Brunswick and Nova Scotia, but in my view there is no question that a common basis should apply in the territories in question. I have so far dealt with the matter on a railway basis pure and simple. As I see it, this basis is not the only basis which of necessity should control the situation. The order in council is the result of war troubles and war expenditures. Both the St. John and the Halifax refineries have had an unduly large share of the war burden thrown upon them. Halifax and St. John have, geographically, under ordinary business conditions, certain advantages which Montreal has not. On the other hand, Montreal has advantages which they have not. St. John, for example, is still getting a packet service for 25% of its raw sugar without any additional charge over and above the 50c New York ocean rate from the West Indies. In normal times its rate on the balance of its raw material is 6c over New York, with the result that in so far as 25% of its sugar is concerned, it is on the New York basis, and as to 75% of it, 6c over. In so far as its whole supply is concerned, it would, therefore, average 4½c over New York. As a general thing, Montreal buys its raw sugars in the New York market, although in the past it has got raw sugar direct. The present New York rail rate to Montreal is 21½c, but the extra 6c rate which is charged on the vessels from New York to St. John, as the result of the war and vessel shortage, has been increased to 20c; so that as a consequence, at St. John today, instead of paying an average of 4½c over New York, it pays 15c, a difference of 11½c a hundred.

While no sugar now moves from St. John to Montreal, under the policy enforced as a result of which St. John gets the benefit of as low an import rate as the lowest port in U.S. territory, and thus obtains just as much traffic as is possible to secure for it, the St. John-Montreal rate on raw sugar is but 19c. It may be noted that there is a shrinkage from 106 lb. to 100 lb. in refining the sugar. I at one time thought that the rates on refined sugar might be graded in relation to the raw sugar, properly weighing the increased value of the commodity and the shrinkage in the material. I find, however, that the prices vary so much from time to time that it would be impracticable to so base the rate. The present price of raw sugar in Montreal may be taken at 5c, while the refined sugar may be taken as 9c, although the average is somewhat higher. It should further be borne in mind that on no other commodities are rates so graded. With St. John obtaining its raw sugar on a much lower basis than Montreal and enjoying the benefits of the export business, these advantages may well offset, and probably do

offset, the fact that Montreal is much nearer the larger consuming centres of the country. The movement to the large consuming western territory can best be illustrated by the rates to Winnipeg, effective under the order in council. The rate, Montreal to Winnipeg, is 87c, and from St. John to Winnipeg is \$1.03½. Under normal conditions, transportation costs over New York work out, as between the rival refineries, as follows:

	St. John refinery.	Montreal via St. John.
Freight on raw.....	4.50	23.50
Freight, refined.....	103.50	87.00
Total	\$1.0800	\$1.1050

For the Toronto market the position is:

	St. John refinery.	Montreal
Freight, raw.....	4.50	23.50
Freight, refined.....	50.50	33.00
Total .....	.5500	.5650

The Montreal cost on the raw material over New York is made up of the 4.50c St. John over New York, plus the St. John import rate of 19c. As Montreal, as a matter of fact, buys its raw sugar in the New York market and the rail rate to Montreal is 21½c, the real relative position in these two large typical consuming centres is as follows at Winnipeg: St. John freight, \$1.08; Montreal freight, \$1.08.50; at Toronto, St. John freight 55c, and Montreal freight 54c. These results could not have been made fairer if the order in council had been considered from the refiners' standpoint, apart from all question of railway necessity. The position today, therefore, is that while the new rate preserves to Montreal its natural geographical advantage on the manufactured article to which it is entitled, the natural geographical advantage on the raw material which Halifax and St. John normally enjoy is taken away from them as a result of war conditions. It is quite true that the rates on raw sugar have gone up at the other refineries, but on the other hand the Dominion Sugar Refinery uses beet root in a large proportion. This proportion varies, but I am fairly safe in saying that at present a fair ratio would range from at least 33 to 40%.

As the order in council is the result not only of a pressing railway condition, but also has to do with war conditions, and as these war conditions work peculiar hardship as against the Atlantic refineries and not to anything like the same degree as against the Dominion and the Montreal refineries, I would recommend that, as a temporary measure of fairness, while traffic conditions remain as they are, the St. John-Montreal rate be reduced 10c, making that rate 32c, and the Halifax rate be reduced 11c, making that rate 33c; and that for all points west through rates from St. John and Halifax for the time being move on the arbitraries suggested by Mr. Silver of the Acadia Sugar Refinery, over the Montreal rate, and arrived at by increasing the old Halifax arbitrary of 12.50c and St. John of 11.50c, by 25%. In making these recommendations, I have carefully considered the claims of the Dominion and Montreal refineries that any exceptional treatment extended to the more eastern refineries should also apply to them. There is no question of the importance of the beet root industry, both from the standpoint of the Ontario farmer and the fact that the more raw material produced in the country the less will be imported, to the financial gain of the country as a whole. Ordinarily, I am free to admit that any reduction in a fair tariff, free from discrimination, accorded to St. John and Halifax, ought, and indeed under the Rail-

way Act must, be accorded Wallaceburg and Chatham. The conditions of today are extraordinary, and the measure of relief suggested for the eastern refiners cannot, under present conditions, work any hardship either against those of Ontario or Montreal.

I now deal with the complaint of the British Columbia Sugar Refineries at Vancouver. The C.P.R. had largely to do with the inception of this refinery, and for the purpose of developing the industry, put into effect low commodity rates. For local movements the commodity moved on the appropriate 5th class scale, but a commodity blanket rate was made effective from Banff east in prairie territory. As a result of the establishment of the refinery, raw sugars of the Orient are refined in Canada. The raw sugar is subject to a duty of \$1.37½ per 100 lb., the duty on the refined product being \$2.07½. As a result, the movement of sugar from the Pacific has been practically that of the refinery in question, which has been very successful. The change brought about in rates under the order is indicated by the following table:

Vancouver-Calgary rate of 86½ becomes \$1.05.
 Vancouver-Medicine Hat rate of 86½ becomes \$1.21½.
 Vancouver-Moose Jaw rate of 86½ becomes \$1.42½.
 Vancouver-Regina rate of 86½ becomes \$1.44.
 Vancouver-Brandon rate of 86½ becomes \$1.50.
 Vancouver-Portage la Prairie rate of 86½ becomes \$1.59.
 Vancouver-Winnipeg rate of 89½ becomes \$1.59.

Many complaints have been made from time to time by the Montreal refineries against the low commodity rates enjoyed by the British Columbia Sugar Refineries. At one time the rates broke as far east as Winnipeg. Under a judgment of the board, rates were equalized at Portage la Prairie. The rates referred to as equalizing at that point were all-rail rates, but as a matter of fact the rail and water breaking point, which constitutes the real movement, was at Wapella, Sask., just past the Manitoba boundary. The complaints, however, have continued and the matter was pending for judgment at the time the order in council was made. Under the rate basis applicable in the different territories under consideration, the prairie territory enjoying a lower rate basis than British Columbia (owing to the great cost of railway construction and of railway operation in B.C.), the all-rail rate today from Fort William west would meet the rate from Vancouver east between Medicine Hat and Calgary, while the rate from Montreal, if the commodity moved on the lower water basis in eastern territory, and thus be a rail-lake and rail movement, would now break at about Swift Current, Sask. The eastern refineries have always argued that they were entitled to the rates being so adjusted. On the other hand, the British Columbia Refineries has always taken the position that its particular movement ought not to be considered on a mileage basis, and that the rate, having voluntarily been put in by the C.P.R., should stand. In the past the C.P.R. was the only railway company interested. It certainly required no increased revenues. The Canadian Northern today is operating out of Vancouver. Its deficit for the current year will not be short of ten million dollars, and to this deficit would have to be added the annual cost of the payment the government makes under the arbitration proceedings, which cannot well be stated as being less than \$550,000. But the Canadian Northern rates cannot be raised unless the rates of the Canadian Pacific today are not those it was enjoying when the former complaint was heard. It is, however, in the interests of the rail-

ways themselves, as well as in the interests of the public, that a substantial movement of sugar should be made from the west east. To break rates at Bassano, which is practically Calgary, would unduly and unfairly shut the B.C. Refineries out of a market which is contiguous to it and hand that market over to competitors situate many hundreds of miles farther away. The position is not that of the Nova Scotia and New Brunswick refineries, which seek to have an added mileage of 487 miles in part absorbed by the railways. The position is reversed.

Under all the circumstances, recognizing on the one hand the absolute necessity of an increase in rates, and on the other hand that the markets of the British Columbia Refineries should not by a change of railway rates be largely wiped out, I beg to recommend that Regina, which is 388 miles east of Bassano, be made the breaking point, and that the requisite amending order be made. In order to cover the situation, the order should read as follows:

The commodity rates to be charged upon sugar, in carloads, from Vancouver to destinations in Alberta, Saskatchewan, and Manitoba shall be as follows:

(a) To Regina, Lanigan, Humbolt, and Melfort—the rail-lake-and-rail 5th class rates contemporaneously in effect from Montreal to the same points.

(b) To Winnipeg—the percentage of the 5th class rate from Vancouver to Winnipeg, equivalent to the ratio of the commodity rate from Vancouver to Regina, to the 5th class rate from Vancouver to Regina.

(c) Subject to the said rates as maxima, the commodity rates to destinations intermediate to the aforesaid on the direct lines of transit shall be reasonably graduated until they merge into the 5th class rates from Vancouver.

(d) To destinations off the aforesaid direct lines of transit, the commodity rates shall not exceed those for equivalent direct line distances applied to the shortest practicable routes, with reasonable additions where the direct line mileage is insufficient for the purpose.

(e) During the existence of the class freight tariffs from Vancouver and Montreal in effect at the date of this order, the commodity rates from Vancouver, graduated as aforesaid, shall not exceed 94c to Banff, \$1 to Calgary and Edmonton, \$1.05 to Lethbridge, \$1.21 to Saskatoon, and \$1.26 to Prince Albert, per 100 lb. respectively.

Order in Council Changing the Dates.

On Aug. 24, the Dominion Government passed an order in council under authority of the War Measures Act, 1914, ordering that the commodity rates on refined sugar in carloads be as follows:—

To Montreal for local deliveries, 32c per 100 lb. from St. John, N.B., and 33c per 100 lb. from Halifax.

To destinations in Canada, west of Montreal, the 5th class rates current from Montreal, with the addition of 14½c per 100 lb. from St. John and 15½c per 100 lb. from Halifax.

From Vancouver, B.C., the rates provided for in the order in council are those recommended by the Chief Railway Commissioner, at the end of his report as given above, in paragraphs a, b, c, d and e.

The new rates are to come into force from St. John and Halifax on Sept. 12, and from Vancouver on Sept. 23, by publishing and filing on one day's notice with the Board of Railway Commissioners, and shall remain in force for the duration of the war or until further ordered.

The United States Railroad Administration's Work.

Coastwise Steamships.—The Railroad Administration has placed H. B. Walker, President of the Old Dominion Steamship Co., in charge of all coastwise steamships operated by the administration. He succeeds the administration's coastwise steamship advisory committee, of which L. J. Spence was chairman.

Meals on Dining Cars.—A la carte luncheon and dinners on dining cars on U.S. railways will be abandoned after Oct. 1, and table d'hôte meals of not more than four courses substituted, with the charge limited to \$1, except on a few through trains, where \$1.25 will be charged. Breakfast will be served a la carte with a restricted menu. The purpose is to economize and put meals within the reach of more people, increase the capacity of dining cars, save labor and conserve food.

Pullman Lines.—The operating department of the Pullman Co., now under U.S. Government control, is known as the Pullman Car Lines. L. S. Taylor, heretofore Controller, Pullman Co., has been appointed Federal Manager of the Pullman Car Lines, with office in the Pullman Building, Chicago. He has jurisdiction over all departments, reporting to the Director, Division of Operation, U.S. Railroad Administration.

Garnisheeing of Wages, Etc.—The Director General has issued the following order:—"Whereas proceedings in garnishment, attachment, or like process by which it is sought to subject or attach money or property under federal control or derived from the operation of carriers under federal control under the act of Congress of Mar. 21, 1918, are inconsistent with said act, and with the economical and efficient administration of federal control thereunder; and whereas such proceedings are frequently commenced, particularly for the garnishment or attachment of amounts payable, or claimed to be payable, as wages or salaries of employes, which practice is prejudicial to the interests of the Railroad Administration in the operation of the lines and systems of transportation under federal control, and is not necessary for the protection of the rights or the just interests of employes or others; and whereas if any rules or regulations become necessary to require employes to provide for their just debts, the same will be issued hereafter; it is therefore ordered, that no moneys or other property under federal control or derived from the operation of carriers while under federal control shall be subject to garnishment, attachment, or like process in the hands of such carriers, or any of them, or in the hands of any employe or officer of the United States Railroad Administration.

E. B. Tilt, formerly Engineer of Tests, Angus Shops, C.P.R., who returned recently to Montreal from Spain, where he was for some time as President and General Manager, Sociedad Hispano-Americano (Gaston Williams) writes: "I have been making an effort to catch up with the reading of the copies of Canadian Railway and Marine World which came here after I requested you to change my address, so that I may get up to date on current transportation matters. Canadian Railway and Marine World was among my most welcome visitors in Madrid and kept me most completely in touch with the railway and marine situation in Canada."

Cross Ties Bought in Canada in 1916 and 1917.

The following bulletin, prepared by the Interior Department's Forestry Branch, is based on reports received from 41 steam railways and 25 electric railways which bought ties in 1917. The average prices in the tables are based on the cost at the point of purchase, and may or may not include long-haul transportation charges. Only in the cases of those woods which are used in large quantities can value given be taken to represent the relative value of the wood.

A total of 7,661,715 ties was bought in 1917, a decrease of 177,800, or 2.3%, compared with 1916.

Of the total ties bought, 649,227 were treated with preservative to withstand decay. This is 8.5% of the total, compared with 2.5% in 1916 and 5% in 1915.

Jack pine heads the list in number of ties cut with 40.2% of the total. Jack pine has held this position since 1911, when it displaced eastern cedar. Eastern cedar still holds well on to second place and shows a slight increase as compared with 1916.

The average value was 51c a tie in 1917, compared with 42c in 1916. Electric railways bought 4.9% of the total in 1917 compared with 3.4% in 1916 and 2.5% in 1915. The electric railways paid an average of 56c a tie, while the steam railways paid an average of 51c.

The number of ties imported in 1917 was 1,213,025, valued at \$971,254, compared with 622,819 imported in 1916, valued at \$424,599. The majority of these ties were of species of wood either not native to or not abundant in Canada, such as oak, hard pine, chestnut, and gum.

The Metric System in Great Britain.—A report presented to the Imperial Parliament recently, by the committee appointed to make suggestions as to the commercial and industrial policy to be followed after the war, contains certain conclusions relative to the adoption of the metric system in Great Britain. The committee states that having given the subject very full consideration, it is unable to recommend the compulsory adoption of the system, expresses itself as not being convinced that it is better than the present British system, and as satisfied that the practical objections are such as to outweigh any advantages claimed for it.

The Pacific Terminal Land Co. has been incorporated under the British Columbia Companies Act with authorized capital of \$8,000 and office at Victoria, to acquire and develop land and properties in the province, and to build wharves, tramways and logging railways, for operation by steam or electricity.

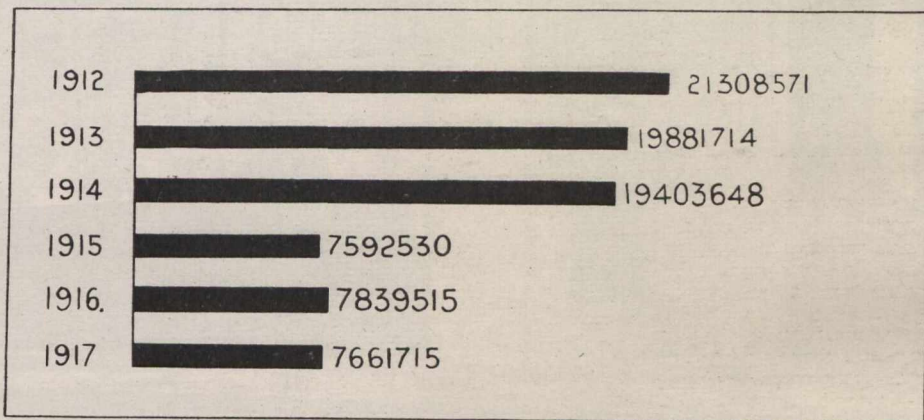
The Edmonton, Dunvegan & British Columbia Ry. special freight rates for cattle, sheep, hay and straw and haying outfits, have been arranged with the Dominion Department of Agriculture's Live Stock Branch. The shipper must have a certificate from the provincial agricultural department before he can make shipment, all charges being paid by the government.

The Peace River Development Co. is reported to have contracted to transport by water to Peace River Crossing, 200,000 bush. of grain from the Peace River Valley before the close of navigation. The grain will then be shipped by the Central Canada Ry. and the Edmonton, Dunvegan & British Columbia Ry. to Edmonton, and thence east by one of the transcontinental lines.

Ties Bought, 1916 and 1917, by all railways.

Kind of Wood.	1916.				1917.			
	Number.	Value.	Av. Value.	Per Cent.	Number.	Value.	Av. Value.	Per Cent.
Total	7,839,515	\$3,307,319	\$0.42	100.0	7,661,715	\$3,902,189	\$0.51	100.0
Jack Pine	3,708,781	1,461,114	.39	47.3	3,077,228	1,280,095	.42	40.2
Eastern Cedar	1,642,836	737,253	.45	21.0	1,674,343	896,601	.54	21.9
Oak	353,751	253,450	.72	4.5	937,630	811,749	.87	12.2
Hemlock	631,706	231,941	.37	8.1	610,628	279,366	.46	8.0
Douglas Fir	328,714	100,946	.31	4.2	437,509	163,912	.37	5.7
Tamarack	434,833	163,225	.38	5.5	373,218	158,420	.42	4.9
Western Helock	62,749	23,657	.38	0.8	148,031	90,558	.61	1.9
Hard Pine	126,901	84,775	.67	1.6	129,278	92,460	.72	1.7
Eastern Spruce	351,980	147,295	.42	4.5	115,578	37,939	.33	1.1
Western Cedar	65,472	24,094	.37	0.8	49,652	23,538	.47	0.6
Maple	12,374	7,177	.58	0.2	28,514	21,412	.75	0.4
Western Hemlock	62,749	23,657	.38	0.8	148,031	90,558	.61	1.9
Beech	18,433	10,155	.55	0.2	17,803	16,050	.90	0.2
Chestnut	77,093	52,774	.68	1.0	17,602	11,642	.66	0.2
Balsam Fir	1,454	263	.18	*	5,847	690	.12	0.1
Elm	4,495	2,029	.45	0.1	5,622	2,931	.52	0.1
Birch	6,229	4,148	.67	0.1	5,245	4,238	.81	0.1
Yellow Cypress					2,026	905	.45	*
White Pine					1,141	393	.34	*
Gum	2,588	1,166	.45	*	1,035	661	.64	*
Sycamore					1,034	660	.64	*
Ash	497	185	.37	*	550	243	.44	*
Red Pine	8,401	1,620	.19	0.1				
Western Larch	228	52	.23	*				

*Less than one-tenth of 1 per cent.



Cross Ties Bought in Canada, 1912-1917.

Cross-Ties Bought, 1916 and 1917, by steam railways.

Kind of Wood.	1916.				1917.			
	Number.	Value.	Av. Value.	Per Cent.	Number.	Value.	Av. Value.	Per Cent.
Total	7,572,878	\$3,189,834	\$0.42	100.0	7,283,330	\$3,692,111	\$0.51	100.0
Jack Pine	3,668,195	1,443,529	.39	48.4	3,014,987	1,246,406	.41	41.4
Eastern Cedar	1,570,586	705,359	.45	20.7	1,568,307	840,214	.54	21.5
Oak	339,712	241,763	.71	4.5	932,760	807,895	.87	12.8
Hemlock	579,474	206,898	.36	7.7	601,943	274,350	.46	8.3
Douglas Fir	279,092	86,646	.31	3.7	372,509	138,892	.37	5.1
Tamarack	414,367	154,105	.37	5.5	366,734	154,981	.42	5.0
Hard Pine	126,559	84,518	.67	1.7	129,278	92,460	.72	1.8
Eastern Spruce	344,937	144,702	.42	4.6	115,678	37,939	.33	1.6
Western Cedar	55,972	19,344	.35	0.7	49,652	23,538	.47	0.7
Maple	12,374	7,177	.58	0.2	28,514	21,412	.75	0.4
Western Hemlock	62,749	23,657	.38	0.8	25,924	9,274	.36	.04
Western Spruce					22,101	7,726	.35	.03
Beech	18,372	10,121	.55	0.2	17,478	15,895	.91	0.2
Chestnut	76,825	52,604	.68	1.0	17,097	11,353	.66	0.2
Balsam Fir	1,454	263	.18	*	5,847	690	.12	0.1
Elm	4,495	2,029	.45	0.1	5,516	2,891	.52	0.1
Birch	6,229	4,148	.67	0.1	5,245	4,238	.81	0.1
White Pine					1,141	393	.34	*
Gum	2,588	1,166	.45	*	1,035	661	.64	*
Sycamore					1,034	660	.64	*
Ash	497	185	.37	*	550	243	.44	*
Red Pine	8,401	1,620	.19	0.1				

*Less than one-tenth of 1 per cent.

Ties Bought, 1916 and 1917, by electric railways.

Kind of Wood.	1916.				1917.			
	Number.	Value.	Av. Value.	Per Cent.	Number.	Value.	Av. Value.	Per Cent.
Total	266,637	\$117,485	\$0.44	100.0	378,385	\$210,078	\$0.56	100.0
Western Hemlock					122,107	81,284	.67	32.3
Eastern Cedar	72,250	31,894	.44	27.1	106,036	56,387	.53	28.0
Douglas Fir	49,622	14,300	.29	18.6	65,000	25,020	.38	17.2
Jack Pine	40,586	17,585	.43	15.2	62,241	33,689	.54	16.4
Hemlock	52,232	25,043	.48	19.5	6,885	5,016	.58	2.3
Tamarack	20,466	9,120	.45	7.7	6,484	3,439	.53	1.7
Oak	14,039	11,687	.83	5.3	4,870	3,854	.79	1.3
Yellow Cypress					2,026	905	.45	0.5
Chestnut	268	170	.63	0.1	505	289	.57	0.1
Beech	61	34	.56	*	325	155	.48	0.1
Elm					106	40	.38	*
Western Cedar	9,500	4,750	.50	3.6				
Eastern Spruce	7,043	2,593	.37	2.6				
Hard Pine	342	257	.75	0.1				
Western Larch	228	52	.23	0.1				

*Less than one-tenth of 1 per cent.

Canadian Northern Railway's Temporary Passenger Station, etc., in Montreal.

The Canadian Northern Ry.'s temporary passenger station at the corner of Lagachetiere and St. Monique Streets, Montreal, is practically completed. It is a reinforced concrete structure, with two stories above grade and one below. The

side by a retaining wall 18 ft. high, which is run back for 50 ft. The court is 33 ft. wide and is paved with brick. It will serve as a wagon approach to the incoming baggage room, which has two wide doors opening directly on the court.

At its right descends a broad staircase, leading directly to the trains. There is also an entrance to the women's waiting room from the entrance vestibule and it contains space for telegraph office and news stand. The arrangement of the en-

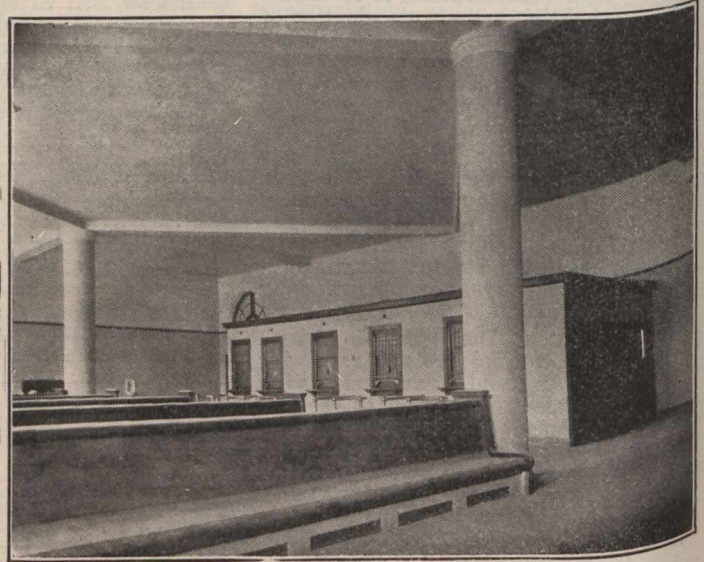
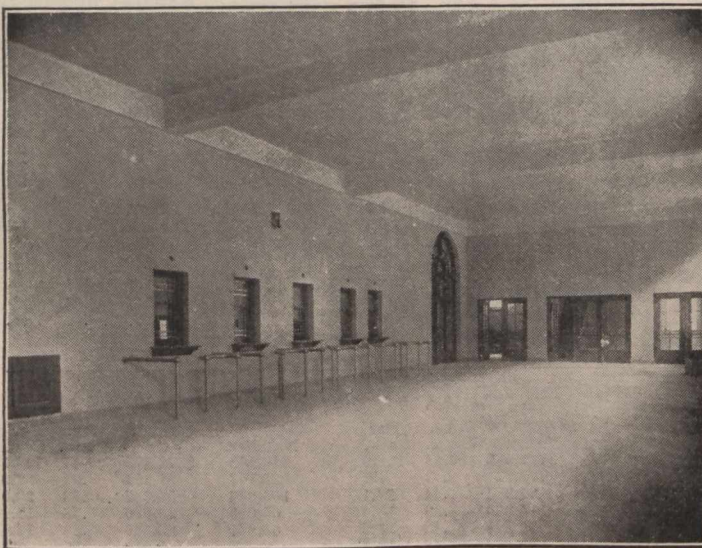


The Canadian Northern Railway's Temporary Station in Montreal, Lagachetiere St. front.

exterior walls are lined with 6 in. terracotta blocks, with an air space between the concrete outer wall and the lining. The main facade faces Lagachetiere St. The building is of classic design, the passenger entrances being five large arched

A passenger entering the building from Lagachetiere St. will go immediately into the entrance vestibule, which is about 30 x 80 ft. It will be the heart of the building, from which all its activities will radiate. It will also be used, in some de-

trance vestibule has been made with the idea of saving the traveller as many unnecessary steps as possible; he may transact all his business here, check his baggage, purchase his tickets, obtain his newspaper, check parcels and proceed di-



The Canadian Northern Ry.'s temporary station in Montreal. Rotunda and ticket wickets to left, waiting room to right.

openings above which are medallions containing the C.N.R. Co.'s insignia. A dignified entablature in cement surmounts the building on all facades. Over the passenger entrances on Lagachetiere St. is a marquise, protecting the sidewalk from rain and snow. To the right of the building is a court, formed on its outer

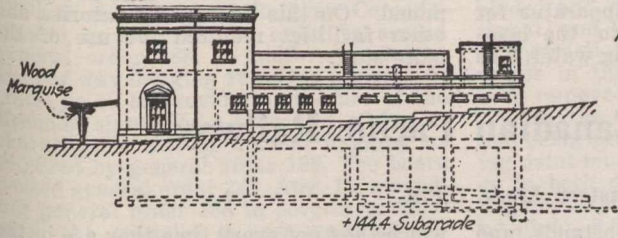
gree, as a waiting room for those who have not the time nor inclination to go back to the main waiting room, which will immediately adjoin it at the rear. Upon this entrance vestibule, on the side opposite the entrance, open four windows of the ticket office. At its end, to the left, is the baggage counter and parcel room.

rectly to his train without traversing the main waiting room. If he arrives well ahead of train time and wishes to sit down for a while, he may cross the entrance vestibule to the main waiting room, which is immediately behind it, and is 50 x 80 ft. The beamed ceiling of this latter room is supported by two columns,

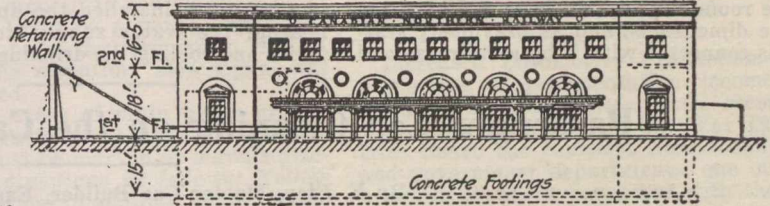
the beams of the ceiling radiating from the column heads, forming a diamond pattern. Between the main waiting room and the entrance vestibule are ticket offices, enclosed with terra cotta walls and ornamented with marble slabs and bronze

area of 2,100 sq. ft. As before stated, this room has two large doors opening out on the wagon court, and at the extreme rear there is a freight elevator, large enough to receive trucks, which will descend to the outgoing baggage room,

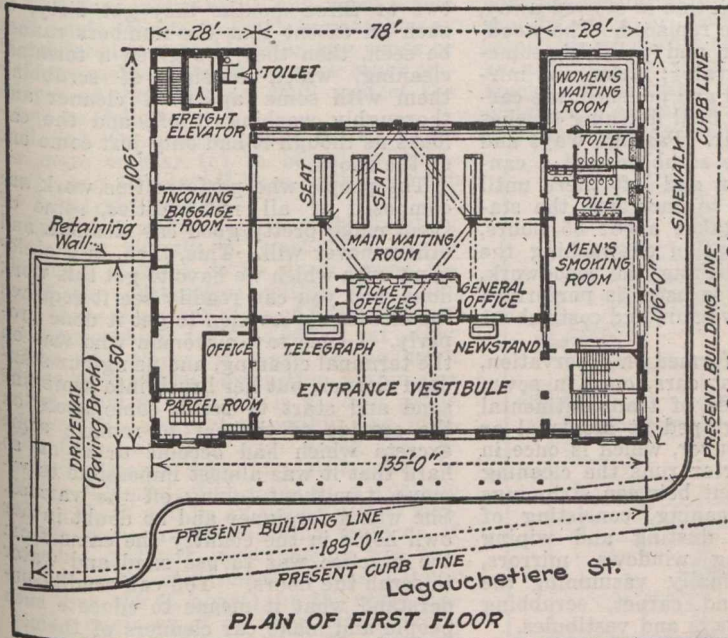
compartments, with seats arranged around the walls, the radiators being concealed in recesses behind the seats. There are drinking fountains in the main waiting room, women's waiting room, and the men's smoking room, to supply iced water.



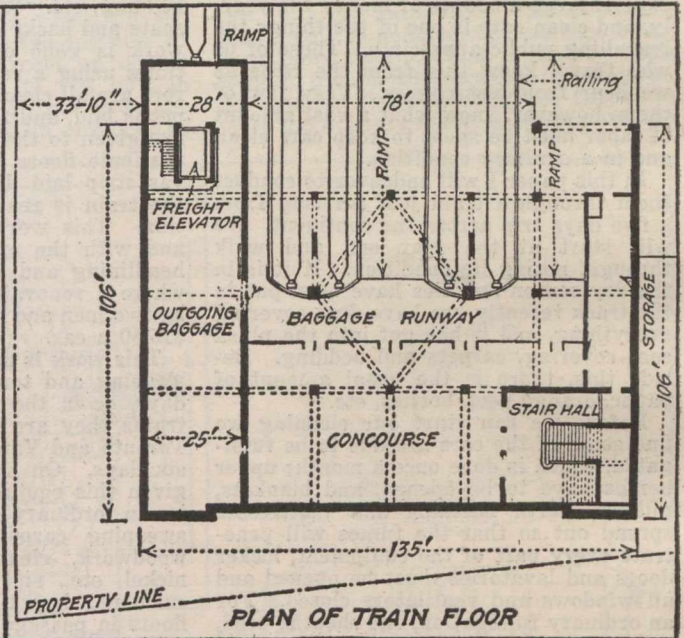
ST. MONIQUE STREET ELEVATION



LAGAUCHETIERE STREET ELEVATION



PLAN OF FIRST FLOOR



PLAN OF TRAIN FLOOR

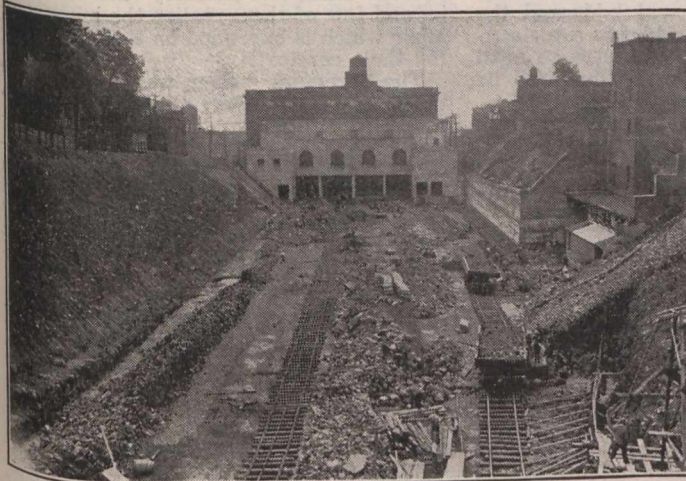
The Canadian Northern Ry.'s Temporary Station in Montreal.

Since the plan shown above, in the lower left hand corner of the group, was made, the space originally intended for a women's waiting room has been made into a men's smoking room, and the space originally intended for a men's smoking room has been made into a women's waiting room. The lavatory arrangements, as shown on the plan, have been reversed.

grilles. In the main waiting room the seats are of the latest model, placed back to back, with a radiator between each pair. This will give an efficient heating

immediately below, at the train level. There is a staircase in the incoming baggage room, which also leads down to the train level.

From the women's waiting room are doors leading to the entrance vestibule and to the staircase hall. This hall, at the right hand end of the entrance vestibule



The Canadian Northern Railway's temporary station in Montreal.

The left view shows the rear of the station, from Dorchester St. Bridge, the right view is looking towards Mount Royal tunnel portal, from the rear of the station.

system and at the same time all the radiators are concealed. Along the tops of the seats are lines of electric lights with reflectors. At the left of the main waiting room is the incoming baggage room, with an

Opposite the incoming baggage room, at the right of the main waiting room, are the men's smoking room and the women's waiting room, with lavatories between. Both of these rooms have windows facing on St. Monique St. They are good sized

contains broad concrete stairs, leading to the train level, and a narrower staircase to the offices on the second floor. Descending the staircase, the passenger will arrive in the lower staircase hall, which in turn opens to the concourse. The con-

course contains approximately 3,500 sq. ft., and is separated from the train room by an iron and glass screen, immediately inside of which is the baggage runway, connecting to the outgoing baggage room at the left. The outgoing baggage room is immediately below the incoming baggage room on the first floor, and is of the same dimensions, and as previously stated, is connected with it by a staircase and

large freight elevator.

There are five tracks arranged in the present construction. From the baggage runway, ramps with a grade of 5% descend to the platform level.

To the right of the baggage runway are the machinery and storage rooms, and here are installed the apparatus for heating the water supply to the lavatories and cooling the drinking water. The

heating plant for the building is installed in a separate structure behind the outgoing baggage room.

Along the Lagachetiere St. front, on the second floor level, is approximately 4,000 sq. ft. of office space, which is to be subdivided later when its uses are determined. On this floor are lavatories and other facilities required for use of the office staff.

Passenger Car Cleaning on the Canadian Pacific Railway.

By E. Eley, Master Car Builder, Eastern Lines, C.P.R.

Cleaning passenger equipment cars is one of the operations all railways have to expend large amounts of money for yearly, and clean cars is one of the things the travelling public appreciate. Those of us who travel know this from the remarks we hear from passengers. Very few of them, however, know what a vast amount of labor must be spent to keep cars clean and in a sanitary condition.

In this paper I will endeavor to conduct them through a train just arriving from a five days trip across the continent. We will start at the rear end and walk through, noting its condition. If it is in the dry season and ties have been put in the track recently, we have dust covering everything, and it has got into the plush seat covering, carpets and bedding. Besides this, there is the usual amount of paper, orange peel, bottles, etc.

Before we can start our cleaning we find some of the cars are due to be fumigated, which is done once a month; upper berths have to be opened, and blankets, pillows, berth curtains and mattresses spread out so that the fumes will penetrate every part of the equipment, locker doors and lavatories must be opened and all windows and ventilators closed. For an ordinary fumigation, one sheet is used, saturated with formaldehyde and hung up in the centre of the car. The car is then closed up, locked and left for at least an hour and a half, after which it is opened and ventilated for the cleaners to go in. For a thorough fumigation, which is used in cases of actual infection, three sheets are used, saturated with formaldehyde, and hung up, one in each end, and one in the center of the car, and the car left closed at least three hours, after which it may be opened and ventilated.

From sleeping cars, carpets, bedding, seats and seat backs have to be removed from the car for cleaning and airing. To clean these, the following is the usual practice: Blankets and berth curtains are shaken, mattresses are beaten or blown with air, seats and backs are either blown with air or cleaned with vacuum. The carpet is first swept off and then blown with air. All this equipment is then laid on racks or trestles until the interior of the car is cleaned thoroughly and made ready to receive it again.

The interior of the car is cleaned from the headlining to the floor. First we have to get rid of the dust. Deck sash are opened and dust wiped out with a disinfectant solution in the water, dust is got out from between and above the window sash by hammering with the hand, and window sticks covered with a cloth. When we have got down all the dust we can, the floor is swept out. We start again at the headlining and wash it, including the deck sash down to the deck sash rail. All the woodwork below this has to be wiped down, and if necessary washed with castile soap and warm water, and finally the floor and steam pipes are washed with a disinfectant solution in the water; this

includes toilets under washstands, and lockers. Now it is ready to receive the bedding, etc. When this is stowed away, seats and backs are replaced. The woodwork is gone over and polished, sometimes using a renovator; nickel and mirrors are all cleaned and polished, the carpet is laid, and the final finishing touches are given to the car. Passage ways and vestibule floors are scrubbed and a canvas strip laid down and left there until the train is ready to back into the station. This work takes about 35 hours, and with the exception of washing the headlining and polishing the woodwork, where a renovator is used, is performed by two men and a woman, and costs about \$15.50 a car.

This work is performed on observation, sleeping and tourist cars, once in seven days, or in the case of transcontinental trains they are stripped at Montreal or Toronto and Vancouver, which is once in six days. On shorter runs the cleaning given this equipment between strippings is an ordinary cleaning, consisting of sweeping carpets, dusting and wiping woodwork, cleaning windows, mirrors, nickel, etc., and finally vacuuming the cushions, backs and carpet, scrubbing floors in passage ways and vestibules.

We will now take the day cars. We do not remove seats or seat backs from them, windows are opened and the car is swept out then dusted down, headlining washed if necessary, floor and steam pipes scrubbed with a disinfectant solution, and, if necessary, all, or part of the interior, washed down, windows, mirrors and nickel cleaned and polished, seats and backs in the first class are vacuumed and aisle strip blown with air, and laid, and the car is ready for service. If cars are cleaned in the morning and do not leave until night, they quite frequently have to be dusted again just prior to departure.

In the baggage and express cars, the fish racks are lifted and pits swept out, and then rack and pits are scrubbed with clean water without disinfectant, then pits and racks are sprinkled with lime and racks replaced. As necessity requires, these cars are washed down from roof to floor, as being on the front end of trains they get very dirty from smoke from the locomotive. The reason we do not use disinfectant in the water for scrubbing baggage cars is, it would taint some of the commodities carried in them.

Mail cars are cleaned in the same way, except that the floors are scrubbed with disinfectant in the water. This completes the inside cleaning. The outside is cleaned by washing or wiping, according to weather conditions, but the best results are obtained by wiping when it is possible to do so. The windows are occasionally gone over with a little muriatic acid in water whenever necessary to cut the dirt or scum which accumulates, and then washed with clear water. vestibules and steps are wiped down and brass work polished. This is an ordinary cleaning

which they get every time they are in the terminal, but even with this cleaning, in two or three months they get dirty, to such an extent that the numbers cannot be seen, then they are given a terminal cleaning, which consists of scrubbing them with some approved cleaner and thoroughly washing it off, and the car looks as though it had only just come out of the shops.

The people who perform this work are composed of all nationalities, some of them make pretty good car cleaners and others never will. This, then, is the element with which we have to get this work done, and you can readily see it requires the closest supervision to get it done properly. I once saw a woman who was on the terminal cleaning, and using our standard cleaner, put her brush into some fine sand and start to scrub some spots on the outside of the car to remove some excreta which had become dried on so hard that it was almost impossible to remove it without taking off the varnish. She was a foreigner and no doubt in her own home in the country she came from the practice was to use sand and water to scrub the floors. You can readily understand what it means to educate such people and make car cleaners of them.

To supervise work of this nature requires men of energy and patience, and they, like people working under them, require special training, otherwise the class of cleaning deteriorates, then it becomes necessary to make a crusade on better cleaning, and some of our foremen will tell you this occurs quite frequently. It has always been our desire to give our patrons clean and sanitary cars to travel in, and few of them realize the amount of labor which is expended on the equipment for their comfort.

The foregoing paper was read before the Canadian Railway Club in Montreal.

Steel Rail Deliveries.—We were officially advised Sept. 9 that the Dominion Iron & Steel Co., Sydney, N.S., had rolled 72,708 tons of steel rails out of the 100,000 tons ordered by the Dominion Government and that 62,973 tons had been shipped to railways as below:

	Tons.	Lbs.
Canadian Govt. Rys.	11,280	600
Canadian Northern Ry.	17,349	1,690
Canadian Pacific Ry.	23,679	540
Grand Trunk Ry.	10,314	840
Toronto, Hamilton & Buffalo Ry.	351	1,910

The Dominion Transportation Co. has been incorporated under the British Columbia Companies Act, with authorized capital of \$10,000 and office at Victoria, to carry on business as general carriers, railway and forwarding agents and warehousemen, and to operate touring and sight-seeing cars and other similar public conveyances.

The Algoma Central & Hudson Bay Ry. announced Sept. 1, that with the exception of two and a half townships, all its land grants will be thrown open for prospecting purposes for two years.

Maintenance of Way Flagging Rules for Impassable Track.

The Canadian Railway War Board applied to the Board of Railway Commissioners recently for an order to amend general order 188, re uniform maintenance of way flagging rules for impassable track, so as to provide for the use of the Brennan signal, or a device of a similar character, in lieu of manual flagging as required by general order 188. The board passed general order 248, Aug. 19, amending general order 188 in several particulars. As amended it now reads as follows:

1. Before undertaking any work which will render the main track impassable, or if rendered impassable from any cause or defect, trackmen, bridgemen, or other employees of the company shall protect the same as follows:

2. (a). On double track; (b) on three or more tracks; (c) in mountain territory; and (d) on all lines with frequent or fast train service—

Send out a flagman in each direction with stop signals, at least 1,500 ft. in daytime, if there is no down grade toward the obstruction within one mile, and there is a clear view of 6,000 ft. from an approaching train; 3,600 ft. at other times and places, if there is no down grade toward the obstruction within one mile; 5,400 ft. if there is a down grade toward the obstruction within one mile. The flagman must, after going the required distance from the obstruction to insure full protection, take up a position where there will be an unobstructed view of him from an approaching train of, if possible, 1,500 ft., first placing two torpedoes on the rail (not more than 200 nor less than 100 ft. apart), on the same side as the engineer of an approaching train, 300 ft. beyond such position. The flagman must display a red flag by day and a red light by night, and remain in such position until recalled or relieved.

3. On other lines—
(a) By day place a red flag and, in addition, by night a red light, on the same side of the track as the engineer of an approaching train, at a point 600 ft. from the defective or working point, with two torpedoes placed on the rail opposite each other so as to cause but one explosion, 150 ft. in advance of the red signal, and provide further protection as follows:

(b) By day place a red flag, and, in addition, by night, a red light, on the same side of the track as the engineer of an approaching train so that it will be clearly in his view, at least 3,600 ft. from the defective or working point, if there is no down grade toward the obstruction; 5,400 ft. if there is a down grade within one mile of the obstruction, or as much farther as may be necessary to ensure full protection.

(c) Place two torpedoes (not more than 200 nor less than 100 ft. apart) on the rail on the same side as the engineer of an approaching train, 300 ft. in advance of the red signal.

(d) Between sunset and sunrise, and during stormy, foggy, or smoky weather conditions, flagmen must be placed instead of the outer signals referred to in clause (b).

4. Trains stopped by flagman, as per rule 2 and rule 3 (d), shall be governed by his instructions and proceed to the working point or working point signal, as the case may be, and there be governed by signal or instructions of the foreman in charge.

5. Trains stopped by red signal, as per

rule 3 (c), shall replace the torpedoes exploded and proceed to the working point signal, and there be governed by signal or instructions of the foreman in charge, unless in the meantime stop signal has been removed.

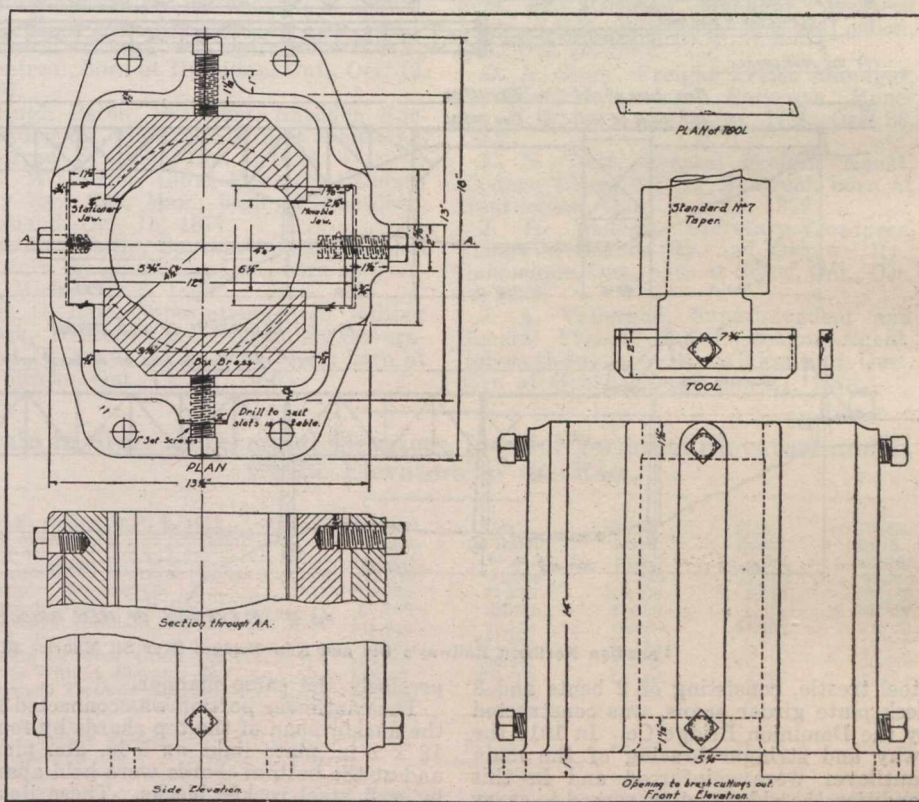
6. In the event of train order protection being provided, the defective or working point must be marked by signals placed in both directions as follows: Yellow flags by day and in addition yellow lights by night, 3,600 ft. from the defective or working point; red flags by day, and in addition red lights by night, 600 ft. from the defective or working point, on the same side of the track as the engineer of an approaching train; except on double track, where trains run to the left, in which case signals shall be placed to the left hand side as seen by an engineer of

red fuses, and a supply of matches.

The foregoing rules be printed in railway companies working time tables for the guidance of all employees. Subdivisions to be named, setting out which of the rules are applicable to each.

General orders 161, Feb. 23, 1916, and 216, Jan. 24, 1918, are rescinded.

Increased Locomotive Production.—At a meeting of representative locomotive builders in Washington, D.C., recently, with representatives of the War Industries Board the Railroad Administration, and government departments, one of the heaviest problems connected with the direction of war work—an adequate supply of railway locomotives—was solved. Plans were worked out whereby the output of the U. S. locomotive manufacturing plants will be doubled, the increase being from more than 3,000 on a pre-war basis to more than 6,000 completed locomotives. An equable distribution of the output to meet the military needs in France and the



Jig for holding trailer truck brasses for boring.

The illustration above shows a jig used at the C.P.R. Shops, Ogden, Alta., for boring trailer truck brasses. The face plate of the duplex rod boring machine is drilled to take the cap studs for holding the jig.

an approaching train, and there is a clear view of at least 1,200 ft.

7. When weather or other conditions obscure day signals, night signals must be used in addition.

8. "Frequent service" shall mean nine or more trains a day and "fast train service" shall mean a service at a speed of 35 miles or more an hour.

9. That the Brennan signal device, as approved by the board, or a signal of an equally serviceable type attached to the base of the rail, to be approved by the board, be used to display the signals directed to be provided under rules 3 (b) and 8 (yellow signal) of this order and rule 35 (yellow signal) of the Uniform Code of Operating Rules.

10. Flagmen must each be equipped for day time with a red flag and 4 torpedoes, and for night time, and when weather or other conditions obscure day signals, with a red light, a white light, 4 torpedoes, 3

needs of the Railroad Administration for the steam railways in the United States has been provided by the chairman which has met the approval of the government officials involved.

New York Ticket Offices.—A new York dispatch says the large ticket office in the world, the United States Railroad Consolidated Ticket Office, was opened at 64 Broadway, Sept. 5. Other offices were opened at 57 Chambers St., and 114 West 42nd St., Manhattan, and 336 Fulton St., Brooklyn. The Broadway office has more than 60 employees. All the trunk lines out of New York and the Sound and coast-wise steamship lines are represented.

The Reid Newfoundland Co. has given notice that, on and after Oct. 5, it will increase its freight rates 20% on traffic moving from North Sydney or Louisburg to all rail and steamship points on its system, either via Port aux Basques and rail or via direct boats to St. John's, Nfld.

Canadian Northern Railway's Bridge over the St. Maurice River at Grand Mere.

A new bridge, replacing the old cantilever, has been completed recently on the Canadian Northern Ry. Eastern Lines, over the St. Maurice River, about a mile east of Grand Mere, Que. The bridge, as seen in the plan, fig. II, consists of two 100 ft. deck plate girder spans, two 115 ft. deck truss spans, one 250 ft. deck truss span and one 38 ft. deck plate girder span. The old cantilever bridge, shown as fig. I, was built by the Dominion Bridge Co., in 1895, and was flanked on the western side by a 100 ft. deck lattice span, the remaining portions of the depression being served by wooden trestles. In 1910 the western wooden trestle was burned and the lattice span wrecked by a train, the bracing of the west anchor arm of the cantilever being at the same time slightly damaged. To take the place of the destroyed trestle and lattice span, a

erection stresses were nowhere large enough to affect the sections of the truss members, so that no extra metal was necessitated by erecting in this manner. The west truss span was erected first. A timber bent was built at the center of this span and the truss was assembled by means of a Bay City derrick car working from the old bridge. A 12-ton stiffleg derrick was then set up on the span, on trucks which ran on the top chords, and with this derrick the west half of the channel span was erected, cantilevering out from pier 3. The 115 ft. span was used as an anchor arm and additional counterweight over and above the weight of the steel was secured by anchoring the free end of this truss span to pier 4, using, for this purpose, two 2 in. dia. bolts 17 ft. 2 in. long, at each corner. The east half of the bridge was then erected in

lowered still more, the diagonal connection and top chord splices were bolted. As soon as the top chords touched at the center the loosening of the anchorage was stopped and the span was left partially suspended until all the splice rivets were driven in the bottom chord. This method insured tight joints in the bottom chord splices and secured a very satisfactory camber. The ends of the anchor spans were then jacked up and the erection links removed. The top chords, being now in compression, were riveted under the best possible condition. All the end bottom struts were designed to permit of jacking, so that the pier members may be repaired or renewed at any time. The deck steel was put in the anchor spans as they were erected, but the stringers and stringer bracing of the channel span were omitted until the anchor spans were jacked up,

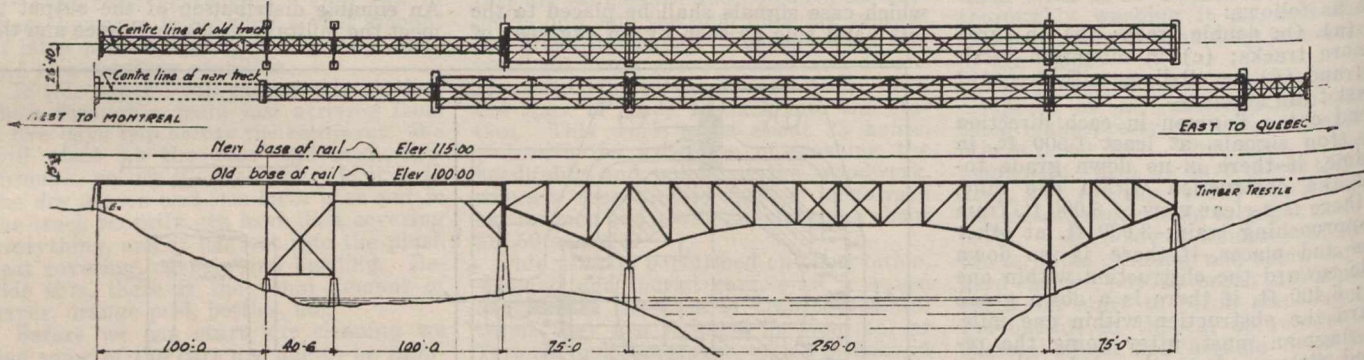


FIG. I ELEVATION OF OLD BRIDGE

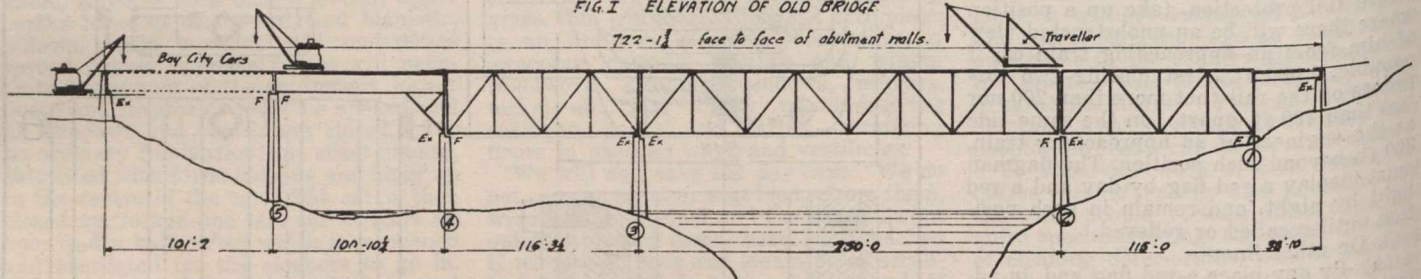


FIG. II ELEVATION OF NEW BRIDGE.

Canadian Northern Railway's Old and New Bridges Over St. Maurice River at Grand Mere, Que.

steel trestle, consisting of 2 bents and 3 deck plate girder spans, was constructed by the Dominion Bridge Co. In 1915 the sway and stringer bracing of the main cantilever were reinforced and in this condition the old structure served to carry the traffic until the summer of 1918.

In order to reduce the excessive grade at this point the track has been raised 15 ft., which makes the distance from base of rail to ground line for the intermediate piers about 70 ft., and in order to minimize the height of the piers the trusses were made deeper than would otherwise have been necessary. The truss spans only are new this year, the eight-year-old girders from the trestle mentioned above being used on new piers. The side truss span has 4 panels at 28 ft. — 1½ in., and is 35 ft. — 9½ in. deep, while the channel span has 8 panels at 30 ft. 9 in. and is 36 ft. deep to the center of gravity of chords. The chords and diagonals of the trusses are built up box sections, while the posts are I sections, composed of a web plate and four angles. The pier members are steel castings, with pin bearing between truss and shoes. There are the usual two lines of plate stringers heading into the floorbeams.

The piers being about 50 ft. high and the river very deep, erection by the cantilever method was naturally adopted. The

precisely the same manner.

The cantilever portion was connected to the anchor span of the top chords by four 12 x 1 in. plate links on 5 in. dia. pins, and at the bottom chords were held apart by cast steel rocker blocks. These links were made ¼ in. short of the normal length, in order that the ends of the cantilevers at the center of the channel would be elevated above normal to facilitate making the center connection. The expansion pier members were arranged to accommodate the expansion of the bottom chords during the change from the cantilever to the simple span conditions. To permit of a final adjustment in case the chords did not meet at the center of the channel span, both pier members on pier 3 were on rollers, on which the west half, both cantilever and anchor span, could be moved a few inches forward or backward as might be necessary. However, no such adjustment was necessary, as when the last section of bottom chord was lowered into place it fitted perfectly and the bolts connecting it to the center bottom lateral plate were put in place without difficulty. The anchorages were then gradually loosened, allowing the middle of the channel span to descend, and as the holes in the gusset plate came to a match with those in the web of the bottom chord the bolts were entered, and, the span being

and the cantilever condition removed, thereby minimizing the erection stresses. In the meantime, these stringers were placed on the ends of the anchor spans, giving additional counterweight, as it was considered advisable to keep the strain on the erection anchors in the concrete piers as low as possible.

After the trusses were completed the 40 ft. deck plate girder span was removed from the trestle posts, fitted with new pier members and placed in position at the east end of the bridge. Traffic was carried across the opening thus created in the old structure by 3 beam spans supported on a timber tower, which was built before the girders were removed. Moving the two 100 ft. girder spans was accomplished on Sunday, April 14, trains being run over the old bridge on the Saturday and over the new one on the Monday. These spans, being too heavy to be handled as a whole, were cut apart, and the separate girders removed by means of two 30-ton derrick cars, which have a capacity of 16 tons at 25 ft. radius. One car worked on the west end of the old bridge, and the other on the new truss spans. The girders weighed 31 tons each and special care had to be taken in hitching to these so that the cars would not be overloaded. The first steel was erected on Feb. 1, the channel span was connected

at the center on April 2, and riveting of the trusses was completed about June 3. The steel on the two 115 ft. trusses weighed 616,650 lb., in the 250 ft. span 936,000 lb., and the total steel in the structure, including girder spans, about 1,890,000 lb. The superstructure was designed and built by the Dominion Bridge Co.,

the writer having special charge of the design and the development of the erection scheme. The whole work was subject to the approval of W. P. Chapman, Engineer of Bridges, C.N.R., and C. H. Connell, Engineer, Quebec Division, C.N.R.—By H. M. White, of Dominion Bridge Co., in Contract Record.

W. S. Rollo, agent, G.T.R., St. Johns, Que., born at Dundee, Scotland, Oct. 8, 1852.

O. J. Rowe, Local Freight Agent, Grand Trunk Pacific Ry., Edmonton, Alta., born at Binghamton, N.Y., Oct. 11, 1879.

J. K. Savage, Superintendent, Smiths Falls Division Quebec District, C.P.R., Smiths Falls, Ont., born at Forrester, Ill., Oct. 5, 1876.

Lord Shaughnessy, K.C.V.O., President and Chairman, C.P.R., Montreal, born at Milwaukee, Wis., Oct. 6, 1853.

T. Duff Smith, Fuel Agent, Grand Trunk Pacific Ry., Winnipeg, Man., born at Barking, Essex, Eng., Oct. 2, 1868.

E. Sterling, Assistant Superintendent, Interurban Lines, British Columbia Electric Ry., New Westminster, born at Thornbury, Ont., Oct. 3, 1875.

K. Stewart, Assistant Superintendent, District 4, Intercolonial Division, Canadian Government Railways, New Glasgow, N.S., born at Little River, N.S., Oct. 21, 1868.

C. E. Stockdill, Assistant to Vice President and General Manager, Western Lines, C.P.R., Winnipeg, born at London, Ont., Oct. 25, 1881.

D. A. Story, Freight Traffic Manager, Canadian Government Railways, Moncton, N.B., born at Halifax, N.S., Oct. 26, 1853.

E. N. Todd, General Freight Agent, Eastern Lines, C.P.R., Montreal, born at Huntingdon, Que., Oct. 17, 1879.

J. H. Valteau, Secretary-Treasurer, Thousand Islands Ry. and Oshawa Ry., Gananoque, Ont., born at Selby, Ont., Oct. 14, 1889.

J. A. Vallerand, Superintendent and General Freight and Passenger Agent, Roberval-Saguenay Ry., Chicoutimi, Que., born at Quebec, Que., Oct. 21, 1878.

41 Birthdays of Transportation Men in October.

Many happy returns of the day to:
 J. L. Abell, Chief Dispatcher, Sudbury Division, Algoma District, C.P.R., Sudbury, Ont., born at Morganfield, Ky., Oct. 3, 1884.
 E. W. Beatty, K.C., Vice President and General Counsel, C.P.R., Montreal, born at Thorold, Ont., Oct. 16, 1877.
 Major Graham A. Bell, C.M.G., acting Deputy Minister of Railways and Canals, Ottawa, Ont., born at Perth, Ont., Oct. 13, 1874.
 L. S. Brown, General Superintendent, Eastern Lines, Canadian Government Railways, Moncton, N.B., born at Nelson, N.B., Oct. 19, 1864.
 F. F. Busted, formerly Engineer in charge of C.P.R. revision and second tracking, west of Calgary, Kamloops, B.C., born at Battery Point, Que., Oct. 10, 1858.
 J. M. S. Carroll, Sales Manager, Canadian Consolidated Rubber Co., Montreal, born at Ballarat, Australia, Oct. 22, 1875.
 C. E. Cartwright, ex-Division Engineer, C.P.R., Vancouver, B.C., born at Toronto, Oct. 13, 1864.
 A. F. Dion, Traffic Manager, Quebec Harbor Commission, Quebec, born at L'Islet, Que., Oct. 1, 1871.
 J. W. Doyle, General Manager, Cape Breton Ry., St. Peters, N.S., born at Summerside, P.E.I., Oct. 12, 1872.
 L. V. Druce, Division Freight Agent, Grand Trunk Pacific Ry., Edmonton, Alta., born at London, Eng., Oct. 20, 1873.
 R. G. Edwards, Assistant Superintendent, Trenton Division, Ontario District, C.P.R., Havelock, Ont., born at Maitland, Ont., Oct. 10, 1883.
 C. E. Friend, General Auditor, Canadian Northern Ry., Winnipeg, born at Brighton, Eng., Oct. 12, 1871.
 W. P. Fitzsimmons, Commissioner of Industries, G.T.R., Montreal, born at Detroit, Mich., Oct. 27, 1868.
 C. N. Ham, Secretary, Express Traffic Association of Canada, Montreal, born at Winnipeg, Oct. 21, 1884.
 G. Hodge, Assistant to General Manager, C.P.R., Montreal, born there, Oct. 2, 1874.
 J. H. Hughes, Assistant Superintendent, Ottawa Division, Quebec District, C.P.R., Montreal, born at Charlottetown, P.E.I., Oct. 7, 1865.
 H. Irwin, Consulting Right of Way and Lease Agent, C.P.R., Montreal, born at Newgrove, County Down, Ireland, Oct. 27, 1847.
 W. B. Johnson, Master Mechanic, District 6, Intercolonial Division, Canadian Government Railways, Truro, N.S., born there, Oct. 8, 1872.
 K. deS. Joseph, Assistant Trainmaster, C.P.R., Sudbury, Ont., born at Quebec, Que., Oct. 6, 1892.
 W. B. Lanigan, Freight Traffic Manager, C.P.R., Montreal, born at Three Rivers, Que., Oct. 12, 1861.
 O. M. Lavoie, Superintendent of Car Service, Eastern Lines, C.P.R., Montreal, born at St. Cyril de Wendover, Que., Oct. 16, 1884.
 F. McDowell, Storekeeper, Canadian Northern Ry., Winnipeg, born there, Oct. 22, 1883.

A. E. McMaster, Secretary and Treasurer, Port Arthur Shipbuilding Co., Ltd., Port Arthur, Ont., born at Perth, Ont., Oct. 22, 1885.

Sir William Mackenzie, ex-President, Canadian Northern Ry., Toronto, born at Kirkfield, Ont., Oct. 30, 1849.

C. Malcolm, chief clerk, Auditor of Stores and Mechanical Accounts, Alberta Division, C.P.R., Calgary, Alta., born at Tatamagouche, N.S., Oct. 18, 1881.

R. Marpole, General Executive Assistant, C.P.R., Vancouver, B.C., born in Montgomeryshire, Wales, Oct. 9, 1850.

C. R. Moore, Assistant to Vice President in charge of operation, G.T.R., Montreal, born at Hamilton, Ont., Oct. 12, 1867.

Hugh Paton, President, Shedden Forwarding Co., Montreal, born at Johnstone, Renfrew, Scotland, Oct. 5, 1852.

J. W. Porter, Chief Engineer, Hudson Bay Ry., Pas, Man., born at Aberdeen, Scotland, Oct. 15, 1877.

T. F. Rahilly, Superintendent, Algoma Eastern Ry., Sudbury, Ont., born at Diorite, Mich., Oct. 6, 1892.

H. G. Reid, Superintendent of Rolling Stock, Western Lines, Canadian Government Railways, Transcona, Man., born at Pembroke, Ont., Oct. 27, 1863.

Grain in Store at Terminal Elevators, Interior Terminal Elevators and at Public Elevators in the East.

Week ending Sept. 6, 1918.	Wheat.	Oats.	Barley.	Flax.	Totals.
	Bush.	Bush.	Bush.	Bush.	Bush.
Port Arthur—					
C.P.R.	65,363	69,810	18,317	6,214	159,704
Consolidated Elevator Co.	†22,269	91,006	12,510	12,963	94,210
Empire Elevator Co.	†26,028	87,230	15,300	2,643	79,145
Ogilvie Flour Mills Co.	56,166	82,222	31,199	.....	169,587
Western Terminal Elevator Co.	†41,016	70,804	10,050	11,208	51,046
G.T. Pacific	1,239	271,533	34,144	5,904	312,820
Grain Growers' Grain Co.	†55,959	436,851	51,834	.....	433,626
Port Arthur Elevator Co.	†45,881	280,582	13,116	4,793	252,610
Eastern Terminal Elevator Co.	†12,345	30,760	9,605	.....	28,020
Northwestern Elevator Co.	† 8,123	6,264	811	.....	† 1,048
Port Arthur—					
Port Arthur Elevator Co.	†16,728	522,267	94,662	17,545	617,746
D. Horn & Co. . . . .	.....	.....	.....	.....	.....
Canadian Government Elevator	†37,312	201,163	11,391	36,178	211,420
Thunder Bay	† 1,893	294,305	38,065	4,464	334,941
Davidson & Smith	† 5,198	150,159	72,498	.....	227,855
Saskatchewan Co-op. Elevator Co.	2,292	120,946	18,183	7,510	148,931
Total Terminal Elevators	†136,396	2,715,802	431,685	109,422	3,120,513
Saskatoon Can. Govt. Elevator	6,873	62,709	2,952	1,198	73,732
Moose Jaw Can. Govt. Elevator . . . . .	.....	Not reported.	.....	.....	.....
Calgary Can. Govt. Elevator	3,627	95,981	12,578	83	112,269
Vancouver Can. Govt. Elevator	48,762	4,282	.....	.....	53,044
Total Interior Terminal Elevators..	59,262	162,972	15,530	1,281	239,045
Midland—					
Aberdeen Elevator Co.	5,172	14,507	.....	.....	19,679
Midland Elevator Co. . . . .	.....	8,350	438	.....	8,788
Tiffin, G.T.P.	6,993	3,050	.....	.....	10,043
Port McNicol	29,137	8,810	.....	.....	37,947
Goderich—					
Elevator & Transit Co.	79,829	517,189	.....	.....	597,018
Western Canada Flour Mills, Ltd. . . . .	.....	26,568	.....	.....	26,568
Kingston—					
Montreal Transportation Co. . . . .	.....	.....	.....	.....	.....
Commercial Elevator Co.	30,212	33,095	248	.....	63,555
Prescott-Montreal Transportation Co., Ltd. . . . .	.....	.....	.....	.....	.....
Montreal					
Harbor Commissioners No. 1	154,534	580,785	171,070	.....	906,389
Harbor Commissioners No. 2	40,380	183,964	89,246	.....	313,590
Montreal Warehousing Co.	45,088	31,997	118,517	.....	195,602
Quebec Harbor Commissioners	81,394	397,130	48,556	*26,486	553,566
West St. John, N.B.	99,066	.....	.....	.....	99,066
Total Public Elevators	571,805	1,805,446	428,075	26,486	2,831,811
Total quantity in store	494,671	4,684,219	875,290	137,189	6,191,369
† Wheat overshipped. *Corn.					

Orders by Board of Railway Commissioners for Canada.

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

General order 247. Aug. 6.—Approving standard stop signal at railway grade crossings protected by watchmen.

General order 248. Aug. 19.—Amending rules approved by general order 188, Apr. 23, 1917, re uniform maintenance of way flagging rules for impassable tracks. This order is given in full on another page.

General order 249. Aug. 31.—Approving standard freight tariffs of maximum mileage tolls of 38 railways filed on basis prescribed by order in council 1863, July 27, re increased freight rates.

27546. Aug. 2.—Ordering C.P.R. to re-establish local service in effect between Tweed and Toronto prior to Jan., 1918, between Apr. 15 and Dec. 1 each year.

27547. Aug. 12.—Ordering Grand Trunk Pacific Ry. to build farm crossing for Geo. Robinson, Leaman, Alta.

27548. Aug. 12.—Authorizing C.P.R. to build two spurs for Spanish Mills Co., Lewis Tp., Algoma District, Ont.

27549. Aug. 13.—Ordering Canadian Northern Ry. to install one pen stock yard at Fiske, Sask., to be completed by June 1, 1919.

27550. Aug. 13.—Declaring on complaint of David Spencer, Ltd., Vancouver, B.C., that proper rates on shipments of hats and caps other than millinery taking 1st class rating in current Canadian Freight Classification, were appearing in item 240, Canadian Freight Association's west-bound tariff 1, effective Sept. 20, 1916.

27551. Aug. 14.—Dismissing application of Colchester South Tp., Ont., to make highway crossing over Pere Marquette Ry. at Oak St., Harrow, Ont.

27552. Aug. 13.—Approving agreement between Bell Telephone Co. and Goulais Bay Telephone Club, Algoma District, Ont.

27553. Aug. 14.—Authorizing Toronto, Hamilton & Buffalo Ry. to build branch for Ford-Smith Machine Co., Hamilton, Ont.

27554. Aug. 15.—Authorizing New York Central Rd. to extend passing siding at Beauharnois, Que., about 1,500 ft. north of Beauce highway crossing.

27555. Aug. 13.—Approving agreement between Bell Telephone Co. and Bowesville Telephone Co., Carleton County, Ont.

27556. Aug. 14.—Relieving Canadian Northern Ry. from erecting fences, gates and cattleguards at points on its Blue River and Lucerne Subdivisions in British Columbia and Alberta.

27557. Aug. 14.—Dismissing Beverly Coal Co.'s application for running rights over portion of spur between Grand Trunk Pacific Ry. and Humberstone Coal Co.'s line to proposed Beverly Mine spur, Alta.

27558. Aug. 13.—Ordering Toronto, Hamilton & Buffalo Ry. to stop train 71 at Smithville, Ont., for milk shipments.

27559. Aug. 14.—Proportioning cost of installing transfer track at Yorkton, Sask., between the C.P.R. and Canadian Northern Saskatchewan Ry.

27560. Aug. 13.—Ordering Canadian Northern Ry. to build standard portable station at Fallowfield, Ont., to be completed Sept. 30.

27561. Aug. 19.—Authorizing Canadian Northern Ry. to build spur for Imperial Oil, Ltd., Vermilion, Alta., and to cross Railway St.

27562. Aug. 16.—Authorizing Canadian Northern Ry. to build spur for Canadian Consolidated Rubber Co., St. Jerome, Que.

27563. Aug. 19.—Authorizing G.T.R. to build spur for Dupont Fabrikoid Co., New Toronto, Ont.

27564. Aug. 19.—Approving agreement between Bell Telephone Co. and North Gosfield Tp., Ont.

27565. Aug. 16.—Authorizing Saskatchewan Government, on behalf of Mervin Rural Municipality, Sask., to make highway crossing through Canadian Northern Ry. station grounds at Turtleford, Sask.

27566. Aug. 17.—Authorizing G.T.R. to build spur for Woods Mfg. Co., east of Logan Ave., Toronto.

27567. Aug. 16.—Approving Canadian Northern Quebec Ry. plan of proposed bridge reconstruction over Riviere a Pierre, Lake St. John Division, 57 miles from Quebec.

27568. Aug. 16.—Dismissing complaint of Minnesota & Ontario Power Co., International Falls, Minn., against increased rates on pulpwood from Canadian Northern Ry. station to International Falls, Minn.

27569. Aug. 21.—Authorizing Canadian Northern Ry. to open for traffic its branch to Cardiff Mines, Alta.; trains not to exceed 15 miles an hour; fencing to be completed by Nov. 1.

27570. Aug. 21.—Authorizing G.T.R. to build three spurs for Motor Trucks, Ltd., Brantford, Ont.

27571. Aug. 21.—Relieving C.P.R. from providing further protection at Lachardies Crossing, near Kirks Ferry, Que.

27572. Aug. 23.—Extending to Apr. 10, 1919, time within which overhead bridge may be completed across C.P.R. on Hamilton St., Regina, Sask.

27573. Aug. 22.—Authorizing Canadian Northern Ry. to rebuild bridge over Riviere a Pierre, Lake St. John Division, 59.5 miles from Quebec.

27574. Aug. 22.—Authorizing Canadian Northern Ry. to rebuild bridge over Miquic River, Lake St. John Division, 75 miles from Quebec.

27575. Aug. 21.—Authorizing G.T.R. to build extension of spur for Battle Creek Toasted Corn Flake Co., London, Ont.

27576. Aug. 21.—Authorizing C.P.R. to build extra track across road allowance between southeast $\frac{1}{4}$ Sec. 4 and southwest $\frac{1}{4}$ Sec. 3, Tp. 23, Range 14, west 2nd meridian, Sask.

27577. Aug. 21.—Authorizing G.T.R. to rebuild bridge carrying Birchmount Ave., Scarborough Tp., York County, Ont., over its main line at mileage 326.5 from Montreal.

27578. Aug. 22.—Relieving Canadian Northern Ry. from erecting fences, gates and cattleguards at about 84 points, and temporarily relieving C.N.R. from erecting fences, gates and cattleguards at about 44 other points on its Kamloops Subdivision until land in the vicinity becomes settled or improved.

27579. Aug. 26.—Authorizing Point Grey Municipality, B.C., to make highway crossing over Vancouver & Lulu Island Ry.

27580. Aug. 23.—Authorizing C.P.R. to build spur for Rob Roy Mills, Ltd., Durham, Ont.

27581. Aug. 23.—Authorizing British Columbia Public Works Department to make highway crossing at grade over C.P.R. near Tappen, B.C.

27582. Aug. 26.—Dismissing application of New Minas Fruit Co., White Rock, N.S., to continue service on applicant's siding without charge in excess of regular freight rate.

27583. Aug. 21.—Ordering Michigan Central Rd. to divert North Talbot Road, Maidstone Tp., Ont., to Naylor Side Road, north of its tracks and to install two automatic bells.

27584. Aug. 24.—Approving clearances at C.P.R. sidings serving Canadian General Electric Co., Peterborough, Ont.

27585. Aug. 26.—Approving plans of C.P.R. and Grand Trunk Pacific Ry. interchange track at Forrest, Man.

27586. Aug. 30.—Authorizing Canadian Northern Ry. to rebuild bridge over Batiscan River at Beudet, Que.

27587. Aug. 30.—Ordering Grand Trunk Pacific Ry. to make highway crossing at Telkwa, B.C., 90 ft. east of present crossing.

27588. Aug. 13.—Approving location and plans of G.T.R. station and facilities at Glen Robert, Ont.

27589. Aug. 22.—Authorizing Cleveland Municipality, Ont., to close two highway crossings over G.T.R. near Richmond station.

27590. Aug. 23.—Approving plan of half interlocking plant at crossing of C.P.R. and St. John Ry., on Main St., Fairville, N.B.

27591. Aug. 21.—Amending order 27530, Aug. 2, re C.P.R. and Canadian Northern Ry. train connections at Montfort Jet., Que.

27592. Aug. 26.—Amending order 26627, Oct. 10, 1917, re C.P.R. train service at Minnitaki, Ont.

27593. Aug. 21.—Authorizing Canadian Northern Ry. to rebuild bridge over Batiscan River Falls, 110 miles from Quebec.

27594. Aug. 20.—Authorizing C.P.R. to build spur for Albert Kerr Co., York Tp., Ont.

27595. Aug. 31.—Amending order 27523, Aug. 7, re G.T.R. spur for W. Harris & Co., Toronto.

27596. Sept. 3.—Authorizing Saskatchewan Highways Department, on behalf of Blaine Lake rural municipality 434, to make highway crossing over Canadian Northern Ry., north of n.e. $\frac{1}{4}$ Sec. 16, Tp. 45, Range 6, west 3rd meridian.

27597 to 27603. Sept. 3.—Approving Canadian Northern Ry. revised location at 7 points in Alberta.

27604, 27605. Sept. 3.—Approving Canadian Northern Ry. revised location at 2 points in Alberta.

27606. Sept. 3.—Authorizing Saskatchewan Highways Department, on behalf of Meota rural municipality no. 468, to make crossing over Canadian Northern Ry. north of Sec. 5, Tp. 47, Range 17, west 3rd meridian.

27607. Aug. 31.—Approving plan, dated Toronto, Aug. 16, showing proposed repairs to Canadian Northern Quebec Ry.'s Batiscan River Bridge, second pier from west end, at mileage 65.8, Joliette Subdivision, Que.

27608. Aug. 26.—Ordering Dominion Atlantic Ry. to build siding for Wolfville Fruit Co., Wolfville, N.S., at no greater cost to applicant than it would have to pay for siding accommodation had D.A.R. site been used.

27609. Aug. 30.—Approving revised plans, dated Apr. 2, showing electrification of Sec. 1, Mount Royal Tunnel & Terminal Co.'s railway from La-gauchetiere St. to east portal of tunnel.

27610. Sept. 3.—Extending to Oct. 1 time within which C.P.R. shall build two-pen stock yard at Cairns, Alta.

27611. Sept. 4.—Approving Canadian Northern Western Ry. revised location in n. w. $\frac{1}{4}$ Sec. 7, Tp. 57, Range 7, west 5th meridian, Alta.

27612 to 27615. Approving Canadian Northern Ry. revised location at 5 points in Alberta.

27616. Aug. 22.—Ordering C.P.R. to install gates at Cote de Liesse Road, Dorval, Que., to be operated from the central tower by day and night watchmen; construction to be paid—20% by rail-

way grade crossing fund, 35% of balance by Dorval, 15% by Parish de la Presentation de la Ste. Vierge, and remainder by C.P.R.; maintenance to be paid, 50% by C.P.R., 35% by Dorval, and 15% by the parish; gates to be installed within 30 days from date.

27617. Sept. 4.—Authorizing London & Port Stanley Ry. to build sidewalk along right of way, from Terrace St., north along east side of track, and across Thames River; thence west, under track and north, on west side of track to Trafalgar St., London, Ont.

27618. Sept. 4.—Amending order 27464, July 23, re removal of G.T.R. siding for Lindsay Factories, Ltd., Toronto.

27619, 27620. Sept. 3.—Approving Canadian Northern Ry. revised location at 3 points in Alberta.

27621. Sept. 4.—Ordering C.P.R. to stop train 4 at Ducks station, B.C., for safe delivery of parcel post matter.

27622. Sept. 4.—Extending to Oct. 1 time within which Canadian Northern Ry. shall erect station building at Sangudo, Alta.

27623. Sept. 3.—Ordering Canadian Northern Ry. to stop local trains 7 and 8 on flag at Clarence, Ont.

27624. Sept. 3.—Extending to Sept. 30 time within which C.P.R. shall complete removing old piles and abutments from bed of Big Creek, in Tilbury North Tp., Ont.

27625. Sept. 5.—Authorizing C.P.R. to divert road allowance between Secs. 8 and 9, Tp. 3, Range 1, west principal meridian, Man., and take certain lands for eliminating grade crossing and protection from snow.

27626. Aug. 30.—Approving agreement, Aug. 13, between Bell Telephone Co. and Burgessville Telephone Co. of Ontario.

27627. Aug. 17.—Ordering that A. B. Pottenger, District Registrar of Supreme Court of British Columbia, Vancouver, be appointed to enquire and report on cost of building Hastings St. viaduct over Vancouver, Victoria & Eastern Ry. in Vancouver.

27628. Sept. 5.—Relieving Great Northern Ry. from providing further protection at first crossing east of Lincoln station, B.C.

27629. Sept. 4.—Approving C.P.R. plans B-1-1549 and B-10-56, Aug. 3 and Aug. 2, showing proposed replacement of wooden trestles at bridges 36.4 and 36.97 over Frenchman River, Govenlock Subdivision, Sask.

27630. Sept. 5.—Authorizing C.P.R. to build Y crossing at grade over surveyed road at mileage 49.4, Maple Creek Subdivision, Sask.

27631. Sept. 5.—Authorizing C.P.R. to cross Minerve St., Vulcan, Alta., at grade.

27632. Sept. 5.—Authorizing Canadian Northern Ry. to cross highway between Secs. 16 and 17, Tp. 5, Range 5, west 3rd meridian, Sask.

27633, 27634. Sept. 4.—Extending to Oct. 15 time within which G.T.R. shall install gates at St. Phillippe St. and St. Marguerite St., Montreal, day and night watchmen to be employed.

27635. Sept. 7.—Authorizing C.P.R. to build spur for B. J. Carney & Co., from mileage 2.27, Okanagan Subdivision, B.C., to edge of Mara Lake, with parallel siding.

27636. Sept. 5.—Extending to Dec. 31 time within which C.P.R. shall complete spur for E. W. Gillett Co., and revise present sidings on Liberty St. and Pardee Ave., Toronto.

27637. Sept. 5.—Authorizing C.P.R. to build spur for Garden City Feeder Co., Regina, Sask.

27638. Relieving Canadian Northern Ry. from erecting fences, gates and cattleguards between mileage 1 and 116 on its Port Mann Subdivision, B.C.

27639. Sept. 5.—Authorizing C.P.R. to build spur for W. Rankins, at mileage 56.6 on Kootenay Central Subdivision, B.C.

27640. Sept. 5.—Authorizing C.P.R. to build spur for Adams River Lumber Co., Chase, B.C.

27641. Sept. 6.—Authorizing Canadian Northern Ry. to divert North Road and water course at Portage Lake, McDougall Tp., Ont.

27642. Sept. 5.—Authorizing Canadian Northern Ry. to cross highway between Secs. 9 and 16, Tp. 51, Range 5, west 3rd meridian, Sask.

27643. Sept. 4.—Amending order 26205, Dec. 3, 1917, re installation of gates at crossing of Walker Road, Walkerville, Ont., G.T.R. and Pere Marquette Ry.

27644. Sept. 7.—Relieving Canadian Northern Ontario Ry. from speed restriction imposed under order 22113, July 2, 1914, between mileage 174 and 175.25, and 181 and 181.25 from Toronto.

27645. Sept. 7.—Relieving Grand Trunk Pacific Ry. and Canadian Northern Ry. from speed limitation of 18 miles an hour on tangents and 12 miles on curves, imposed by order 26972, Feb. 9, on joint section from Lobstick Jet., to Chip Lake, Alta.

27646. Sept. 9.—Approving Montreal & Southern Counties Ry. timetable effective Aug. 11, company to stop all trains during winter and all trains except limited trains 135, 139, 443, 136 an 430 during summer at St. Hubert Road; all local trains to stop at Springfield Park; and rescinding orders 26286, 26325 and 26540.

27647. Sept. 7.—Removing speed restriction of 8 miles an hour imposed by order 27283, June 5, on Canadian Northern Quebec Ry. from point in St. Theophilus Parish to point in St. Flore Parish, 3516.3 ft.

- 27648. Sept. 9.—Authorizing J. B. Carr, Hunt-
ington, Que., under G.T.R. supervision, to extend
drain under railway embankment to line ditch on
south side of track, as shown on plan.
- 27649. Sept. 7.—Authorizing Canadian North-
ern Ry. to build across road allowance between
Secs. 11 and 12, Tp. 27, Range 1, west 3rd meri-
dian, Sask.
- 27650. Sept. 8.—Authorizing C.P.R. to build
spur for Slobinsky Bros. & Sons, Winnipeg.
- 27651. Sept. 9.—Authorizing C.P.R. to extend
spur for Gordon, Ironsides & Fares, Packers, Ltd.,
between Knox and Maude Sts., Winnipeg.
- 27652. Sept. 9.—Authorizing G.T.R. to build
spur for City of Ottawa, Ont.
- 27653. Sept. 12.—Authorizing Canadian North-
ern Ontario Ry. to build temporary siding across
Blackstone Road, Foley Tp., Ont.
- 27654. Sept. 11.—Authorizing Canadian North-
ern Ry. to extend siding across highway at Aner-
ley, Sask.
- 27655. Sept. 10.—Authorizing C.P.R. to build
spur for Laing Produce & Storage Co., Ltd.,
Brockville, Ont.
- 27656. Sept. 10.—Relieving Canadian Northern
Ry. from erecting fences, gates and cattleguards
on its Boston Bar Subdivision, between mileage
0.29 and 123.19, B.C.
- 27657. Sept. 12.—Authorizing Mount Royal Tun-
nel & Terminal Co. to cross under Portland Ave.,
Mount Royal, Que.
- 27658. Sept. 11.—Authorizing G.T.R. to build
additional track across Wellington St., Exeter, Ont.
- 27659. Sept. 12.—Authorizing C.P.R. to divert
road allowance at mileage 76.1, Broadview Subdi-
vision, Sask.
- 27660. Sept. 12.—Approving revised location
and diversion of Canadian Northern Quebec Ry.
from mileage 60.5 from Joliette, southwesterly to
Canadian Northern Ontario Ry. in Chatham Tp.,
Que., and authorizing it to make connection there.
- 27661. Sept. 12.—Authorizing C.P.R. to divert
road allowance on south boundary of s. e. ¼ Sec.
17, Tp. 11, Range 33, west principal meridian,
Sask.
- 27662. Sept. 12.—Authorizing C.P.R. and Cana-
dian Northern Ontario Ry. to use interlocking
plant at Donlands, Ont.
- 27663. Sept. 11.—Authorizing Essex Terminal
Ry. and Canada Southern Ry. to operate over
crossing near Amherstburg, Ont.
- 27664. Sept. 12.—Ordering that Canadian Nor-
thern Ontario Ry. station at Cote Double, Que.,
be in accordance with C.P.R. no. 2 shelter plan
11-15-2A; and be completed by Nov. 1.
- 27665. Sept. 13.—Authorizing C.P.R. to build
spur for City of Three Rivers, Que.
- 27666. Sept. 14.—Relieving C.P.R. from erect-
ing fences, gates and cattleguards on Dominion
Atlantic Ry. between Windsor and Uniacke, N.S.,
at certain points.

Directors' Inspection of Canadian Pacific Railway.

The annual directors' inspection of C.P.R. lines from Montreal to the Pacific coast was commenced Sept. 8, when the President, Lord Shaughnessy, left Montreal in a special train, accompanied by Sir Herbert Holt, R. B. Angus, C. R. Hosmer and E. W. Beatty, directors. At Toronto the party was joined by two other directors, Sir Edmund Osler and W. D. Matthews, and by Dr. Allan Baine, and visited the new union station under construction; the new concrete viaducts on Leaside-North Toronto line, and other works. Port Arthur was reached Sept. 10, and a stop was made over night at Port William, where Grant Hall, Vice President and General Manager, Western Lines, took over the charge of the party from A. D. MacTier, General Manager, Eastern Lines, who had accompanied it to that point. Winnipeg was reached on the evening of Sept. 11, where the party was joined by another director, Sir Augustus Manton. After inspecting the company's various interests in that city, the special train resumed its journey westerly, Sept. 13, short stops being made at Brandon, Man., Moose Jaw, Sask., and Calgary, Alta., arriving at Vancouver, Sept. 15, and at Victoria by steamship Sept. 16. The return journey was started from Victoria, Sept. 18, and from Vancouver, Sept. 20. The special train travelled eastward via Calgary, Edmonton and Saskatoon. A two hour stop was made at Winnipeg, Montreal being reached on the evening of Sept. 25. In accordance with the President's re-

quest, there were no receptions or public functions at any of the points visited. At various places short interviews were given on general subjects, very little being said about railway matters, and that of a particularly general character.

Canadian Government Railways Construction, Betterments, Etc.

Prince Edward Island Ry.—The Premier of Prince Edward Island is reported to have said at Toronto, Sept. 10, that it is expected that by the end of this year a third rail will be laid between Charlottetown and Summerside and to the car ferry terminal at Borden, so as to permit the use of standard gauge rolling stock. When this is done, he said, nearly half the railway in the province will become an effective part of the Dominion Government Railways system, and when the rest of the line is similarly treated the present narrow gauge rolling stock will either be sold or scrapped.

A Charlottetown dispatch of Sept. 17 stated that the distributing of rails for laying a third track from Borden to Summerside, and from Emerald to Elliots, had been completed, and that tracklaying was in progress.

Halifax Ocean Terminals.—A press report states that it is expected that the new temporary station at Halifax will be opened for passenger traffic early in November.

Sydney Yards.—We are officially advised that the yard extension being done at Sydney, N.S., consists of some filling by contractors working for the Dominion Iron & Steel Co., upon which the railway laid some additional storage tracks.

Moncton Yards.—We are officially advised that the improvements effected at the Moncton, N.B., yards, referred to in recent press reports, were ordinary maintenance work, and not in the way of extensions or new work.

Moncton Yard Offices.—Excavation for the new yard offices at Moncton, N.B., to replace those destroyed by fire in April, is reported to be in progress. The new building will be at the west end of the present rest house, and will contain accommodation for some other branches of the service which were not located in the old building.

St. John, N.B.—A press report states that a contract has been let to D. C. Clark for extensive repairs and renewals to the Intercolonial Ry. no. 9 shed on Long Wharf, St. John, N.B. The wharf itself is reported to have undergone extensive repairs during the summer. Among the other improvements reported to have been carried out at St. John during the summer are the repairing and renewal work on the Courtenay Bay branch, and the provision of additional trackage on the breakwater wharf. Other work is still in progress.

South Devon.—A press report states that some additional tracks are being laid between Fredericton and South Devon, and that a 2-stall locomotive house is being built at the latter place for consolidated locomotives, which are too heavy to cross the bridge there.

Moffat-Campbellton Division.—A line 2.7 miles long is being built from Moffat station on the Intercolonial Ry. to a junction with the International Ry. of New Brunswick, 7.4 miles from Campbellton, N.B. The contractor is R. B. Stewart, Perth, N.B. Work has been started and it is expected to have it completed this year, when traffic for the International

Ry. of New Brunswick will be run over the Intercolonial Ry. main line between Campbellton and Moffat, thence over the new line to the I. Ry. of N.B., thus permitting 7.4 miles of the latter railway to be abandoned and the track lifted. The I. Ry. of N.B. was built as a private enterprise, and was subsequently taken over by the Dominion Government as an Intercolonial branch. The present work is being done to co-ordinate the tracks of the two lines for the better working of traffic, in the same way as is being done at the St. Leonard end of the line with the National Transcontinental Ry., also a part of the Canadian Government Railway system. (Sept., pg. 394.)

Railway Rolling Stock Orders and Deliveries.

The C.P.R. will probably order three 29 ft. vans at its Winnipeg shops.

Dominion Foundries & Steel, Ltd., has ordered 11 flat cars, 40 tons capacity, from National Steel Car Co.

Canadian Northern Railway has received 6 six-wheel switching locomotives from the Canadian Locomotive Co.

The Prince Edward Island Ry. has received 2 ten-wheel narrow gauge locomotives, from the Canadian Locomotive Co.

The Pacific Great Eastern Ry. has bought 30 stock cars, 60,000 lb. capacity, complete with M.C.B. equipment, from Gray & Son, Chicago, Ill.

The Toronto Commissioner of Works received tenders, Sept. 30, for the purchase from the city of 4 flat cars, 3 ft. gauge, 40,000 lb. capacity, weight approximately 17,200 lb.

The C.P.R. received the following additions to rolling stock from its Angus shops, Montreal, recently:—19 express refrigerator cars, 390 steel underframe box cars, and 1 decapod locomotive; also 4 vans from its Winnipeg shops.

Canadian Government Railways, since July 19, have authorized Canadian Car & Foundry Co. to repair approximately 500 cars of various designs. They are being distributed between the company's Montreal and Amherst, N.S., works.

The Grand Trunk Pacific Ry. has authorized the Canadian Car & Foundry Co. to repair 1,000 box cars, each of which will be refitted with economy reinforced ends. This work is being carried out at the company's Fort William plant.

Grain Inspected at Western Points.

The following figures compiled by the Trade and Commerce Department's inspection branch, show the number of cars of grain inspected on railways at Winnipeg and other points in the Western Division, for August, and for 12 months ended Aug. 31, 1918 and 1917.

	Aug. 1918.	12 months Aug. 31, 1918.	12 months Aug. 31, 1917.
C.P.R.	499	91,827	131,594
C.N.R.	258	55,134	72,833
G.N.R. Duluth . . . . .	...	714	3,519
G.T.P.R.	36	23,405	23,136
Totals	783	171,080	231,082

A fast motor freight and express service has been inaugurated between Toronto and Hamilton. It is reported that two trips a day in each direction are being made and that seven trucks, each capable of hauling two trailers, are being used. Lighter cars are being used for the collection and delivery of the freight in Toronto and Hamilton.

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

Alaska Ry.—A Seward, Alaska, press dispatch stated recently that it was expected to connect up the Seward and Anchorage divisions of the United States Government line in Alaska, Sept. 16, thus completing the line from Tidewater to Seward. (Sept., pg. 390.)

Canadian Pacific Ry.—Two miles of new water mains are being laid at Pilot Butte, Sask., this season, J. Brodt being the contractor, and it is reported that an additional 4 miles will be laid next year.

In connection with the Johnson St. bridge at Victoria, the Premier of British Columbia and the mayor had an interview with Lord Shaughnessy, Sept. 17, at which the latter stated that the company would carry out the terms of the agreement referred to in the order in council of 1887, as it would have been carried out had a joint bridge been built at that time. The question at issue is the character of the bridge to be built, and the proportionate cost to be paid by the company and the city. (Sept., pg. 390.)

Grand Trunk Pacific Ry.—The Board of Railway Commissioners has approved of plans for an interchange track between the C.P.R. and the G.T.P.R. at Forrest, Man., upon the application of the latter company.

The ballasting and completing of the branch line from Talmage, on the Regina-International Boundary line, into Weyburn, Sask., which was put in hand in May, has been completed. Train service was put in operation over it Sept. 1. (Sept., pg. 390.)

Kettle Valley Ry.—A press report of Sept. 12, said construction on the branch line from Princeton, B.C., to Copper Mountain had reached such a stage that it was expected to have track laid on the first six miles by Nov. 1. The Canadian Copper Corporation's big concentrating plant is to be erected at this point on the branch, and it is reported that the site has been cleared. The branch is expected to be completed in its entirety early next summer. (July, pg. 285.)

Hudson Bay Ry.—It was reported in Ottawa, Sept. 17, that construction was being suspended. This applies more particularly to the approximately 90 miles of line from the Kettle Rapids of the Nelson River to Nelson, upon which track has yet to be laid. The difficulty of obtaining steel rails, and the fact that the terminal works at Nelson are incomplete are stated to be the causes of this suspension. Some work on the terminals will, however, it is said, be gone on with during the winter. It is stated that arrangements have been made for the Canadian Northern Ry. to provide a service over the completed portion of the H.B.R. from Pas to mileage 189, upon which a limited service has heretofore been given by the contractors.

Michigan Central Rd.—The St. Thomas, Ont., City Council, has authorized the company to build 12 portable houses for the use of laborers on the line. Heretofore old freight and passenger cars have been used for housing the men. (Sept., pg. 390.)

Nakusp & Slocan Ry.—It is reported that at a conference with the Premier of British Columbia, at Victoria, Sept. 17, Lord Shaughnessy, President C.P.R., intimated the company's willingness to hand over the railway to the province after the redemption of the outstanding bonds.

The North Shore Ry. is the title of the railway extending from Adamville Jct. on

the Intercolonial Ry., to the Beersville, N.B., coalfields, formerly operated by the Beersville Coal & Ry. Co. A new company with a reported capital of \$100,000, is getting the mining properties into order for operation, and expects shortly to have an output of over 100 tons a day. It is reported that J. D. Betts, of Joggins Mines, N.B., is to manage the company, and that the railway line will be overhauled and put in operation. The line has a total length of 14 miles and is in two sections, viz.: from Adamsville to Imperial, 10 miles, and from Hogan Jct., 7 miles from Adamsville, to Coalville, 4 miles. C. J. Burchill, K.C., Halifax, N.S., and J. T. Cumming, New Glasgow, N.S., on behalf of the new company, had an interview with the New Brunswick Government Sept. 6, with respect to the railway part of the undertaking, which was taken possession of by the government on the failure of the former owners. (Aug., 1914, pg. 372.)

Pacific Great Eastern Ry.—We are officially advised that the British Columbia Government has let the contract for completing a 42 mile extension of the line beyond the present track end near Clinton, B.C., to the Northern Construction Co., Vancouver. The work to be done consists of track laying for 42 miles, 6 miles of grading, putting in a few trestle bridges, and other work, all the other work having been done before the government took over the railway from Foley, Welch & Stewart.

According to press reports, the lowest tenderer was McKinnon, Cooper, Drabble & Co., Vancouver, at \$300,000; the next lowest Cotton & Co., Vancouver, at \$308,000, and the next Palmer Bros., Vancouver, at \$349,000; but for one reason or another no contract was arranged with either of them. These three bids were on the unit principle, while the remaining bids were on the cost-plus principle. An examination of these by A. F. Proctor, Chief Engineer, showed that the Northern Construction Co. estimate would work out at \$319,000, with 5½% commission, but no commission would be paid on any amount over \$319,000. The company is to furnish all the plant required, and will be allowed 25% upon all savings effected upon estimates. A. R. Mann, President Northern Construction Co., will be in charge of the work. It is not likely that any sub-contracts will be let.

The Premier of British Columbia is reported to have said in Vancouver, Sept. 12, that work had been started by the Northern Construction Co. on the line; that 90 men were then at work, and that it was expected to have steel laid on the 42 miles from Clinton by Dec. 31. (Sept., pg. 390.)

The Quebec & Saguenay Ry. is being operated to within a mile of Baie St. Paul, but it was expected that trains would be running right into the village by Sept. 30. Tracklaying and other work is being gone on with between Baie St. Paul and Murray Bay, 27 miles, and it is expected that this section of the line will be completed by Dec. 31. Tenders for the erection of 5 station buildings, 2 section houses, 1 water tank, 1 locomotive house and other minor buildings were called for a second time recently and are now under consideration. The first tenders received for these buildings were not satisfactory, hence the second call. O'Brien & Doheny, Quebec, are the general contractors. (Sept., pg. 390.)

St. John & Quebec Ry.—The Premier of New Brunswick is reported to have

said, Sept. 3, that the progress of construction on the extension from Gagetown to the C.P.R. near Westfield, during August, had been only fair, due to the extreme shortage of labor. Unless there was a decided increase in the number of men on the work immediately, there was little prospect of the extension being completed this year.

T. Cozzolino, representing the Nova Scotia Construction Co., general contractors, is reported to have said all the rails for the extension are on hand and that progress is being made with the work.

Another report states that Kennedy & McDonald, who are sub-contractors for the Westfield end of the line, have their work well forward and hope to complete it by Dec. 1. The Bedford Construction Co., sub-contractors for the Gagetown southerly section, have made some progress, but cannot get sufficient men. A press report states that this company has applied to the Dominion Government to obtain permission to use interned alien enemies from the Amherst, N.S., camp on the work. (Sept., pg. 391.)

Toronto, Hamilton & Buffalo Ry.—A fire at the shops at Aberdeen Ave., Hamilton, Aug. 27, is reported to have caused \$10,000 damage. The boiler room, air-compressor room and store room, all of frame construction, were destroyed, the machine shop only being saved.

The new freight yards at Bridgeburg, Ont., laid out at a reported cost of \$100,000, were put into operation Sept. 2. (Aug., pg. 337.)

Railway Taxation in Montreal.—After a lengthened argument, Justice Ducloux on Sept. 19 reserved judgment in the appeal of the Canadian Pacific, Grand Trunk and Canadian Northern Railways against a judgment of the recorder's for the levy of a special tax upon their rails in the city. The city claims that it has a right under subsection 2, of article 361 of the city charter to levy this tax, which provides immovable property subject to taxation should comprise: "rails and other constructions and apparatus of every nature used for traction purposes and constructed or placed on, over, or under property, streets, highways or elsewhere within the limits of the city." The companies contend that this is a double taxation, while the city holds that the land is one immovable and the rails another.

Appeal Court for Labor Disputes.—The Dominion Government has appointed Justice McLennan of the Quebec Superior Court, Montreal, as chairman of the permanent court of appeal in labor disputes. The other members of the court are:—S. R. Parsons, Toronto, and G. H. Duggan, Montreal, representing the Canadian Manufacturers' Association, and G. Franco and J. Bruce, representing the Trades and Labor Congress. The court will investigate the findings of boards of conciliation under the Labor Disputes Act, when they are unsatisfactory to either party, and its ruling will be supposed to be final.

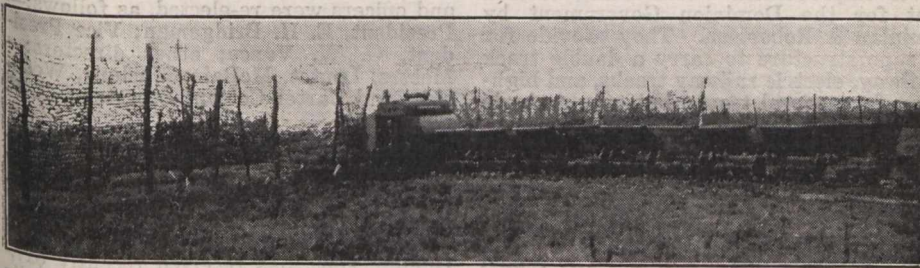
Railway Lands Patented.—Letters patent were issued during August for Dominion railway lands in Manitoba, Saskatchewan, Alberta and British Columbia, as follows:—

Calgary & Edmonton Ry.....	480.00
Canadian Northern Ry.....	7,040.00
Qu'Appelle, Long Lake & Saskatchewan Rd. & Steamboat Co.....	1,275.50
Total	8,795.50

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.—General orders have been issued giving authority for the organization as a unit of the Canadian Expeditionary Force, part of the active militia, of the Corps of Canadian Railway Troops, and such unit is placed on active service from the date of its organization, June 5, 1918. The estab-



A Canadian light railway train passing through camouflage near Loos. From Canadian official photograph. Copyright reserved.

lishment in Canada of the depot, which was heretofore known as the Railway Construction Depot, Military District No. 2, and which was originally organized as a forestry depot, will be as laid down for a depot battalion with a strength of a headquarters and four companies. Authority has been granted for the disbandment of the Canadian Railway Construction Corps, created Mar. 5, 1915, and organized July 1, 1915.

The Timiskaming & Northern Ontario Railwaymen's Patriotic Association, up to the last report had contributed \$90,519.58 to the Canadian Red Cross and Canadian Patriotic Funds.

PERSONAL NOTES.

Lieut. R. J. Backhus, 29th Vancouver Battalion, who has been reported killed in action, was formerly assistant to Freight Agent, Grand Trunk Pacific Ry., Victoria, B.C., and afterwards purser on the G.T.P. Coast Steamship Co.'s s.s. Prince Rupert.

Capt. S. M. Bosworth, mentioned in dispatches recently, is son of G. M. Bosworth, Chairman, Canadian Pacific Ocean Services, Ltd., Montreal.

Lieut. J. Boyd, Montreal, Canadian Overseas Railway Construction Corps, has been awarded the Military Cross for conspicuous gallantry and devotion to duty, in maintaining track until all guns and rolling stock had been removed. Under heavy fire, and being cut off, he took his party across country and back to his company. Later, when in charge of a demolition party, he destroyed all structures and track, sometimes when the enemy was close on him. He was wounded, but completed his duties before reporting for medical attention.

Private J. R. Bryant, who was reported recently as wounded in action, was formerly in the Stores Department, Canadian Northern Ry., Saskatoon, Sask.

W. J. Christie, formerly Travelling Auditor, Grand Trunk Pacific Ry., Edmonton, Alta., who went overseas as a sergeant in the 202nd (Sportsmen's) Batta-

lion, since when he has seen considerable service in France, has been given an Imperial commission in the Seaforth Highlanders.

Lieut. H. N. Darling, Toronto, Canadian Railway Troops, has been awarded the Military Cross. The pipe line supplying the water tanks from which the locomotives were filled was broken by shell fire. He returned with a noncommissioned officer and several men, under very heavy shell fire, and repaired the pipe line, thus enabling the locomotives to get away before the enemy's arrival. Throughout subsequent operations he displayed the greatest coolness and courage, and set a splendid example to all ranks.

Lieut.-Col. J. S. Dennis, Chief Commissioner of Colonization and Development,

Cross. On the leading tractor of a train, comprising two other tractors and 17 empty cars, becoming derailed, and thus preventing the salvage of the rest of the train, he immediately organized a party and proceeded to the point of derailment through a very heavy gas barrage, but owing to lack of appliances he could not re-rail the tractor. Having, however, cut the track on each side of the tractor and made a loop round it, he was able to get the rest of the train to proceed, although later its passage was again obstructed by a wrecked train, the damaged cars of which were cleared away successfully. By his ingenuity and gallant conduct he undoubtedly saved the tractors and the cars.

Capt. J. G. McCaul, who was awarded the Military Cross recently, was formerly in Canadian Northern Ry. service at Edmonton, Alta.

Sergt. A. E. Moore, who, prior to enlistment in the Canadian Expeditionary Force, was engaged in the Canadian Northern Ry. shops at Winnipeg, is reported to have been wounded in action for the second time.

Lieut. C. E. Peers, reported killed in action recently, was formerly Assistant Engineer, Sault Ste. Marie Canal. He left Canada on overseas service in 1916.

Lieut.-Col. S. L. Penhorwood, of the Forestry Service, was a guest of the King and Queen at Windsor, Eng., Sept. 22. He was formerly Manager, New Ontario Dock Co., Sault Ste. Marie, Ont., and prior to the war, was officer commanding the 51st Sault Ste. Marie Rifles. After the outbreak of war, he was selected to organize the Northern Battalion from the Algoma, Nipissing and Timiskaming Districts.

Lieut. E. V. Power, reported killed in



The Canadian Minister of Militia, Major General Mewburn, addressing a Canadian tramway corps near the western front. From Canadian official photograph. Copyright reserved.

Lieut. C. W. W. Field, who joined the U.S. Army in May, 1917, and who has been killed in action, was formerly City Passenger Agent, G.T.R., and Central Vermont Ry., Boston, Mass.

Lieut. J. A. Foote, of the Canadian Railway Troops, has been awarded the Military Cross. The area where he was working was subjected to intense shell fire, and the line was broken in six places. He repeatedly reorganized his working parties, who had suffered casualties, and by his example and encouragement kept his men at work under most difficult conditions. By his efforts the line was kept open and the supply of ammunition was ensured.

Lieut. M. Helyer, Canadian Railway Troops, has been awarded the Military

action, was a son of N. J. Power, formerly General Auditor, G.T.R., Montreal, and now residing in California.

Lieut. G. I. Price, St. John, N.B., Canadian Railway Construction Corps, has been awarded the Military Cross. While acting as liaison officer with four pieces of railway mounted artillery, through his untiring efforts and skill all pieces were removed without loss or damage. The track was continually being broken by shell fire, and was repaired as required.

Lieut. W. J. Riley, Victoria, B.C., Canadian Railway Troops, who had previously been given the military medal, has been awarded the Military Cross, for conspicuous gallantry and devotion to duty in attempting to save two 12 in. railway howitzers, and in saving a locomotive which

would have fallen into enemy hands. A number of breaks had to be repaired, and at one part of the journey the locomotive had to be taken over an 8 in. break in the rails. In spite of heavy machine gun and rifle fire, he was successful and the locomotive was then used to haul a trainload of material. He showed great courage under very trying conditions.

Lieut. Edward Slattery, holder of the distinguished conduct medal, and the military medal with two bars, who was killed in action, Aug. 30, was, before enlisting, engaged as a car cleaner in the C.P.R. Glen Yard, Montreal. He enlisted as a private, and received the military medal for bravery in July, 1917, two bars being added for his work during the Vimy Ridge encounters. The distinguished conduct medal was awarded in Aug., 1917, and he was promoted to lieutenant on the field, in April, 1918.

Lieut. E. G. Stevenson, St. John, N.B., Canadian Railway Troops, has been awarded the Military Cross for conspicuous gallantry and devotion to duty in an attempt to save two 12 in. railway howitzers. The track behind the guns had been broken and the breaks had to be repaired. This was accomplished under heavy shell fire, and the guns pushed for half a mile by hand. It was only when the shelling and machine gun fire became intense, and the infantry had to take up another position behind the guns, that the attempt had to be abandoned.

Brigadier-General J. W. Stewart, of Foley, Welch & Stewart, railway contractors, who has been associated throughout the war with the work of the Canadian Railway Troops, is mentioned as likely to be appointed Director of the whole transportation system in France and Flanders. In speaking of him recently, the Dominion Minister of Militia paid special tribute to the work for which he is responsible.

Private J. H. Summerbell, reported recently as wounded in action, was formerly in the Engineering Department, Canadian Northern Ry., Toronto.

Lieut. C. W. Switzer, Montreal, Canadian Overseas Railway Construction Corps, seconded to Railway Construction Engineers, has been awarded the Military Cross. He received an order for the demolition of structures with a time limit, and so was unable to communicate with the railway company. On his own initiative, he organized the demolitions and handled quantities of high explosives under heavy shell fire.

Corporal Leslie Taylor, formerly in the Canadian Northern Ry. shops at Winnipeg, has been awarded the Military Medal. He joined the Canadian Expeditionary Force in Aug., 1914.

C. W. Wilson, Locomotive Foreman, Canadian Government Railways, Hearst, Ont., has been granted leave of absence for military service.

Phillip Hamilton Wilson, of the 2nd Canadian Mounted Rifles, formerly of the 198th Battalion, who was killed in action in France, Aug. 10, was the youngest son of the late Jas. Wilson, at one time General Superintendent, C.P.R., Toronto.

A press report states that trans-Atlantic steamship companies are being asked to accept bookings for passage after the war.

The G.T.R. is reported to have handled 8,371,521 bush. of grain from Great Lakes ports to Montreal for export during August, which, it is claimed, exceeds by about 500,000 bush. the previous best record by the company.

Canadian Northern Railway Construction, Betterments, Etc.

St. Charles River Bridge.—A new bridge across the St. Charles River, at Quebec, is under construction. The present bridge, known as the St. Anne bridge, was built for the Quebec & Lake St. John Ry., and was subsequently used in addition by the Canadian Northern Ry. and the Quebec Ry., Light & Power Co. It was condemned as insufficient for the traffic requirements about nine years ago, but the proposal to rebuild was left in abeyance until the completion of certain river improvement works. However, the condition of the bridge became such that the work of erecting a new bridge became an immediate necessity. The piers for the new bridge, which will be located immediately to the west of the present bridge, are being put in as part of the river improvement works being carried out for the Dominion Government by Quinlan & Robertson. They provide for a superstructure to carry a double track railway, electric railway tracks, and highway for general traffic, but only a single track will be laid until the river improvement works are completed. The contract for the superstructure is reported to have been let to the Dominion Bridge Co. The piers are being erected under the supervision of E. A. Hoare.

Montreal Tunnel Opening.—The tunnel under Mount Royal, which gives the C.N.R. an entrance into the center of Montreal, was officially opened for traffic, Sept. 21. The first train arriving in Montreal by the tunnel was a special one from Ottawa, carrying G. A. Mountain, Chief Engineer, Board of Railway Commissioners, and several C.N.R. officials, and travelling over the direct line between the two cities. The distance between Montreal and Ottawa by the new route is 112 miles, instead of 160 miles by the old line via Joliette. The new line follows the Ottawa River from Hawkesbury, crosses the Back River to Montreal Island, and reaches the center of the city via the tunnel. The divisional yard is at Cartierville, and between there and the Montreal terminal electric locomotives will be used. A through service between Montreal and Toronto via Ottawa will be started at an early date.

Connecting Link Near Grenville, Que.—Tenders were received to Sept. 10 for the construction of about a mile of railway to connect the Canadian Northern Ontario Ry. and the Canadian Northern Quebec Ry. at Cushing in Argenteuil county, Que., but we have been officially advised that owing to the lateness of the season and other contingencies it has been decided to defer the work for the present and no contract has been let.

Western District.—In connection with the plans for the extension of the Luck Lake Branch, upon which the Dominion Government authorized the company to lay 14 miles of track this year, a deputation from Rosetown, Sask., and vicinity waited upon the Dominion Government at Ottawa recently to press for the laying of a greater mileage.

The Board of Railway Commissioners has directed the company to build an additional 40 ft. to its freight sheds, and to provide adequate waiting room accommodation at North Battleford, Sask.

Vancouver Island Lines.—The Premier of British Columbia is reported to have said in Vancouver Sept. 12, that rails were being transferred from Port Mann, to Victoria, and that they were being laid on the line from Victoria towards the Nitinat River. (Sept., pg. 385.)

Railway Finance, Meetings, Etc.

Burrard Inlet Tunnel & Bridge Co.—At the annual meeting of shareholders, who are, with a few exceptions, representatives of city and other municipal councils in the vicinity of Vancouver, on Sept. 11, the President—Reeve Bridgman of North Vancouver City—Reported that there was no change in the company's affairs since the last annual meeting, except that the Dominion Parliament had extended its charter privileges until May, 1920. Nothing in the way of construction was proposed to be done, and all the directors proposed to do was to keep the charter clear until conditions became normal. The shareholders are:—City of Vancouver, 2,000 shares; City of North Vancouver, 2,000 shares; North Vancouver district, 3,375 shares; Carter Cotton, 20 shares; Loutet, 20 shares; McNaught, 20 shares; and McLean, 20 shares. The directors and officers were re-elected, as follows:—President, E. H. Bridgman; Vice President, G. W. Vance; other directors:—Messrs. Loutet, McBain, Maclurg, Woodside, and Carter-Cotton; Secretary, R. F. Archibald.

Grand Trunk Ry.—An issue of \$3,000,000 three year notes at 6%, at 99, partly to replace \$2,000,000 5% notes due shortly, has been authorized in England.

Guelph Junction Ry.—The City of Guelph, Ont., has received recently \$17,000 as a three months dividend on its stock in the G.J.R., against \$10,600 for the corresponding period of 1916-17. The dividends received for the first nine months of this year aggregate \$40,375.

New York Central Lines.—There have been deposited with the Secretary of State at Ottawa, copies of a supplemental agreement between the Guaranty Trust Co. of New York, the New York Central Rd., the Michigan Central Rd., and the Cleveland, Cincinnati & St. Louis Rd., under the New York Lines Equipment Trust for 1907.

Timiskaming & Northern Ontario Ry.—Passenger receipts for July, \$59,578.42; freight receipts, \$150,457.38; total receipts \$210,035.80, against \$56,134.33 passenger receipts; \$110,956.45 freight receipts; \$167,090.78 total receipts, for July, 1917.

White Pass & Yukon Ry.—A special meeting of debenture holders and shareholders was held in London, Eng., Aug. 2, for the consideration of reorganization proposals, as outlined in our last issue. The meeting was called under an order of the court, and votes of the various interests were taken for submission to the court, the result of which will be announced later.

Grand Trunk Ry. Acquisition.—The following statement was issued from the G.T.R.'s London, Eng., office Sept. 5:—“Reports that shareholders and directors of the G.T.R. in recent negotiations in London insisted that the only basis upon which they would sell their property to the Dominion Government was for cash, are declared here on highest authority to be absolutely untrue. It is stated that there was no suggestion made by either side of a cash settlement in payment for taking over the system, the only terms discussed being those regarding a fixed annuity to be paid to owners of the property.”

Officials of the C.P.R. and the Canadian Government Railways met in St. John, N.B., Sept. 21, to discuss freight and passenger rates in the maritime provinces.

The Canadian Railway War Board's Work.

Abbreviations for Cars:—For the sake of uniformity in compilation of interchange and other car reports, it is directed that Canadian lines adopt the following abbreviations:—

- "A"—Automobile cars.
- "B"—Box cars.
- "C"—Coal gondola cars.
- "H"—Hopper cars.
- "CK"—Coke cars.
- "F"—Flat cars.
- "LP"—Live poultry cars.
- "MW"—Ballast cars.
- "R"—Refrigerator cars.
- "SD"—Single deck stock cars.
- "DD"—Double deck stock cars.
- "PH"—Palace horse cars.
- "T"—Tank cars.

Commodities liable to damage cars.—One of the railways has issued the following circular:—"When box cars are necessary for shipments of freight, either in carload or less than carload quantities, which is liable to damage sides, ends or floors of cars, only old cars must be loaded, and when system cars are used, only those having a carrying capacity of 30 tons or less are to be so loaded. This includes such freight as: Acids of all kinds, asphalt, empty oil barrels, empty carboys, fertilizer, bulk or packages, gasoline, glue stock, grease, hides, ice, lime, bulk or packages, marget waste, molasses, paints, petroleum and products, phosphates, syrups, tallow, tankage, tar, turpentine, kerosene and other oils, or any other commodity liable to leak or that will taint the car and render it unfit for movement of foodstuffs. System box cars exceeding 30 tons capacity and system automobile or produce cars, must not, under any circumstances, be used for such freight."

It is suggested that all member lines might with advantage issue specific instructions somewhat similar to the foregoing.

General Embargoes.—In issuing other than general embargoes, it is desired that the following exemptions be made in the order of priority shown:—1. Live stock and perishables. 2. Fuel, including coal, coke, charcoal, cordwood, slabs, edgings. 3. Shipments consigned to or for account of Imperial Munitions Board and Director of Overseas Transport, and to officers of United States Government departments. 4. Food for human consumption, including grain, grain products, sugar, salt, canned goods. 5. Food for animals and poultry. 6. Railway material and supplies (other than coal or coke when consigned to an officer of the railway at a station of the railway. 7. Shipments consigned to manufacturers of locomotives and cars. 8. Supplies for coal mines. 9. Oils. 10. Tank cars, loaded and empty. 11. Empty gas cylinders.

Obligation of Supplying Rolling Stock.—Canadian railways have been asked by the Board to be governed by the following regulations issued by the United States Railroad Administration's car service section:

1. (a) When cars are to be loaded to destinations within the same switching limits in which the shipment originates, the obligation of supplying equipment ordered rests with the road upon which the car is to be loaded.

(b) When cars are to be loaded on a switching line to destinations beyond the switching limits, primary obligation for equipment ordered rests with the carrier road which is to receive the loaded car for road haul, subject to paragraphs 2 and 3.

2. A road haul line loading cars in switching service destined to points be-

yond the switching limits on another carrier road shall furnish the equipment from such supply as may be available within such switching limits and such carrier roads will make necessary equalization locally within weekly periods.

3. A terminal switching line loading cars in switching service destined to points beyond the switching limits on a carrier road shall furnish the equipment from such supply as may be available on its rails and when equipment required is not available, will call upon the carrier road to furnish necessary cars under paragraph (b).

4. The use of equipment as above is subject to car service rules, and exceptions may be made only upon authority of the car service section or the regional director having jurisdiction.

5. Shippers will be required to place order for equipment desired with proper representatives of the road on which cars are to be loaded.

Shipments to Consignees.—From time to time embargoes are issued by railways to the effect that "at request of consignee" shipments will not be accepted when billed to such consignee. For obvious reasons it is inadvisable that an embargo be placed for the reason stated. The issuance of an embargo in this manner conveys the impression that the railway is responsible for regulating the receipts of the consignee, and the railway might be involved in difficulty due to non-fulfillment of contracts entered into by outside parties.

Transportation of Mails.—As, on account of the increases in the costs of transportation, it is apparent that the rate of compensation allowed railways for the carriage of mails is inadequate, it is intended to make application to the Dominion Government at an early date for the establishment of mail carrying rates which will fully compensate the railways for the service given. In order to permit of necessary action being taken, member companies have been asked to furnish statements showing the present compensation received, the cost of the service performed, and the increase in cost since the establishment of the present rates, and also to recommend what increases in rates should be obtained.

Canadian Railway Board of Adjustment No. 1.

Case 1, heard Sept. 10, Brotherhood of Railroad Trainmen and Toronto, Hamilton & Buffalo Ry. Claim for reinstatement, pay for time lost, of brakeman Earl Stewart, discharged on account of accident involving rear end collision.

Joint statement of fact as to controversy existing between T. H. & B. Ry. and the Brotherhood of Railroad Trainmen, submitted to Canadian Railway Board of Adjustment No. 1. "On January 29, 1918, a rear end collision occurred on the T. H. & B. Ry. about 3½ miles east of Hamilton, at the Albion bridge. On the date in question extra west locomotive 53, left Stoney Creek shortly after 7 p.m., and about the Albion bridge was stopped on account of light locomotive 16, having stopped about two locomotive lengths inside of automatic block signal 331, which was standing at 'danger' on arrival of extra 53. Rear brakeman Earl Stewart left the caboose of extra 53, which was standing on the bridge, to flag, but only got back about 700 ft. before extra west locomotive 70, showed up around curve and, passing him, struck rear end of ex-

tra 53 standing on the Albion bridge. Conductor Darche of extra 53 was killed in the collision, and another employe was injured, while one other employe riding in the caboose got out without injury. Brakeman Stewart was, on Feb. 9, 1918, 'discharged for failure to comply with flagging rule, Jan. 29, 1918.'

"The contention of the organization is: That flagman Stewart left the caboose of extra 53 as promptly as possible after stopping; that he got out as far as possible, with the time at his disposal, before extra 70 showed up around the curve, and that, for that reason, it was improper to hold him responsible for the accident.

"The contention of the company is: That flagman Stewart did not get back the proper distance required by rules to flag extra 70, and that he did not get back as far as he could have gone with the time at his disposal after extra 53 stopped. He was discharged for reasons above quoted.

"F. F. Backus, General Manager, T. H. & B. Ry.; W. J. Goodfellow, General Chairman, B. of R. T.—T. H. & B. Ry."

After analyzing the foregoing statements of fact and hearing additional evidence submitted by each party to the controversy, the board considered the following questions:—

1. Did Stewart observe T. H. & B. R. flagging rules? Answer, yes.

2. Should Stewart be paid according to schedule for all time lost? Answer, yes.

The unanimous opinion of the entire board is, and they take this opportunity of impressing on all concerned, that flagging rules must be rigidly observed to prevent accident resulting in damage to property to injury to person, and that everything possible must be done to afford full protection to trains.—U. E. Gillen, Chairman; S. N. Berry, Vice Chairman.

Contagious or Infectious Diseases on Trains.

—The Board of Railway Commissioners has issued the following circular: "Railway companies are required to issue instructions to conductors of trains carrying passengers, to report, immediately, to the proper officer, any case, or cases, that they know of or have reason to suspect, of a passenger, or passengers, suffering from contagious or infectious diseases, having travelled in any of the cars in their trains; and, furthermore, instruct the official designated to have such car, or cars, removed from service and thoroughly disinfected in accordance with clause 5 of general order 35, before permitting the same to go into service again."

The Metric System in Great Britain.

—A report presented to the Imperial Parliament recently, by the committee appointed to make suggestions as to the commercial and industrial policy to be followed after the war, contains certain conclusions relative to the adoption of the metric system in Great Britain. The committee states that having given the subject very full consideration, it is unable to recommend the compulsory adoption of the system, expresses itself as not being convinced that it is better than the present British system, and as satisfied that the practical objections are such as to outweigh any advantages claimed for it.

The Grand Trunk Pacific Ry. inaugurated a direct service between Regina and Weyburn, Sask., Sept. 1, over the Regina-Northgate line as far as Talmage, then over the recently completed branch into Weybury. The service is tri-weekly, each way on Tuesdays, Thursdays and Saturdays.

The Canadian Northern Railway's Reorganization, Etc.

The principal event of the past month in Canadian railway circles has been the final steps in the transfer of the C.N.R. ownership to the Dominion Government, the retirement of the President and Vice President, Sir Wm. Mackenzie and Sir Donald Mann, and most of the other directors, the election of new directors and the election as President of D. B. Hanna, heretofore Third Vice President.

Legislation, Agreement and Arbitration.

In 1913 the Dominion Parliament passed an act to grant subsidies towards the construction of lines as follows: Canadian Northern Ontario Ry., from Ottawa to Toronto, not exceeding 250 miles, at \$6,400 a mile; Canadian Northern Ontario Ry., from Ottawa to Port Arthur, not exceeding 910 miles, \$12,000 a mile; Canadian Northern Alberta Ry., from Edmonton to the boundary between Alberta and British Columbia, not exceeding 260 miles, \$12,000 a mile. It was provided that before any of the subsidies be paid, the C.N.R. Co. should transfer to the Finance Minister, in trust for the government, \$7,000,000 of common stock.

In 1914 the Dominion Parliament passed an act providing that the government might aid in the construction, completion, equipment and betterment of the C.N.R. system, by guaranteeing its bonds, etc., to an amount not exceeding \$45,000,000, the guaranteed securities to be secured by a trust deed of securities of the railway, express, telegraph, transfer and other companies comprising the C.N.R. system, and by the transfer to the Finance Minister, in trust for the government, of \$33,000,000 of C.N.R. common stock, making, with the \$7,000,000 previously transferred, a total of \$40,000,000. The act also provided that while any of the guaranteed securities were outstanding the government might appoint any person to be a director of any or all of the companies included in the C.N.R. system.

In 1917 the Dominion Parliament passed an act providing that it might acquire the remaining 600,000 shares of the C.N.R.'s capital stock, not then held by the Finance Minister in trust for the government, on terms to be set out in an agreement to be made between the government and the owners and pledgees of not less than five-sixths of that stock, and for a price to be determined by arbitration; that upon the making of the agreement, at least five-sixths of the shares be transferred to the Finance Minister in trust for the government, and that if any of the 600,000 shares be not transferred the Governor in council might declare them to be the government's property, and that they should be paid for pro rata with the shares transferred as above required. The government was authorized, on the transfer of the five-sixths of the shares referred to, to assist the C.N.R. in paying its indebtedness up to \$25,000,000.

On Oct. 1, 1917, five-sixths of the 600,000 shares, par value \$51,000,000, were transferred to the Finance Minister, making a total of 910,000 shares, par value \$91,000,000, vested in the government, and shortly afterwards the Finance Minister announced that the government had become the "sole proprietor" of the system.

The agreement entered into between the government, Mackenzie, Mann & Co., Ltd., and the Canadian Bank of Commerce, pledgees of a portion of the 600,000 shares of stock, under the act of 1917, provided that arbitrators should deter-

mine the value of the 600,000 shares as at Oct. 1, 1917, that should the value be determined as \$10,000,000 or more, the price to be paid therefor should be \$10,000,000, but if the value determined

within three months of its receipt of the award, subject to deduction for undisclosed C.N.R. liabilities, if any.

Under the agreement, the following arbitrators were appointed: Sir Wm. Meredith, Chief Justice of Ontario, representing the Dominion Government; Wallace Nesbitt, K.C., Toronto, representing Mackenzie, Mann & Co., and Canadian Bank of Commerce; and Mr. Justice R. E. Harris, of Halifax, selected by the two other arbitrators. The arbitration opened at Toronto, Feb. 4, 1918, and continued at intervals until May 25, when the arbitrators gave a unanimous award, declaring that the value of the 600,000 shares was \$10,800,000, each of the parties to pay its own costs of the arbitration.

Under the terms of the agreement, the payment under the award was to be made by Aug. 25, but it was delayed for some two weeks, owing to certain matters which had to be cleared up. On Sept. 11, it was announced in Ottawa that payment had been made for 510,000 shares by a cheque for \$8,500,000, payable jointly to Mackenzie, Mann & Co. and the Canadian Bank of Commerce, the balance of the \$10,000,000 being held for the acquirement of the 90,000 remaining shares outstanding. As the holders of these shares were not parties to the agreement respecting the five-sixths of the 600,000 shares, it is said that they will be paid for on the basis of the arbitrators' determination of \$10,800,000, viz., \$18 a share, making the total payments \$10,120,000.

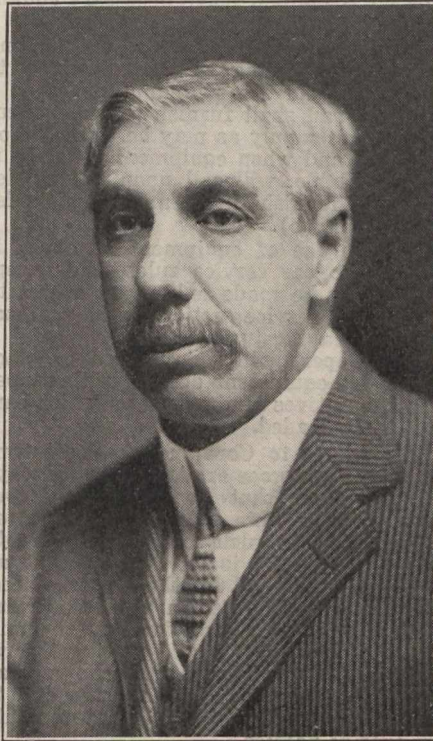
Canadian Northern Railway System Properties.

The companies amalgamated in 1914 as the C.N.R. system were as follows: Bay of Quinte Ry. Co., Brockville, Westport & North Western Ry. Co., Canadian Northern Ry. Co., Canadian Northern Pacific Ry. Co., Canadian Northern Alberta Ry. Co., Canadian Northern Western Ry. Co., Canadian Northern Saskatchewan Ry. Co., Canadian Northern Manitoba Ry. Co., Canadian Northern Ontario Ry. Co., Canadian Northern Quebec Ry. Co., Canadian Northern Express Co., Canadian Northern Transfer Co., Canadian Northern Telegraph Co., Canadian Northern Steamships, Ltd., Canadian Northern System Terminals, Ltd., Central Ontario Ry., Duluth, Winnipeg & Pacific Ry. Co., Halifax & Southwestern Ry. Co., Irondale, Bancroft & Ottawa Ry. Co., Lake Superior Terminals Co., Minnesota & Ontario Bridge Co., Minnesota & Manitoba Rd. Co., Marmora Ry. & Mining Co., Mount Royal Tunnel & Terminal Co., Niagara, St. Catharines & Toronto Ry. Co., Northern Consolidated Holding Co., Quebec & Lake St. John Ry. Co., Qu'Appelle, Long Lake & Saskatchewan Rd. & Steamboat Co., St. Boniface Western Land Co., Winnipeg Land Co.

The C.N.R. Co. holds a controlling interest in the Great Northwestern Telegraph Co., which is included in the transfer to the government. No action has apparently been taken in regard to the Chatham, Wallaceburg & Lake Erie Ry., Toronto Suburban Ry., and the Toronto & Eastern Ry., on the latter of which only a little construction has been done. All three of these companies are controlled by Sir Wm. Mackenzie and associates. It is possible that some, if not all of them, may be transferred to the government.

Canadian Northern Railway Shareholders.

The acting Minister of Finance, Hon. A. K. Maclean, stated in the House of



David Blythe Hanna,
President, Canadian Northern Railway.



Alfred J. Mitchell,
Vice President, Finance and Accounting, Canadian Northern Railway.

should be less than \$10,000,000, the value so determined was to be the price paid, in other words, no more than \$10,000,000 was to be paid, regardless of what the arbitrators might decide as to the price; payment to be made by the government

Commons, on May 14, 1918, that the 1,000,000 shares of \$100 each of the C.N.R. Co.'s stock were then held as follows:

Minister of Finance and Receiver General of Canada in trust for His Majesty	910,000
Lazard Brothers & Co.	22,500
Mackenzie, Mann & Co., Ltd., transferred in blank and deposited with Province of British Columbia, Order deposited with Finance Minister	16,000
Z. A. Lash, K.C.	13,020
Mackenzie, Mann & Co., in trust	12,660
Sir John Aird and H. V. F. Jones, in trust	10,000
British Empire Trust Co. Ltd.	3,240
D. B. Hanna	2,600
R. M. Horne-Payne	2,520
Bank of Scotland	2,000
Lewis Lukes	2,000
D. C. Rea and E. B. McNery, in trust	1,000
W. H. Moore	1,000
A. J. Mitchell	100
Sir William Mackenzie	100
Sir Donald Mann	100
R. J. Mackenzie	100
E. R. Wood	100
W. J. Christie	20
W. K. George	20
G. A. Bell	20
Total	1,000,000

The Minister added that the last three named were the government directors, who had shares allotted to them for qualification purposes which they held in trust for the Government.

The Prime Minister's Declaration of Railway Policy.

Sir Robert Borden, in speaking at the Toronto Exhibition directors' luncheon on Sept. 9, said:—"Questions of great moment demand and are now receiving the attention of the government. With one exception the largest railway proprietor in Canada is the Canadian people; and the day may come when there will be no exception. The acquisition of the Canadian Northern Ry. system was brought about by conditions arising out of the war, and, in my judgment, it was the wisest solution of existing difficulties. The system comprises about 10,000 miles of railway, of which more than 9,700 miles are in actual operation; and, including the \$10,000,000 to be paid for the capital stock, the total cost to the country will be between \$44,000 and \$45,000 a mile. The greater portion of the line runs through a country which must develop rapidly in the early future. For this reason its future prospects are more favorable than those of the Intercolonial or the National Transcontinental. But if we take into account capitalization, the comparison is still more favorable to the recently acquired system. The government system of railways, comprising the Intercolonial, the Prince Edward Island and other small railways in the Maritime Provinces, embraces a total of 1,941 miles, hitherto known as the Canadian Government Railways. It represents a capitalization of more than \$137,000,000, without including interest. That means a capitalization a mile of \$70,666. If, however, interest were included (as it has been included in the capitalization of the Canadian Northern system), the capitalization would exceed \$100,000 a mile. Comparison with the Grand Trunk Pacific is equally striking. It embraces a total of 1,748 miles. The total expenditure upon the road, equipment and rolling stock amounts to about \$180,000,000, or more than \$100,000 a mile. The National Transcontinental comprises 1,811 miles from Moncton to Winnipeg. The actual cash paid out for its construction, without including a dollar for interest, is nearly \$164,000,000 and if interest is added the amount exceeds \$200,000,000 for 1,811 miles. This represents a capitalization of \$92,000 a mile if interest is omitted, and over \$112,000, including interest.

"The country, therefore, has embarked upon a wide policy of state ownership under very favorable conditions. Difficult questions at once present themselves as to methods of operation. If the policy of State ownership is to be successful, certain conditions are essential, and the people must resolutely support the government in maintaining them. The methods by which the operation of the road is to be carried out must be as efficient as those of any private corporation. There must be no party political interference; that would be absolutely fatal to discipline, to efficiency and to success. On the other hand, there must remain with the people and parliament of the country a general control which is incident to and indeed inherent in ownership. The government's proposals will be made public almost immediately, and they will be based upon the considerations I have mentioned. The total mileage owned by Canada is very large, comprising nearly

George, Toronto, and H. W. Richardson, Kingston, Ont., representing the government. Messrs. Nicholls and Richardson resigned from the Board on their appointment to the Senate, and Graham A. Bell, then Assistant to the Minister of Railways and Financial Comptroller, Railways Department, was appointed as one of the government directors.

On Sept. 6, 1918, Sir Wm. Mackenzie, Sir Donald Mann and all the other directors, except D. B. Hanna and G. A. Bell, the latter of whom had in the meantime been appointed acting Deputy Minister of Railways, retired; A. J. Mitchell, theretofore assistant to Vice President, C.N.R., and Comptroller, Mackenzie, Mann & Co., was elected a director, and on Sept. 18 it was announced that the following additional directors had been elected, of course, on the government's nomination:—Robt. Hobson, President, Steel Co. of Canada, Hamilton, Ont.; F. P. Jones, Vice President and General Manager, Canada Cement Co., Montreal; E. R. Wood, President, Dominion Securities Corporation, Toronto; R. T. Riley, President, Northern Trusts Co., Winnipeg; C. M. Hamilton, farmer, Weyburn, Sask. E. R. Wood, who had been a member of the board, resigned at the same time as Sir Wm. Mackenzie, Sir Donald Mann, and others, and was re-elected. D. B. Hanna was elected President, and A. J. Mitchell was appointed Vice President, in charge of finance and accounting.

The first meeting of the new directorate was held in Toronto Sept. 27, all the directors except E. R. Wood being present. After inspecting the new terminals at Leaside, they left that evening by special train for Ottawa and Montreal, to look over the terminals, etc., at those places, and inspect the line between Ottawa and Montreal, which will be opened for traffic shortly in connection with the line between Ottawa and Toronto, thus giving a through route between Montreal and Toronto. Until otherwise decided, the board will meet in Toronto each Friday.

In addition to the election of D. B. Hanna, as President, and the appointment of A. J. Mitchell as Vice President, Finance and Accounting, the only appointments that have been made are those of Senior Counsel, Assistant to the President, and Secretary. Z. A. Lash, K.C., who was a member of the old board, and also the company's Senior Counsel, but who resigned both positions when Sir Wm. Mackenzie, Sir Donald Mann and other directors retired recently, has been re-appointed as Senior Counsel. In this connection he has also retired from the board of Mackenzie, Mann & Co., so that there can be no conflict of interests. R. C. Vaughan, heretofore Assistant to the Third Vice President, has been appointed Assistant to the President, and R. P. Ormsby, heretofore Assistant Secretary, has been appointed Secretary, vice W. H. Moore, resigned. A number of other changes will doubtless be made, especially in the operating department, and it appears to be probable that one or more vice presidents, without seats on the board, will be appointed in charge of various departments. M. H. MacLeod, General Manager and Chief Engineer, Western Lines, Winnipeg, is mentioned as likely to be made Vice President of Operation at Toronto, in which case he would probably be succeeded at Winnipeg by A. E. Warren, now Assistant to the General Manager there, and who acted for several months recently as Chief Operating Officer for the Railways Department at Ottawa. Vice Presidents for the legal and traffic departments are also



R. C. Vaughan, Assistant to President, Canadian Northern Railway.

14,000 miles, and reaching from the Atlantic to the Pacific. All the lines included in this mileage should be operated as one system and under one management; this system should not be administered by a department of the government; it should be connected, as soon as practicable, with steamship lines on both Atlantic and Pacific; and last, but not least, its operation should be kept absolutely free from party political interference. For these reasons and for this purpose the board of the Canadian Northern system will be reconstituted in the immediate future."

C.N.R. Directorate and Officials.

The C.N.R. directors, at the time of the issue of the last annual report to June 30, 1916, in Nov., 1916, were: Sir Wm. Mackenzie, President; Sir Donald Mann, Vice President; D. B. Hanna, Third Vice President; Z. A. Lash, Senior Counsel; R. M. Horne-Payne, London, Eng.; R. J. Mackenzie, Winnipeg; Frederick Nicholls and E. R. Wood, Toronto, representing the private shareholders, and W. J. Christie, Winnipeg; W. K.

spoken of, but the full organization may be delayed, pending the expected arrangements in connection with the Canadian Government Railways, which will probably be merged with the C.N.R. into one system, and also the possibility of the Grand Trunk Pacific, if not the Grand Trunk also, being taken in later on.

DAVID BLYTHE HANNA, President, was born at Thornliebank, Renfrewshire, Scotland, Dec. 20, 1858, and entered railway service there in 1874, since when he has been, to 1879, clerk and ticket agent, Glasgow, Barrhead & Kilmarnock Ry., at Kinnishead, Pollokshaws and Barrhead; 1879 to 1882, cashier, Stobcross station, Glasgow, Caledonian Ry.; 1882 to 1884, in Auditor's office, and Travelling Auditor, G.T.R., Montreal; 1884 to 1886, clerk, General Auditor's office, New York, West Shore & Buffalo Ry., New York; 1886 to 1892, Chief Accountant, Manitoba & North Western Ry., Winnipeg; 1892 to 1896, Treasurer, and from 1893, also Land Commissioner, same road; 1896 to Nov., 1902, General Superintendent, first of Lake Manitoba Ry. & Canal Co., and afterwards of Canadian Northern Ry., Winnipeg; Nov., 1902, to the date of his present appointment, Third Vice President, Canadian Northern Ry. He has been associated with the Canadian Northern Ry. since its inception, and has been officially connected with all its subsidiary railway companies, now comprising the system.

ALFRED J. MITCHELL, Vice President, was born at Toronto, Sept. 28, 1879, and entered transportation service July 18, 1899, since when he has been, to Jan., 1902, chief clerk, Mackenzie, Mann & Co.; Jan., 1902, to Jan., 1904, accountant, same company; Jan., 1904, to July, 1908, Assistant Comptroller, same company; July, 1908, to Sept., 1918, Comptroller, same company; July, 1912, to Sept., 1918, also Assistant to Vice President, Canadian Northern Ry., all at Toronto.

MAJOR G. A. BELL, C.M.G., director, is acting Deputy Minister of Railways and Canals. Biographical data and portrait were published in our August issue, pg. 339.

C. M. HAMILTON, director, is a farmer at Weyburn, Sask., and is specially interested in the transportation problems connected with that industry. He is President of the Union of Rural Municipalities.

ROBERT HOBSON, director, is a son of the late Joseph Hobson, formerly Chief Engineer, G.T.R., and was born at Berlin, Ont., Aug. 31, 1861. He was engaged in railway work for several years on the Great Western Ry. and G.T.R., and in 1876 was appointed Secretary-Treasurer of the Hamilton Blast Furnace Co., the first producers of pig iron in Ontario. This company has since developed into the Steel Co. of Canada, of which he is President. He is also associated with several financial and industrial concerns, including the Bank of Hamilton and the Canadian Locomotive Co., being a director of both of these.

F. P. JONES, director, was born at Brockville, Ont., Nov. 5, 1869, and educated there and at Kingston, Ont. He was for many years in the Nova Scotia Steel & Coal Co.'s service, becoming Sales Manager, and subsequently transferred to the Dominion Iron & Steel So. in a similar capacity, eventually becoming Manager. He was later appointed Vice President and General Manager, Canada Cement Co. Since the outbreak of war, he has acted as Vice Chairman of the War Trade Board.

R. T. RILEY, director, was born in Yorkshire, Eng., July 1, 1851, and came to Canada in 1875, and for some years

was engaged in farming in Ontario. He removed to Manitoba in 1881, where he has since been associated with a number of industrial, insurance and financial concerns, including the Northern Trust Co., of which he is President. He was one of the organizers, and is a director of the Great West Life Assurance Co., director, Union Bank of Canada, and a manager of the Winnipeg Stock Exchange.

E. R. WOOD, director, was born at Peterborough, Ont., May 14, 1866, and was educated there. He commenced business life as a telegraph operator, and subsequently entered the office of the Central Canada Loan and Savings Co., of which he became Vice President and General Manager. He is also President, Dominion Securities Corporation; Vice President, National Trust Co.; Director, Crow's Nest Pass Coal Co., Canadian Bank of Commerce, Western Assurance Co., Canada Life Assurance Co., Sao Paulo Tramway, Light & Power Co., Mexican Light & Power Co., and other industrial and financial concerns.

R. C. VAUGHAN, Assistant to President, was born in Toronto, Dec. 1, 1883, and entered railway service Oct. 3, 1893, since when he has been, to Mar., 1902, office boy, clerk and stenographer, General Freight Agent's office, C.P.R., Toronto; July to Dec., 1902, in Freight Department, G.T.R., Toronto; Jan., 1903, to July 1, 1910, clerk, secretary to Third Vice President and General Manager, and chief clerk to Third Vice President, Canadian Northern Ry., Toronto; July 1, 1910, to date of present appointment, Assistant to Third Vice President.

Changes in Offices, Etc.

There appears to be little doubt that the C.N.R. head office will remain in Toronto, unless a change should be determined on if the C.N.R. and the Canadian Government Railways are merged, and the Grand Trunk Pacific and possibly the Grand Trunk also taken in. The Winnipeg Board of Trade has started a movement in favor of the removal of the headquarters to that city, but this is not likely to take place.

President D. B. Hanna is moving down one floor in the general office building, 1 Toronto St., to the room occupied heretofore by Sir Wm. Mackenzie, and his Assistant, R. C. Vaughan, and immediate staff, will be located in adjoining rooms. Sir Donald Mann's former office will be used as a board room.

Sir Wm. Mackenzie and Sir Donald Mann have moved into offices at 43 Victoria St., Toronto, and among their staff who have moved with them are: R. G. O. Thomson, heretofore Assistant Comptroller, and now Comptroller, Mackenzie, Mann & Co., Ltd.; F. C. Annesley and C. E. Buckley, private secretaries to Sir William and Sir Donald, respectively. The Canadian Land & Investment Co. will also have its offices at 43 Victoria St. Lewis Lukes, heretofore Assistant to President, C.N.R., who is connected with several of Sir Wm. Mackenzie's interests, has moved his office to 95 King St. East, Toronto.

Grand Trunk Ry.—A London, Eng., cable of Sept. 12 says the G.T.R. has issued £3,000,000 of 3-year 6% notes at 99, partly to replace an issue of £2,000,000 of 5% notes maturing shortly.

The Michigan Central Rd. is reported to have made an arrangement for the operation of certain of its freight trains over a section of the Toronto, Hamilton & Buffalo Ry., which necessitates the removal of a number of train crews from St. Thomas to Bridgeburg, Ont.

Canadian Northern Railway Earnings, etc.

Gross earnings, working expenses, net earnings, increases and decreases compared with those of 1917, from July 1, 1918.

	Gross earnings.	Expenses.	Net Earnings.	Decreases.
July	\$3,739,400	\$3,462,700	\$276,700	\$628,200
	\$3,739,400	\$3,462,700	\$276,700	\$628,200
Incr.		\$ 522,700		
Decr.	\$ 105,500		\$628,200	

Approximate earnings for August, \$3,933,300, against \$3,405,200 for August, 1917.

Canadian Pacific Railway Earnings, Etc.

Gross earnings, working expenses, net earnings, and increases or decreases, compared with those of 1917, from Jan. 1, 1918:

	Gross earnings.	Expenses.	Net Earnings.	Decreases.
Jan.	\$10,789,818	\$9,621,824	\$1,167,993	\$1,263,485
Feb.	9,574,302	8,983,404	590,898	1,396,151
Mar.	12,427,915	9,435,134	2,992,781	944,536
Apr.	13,328,849	9,873,459	3,455,390	719,588
May	13,314,117	9,626,341	3,687,776	863,944
June	12,577,286	9,765,139	2,812,147	1,103,759
July	12,374,165	10,204,153	2,170,012	1,589,995
	\$84,386,451	\$67,509,455	\$16,876,996	\$7,880,460
Incr.		\$ 7,532,274		
Decr.	\$ 348,186		\$ 7,880,460	

Approximate earnings for August, \$12,713,000, against \$12,414,537 for August, 1917.

Grand Trunk Railway Earnings.

	Gross earnings.	Expenses.	Net earnings.	Increase or Decreases.
Jan. to June	\$26,162,127	\$25,855,560	\$ 306,567	\$4,652,068
July	5,788,482	4,358,163	1,430,319	214,767
	\$31,950,609	\$30,213,723	\$1,736,886	*\$44,37,301
Incr.	\$ 2,899,121	\$ 7,345,421		
Decr.			\$4,437,301	

*Decrease.
Approximate earnings for August, \$6,106,615, against \$4,784,269 for August, 1917.

Grand Trunk Pacific Ry. Earnings.

Earnings for July, \$437,847, against \$489,980 for July, 1917; approximate earnings for three weeks ended Aug. 21, \$301,921, against \$362,783 for same period 1917.

Dominion Transport Co's Organization.

The following changes have been made in the organization of the Dominion Transport Co.:

G. R. Starke, heretofore Vice President and Managing Director, has been elected President and Managing Director. Office, Montreal.

J. A. Cantlie, Montreal, has been elected Vice President.

The other directors are Lieut.-Col. Michie and Hugh Mackay.

F. L. Miller is Secretary-Treasurer.

W. J. Langton, heretofore Superintendent, Toronto, has been appointed General Manager. Office, Montreal.

R. H. Walker, heretofore agent, Ottawa, Ont., has been appointed Superintendent, Toronto.

Geo. Preston has been appointed agent, Ottawa, Ont.

W. J. Langton, General Manager, was born at Toronto, entered the company's service about 30 years ago, and was Superintendent at Toronto for about 13 years. While in Toronto, he was associated with several local organizations, and is President of the Toronto Transportation Club.

The Canadian Ticket Agents' Association will hold its 32nd annual meeting and outing at Buffalo, N.Y., Oct. 9, 10 and 11.

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Official Organ of various Canadian Transportation
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NOTICE TO ADVERTISERS.

ADVERTISING RATES furnished on application.

ADVERTISING COPY must reach the publishers by
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TORONTO, CANADA, OCTOBER, 1918.

PRINCIPAL CONTENTS.

Appointments, Transportation	448
Birthdays of Transportation Men.....	435
Board of Railway Commissioners,—	
Orders by, Summaries of.....	436
Traffic Orders	446
Canadian Government Railways Betterments	437
Canadian Northern Ry. Construction.....	440
Montreal Station	430
Presidency	445
Reorganization, etc.	442
St. Maurice River Bridge.....	434
Canadian Pacific Ry. Inspection.....	437
Passenger Car Cleaning.....	432
Canadian Railway War Board's Work.....	441
Express Companies, Among the.....	467
Electric Railway Department.....	450 to 460
Canadian Electric Railway Association's	
Meeting.....	452
Finance, Meetings, etc.	452
Freight and Passenger Rate Increases....	450
London & Port Stanley Ry. Report.....	454
Montreal Tramways Co.'s Fares.....	454
Report	456
Notes.....	456
Nova Scotia Tramways & Power Co.'s	
Taxation	456
Ottawa Electric Ry. Franchise.....	451
Personal.....	453
Projects, Construction, etc.	453
Quebec Ry., Light, Heat & Power Co.'s	
Report.....	455
Winnipeg Electric Ry. New Cars.....	454
Flagging Rules for Impassable Track.....	433
Grain in Store at Terminal Elevators.....	435
Locomotives, Terminal Handling of.....	421
Marine Department.....	457 to 467
Canal Accidents, Suggestions for Suppres- sion of	463
Grain Statistics, 1917-1918.....	465
Personal.....	467
Sault Ste. Marie Canals Traffic.....	466
Shipbuilding in Canada for British Govern- ment.....	459
Shipbuilding in Canada for Dominion Govern- ment	457
Shipbuilding in Canada, General.....	461
Mainly About Railway People.....	447
Railway Air Compressor Laundry.....	424
Railway Development	438
Railway Earnings	444
Railway Finance, Meetings, etc.	440
Railway Rolling Stock Orders and Deliveries	437
Railway Ties Bought in Canada.....	429
Rates on Sugar in Carloads.....	425
Telegraph, Telephone and Cable Matters....	467
Trade and Supply Notes.....	468
Transportation Men, etc., in the War.....	439
United States Railroad Administration's Work.....	428

The Canadian Northern Railway's Presidency.

The Dominion Government has made a good start in the reorganization of the C.N.R. management. For some time it was feared that political considerations might prevail, and that a politician, without practical railway experience, would be appointed either chairman of the board or possibly as President. Such an appointment would have been a national calamity, and there was a good deal of public apprehension in regard to it. Sir Robert Borden allayed this somewhat, when he stated at the Toronto Exhibition directors' luncheon, on Sept. 9, that there must be no party political interference in the management of the road, and there was a general feeling of relief when it was announced on Sept. 18 that a board of business men had been appointed, and that D. B. Hanna had been elected President, thus ensuring a business administration of the second largest Canadian railway system.

It is eminently fitting that Mr. Hanna, who in 1896 was the first official of the little Lake Manitoba Ry. & Canal Co., the nucleus of the present C.N.R. system, should have been chosen as its chief executive. He is acquainted with every detail of the building up of the system, and has been responsible for years for its operation and for many other branches of its organization. Laboring under difficulties that many men would have found insurmountable, he has carried on the operation in a most economical way and has proved himself a most capable administrator. During the recent arbitration proceedings, he surprised even his most intimate friends by his thorough knowledge of every phase of the company's operations—finance, construction and operation.

Mr. Hanna enjoys to an extraordinary degree the confidence and respect of the thousands of men on the C.N.R. pay rolls, and will undoubtedly receive an enthusiastic loyalty from them that no outsider could hope to secure. He is also very popular with other railway officials, and with the large number of the general public with whom he has come in contact, and we believe that now he has a free hand and can carry out his own ideas as to organization, etc., he will produce satisfactory results.

Of one thing the public need have no fear. Mr. Hanna will serve the new owners of the road—the people—as loyally and enthusiastically as he served its private owners, and no man could do more.

Character Sketch of D. B. Hanna.

Following are extracts from an article published in the Toronto Globe in 1911:

You may call him, if you choose, prime minister to the dual monarchy that reigns over the Canadian Northern Ry. System. You may regard him as the foster mother of the score or more enterprises in which these potentates are engaged. You may speak of him as one of the big men of the country, wealthy, respected and influential, or you may point to him as the steady yet agile climber up the slippery rungs of the ladder of success. And yet in the end you will get back to describing him simply as the warm hearted, genial Scotchman, David Blythe Hanna, unspoiled and unchanged by all the honors that have fallen to his lot.

D. B. Hanna was Treasurer of the Manitoba & Northwestern Ry., with headquarters in Portage la Prairie, when William Mackenzie first ran across him. Mac-

kenzie was building the comparatively insignificant road from Gladstone to Dauphin, which was to form the nucleus of the Canadian Northern. He wanted a Superintendent, and a friend recommended Hanna, with the result that the brilliant promoter and the no less brilliant administrator joined hands.

The early days of the Canadian Northern, when Hanna was simply Superintendent of the little Lake Manitoba Ry. & Canal Company, form quite a contrast to the era that has since dawned. Those were the times when thirteen men and a boy were said to have been a sufficient force to operate the entire system. It was a period of vicissitude, when versatility was required, and faith and enthusiasm. Through it all D. B. Hanna plodded along, working overtime and inspiring courage in his subordinates.

His earlier career had all along been associated with railroading, in one form or another. Born at Thornliebank, Renfrewshire, Scotland, on December 20, 1858, he entered the service of the Glasgow, Barrhead & Kilmarnock Ry., at the age of 16, as ticket agent. In 1879 he transferred his services to the Caledonian Ry., becoming cashier at Stobcross station, in Glasgow. Emigrating in 1882, he first served two years in the Auditor's office of the Grand Trunk in Montreal, and then two years in the Auditor's office of the New York, West Shore & Buffalo Ry. in New York. In 1886 he joined the Manitoba & Northwestern Railway as Chief Accountant, becoming its Treasurer in 1892, and also Land Commissioner a year later. Just 15 years ago he became Superintendent of what was to become the Canadian Northern Ry., and in 1902 received the appointment of Third Vice-President.

In dealing with a man of Mr. Hanna's character, it is quite impossible to avoid the laudatory style of treatment. As one of his intimates remarked, "You can't tell much about Hanna, because he hasn't any faults." Among the several hundred men in the head offices of the C.N.R. in Toronto he is almost an object of worship. "There isn't a man among us who wouldn't die for him," was the somewhat extravagant assertion of one enthusiast, which may be taken as a fair indication of the esteem in which he is held. And this feeling extends outside to the other employes of the road. Even labor agitators, who might sometimes be expected to adopt a hostile attitude, have only good words to say for him.

When it comes to working, he does not believe in the eight-hour day—that is, for himself. It is no unusual thing for him to put in nine or ten hours at his desk, and throw in Saturday afternoons to boot, when, as he says, he can get a little house-cleaning done. On Sundays—well, of course, being a good Scotch Presbyterian, he doesn't indulge his hobby on the Sabbath. As for holidays, the frequent inspection trips which he must needs take, and almost annual voyages to England, provide sufficient variety, in his opinion, to make it possible to dispense with more formal vacations altogether. With so much of his time devoted to work, he is able to achieve wonders, getting through an immense amount of routine, and being interviewed by sometimes as many as fifty people a day.

The Third Vice-President of the C.N.R. is a big man, towering well over the 6-foot mark. Since he has seen fit on several occasions to joke about his appearance, it will not be derogatory to state that, like most men, he is not exactly in the Adonis class. One of his amusing reminiscences of his early life in Scotland has

to do with the time when he was a ticket-seller on the Glasgow & Kilmarnock Ry. An old lady presented herself before his wicket to buy a ticket to Glasgow.

"And sae ye're Janet Blair's boy?" said she.

"Aye," he assured her; "she's my mither."

"Weel, weel," mused the old lady, "a fine-lookin' woman is Janet Blair—but, lawks, ye're no a bit like her."

Looks, however, are only skin deep, and one need not be long in Mr. Hanna's company to find that his smile reveals a winsome personality, and his laugh a deep well of good spirits. Men who have travelled with him when the restraints of business have been relaxed find in him a prince of good fellows, an excellent story teller, and, what is just as much to the point, an appreciative listener. At the proper time, too, he can sing a Scotch song with almost as good effect as Harry Lauder, minus, of course, the theatrical trappings.

This vocal gift is, perhaps, the one unique feature about D. B. Hanna on which his biographer will be able to seize with particular satisfaction. It affords just that delightful little bit of contrast that is so essential to a good pen portrait. When the young Scotchman landed in Portage la Prairie his abilities in this direction were early recognized, and he was inveigled into taking charge of the choir in the Presbyterian church. His career as choirmaster is historic—it is inseparable from the story of his life. Whatever else may be forgotten, no one who attempts to outline his life omits this experience. Associated with it is the story of his discovery of Miss Edith Miller, the talented Canadian prima donna, who was a member of his choir, and who owes not a little of her success to his encouragement.

While Mr. Hanna no longer sings in a church choir, he has by no means lost his voice or his love for music. He is a regular attendant at Massey Hall concerts, and is Vice-President of the National Chorus. At the memorable banquet tendered to Sir William Mackenzie in Halifax on the occasion of the arrival of the first Canadian Northern liner from Bristol, he was present, and made one of the best speeches of the evening. Later on it was softly whispered that he had a very sweet voice, and that he was equally at home singing a hymn or a love song. There was a cry for a song from him, the doors being barred to prevent an escape. When he found there was no way to avoid it he surrendered, and delighted the crowd by singing that sweet little Scotch ballad, "I Love a Lassie." He was encored time and again. After it was over a mild mannered old Presbyterian was heard to say: "My! I would dearly love to hear him sing 'A Few More Years Shall Roll.'"

It was in connection with this incident, Mr. Hanna avers, that he had the most amusing experience in his life. He had retired in the small hours of the night, and was just getting to sleep, when the telephone in his room rang. He answered it, and found, as so often happens, that the voice at the other end of the line belonged to a man who had some favor to ask. This individual prefaced his request by saying: "I'm afraid you don't know me, Mr. Hanna, but I heard you sing to-night." Surely this was a tribute to his abilities as a singer.

Mr. Hanna can be termed neither a sport nor a club man. While he is a member of some dozen clubs in Toronto, Ottawa, Winnipeg and elsewhere, he prefers the comforts and pleasures of home life to the best that any club can afford. You

may see him lunching any day at the Albany or the National or the Toronto, but once the day's work is over he is off in one of his motors to his home in Rosedale, where he dines en famille and spends the evening reading or playing billiards with any friend who may chance to drop in.

He is a solid type of citizen, this big Scotch-Canadian, to whose speech the burr of his native land still clings tenaciously. His success has been due not so much to any brilliant series of achievements as to steady, conscientious work, involving a mastery of detail that would appal most minds. Couple with this those other qualities of heart and mind which have endeared him to a wide circle of friends and you have a character worthy to be pointed out as a fitting example for the rising generation.—W. A. Craick.

Traffic Orders by the Board of Railway Commissioners.

Standard Freight Tariffs.

General order 249. Aug. 31. Re application of undermentioned railway companies for approval of their standard freight tariffs of maximum mileage tolls. The said freight tariffs having been filed on the basis prescribed by order in council, 1863, July 27, 1918, it is ordered that the following tariffs be approved; the rate scales of the said tariffs to be published in at least two consecutive weekly issues of the Canada Gazette and preceded by the following notice:—"The undermentioned standard freight tariffs having been filed for the approval of the Board of Railway Commissioners for Canada, and being found by the board to be in accordance with order in council approved by general order of the board no. 249, August 31, 1918, the rate scales thereof are hereby published as required by sec. 327 of the Railway Act."

	C.R.C. No.
Algoma Central & Hudson Bay	478
Algoma Eastern Ry.	223
Atlantic, Quebec & Western Ry.	26
Boston & Maine Rd.	1908
Canadian Northern Ry.	W1132
Canadian Northern Ry.	E1102
Canadian Pacific Ry.	W2392
Canadian Pacific Ry.	E3543
Central Vermont Ry.	1295
Dominion Atlantic Ry.	576
Edmonton, Dunvegan & British Columbia Ry.	86
Essex Terminal Ry.	484
Esquimalt & Nanaimo Ry.	402
Glengarry & Stormont Ry.	93
Grand Trunk Ry.	E3957
Grand Trunk Pacific Ry.	298
Great Northern Ry.—	
Manitoba, Great Northern Ry.	1424
Brandon, Saskatchewan & Hudson Bay Ry.	1425
Crows Nest Southern Ry.	1423
New Westminster Southern Ry.)
Nelson & Fort Sheppard Ry.)
Vancouver, Victoria & Eastern Ry. (&.)	1430
Navigation Co.)
Red Mountain Ry.)
Kettle Valley Ry.)
Victoria & Sidney Ry.	V54
Halifax & South Western Ry.	F64
Kettle Valley Ry.	174
Maine Central Rd.	C1566
Michigan Central Rd.	2812
Naperville Junction Ry.	198
New York Central Rd.	1650
New York Central Rd.	1681
Pere Marquette Ry.	2215
Quebec, Montreal & Southern Ry.	661
Quebec Oriental Ry.	37
Temiscouata Ry.	328
Toronto, Hamilton & Buffalo Ry.	1227

Interswitching of Freight Traffic.

General order 250, Sept. 16.—Re general order 230, May 17, 1918, in matter of freight traffic, and general order 243, July 25, 1918, postponing effective date of general order 230 until Oct. 1, 1918. Upon reading what is filed by the Canadian Manufacturers' Association, and upon its request for further postponement of the effective date of general order 230, it is ordered that the effective date of

general order 230 be further postponed until Nov., 1918.

Rates on Caps and Hats.

27550. Aug. 1.—Re complaint of David Spencer Limited, Vancouver, against the interpretation placed by railway companies on item 240, page 59, Canadian freight Association Westbound Tariff no. 1, reading inter alia "Hats and caps (other than millinery) taking first class rating in current Canadian Freight Classification as applied to shipments of women's hats with plain band and binding only from Eastern Canada to Vancouver. Upon hearing the complaint at Vancouver, June 6, the complainant, the Canadian Pacific, Canadian Northern, and the Grand Trunk Pacific Railways being represented, and upon reading the report of the board's Chief Traffic Officer, it is declared that the proper rates on the shipments in question were the rates appearing in item 240 of Canadian Freight Association's Westbound Tariff no. 1, effective Sept. 20, 1916.

Service on Private Siding.

27522. Aug. 26.—Re application of New Minas Fruit Co. of White Rock, N.S., for an order directing the Dominion Atlantic service on the applicant company's siding without any charge in excess of the regular freight rates and that the railway return charges unjustly collected for the upkeep of the siding. Upon hearing the application at Kentville, N.S., July 4, in the presence of counsel for the applicant company and the railway company, and upon its appearing that the board is without jurisdiction in the matter, it is ordered that the application be dismissed.

North Mountain Ry. Passenger Tariff.

27702. Granting application of Dominion Atlantic Ry. Co. for approval of Standard Passenger Tariff C.R.C. 1 of North Mountain Ry. on the basis of 3.45c a mile.

Canadian Northern Ry. Rates on Wood Pulp.

27568. Aug. 16. Re complaint of Minnesota & Ontario Power Co., of International Falls, Minn., against increased rates on pulpwood from Canadian Northern Ry. stations to International Falls, as shown in C.N.R. tariff W-2051, C.R.C. W-1101, effective May 18, 1918: Upon hearing the complaint at Fort Frances, June 18, the complainant and the C.N.R. being represented, and upon the report of the board's Chief Traffic Officer, it is ordered that the complaint be dismissed.

Bills of Lading for Grain at Fort William and Port Arthur.

27,715. Sept. 27. Re complaint of Bole Grain Company, Fort William, Ont., that the C.P.R. refuses to issue bills of lading for grain weighed by the government weighing department except with the provision "Shipper's load and count." Upon hearing the complaint at Port Arthur, June 19, 1918, the Fort William and Port Arthur Grain Exchange, the Canadian Pacific, Canadian Northern and Grand Trunk Railways and the Ogilvie Flour Mills being represented, no one appearing for the complainant, and what was alleged, and upon reading the further written submissions filed, it is ordered that the complaint be dismissed.

A press report states that as a result of the disapproval by the Director General of United States Railroads of railways operating over leased lines, it is probable that the Wabash Rd. may have to cease operating in Canada. The Wabash operates over the Grand Trunk Ry.'s old air line under a lease which expires in 1919.

Mainly About Railway People Throughout Canada.

L. M. Conroy, ticket clerk, C.P.R., Halifax, N.S., was presented with a travelling bag recently, on resigning from the service.

M. J. O'Brien, railway contractor, and President, Canada & Gulf Terminal Ry., Ottawa and Renfrew, Ont., has been appointed a senator.

R. Home Smith, President, Algoma Central & Hudson Bay Ry., and one of the Toronto Harbor Commissioners, has been appointed Fuel Commissioner for Ontario.

A. E. Doucet, formerly District Engineer, National Transcontinental Ry., Quebec, Que., has resigned as President, St. Maurice Mines Co., and has been elected Vice President.

G. C. Martin, General Traffic Manager, Toronto, Hamilton & Buffalo Ry., was one of the speakers at the Canadian National Exhibition directors' luncheon at Toronto, Sept. 3.

U. E. Gillen, Vice President, G.T.R., who was taken ill suddenly at Trenton, Mich., about the middle of September, was reported Sept. 24, to be much better, and resting at his home.

E. McDonald, General Baggage Agent, Grand Trunk Pacific Ry., Winnipeg, has returned to duty, after an absence of a few weeks, having received a military discharge as unfit for active service.

H. C. Grout, General Superintendent, New Brunswick Division, C.P.R., St. John, N.B., received news of the death of his father, A. C. Grout, Manager, First National Bank, Wausau, Wis., recently.

A. B. Eldredge, President and General Counsel, Duluth, South Shore & Atlantic Ry., Marquette, Mich., was found dead in his bed at the Manhattan Hotel, New York, Sept. 9. The cause of death is given as internal haemorrhage.

W. B. Lanigan, whose appointment as Freight Traffic Manager, C.P.R., Montreal, was announced in our last issue, was entertained to luncheon in Winnipeg recently by local C.P.R. officials, on leaving for the east to take up his new duties.

W. H. Biggar, K.C., Vice President and General Counsel, and **Frank Scott**, Vice President and Treasurer, G.T.R., have been appointed, by a court order, trustees for the Toronto Belt Line Ry. Co. mortgage holders, in place of W. S. Lee and C. S. Czowski, deceased.

W. H. Newman, President, New York Central Lines, from 1901 to 1909, died Aug. 14, aged 71. He commenced railway service in 1869. On his resignation as President, in 1909, he took personal charge of the plans of the Grand Central terminal in New York, becoming responsible for the carrying out of the work.

John Vass, who has been appointed Assistant to Superintendent of Motive Power, Ontario Lines, G.T.R., Allandale, Ont., was born at Braidwood, Scotland, and went to the U.S. in 1888, and was, to 1894, locomotive fireman, Wabash Rd., Chicago, Ill.; 1894 to 1895, locomotive fireman, G.T.R., Battle Creek, Mich.; 1895 to 1903, locomotive man, G.T.R., Battle Creek, Mich.; 1903 to June, 1918, Road Foreman of Locomotives, Nichols, Mich.; June to Sept. 1, 1918, Assistant Master Mechanic, Ontario Lines, Allandale, Ont.

Edwin Roy Battley, who has been appointed Superintendent of Motive Power, Eastern Lines, G.T.R., Montreal, was born at Stratford, Ont., Oct. 21, 1886, and entered G.T.R. service, Dec. 1, 1902, since when he has been, to Dec. 1, 1907, machinist apprentice, Stratford, Ont.; Dec. 1,

1907, to Jan., 1909, machinist, Stratford; Jan., 1900, to Mar. 12, 1910, to July 1, 1914, Locomotive Foreman, Fort Erie, Ont.; July 1, 1914, to Sept. 1, 1917, General Foreman, Deering, Me.; Sept. 1, 1917, to Sept. 1, 1918, Master Mechanic, Eastern Lines, Montreal.



H. R. Safford, Engineering Assistant to Regional Director, Central Western District, U.S. Railroad Administration.



W. H. Sample, Superintendent of Motive Power, Grand Trunk Western Lines Railroad.

Herbert Mitchinson, whose appointment as Safety Engineer, Western Lines, Canadian Government Railways, Winnipeg, was announced in our last issue, was

born at Gateshead-on-Tyne, Eng., Jan. 18, 1882. He was from Mar., 1898, to Mar., 1911, a cabinet maker on the North Eastern Ry., Newcastle, Eng., and from Mar., 1911, to May, 1912, engaged in mechanical work, welding, etc., Armstrong, Whitworth & Co., Elswick Works, Newcastle, Eng. He came to Canada in 1912, and from Sept. of that year to Sept., 1913, was assistant principal of the Indian School, Brandon, Man.; Oct., 1913, to June 30, 1915, First Aid Instructor, Grand Trunk Pacific Ry., Transcona, Man.; July 1, 1915, to Nov., 1916, First Aid Instructor, Canadian Government Railways, Transcona, Man.; Nov., 1916, to July 31, 1918, First Aid Instructor and Safety Inspector, Western Lines, Canadian Government Railways, Transcona, Man.

Wilmer Herbert Sample, who has been appointed Superintendent Motive Power, Grand Trunk Western Lines Rd., Detroit, Mich., under the U.S. Railroad Administration, was born at Altona, N.Y., Aug. 20, 1864, and entered railway service Aug. 20, 1882, since when he has been, to 1887, fireman, Central Vermont Ry., St. Albans, Vt.; 1887 to 1890, locomotive man, Atcherson, Topeka & Santa Fe Ry., Albuquerque, N.M.; 1890 to 1901, locomotive man, Central Vermont Ry., St. Albans, Vt.; 1901 to 1906, Road Foreman of Locomotives, Central Vermont Ry., St. Albans, Vt.; 1906 to 1911, Superintendent of Motive Power and Car Department, Northern Ry. of Costa Rica (United Fruit Co.), San Jose, Costa Rica; Mar. 15, 1911, to Oct., 1914, Master Mechanic, G.T.R., Ottawa; Oct., 1914, to Oct., 1916, Master Mechanic, G.T.R., Battle Creek, Mich.; Oct., 1916, to Sept. 1, 1917, Master Mechanic, Eastern Lines, G.T.R., Montreal; Sept. 1, 1917, to Aug. 26, 1918, Superintendent of Motive Power, G.T.R., Montreal.

F. X. Belanger, after 22 years service with the Temiscouata Ry., latterly as General Freight and Passenger Agent at Riviere du Loup, Que., resigned recently on his appointment as Traffic Manager, Fraser Companies, Limited, with office at Edmundston, N.B. This is a \$10,000,000 concern, owned by two brothers, and which operates 9 lumber mills, 3 planing mills and 2 shingle mills at various points in New Brunswick and Quebec, in addition to which it is just completing the erection of a sulphite mill at Edmundston, which will be the second largest in North America, with a capacity of 140 tons a day. The company has large tracts of timber limits in Nova Scotia and Quebec not yet developed. In writing recently to have his address changed, Mr. Belanger said: "While I have left railway service, I still wish to keep in close touch with railway matters and know of no better medium than Canadian Railway and Marine World, of which I have been a constant reader almost ever since its inception."

H. R. Safford, who has been appointed Engineering Assistant, Central Western Region, U.S. Railroad Administration, Chicago, Ill., was born at Madison, Ind., in 1875, and prior to graduation in civil engineering from Purdue University in 1895, was engaged with an engineering corps operating on the Pennsylvania lines immediately west of Pittsburg, Pa. In 1895 he entered Illinois Central Rd. service, remaining with it until May, 1910, and holding the following positions: 1895, rodman; 1896 to 1897, Resident Engineer; 1897 to 1900, Assistant Engineer; 1900

to 1901, Roadmaster, Amboy Division; 1901, Roadmaster, Freeport Division; 1902, Roadmaster, St. Louis Division; 1903 to 1905, Principal Assistant Engineer; 1905 to 1907, Assistant Chief Engineer; 1907 to 1910, Chief Engineer, Maintenance of Way. From 1910 to Oct., 1911, at which latter date he was appointed Chief Engineer, G.T.R., Montreal, he was not in railway service.

J. Mitchell Silliman, who has been appointed Division Engineer, Maintenance

of Way, Susquehanna Division, Delaware & Hudson Rd., Oneonta, N.Y., was born at Easton, Pa., Sept. 8, 1885, and entered C.P.R. service in June, 1907, since when he has been, to Aug., 1907, leveller, right of way survey, Atlantic Division; Aug. to Dec., 1907, transit man, District 2, Atlantic Division; Jan. to Apr., 1908, rodman on reconnaissance survey, Lake Superior Division; May, 1908, to Oct., 1909, transit man, District 1, Atlantic Division; Nov., 1909, to Mar., 1910, transit man, District

1, Lake Superior Division; Mar., 1910, to Mar., 1911, transit man, District 3, Lake Superior Division; Mar., 1911, to Sept., 1912, Resident Engineer, Construction Department, Guelph Jct. to Hamilton, Ont.; Sept., 1912, to Mar., 1915, Resident Engineer in charge of construction of Forsyth St. branch, Montreal; Mar. to Dec., 1915, District Engineer on construction, in charge of Lake Erie & Northern Ry.; Jan., 1916, to Sept. 3, 1918, Resident Engineer, London, Ont.

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.

British Ministry of Shipping.—**SIR ARTHUR H. HARRIS**, formerly Special Traffic Representative, C.P.R., and latterly Director of Overseas Transport, is reported to have been appointed Director General for Canada, British Ministry of Shipping.

Canada Atlantic Transit Co. of United States.—The duties hitherto performed by **C. A. GORMALY**, Commercial Agent, Chicago, Ill., and **H. W. PLOSS**, Commercial Agent, Milwaukee, Wis., are now performed by **J. B. HECKENDORN**, Agent, Chicago, Ill.

Canadian Government Railways.—**J. E. STEWART** has been appointed Locomotive Foreman, Hearst, Ont., vice **C. W. Wilson**, on leave of absence for military service.

W. H. FLETCHER, heretofore with Dominion Copper Products Co., Montreal, has been appointed Locomotive Foreman, Sioux Lookout, Ont., vice **C. H. Moulton**, transferred.

C. H. MOULTON, heretofore Locomotive Foreman, Sioux Lookout (formerly Graham), Ont., has been appointed Locomotive Foreman, Transcona, Man.

Canadian Northern Ry.—**D. B. HANNA**, heretofore Third Vice President, has been elected President, vice **Sir Wm. Mackenzie**, resigned.

SIR DONALD MANN, Vice President, has resigned.

A. J. MITCHELL, heretofore Assistant to Vice President, C.N.R., and Comptroller, Mackenzie, Mann & Co., Ltd., has been appointed Vice President, Finance and Accounting, C.N.R. Office, Toronto.

R. C. VAUGHAN, heretofore Assistant to the Third Vice President, has been appointed Assistant to the President, Office, Toronto.

LEWIS LUKES, heretofore Assistant to the President, Sir Wm. Mackenzie, has left the company's service.

Z. A. LASH, K.C., heretofore director and Senior Counsel, has been appointed Senior Counsel, Office, Toronto.

R. P. ORMSBY, heretofore Assistant Secretary, has been appointed Secretary, vice **W. H. Moore**, resigned. Office, Toronto.

G. DUFF has been appointed Roadmaster, Montreal Division, with jurisdiction over Joliette Subdivision, Aldred to Montreal, Hawkesbury Subdivision, Joliette to Rinfret, Montfort Subdivision and Rawdon Subdivision, Quebec District. Headquarters, Montreal.

A. E. WARREN, who was in Ottawa for several months as Chief Operating Officer, Railways and Canals Department, has returned to Winnipeg and resumed his duties as Assistant to General Manager, Western Lines, C.N.R.

Canadian Pacific Ry.—**P. J. MELVIN**, heretofore chief clerk to Export Freights

Agent, has been appointed acting Export Freight Agent, Montreal, **G. D. ROBINSON**, Export Freight Agent, having entered the service of the British Ministry of Shipping (Canada).

C. S. GOWANS, heretofore chief clerk to Import Freight Agent, has been appointed acting Import Freight Agent,



W. B. Lanigan,
Freight Traffic Manager, Canadian Pacific
Railway.

Montreal; **W. T. MARLOW**, Import Freight Agent, having entered the service of the British Ministry of Shipping (Canada).

G. H. DAVIS, Resident Engineer, Toronto Terminals, is reported to have been appointed Assistant Engineer, Maintenance of Way, Eastern Lines, Montreal.

J. P. DOHERTY, in Canadian Pacific Ocean Services' employ, is reported to have been appointed Travelling Freight Agent, C.P.R., St. John, N.B., vice **J. E. Green**.

H. J. MAIN, heretofore Assistant Superintendent, Smiths Falls Division, Quebec District, Smiths Falls, Ont., has been appointed Assistant Superintendent, Farnham Division, Quebec District, vice **W. J. Pickrell**, promoted. Office, Farnham, Que.

J. A. COOK has been appointed Assistant Superintendent, Smiths Falls Division, Quebec District, vice **H. J. Main**, transferred. Office, Smiths Falls, Ont.

R. E. SEWELL, Chief Inspector of

Transportation, Montreal, is acting as Superintendent, Ontario District, Trenton, during the absence of **W. J. UREN**, on leave.

U. A. G. DEY, Assistant Engineer of Construction, is reported to have been appointed Assistant Engineer of Toronto Terminals, vice **G. H. Davis**, Resident Engineer, promoted.

A. L. MCGREGOR has been appointed Car Foreman, Sudbury, Ont., vice **C. Brownlee**.

Delaware & Hudson Rd.—**J. M. SILLIMAN**, heretofore Resident Engineer, C.P.R., London, Ont., has been appointed Division Engineer in charge of maintenance of way forces, Susquehanna Division, D. & H.R., under the U.S. Railroad Administration, vice **H. S. Rogers**, resigned. Office, Oneonta, N.Y.

Duluth, South Shore & Atlantic Ry.—The following appointments have been made by the U.S. Railroad Administration:—**C. E. LYTTLE**, General Superintendent, Marquette, Mich.; **S. R. LEWIS**, General Freight Agent, Duluth, Minn.; **JAMES MANEY**, General Passenger Agent, Duluth, Minn.; **A. E. MILLER**, heretofore General Attorney, to be General Solicitor, Marquette, Mich.; **E. R. LEWIS**, heretofore Assistant to General Manager, to be Chief Engineer, Marquette, Mich.; **I. H. HARSH**, Purchasing Agent, Duluth, Minn.; **A. E. DELF**, heretofore Comptroller, to be Federal Auditor, Marquette, Mich.; **W. J. ELLISON**, heretofore Treasurer, to be Federal Treasurer, Marquette, Mich.

Grand Trunk Ry.—**E. R. BATTLE**, heretofore Master Mechanic, Eastern Lines, Montreal, has been appointed Superintendent of Motive Power, Eastern Lines. Office, Montreal.

G. M. WILSON, heretofore Master Mechanic, Montreal shops, has been appointed Superintendent of Motive Power Shops, Montreal.

A. McDONALD has been appointed Assistant to Superintendent of Motive Power Shops, Montreal.

R. J. NEEDHAM has been appointed Mechanical and Electrical Engineer, Motive Power and Car Department, Office, Montreal.

D. J. McCUAIG, heretofore Master Mechanic, Ontario Lines, Toronto, has been appointed Superintendent of Motive Power, Ontario Lines. Office, Toronto.

JOHN VASS, heretofore Assistant Master Mechanic, Ontario Lines, Allandale, Ont., has been appointed Assistant to Superintendent of Motive Power, Ontario Lines. Office, Allandale, Ont.

J. C. GARDEN, heretofore Master Mechanic, Stratford Shops, Ont., has been appointed Superintendent of Motive Power Shops, Stratford, Ont.

J. R. LECKIE, heretofore Assistant Master Mechanic, Ontario Lines, London, Ont., has been appointed Assistant to Superintendent of Motive Power, Ontario Lines. Office, London, Ont.

C. A. SAYLER has been appointed Locomotive Foreman, Sarnia, Ont., vice J. Hay, whose appointment as Master Mechanic, G.T.R. Lines in New England, at Portland, Me., under the U.S. Railroad Administration, was announced in our last issue.

Grand Trunk Pacific Ry.—R. M. HALPENNY, heretofore Assistant Superintendent, Jasper, Alta., has been appointed Superintendent, lines between Edmonton, Alta., and Prince George, B.C., not including Edmonton, vice J. P. Kirkpatrick, resigned. Office, Edson, Alta.

S. SMITH, heretofore Resident Engineer, Melville, Sask., has been appointed Assistant Superintendent, Edson Division, Edson, Alta.

Grand Trunk Ry. Lines in New England.—C. B. WEISS, heretofore Assistant Engineer, Montreal Division and Montreal Terminals, G.T.R., has been appointed Assistant Engineer, G.T.R. Lines in New England, under the U.S. Railroad Administration, not Chief Engineer, as mentioned in our last issue. Office, Portland, Me.

H. L. BLACK has been appointed Superintendent of Signals, under the U.S. Railroad Administration. Office, Portland, Me.

Grand Trunk Western Lines Rd.—W. H. SAMPLE, heretofore Superintendent of Motive Power, G.T.R., Montreal, has been appointed Superintendent Motive Power, G.T.W.L. Rd., under the U.S. Railroad Administration. Office, Detroit, Mich.

T. T. IRVING, heretofore Division Engineer, G.T.R., Chicago, Ill., has been appointed Chief Engineer, G.T.W.L. Rd. Office, Detroit, Mich.

G. BRADSHAW, heretofore Safety Engineer, G.T.R. and G.T.P.R., Toronto, has been appointed Safety Engineer, G.T.W.L. Rd., Detroit, Mich.

Grand Trunk Western Lines Rd.-Pere Marquette Ry.—The following appointments have been made jointly for these railways, under the U.S. Railroad Administration:—J. L. CRAMER, Local Treasurer; C. S. SIKES, General Auditor; J. O. TALBOTT, Assistant General Auditor; A. C. RHODES, General Accountant; F. HORTON, Auditor Station Accounts; K. A. KARLSON, Auditor Disbursements; P. HEITMANN, Assistant Auditor Disbursements; A. J. ANDERSON, Auditor Freight Traffic; C. E. CONNALLY, Assistant Auditor Freight Traffic; F. W. NEIMANN, Auditor Passenger Traffic; H. F. FARRELL, Auditor Overcharge Claims; all with offices at Detroit, Mich.

Minneapolis, St. Paul & Sault Ste. Marie Ry.—The following appointments have been made by the U.S. Railroad Administration:—W. L. MARTIN, heretofore Vice President (Traffic Department), to be Traffic Manager; H. B. DIKE, heretofore Assistant to the President and General Solicitor, to be General Solicitor; E. A. WHITMAN, Chief Engineer; E. T. STONE, Purchasing Agent; C. W. GARDNER, heretofore Comptroller, to be Federal Auditor; C. F. CLEMENT, heretofore Treasurer, to be Federal Treasurer; all with offices at Minneapolis, Minn.

New York Central Rd.—The following appointments have been made by the U.S. Railroad Administration:—HARRY PARRY, heretofore Assistant General Passenger Agent, Buffalo, N.Y., has been appointed General Passenger Agent, lines east of Buffalo, N.Y. Office, New York.

W. S. RANDOLPH has been appointed Assistant General Passenger Agent, Buf-

falo and east, Buffalo, N.Y., vice Harry Parry, promoted.

A. L. MILLER has been appointed General Agent, Albany, N.Y.

The Canadian Northern Railway's Line into the Nitinat Country.

Lord Shaughnessy, President, C.P.R., was reported by the Vancouver World of Sept. 19 as having stated that in his opinion the construction of the Canadian Northern Ry. line from Nitinat to Sooke was entirely unwarranted, and as having characterized the expenditure for it as extravagant waste. It appeared that the getting out of aeroplane spruce was given as an excuse for the construction of the line, which he claimed was not required at this time.

The Premier of British Columbia is



E. R. Battley,

Superintendent of Motive Power, Eastern Lines, Grand Trunk Railway.

reported to have given the following interview on the evening of the same day:

"The line is not being laid either by, or at the expense of, the B.C. Government, and if Lord Shaughnessy has any criticism, he should direct the same to the Dominion Government and not the provincial one. Several months ago, at a meeting with Major Taylor, of the Imperial Munitions Board, charged with getting out aeroplane spruce, I discussed with him the spruce resources of the province, especially the magnificent spruce belt which I am reliably informed exists in the Nitinat country. Major Taylor informed me he had had it cruised and that it was very desirable. He desired to get it out for war purposes, but said that unless transportation was provided it would not be available. It was known to both of us that the C.N.R. line was graded from the south end of Cowichan Lake into the Nitinat country, and that the grade could be utilized if rails could be procured. The province was receiving from the U.S. Steel Products Co. some 20,000 tons of rails and equipment for the Pacific Great Eastern Ry. These

would lay upwards of 200 miles and we had probably 70 or 80 miles of rails already in stock at various points along the P.G.E.R. We were not in a position to use the rails immediately. When in Ottawa in May last I discussed with the Minister of Railways, the question of the Dominion Government completing the lines in B.C., which were undertaken by the C.N.R. I expressed a desire to lay the rails, but the trouble was that we could not get them. At that time the statement was made to me that if we procured the rails the Dominion Government would be willing. After discussing the spruce situation with Major Taylor, I informed him that the province could loan the rails. When I took up the matter with my colleagues it was pointed out that it was very desirable to get the rails laid from Victoria, through the agricultural district of Sooke, and into the timber belt northwest of Sooke harbor. Then the matter was taken up with the Dominion Minister of Railways and the offer to loan the rails on the condition that as soon as they could be procured the Dominion Government was to return them to us, was made. We have ample rails, over what we are loaning to the government, to carry the P.G.E.R. to Soda Creek. I expect the steel will be returned by the time we are in a position to use it."

Official Test of the Quebec Bridge.

As stated in Canadian Railway and Marine World for September, the Quebec Bridge Board of Engineers made an official test of the bridge on Aug. 21, in accordance with the specification's requirements. Two heavily loaded trains, each hauled by 2 Santa Fe locomotives, were placed on the bridge, completely filling both tracks of the 1,800 ft. span between the two main piers. The 4 locomotives, instead of being at the extreme end of the train, were placed together at the end of the south cantilever arm, with cars in front and behind, this location providing the greatest effect on the span under their concentrated weight. Each of the locomotives weighed 514,000 lb., and the total weight of locomotives and cars was 6,627 tons, or an average over the whole span of about 3,500 lb. per lin. ft. on each track. The bridge was designed for 2 class E60 locomotives, followed and preceded by a train load of 5,000 lb. per lin. ft. of track. Although the trains used were the heaviest that it was practicable to obtain under normal conditions, it will be seen that there is ample room for increase in weight of locomotives and train loads before the bridge is actually loaded to the limits prescribed by the specification.

Under this somewhat severe test, the maximum deflections noted at the center of the suspended span was 6 $\frac{1}{2}$ in. The deflection at the south end of the suspended span, under the 4 locomotives, was 6 $\frac{5}{32}$ in., and at the north end of the suspended span it was 3 $\frac{15}{16}$ inches. The movement at the expansion joint, between the cantilever arm and the suspended span, under full load, was 1 $\frac{1}{2}$ in. This latter motion, however, was effected somewhat by temperature during the two hours the trains were left standing on the bridge. Under the maximum train loads prescribed by the specification, the calculated deflection at the end of the cantilever arm would amount to 10 in.

There was a marked absence of vibration while the trains were moving on the bridge, and the test, considering the conditions under which it was made, was highly satisfactory in every respect.

Electric Railway Department

Increases in Electric Railway Freight and Passenger Rates.

The British Columbia Electric Ry. has filed with the Board of Railway Commissioners local passenger tariff B.C.E.R. 19, of commutation fares between points on the Vancouver and Lulu Island Ry. and on the Vancouver, Fraser Valley & Southern Ry. to cancel tariff B.C.E.R. 11.

In connection with the company's Victoria lines and business, George Kidd, General Manager, wrote the Mayor Aug. 30, asking the city to pass a bylaw authorizing the company to charge a 6c fare, with transfer privileges, in return for which concession the company would put in force the recommendations of the Shortt report that the Victoria franchise be brought into harmony with the Vancouver franchise, except as to the proportion of gross earnings paid, and to apply the Vancouver scale for lighting in so far as practical in Victoria. The principal change which this suggestion would make in the charter would be with respect to the maintenance of track allowance. The company would be prepared to take over the maintenance of the 5.33 miles of track allowance in macadam, and the 18.82 miles of permanent roadway which is in good or fair condition, leaving 4.85 miles of track allowance to be maintained by the city. The company would also desire the passing of a bylaw to eliminate the jitney traffic in the city.

The City of Vancouver, Sept. 7, issued a writ in the Supreme Court against the British Columbia Electric Ry., asking for a declaration of the legality of clause 11 of city bylaw 394, and that it is binding on the company, and for an injunction restraining the company from charging more than a 5c fare for passengers on its cars within the city limits. Clause 11 is the one fixing a fare of 5c, providing for transfers, and for the sale of tickets at reduced fares during certain hours. On Sept. 12, a special application was made to the court to fix a day for hearing of the case, and Justice Murphy fixed Sept. 17 for opening the proceedings. When the case was called on Sept. 17 the city's counsel stated that by an arrangement with the company it would stand over for a week.

This is the present position of the differences between the council and the company that have been under discussion since the council, on July 8, passed a bylaw permitting the company to charge a 6c fare. The mayor refused to sign the bylaw, and the council, upon taking special legal advice, was informed that the bylaw would not be legal until it had been ratified by the ratepayers. As a result, the council, after several conferences and discussions, decided on Sept. 4 to submit the 6c bylaw to the ratepayers for approval on Oct. 5.

A side issue to the negotiations is the matter of electric light rates, which the council contends ought to be reduced, and a suggestion was made that the bylaw which eliminated the jitney traffic should be repealed, as a lever to get this reduction, and also the withdrawal of the 6c fare until after the vote on that bylaw.

Meanwhile the negotiations for the renewal of the franchise for five years are being proceeded with and it is expected that a tentative agreement will be reached early in October.

The Mayor of Vancouver informed the city council Sept. 12, that the company

would announce a new lighting schedule on Sept. 24. The council expected to complete the details of the proposed new franchise at the same time, and it was hoped that the terms of this franchise could be made public by Oct. 5, the date fixed for voting on the 6c street car fare bylaw.

Edmonton Radial Ry.—The increase of fares on this municipal railway which became operative in May has considerably reduced the number of passengers carried, particularly the short distance ones. The following figures show the passengers carried and the revenue for four months prior to the increase in fares and for the four months subsequent thereto:—

	Passengers.	Revenue.
January to April.....	3,836,686	\$179,148.75
May to August.....	1,179,192	170,137.01

The Edmonton Bulletin of Sept. 10 said:—"The street railway superintendent believes that the reduction of operating expenses has been carried to the point where it is impossible to go any further. Next week one-man cars will be operating over practically the whole of the city. At present there are only 6 two-men cars operating, and they will be taken out of service almost immediately. As said by officials previously in connection with the railway, the expense has been reduced to the lowest point, while no great influx of residents into the city can be immediately looked for. Therefore, it is said, the alternative in order to raise more money is to increase the fares. Suggestions along this line are likely to include the limiting of the purchase of tickets to 4 for 25c all the time."

The Edmonton Bulletin suggests the adoption of zone fares.

Fort William Municipal Ry.—The civic authorities of Fort William and Port Arthur applied to the Ontario Railway and Municipal Board in August for permission to put the following fares in effect on the municipal railways in each city:

Adults, 5c cash, or tickets at rate of 6 for 25c.

Children under 5 free; from 5 to 12 years of age, 5c cash, or tickets at rate of 8 for 25c.

The above fares to be in effect from 5.30 a.m. to midnight; double fares to be charged between midnight and 5.30 a.m.

These fares were to go into effect Sept. 3, but objections to them were filed with the board by labor organizations and no further action has been taken.

Moncton Tramways, Electricity & Gas Co. now has the following fares: cash 5c, or 6 unlimited tickets for 25c; workmen's tickets, good between 6.30 and 8 a.m., 12 noon and 2 p.m., and 5 and 6.30 p.m., 8 for 25c. The company applied recently to the New Brunswick Public Utilities Commission for permission to discontinue issuing workmen's tickets, and to charge a 5c fare throughout, and the hearing was fixed to be held at St. John, Sept. 25.

Montreal Tramways Co.—Full particulars of the Quebec Public Utilities Commission's judgment, fixing the company's passenger fares, are given on another page of this issue.

New Brunswick Power Co.—The commission appointed by the New Brunswick Government to investigate the New Brunswick Power Co.'s affairs, with power

to advance its rates for transportation, gas and electric current, made an interim order early in September, to go into effect on Oct. 1. After fixing maximum rates for electric lighting and power and for gas, the order contains the following clause:—"That as of the said date (Oct. 1), and thereafter until the further order of the commission, the street railway fare shall be 6c. The company shall not be required to issue tickets. Transfer privileges shall remain in force without change. Outstanding tickets shall not be valid for fares after said date, but shall be redeemed in cash on demand at the company's office."

Following are further extracts from the order:—"The commission has caused the company's accounts to be examined by Lybrand, Ross Bros. & Montgomery, accountants familiar with public utility accounting. It appears from their report that the company is not earning its operating expenses, to say nothing of any return on its investment. The net operating income has entirely disappeared in the recent increase in operating expenses, which the accountants report to be at the rate of \$177,041 a year in the two items of coal and labor alone.

"Counsel for the city is carrying on, with the aid of experts, an extended enquiry into the valuation of the properties. The commission is affording every facility for this enquiry, and regards it as an important factor in any final determination of rates. It is apparent, however, that the present earnings of the company are entirely inadequate to pay a return on its investment, computed on any theory, or even to guarantee the continuance of service. The proceeds of the increased rates which the commission has established in this order will not, in the commission's opinion, be sufficient to produce even the amount which was required for interest and dividends on the shares and securities of the St. John Ry. Co. before its acquisition by the N.B. Power Co.

"It has become apparent to the commission in the course of its investigation of the company's affairs that the present relations between the municipality and the company are not such as should exist in the interests of the community. It is the commission's hope that before it reaches its final conclusion some method may be found to harmonize these relations. The same problems which are presented by the situation in St. John have existed in many other localities, and in some cases have been settled by some form of public control or supervision. In the commission's opinion the controversy between the City of St. John and its public utilities cannot be permanently settled to the advantage of either party by the mere establishment of a correct rate base and the determination of a proper interest return.

"The commission is of the opinion that certain economies may be effected in operation, which, however, cannot be made effective in time to assist in meeting the present emergency. The commission requires, however, the company to make no further payment of salaries to the executive committee or to officers not connected with operation while this order remains in effect. The commission recommends to the company that it make an immediate study of the question of

more satisfactory as well as more economical routing of cars, and that it put in operation a sufficient number of one-man cars to determine their economical value and suitability for the service.

"It is not within the commission's authority to amend the contract for municipal lighting. It does, however, recommend to the City of St. John that it consent to such an amendment so that the prices under the contract shall be increased 25%."

The Ottawa Electric Ry., on Aug. 27, filed with the Board of Railway Commissioners, the following special passenger tariff of tolls, C.R.C. 4, cancelling C.R.C. 3, effective Aug. 31:

Between points within the limits of the City of Ottawa, and between points therein and the Experimental Farm and intermediate points; between points within the limits of the City of Ottawa and the Rockcliffe Rifle Range and intermediate points, and between the westerly limits of the City of Ottawa and Britannia on the Bay, and intermediate points. Between 5.30 a.m. and 12 midnight, 5c.

Between 12 midnight and 5.30 a.m., 10c.

To workmen and others, 33 tickets for \$1, or 8 tickets for 25c, good from the first trip in the morning until 7.30 a.m., and between 5 and 6.30 p.m.

Seven tickets for 25c, good only on Sundays.

School children under 14, to and from school at the rate of 40 tickets for \$1, good between 7 and 9.30 a.m., 11.30 a.m. and 1.30 p.m. and 3.30 and 5 p.m.

Children under 10 years of age, 3c.

The effect of this new tariff is to do away with tickets sold formerly at 6 for 25c, and 25 for \$1, making the rates the same as provided for in the company's agreement with the city, viz., 5c for fares between 5.30 and 12 midnight. For the convenience of passengers who do not wish to carry small change, the company sells strips of 5 tickets for 25c. Outstanding old style tickets are being redeemed by the company for cash.

The company issued the following notice to the public:—"The unprecedented increase in the costs of all materials used in the operation of street railways has made it necessary to increase fares. Between 200 and 300 cities in Canada and the United States have advanced fares to sums ranging from 6c to 10c, with an additional charge for transfers in some instances. In Ottawa the company's agreement with the city specifies a fare of 5c, with special provisions for tickets for workmen, school children and for Sunday use. The company, during normal times, when such action was warranted, made special reduced rates of 6 tickets for 25c, and 25 tickets for \$1, which privilege has been continued up to the present, and which the company would be glad to continue for a longer period but for the circumstances above referred to. The company therefore regrets that it is obliged for the present to withdraw the special ticket rates, and, beginning Aug. 31, to revert to the terms of its agreement with the city, viz., a fare of 5c. The reduced rates for workmen's, school children's and Sunday tickets will remain as heretofore. For the convenience of the public, beginning on the date specified, new tickets will be sold by conductors at the rate of 5 for 25c, instead of 6 as heretofore. All tickets now outstanding will be received on the cars in payment of regular fares up to and including Sept. 10."

Port Arthur Civic Ry.—See Fort William Municipal Ry.

Quebec Ry., Light & Power Co.—The Board of Railway Commissioners passed order 27,711, Sept. 21, approving the

Q.R.L. & P. Co.'s Standard Mileage Freight Tariff, C.R.C. 113, filed on the basis permitted in order in council 1,863, dated July 27, 1918.

The Winnipeg Electric Ry. advised the city council Sept. 10, that it was preparing to ask for authority to increase its fare to 7c, with unlimited transfers as at present, or in the alternative for a fare of 6c with a charge of 1c for transfers. It is said that the company does not propose to operate one-man cars.

Increases in United States.—Revised figures of fare advances granted traction lines throughout the United States and Canada up to September 15, compiled by the American Electric Railway Association, show that 24 cities have given the local street railways higher rates since July 1, 1918. The figures do not include interurban lines. It is stated that 246 increases had been granted up to July 1, and with the additions since that time, the total number of cities now paying higher rates for street railway service is 270.

The Ottawa Electric Railway Franchise.

The Ottawa City Council, on Sept. 16, resumed consideration of a motion to reopen negotiations with the Ottawa Electric Ry. respecting the taking over of its lines by the city. The discussion extended over a very considerable period, and eventually the mayor drafted the following letter to the company, which was approved of by the council:—"At a meeting of the council Sept. 16, a motion was presented recommending the opening of negotiations between the city and the company with a view to the possible purchase of the company's assets, or entering into a partnership agreement. The motion was withdrawn after a general expression of opinion that within certain limitations the city would be willing to discuss the possibility of an agreement being arrived at. I am instructed to inform you that the board of control is prepared to consider any proposal which the company might see fit to make, or is prepared to meet the representatives of the company for a preliminary discussion."

Jas. D. Fraser, Secretary-Treasurer of the company, replied on Sept. 18, in part as follows:—

"Before entering upon negotiations, it might be found desirable for the Corporation of Ottawa to consider the appointment of a committee of citizens for the purpose of investigating the question of civic ownership or partnership operation of street railway systems. If this method commends itself to your board, the company would respectfully suggest that the personnel of a committee appointed for the purpose indicated—to be called the tramway committee—might consist of three citizens of Ottawa, to be selected, as follows, viz.,—One representative of the business community, one representative of the civil service, and one representative of the Allied Trades and Labor Council—and that neither the corporation nor this company should be represented on the committee.

"Various plans of civic ownership and partnership have been adopted in Canada and the United States. Of these plans the "Service at cost" method enacted into law by the State of Massachusetts recently, and the partnership plan adopted at Montreal recently, possess features of interest and merit which provide a field for investigation.

"Your board will remember that, during recent discussions with representatives of

this company in reference to extensions of the street railway system, it was pointed out that the company, in view of its limited franchise, could not fairly be expected to make further extensions, and that it would therefore be in the interest of the citizens interested in the desired extensions that a decision might be reached as early as possible as to whether the corporation intends to extend the franchise, which, as you are aware, provides that if the corporation does not exercise its right at that time the franchise automatically renews itself for an additional period of five years.

"An investigation by a committee, as suggested, of the methods adopted in other cities would no doubt enable your board to reach an early decision as to the most desirable plan to consider for the operation of the Ottawa street railway system, and when decided upon, the company will be glad to discuss the subject with your board. Such an investigation would enable the city to present to the electors full information upon the three plans, viz.:—(1) Civic ownership; (2) Partnership; (3) Extension of the present franchise, and the result of the proposed plebiscite would then be definite."

Mr. Fraser's letter was discussed by the city board of control, Sept. 21, after which the mayor intimated that the board would not entertain the idea of handing the question over to a committee as suggested. Considerable feeling having been expressed in favor of the council being consulted before the suggestion be rejected, the board of control met Sept. 24, when it was decided to hold a special meeting of the council Sept. 26, for the consideration of the letter, the board recommending that the proposal for the appointment of a committee be not agreed to.

Employment of Women on Moose Jaw Electric Railway.

A. H. Dion, Superintendent, Moose Jaw Electric Ry., Moose Jaw, Sask., has favored us with the following information: "We have employed women as conductors for about two years and have found them very satisfactory. We now have about 22 employed. They are treated in exactly the same manner as the men whom they replaced and whose positions they fill. They work on the same schedule and are paid the same scale of wages, no difference being made between the male and female conductors. At present we have no male conductors, owing to the extreme shortage of men in the west, and have found that the employment of women for this work has been a most satisfactory means of overcoming the shortage. We do not give preference to female conductors, but have employed them solely owing to its being impossible to obtain men. We are seriously considering trying women as motormen and have had several applications from women for such employment."

The Advantages of a Seven Cent Fare.

Pat—This is the foist time innny of these corporations hev done innnything to binnefit the workingman.

Mike—How is that, Pat?

Pat—It is this seven-cent fare. I hev bin walkin' to and from me work and savin' tin cints, and now I kin save fourteen cints.—Boston Transcript.

Increased Fares for Electric Railways in Great Britain.

The necessity for increased revenue for electric railways and other public utilities in Great Britain has been met by the passage by the House of Commons of the Statutory Undertakings (Temporary Increases of Charges) Act, 1918, as follows:—

1. (i.) Where it appears to the appropriate government department that the financial position of any undertaking to which this act applies has been adversely affected by circumstances arising out of the present war, the department may, if they think fit, by order provide for the modification of any statutory provisions regulating the charges to be made by the undertakers, and of any statutory provisions consequential on or supplemental to any such provisions as aforesaid, for such period during the continuance of this act, in such manner, and subject to such conditions, as appear to the department to be just and reasonable:

Provided that—
(a) where the undertakers are a local authority no modification shall be authorized which will increase the statutory maximum charge by more than 50%, or which is more than sufficient so far as can be estimated to enable the undertaking to be carried on without loss; and

(b) In any other case no modification shall be authorized which is more than sufficient to enable with due care and management a dividend on the ordinary stock or shares of the undertaking to be paid at three-quarters the standard or maximum rate of dividend, if any, prescribed for the undertaking, or at three-quarters the pre-war rate of dividend, whichever is lower.

(ii.) An application to a department for the purposes of this act shall be accompanied by such information, certified in such manner as the department may require, with respect to the financial position of the undertaking in question, and before making an order the appropriate government department shall require the undertakers to give public notice of the application for an order under this act, and as to the manner in which and time within which representations may be made, and to give a similar notice to the council of each county, borough, or urban, or rural district within which any part of the undertaking or limits of supply of the undertaking is situate, and the department shall consider any representations which may be duly made.

(iii.) The undertakings to which this act applies are tramway undertakings, including light railways constructed wholly or mainly on public roads, and undertakings for the supply of gas, water and electricity, and in calculating the maximum charge which may be authorized under this act in respect of such tramway undertakings fractions of one halfpenny shall be calculated as one halfpenny.

(iv.) For the purposes of this act—
The expression "statutory provisions" includes the provisions of any order having the force of an act;

The expression "appropriate government department" means, in relation to gas and water undertakings carried on by local authorities, the Local Government Board, and in relation to other undertakings the Board of Trade.

The expression "local authority" includes any commissioners, trustees, or other public body of persons carrying on, otherwise than for purposes of private profit, any undertaking to which this act applies.

The expression "pre-war rate of dividend" means the average rate of dividend for the three financial years immediately preceding the war.

2. In the application of this act to Scotland the Secretary for Scotland, and in the application of this act to Ireland the Local Government Board for Ireland, shall be substituted for the Local Government Board.

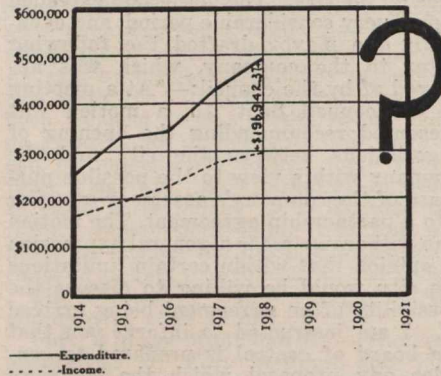
3. (i.) This act may be cited as the statutory undertakings (temporary increase of charges) act, 1918.

(ii.) This act shall have effect during the continuance of the present war and for a period of two years thereafter and no longer.

Toronto Civic Railway Deficits.

The Toronto Bureau of Municipal Research has issued "City Budget Facts, 1918," which contains the following statement of the financial results of operation of the civic car lines for the past five years:—

Year.	Expenditures (including debt charges)	Income	LOSS.	
			Amount	Per cent of income
1914..	\$ 250,102.25	\$ 167,498.12	\$ 82,604.13	49.3
1915..	332,074.25	199,980.49	132,093.76	66.1
1916..	343,975.17	225,031.38	118,943.79	52.8
1917..	432,436.83	275,972.78	156,464.05	56.6
Estimated 1918..	496,942.37	300,000.00	196,942.37	65.6
Total	\$1,855,530.87	\$1,168,482.77	\$687,048.10	58.9



The accompanying chart shows the increasing deficit from operating the lines.

Electric Railway Finance, Meetings, Etc.

British Columbia Electric Ry. and allied companies:—

	July, 1918.	July, 1917.
Gross	\$413,968	\$438,378
Expenses	394,803	380,054
Net	19,165	58,324

Cape Breton Electric Co.—

	12 months to 12 months to			
	July, 1918	July, 1917	July 31, 1918	July 31, 1917
Gross	\$44,532.50	\$40,500.71	\$490,079.96	\$433,185.72
Exp.	34,835.41	25,293.27	348,958.14	259,179.30
Net	9,697.09	15,207.44	141,121.82	174,006.42

Edmonton Radial Ry.—July earnings, etc.:—

	1918.	1917.
Passenger receipts	\$45,906.90	\$43,957.90
Gross receipts	46,307.40	44,618.34
Operating expenses	33,097.21	34,419.88
Net earnings	\$13,210.19	\$10,198.46
Interest and other charges	21,249.29	21,069.31
Deficit	\$ 8,039.10	\$10,870.85

Hull Electric Co.—The directors for the current year are: A. D. MacTier, President; G. Gordon Gale, Vice President and General Manager; E. W. Beatty, K.C., Sir George Bury, E. Hanson, I. G. Ogden and F. L. Wanklyn. H. C. Oswald is Secretary-Treasurer.

Regina Municipal Ry.—Freight operating results:—

	1918.	1917.
Passengers carried	446,000	360,688
Passenger receipts	\$21,406	\$15,061

The increased number of passengers carried is reported to be largely due to the fact that part of the exhibition traffic came into the month, while in 1917, the whole exhibition traffic was in July.

Toronto Railway.—

	Earnings.		City percentage.	
	1918.	1917.	1918.	1917.
Jan.	\$562,707	\$510,052	\$ 84,406	\$ 76,508
Feb.	509,650	473,185	88,763	70,978
Mar.	575,957	531,080	115,191	105,876
Apr.	543,055	510,335	108,611	102,067
May	548,778	510,870	109,756	102,174
June	533,393	499,732	106,679	99,946
July	540,296	467,382	108,058	93,476
Aug.	555,709	516,967	111,142	103,393
Total	\$4,369,545	\$4,019,603	\$832,606	\$754,418

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

	7 months to 7 months to	
	July, 1918	July, 1917
Gross	\$1,049,936	\$954,192
Expenses	589,964	527,288
Net	459,972	426,904

Winnipeg Electric Ry. and subsidiary companies.—

	7 months to 7 months to	
	July, 1918	July, 1917
Gross	\$288,155	\$242,797
Expenses	218,454	211,450
Net	69,701	31,347

Canadian Electric Railway Association's Annual Meeting.

The Canadian Electric Railway Association's annual meeting, held in Toronto, Sept. 17 and 18, was attended by a large number of representatives of member companies, the President, C. L. Wilson, Assistant Manager, Toronto & York Radial Railway, occupying the chair.

On account of having war conditions, the usual practice of having papers read and discussed was omitted, and the greater part of the time was devoted to the reading and discussion of the Honorary Secretary's report on the association's work for the past year, and the discussion of other matters vitally affecting all electric railway companies, such as the necessity for securing increased revenues, etc.

The following were unanimously elected as officers: President, A. Eastman, Vice President and General Manager, Windsor, Essex & Lake Shore Rapid Railway; Vice President, A. Gaboury, Superintendent, Montreal Tramways Co.; Honorary Secretary-Treasurer, Acton Burrows, Managing Director, Canadian Railway and Marine World, re-elected for the 12th consecutive year. Executive Committee: E. P. Coleman, General Manager, Dominion Power & Transmission Co.; Jas. D. Fraser, Director and Secretary-Treasurer, Ottawa Electric Ry.; G. Gordon Gale, Vice President and General Manager, Hull Electric Co.; H. M. Hopper, General Manager, New Brunswick Power Co.; Geo. Kidd, General Manager, British Columbia Electric Ry.; M. W. Kirkwood, General Manager, Grand River Ry.; J. S. Mackenzie, Treasurer, Winnipeg Electric Ry.; R. M. Reade, Superintendent, City and Quebec County Divisions, Quebec Ry. Light & Power Co.; C. L. Wilson, Assistant Manager, Toronto & York Radial Ry. Assistant Secretary, A. A. Burrows, Business Manager, Canadian Railway and Marine World.

The New Brunswick Power Co. will, according to a press report, convert several of its cars on the St. John Ry. into one-man cars.

Electric Railway Projects, Construction, Betterments, Etc.

Calgary Municipal Ry.—The question of a new route for the Ogden car line is under consideration by the Calgary, Alta., City Council. A right of way over private property is desired, and the council is considering the desirability of starting expropriation proceedings to secure the necessary land. (Sept., pg. 403.)

Levis County Ry.—We are officially advised that of the Quebec Bridge division, 7.25 miles, there has been rebalanced this year 2.50 miles, and that it is expected to finish a further distance of three miles before winter sets in. (Sept., pg. 403.)

London & Port Stanley Ry.—One of the London, Ont., City Council's committees was informed Sept. 12, that the steel for the Beattie bridge had been ordered, and that the work of building this bridge and raising the railway bridge would be taken in hand as soon as delivery of the steel was assured. Final plans for the entire work are promised to be submitted at an early date. (Sept., pg. 403.)

Moose Jaw Electric Ry.—The Moose Jaw, Sask., City Council, on Sept. 9, passed a resolution recommending the company to build a line from 4th Ave. s.w. and Coteau St., west to 9th Ave. s.w., thence north on 2nd Ave. to Lillooet St., and thence along Lillooet St. to 4th Ave. In the event of the company agreeing to build this line at once, the council will submit a bylaw to the ratepayers providing for a straight 5c fare, will endorse the one-man car proposals for the duration of the war, and will defer the collection of taxes for 1917 and 1918. (Aug., pg. 348.)

Winnipeg Electric Ry.—The city engineer reported to the city council recently that during June the company had expended on improvements \$31,379.23, of which \$418.46 was for elimination of electrolysis. Under the agreement with the city, the company is to expend \$25,000 a month for a specified term upon extensions and improvements.

The company has advised the Winnipeg City Board of Control that it does not regard the proposed extension for River Heights as being necessary, at present at any rate. (Sept., pg. 403.)

American Institute of Electrical Engineers.—The Toronto section opened its 16th season with an address by P. M. Lincoln of the Westinghouse Electric Manufacturing Co., East Pittsburg, Pa., on the development of power transmission. He reviewed the progress of electric power transmission from its inception, and presented comparisons with prior developments in power transmission, by hydraulic, mechanic and pneumatic methods. The records of early transmissions with alternating current, at approximately 1,000 volts, were especially interesting in view of their effect on the ultimate standardization of alternating current systems with existing voltages as high as 150,000. He also discussed the limitations to still higher voltages of transmission, and it is his opinion that, within five years, there will be one or more systems operating at 200,000 volts. In the course of the discussion, Jno. Murphy, Electrical Engineer, Railways and Canals Department, related some interesting experiences in connection with early electrical developments in Ottawa, with particular reference to his experience with one of the first synchroscopes, an early invention of Mr. Lincoln.

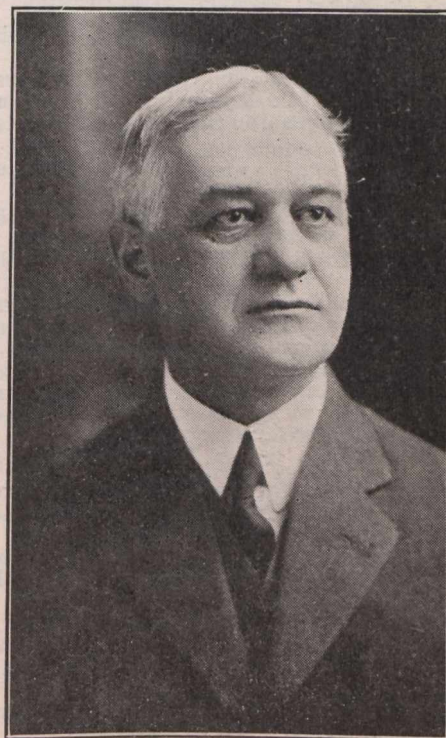
Mainly About Electric Railway People.

F. Morton Morse, heretofore Secretary-Treasurer, Winnipeg Electric Ry., will in future act as Secretary only.

F. H. Williams, Publicity Agent, Win-



A. Eastman,
Vice President and General Manager, Windsor,
Essex & Lake Shore Rapid Ry., and President,
Canadian Electric Railway Association.



J. S. Mackenzie,
Treasurer, Winnipeg Electric Railway.

nipeg Electric Ry., was married at Kingston, Ont., Sept. 18 to Miss B. C. Holder.

A. W. McLimont, General Manager, Winnipeg Electric Ry., has been elected

a director of the Greater Winnipeg Board of Trade.

R. R. Knox, Traffic Superintendent, Winnipeg Electric Ry., has returned to duty, after medical treatment at Rochester, Minn., and a recuperating rest at Pinawa, Man.

J. S. Mackenzie, heretofore Purchasing Agent, Winnipeg Electric Ry., has been appointed Treasurer, not Assistant Treasurer, as stated in Canadian Railway and Marine World for September.

J. A. Ellis, a former Mayor of Ottawa and ex member of the Ontario Legislature, has been appointed a member of the Ontario Railway and Municipal Board, in place of H. N. Kittson, of Hamilton, who retired some months ago.

W. C. Hawkins, Vice President and Managing Director, Dominion Power & Transmission Co., and President, Southern Canada Power Co., who was a United States citizen, was admitted to Canadian citizenship at Hamilton, Ont., Sept. 17.

C. H. Rust, latterly City Engineer of Victoria, B.C., and formerly City Engineer of Toronto, has been appointed Assistant to D. H. McDougall, who is Assistant to R. J. Fleming, General Manager, Toronto Electric Light Co., and Toronto Power Co., which are subsidiaries of the Toronto Ry. Co.

Lawrence Palk, whose appointment as Assistant Secretary, Winnipeg Electric Ry., and Secretary of the Winnipeg, Selkirk & Lake Winnipeg Ry., was announced in our last issue, was born at Winnipeg, Aug. 14, 1885, and entered the company's service in Oct., 1904, as stenographer to the General Manager, and has since been secretary to General Manager, Claims Agent, Accident Investigator, and since Feb., 1916, Assistant to General Manager, which option he still holds.

Arthur Gaboury, who was elected Vice President, Canadian Electric Railway Association, was born at Montreal, April 6, 1875, and entered Montreal Street Ry. Co.'s service, June 4, 1894, since when he has been, to Oct., 1900, conductor and motorman; Oct. to Nov., 1900, Assistant Inspector; Nov. to Dec., 1900, night clerk, Cote St. Barn; Dec., 1900, to Sept., 1903, day chief clerk, St. Denis; Sept., 1906, to May, 1906, Claims Agent; May, 1906, to 1907, Assistant Superintendent; and from 1907, Superintendent, which position he still occupies in Montreal Tramways Co.'s service. He was, early this year, appointed, by the French Government, an officer of the French Academy.

Albert Eastman, who was elected President, Canadian Electric Railway Association, was born in Bosanquet Tp., Ont., Aug. 21, 1870. He entered transportation service in 1889, and was to 1891, operator, Michigan Central Rd.; 1892 to 1900, freight and ticket clerk and operator, G.T. R., Detroit, Mich.; 1901, assistant agent, Michigan Central Rd.; 1892 to 1900, to Nov., 1902, Travelling Express and Passenger Agent, Detroit United Ry.; Dec., 1902, to May, 1903, General Express Agent, Utica and Mohawk Valley Ry.; May to Nov., 1903, Division Superintendent, Detroit United Ry.; Nov., 1903, to Nov., 1907, Superintendent of Employment, Public Service Corporation of New Jersey; Nov., 1907, to May, 1910, General Express and Passenger Agent, New York State Railways, Syracuse and Utica, N.Y.; May, 1910, he was appointed General Manager, and in 1914, also Vice President, Windsor, Essex and Lake Shore Rapid Ry., Kingsville, Ont.

**Winnipeg Electric Railway's
New Cars.**

As mentioned in a previous issue, the Winnipeg Electric Ry. is having 10 cars built by the Ottawa Car Manufacturing Co. They will be double truck, single end, semi steel, p.a.y.e. type, with arch roof. The interior lighting arrangements include 5 shaded lights in the center of the arch roof, through selector switch on rear platform over conductor's position. The vestibule doors of the 2-leaf type will fold out and back and will be controlled by the motorman and conductor and operated in conjunction with the folding step. The heating will be hot air, and Keystone illuminated side window signs are to be installed on each rear window and front vestibule side window. The trucks, air brakes, motor equipment and Coleman fareboxes are being supplied by the Winnipeg Electric Ry.

The general details are:

Seating capacity	46
Weight of car body	1,900 lbs.
Length of car body	33 ft. 3 ins.
Length of front vestibule	5 ft.
Length of rear vestibule	7 ft. 6 ins.
Length over bumpers	45 ft. 8 ins.
Width over all	8 ft. 6 ins.
Distance between bolsters	21 ft. 6 ins.

**London and Port Stanley
Railway Report.**

A short summary of the receipts and expenditures of the London & Port Stanley Ry. for the year ended June 30 was given in our last issue, since when the full report has come to hand, and the following figures are taken from it:

Income.

Passenger earnings	\$177,598.28
Freight earnings	143,608.96
Miscellaneous earnings	47,706.81
Total earnings	\$368,914.05
Operating expenses	254,659.85

Gross income

Gross income	\$114,254.20
Deductions,—	
Taxes	\$ 2,252.8
Interest	53,732.56
Rental	20,000.00
Sinking fund	14,766.29
	90,750.23

Net income

Net income	\$23,03.97
Surplus Income.	
Year ended June 30, 1916	\$18,474.14
Year ended June 30, 1917	26,581.48
Year ended June 30, 1918	23,503.97

Total

Total	\$68,559.49
Statistics.	
Passenger car mileage	486,130
Freight, mail and express car mileage..	347,437
Fare passengers carried	842,641
Average fare, revenue passengers	20.27c
Car earnings per car mile	38.53c
Miscellaneous earnings per car mile....	5.72c
Operating expenses per car mile	30.55c
Operating expenses and taxes per car mile	30.82c
Tons of freight carried	614,351

Toronto Ry. Litigation.—Judgment was delivered in Toronto recently in favor of the city against the Toronto Ry., on a claim for \$95,859.25, being 20% of gross receipts for May, 1915, and interest on \$93,790.71 from Nov. 15, 1915, and costs of the action, without prejudice to the rights or obligations of either party as to apportionment or recovery of the costs of constructing the Don River bridge or any part of it. Judgment was also given in favor of the Toronto Ry. against the city on a counter claim for \$82,040.51, with interest on \$70,686.97 from May 3, 1915, and on \$11,333.54 from Dec., 1915, and the costs of the counterclaim. A stay of 20 days was granted in both cases. The Toronto Ry. did not dispute the city's claim, but had withheld payment pending the settlement of the company's claims against the city for certain work done on the tracks.

**Montreal Tramways Co's Fares Settled by Quebec
Public Utilities Commission.**

The Quebec Public Utilities Commission gave judgment, Sept. 20, on the appeals of the Montreal Tramways Co., and of the municipalities served by it, against the schedule of fares fixed by the Montreal Tramways Commission on June 21, full particulars of which were given in Canadian Railway and Marine World for August and September.

The principal changes made by the Public Utilities Commission are that transfers are to be issued free in the uni-

form tariff territory, instead of being charged for at the rate of 1c, as fixed by the Montreal Tramways Commission, except to school children and between 5 and 5 a.m. on week days only. So-called workmen's tickets have been restored by the Public Utilities Commission and are to be sold 6 for 25c and to be good between 6 and 8 a.m. and 5 and 7 p.m. Certain modifications are also made in the schedules outside the uniform tariff territory.

COMPARISON OF THE TWO TARIFFS.

Following is a comparison of the tariff as fixed by the Montreal Tramways Commission and of the revised tariff as settled by the Public Utilities Commission. The uniform tariff territory, referred to hereunder, comprises the City of Montreal and the cities or towns of Maisonneuve, Westmount, Outremont, Verdun, St. Laurent, Mount Royal, that portion of the parish of St. Laurent and of the municipality of Cote St. Luc lying to the east of the line of the company running from Snowdon station to Cartierville, including the land occupied by the said line.

**TRAMWAYS COMMISSION'S
SCHEDULE.**

- (a) From midnight to 5 a.m., 15c cash.
- (b) From 5 a.m. to midnight, 6c cash, or 5 tickets for 25c.
- (c) For school children from 5 years to 16 years of age, on week days only, and between 8 a.m. and 6 p.m., 7 tickets for 25c.
- (d) Transfers shall be issued free to school children specified in clause c, and to all passengers travelling on cars between 5 a.m. and 8 a.m., on week days only. At all other times, a transfer shall be issued to any passenger paying his or her regular fare, at a charge of 1c.

The following are the tariffs for municipalities outside the uniform tariff territory, for local traffic only:—

**PUBLIC UTILITY COMMISSION'S
SCHEDULE.**

Uniform Tariff Territory.

- (a) Day tariff, 6c cash or a ticket to be sold at the rate of 5 for 25c.
 - (b) School children, a ticket to be sold at the rate of 7 for 25c.
 - (c) Special day tariff of a ticket to be sold at the rate of 6 for 25c, to be good only between 6 and 8 a.m. and 5 and 7 p.m. on week days only.
 - (d) Night tariff, 15c cash.
- Passengers paying fares shall be entitled to a transfer free of charge.

Montreal West.

- Local traffic:
- (a) From midnight to 5 a.m., 5c cash fare.
 - (b) From 5 a.m. to midnight, 2c cash fare, or 6 tickets for 10c.
 - (c) School children, from 5 to 16 years of age on week days only, and between 8 a.m. and 6 p.m., 1c cash fare or 6 tickets for 5c.

Town of Lachine.

- Local traffic:
- (a) From midnight to 5 a.m., 10c cash fare.
 - (b) From 5 a.m. to midnight, 5c cash fare.
 - (c) School children from 5 to 16 years of age, on week days only and between 8 a.m. and 6 p.m., 7 tickets for 25c.
 - (d) The above tariff will also apply to all passengers travelling from the Town of Lachine to the Western limit of the uniform tariff territory and vice versa.

Ville St. Pierre.

- From the western boundary of Ville St. Pierre to the western limit of the uniform tariff territory and vice versa:
- (a) From midnight to 5 a.m., 5c cash.
 - (b) From 5 a.m. to midnight, 2c cash or 6 tickets for 10c.
 - (c) School children from 5 to 16 years of age, on week days only and between 8 a.m. and 6 p.m., 1c cash fare or 6 tickets for 5c.

Montreal North.

- Local traffic:
- (a) From midnight to 5 a.m., 10c cash fare.
 - (b) From 5 a.m. to midnight, 5c cash fare.
 - (c) School children from 5 to 16 years of age, on week days only and between 8 a.m. and 6 p.m., 7 tickets for 25c.

All tariffs same as for Montreal West and to apply to all passengers travelling between the eastern and western limits of the town, but not to passengers having paid the Lachine local fare.

Same tariffs as for the City of Lachine. Fare of school children will, however, be good for interurban transport as far as the Sacre Coeur Convent station.

Montreal East.

Local traffic:

- (a) From midnight to 5 a.m., 5c cash fare.
 (b) From 5 a.m. to midnight, 2c cash fare.
 (c) School children from 5 to 16 years of age, on week days only and between 8 a.m. and 6 p.m., 1c cash fare or 6 tickets for 5c.

Same tariffs as for Town of Montreal West.

Pointe aux Trembles and Laval.

- TOWN OF POINTE AUX TREMBLES.**
 (a) From midnight to 5 a.m., 10c cash fare.
 (b) From 5 a.m. to midnight, 5c cash fare.
 (c) For school children from 5 to 16 years of age, on week days only and between 8 a.m. and 6 p.m., 7 tickets for 25c.

- (a) Day tariff, 2c cash fare.
 (b) School children, 1c cash fare or a ticket to be sold at the rate of 6 for 5c.
 (c) Night tariff, 5c cash.

TOWN OF LAVAL.

- (a) Day tariff, 3c cash fare.
 (b) School children, 2c cash fare or a ticket to be sold at the rate of 7 for 10c.
 (c) Night tariff, 10c cash.

Interurban Traffic.

From Laval de Montreal to western limits of Pointe aux Trembles, and vice versa:

- (a) From midnight to 5 a.m., 10c cash fare.
 (b) From 5 a.m. to midnight, 5c cash fare.
 (c) For school children, from 5 to 16 years of age, on week days only, and between 8 a.m. and 6 p.m., 7 tickets for 25c.

From Laval de Montreal to eastern limits of uniform tariff territory and vice versa:

- (a) From midnight to 5 a.m., 15c cash fare.
 (b) From 5 a.m. to 8 a.m., 10c cash fare.
 (c) For school children from 5 to 16 years of age, on week days only, and between 8 a.m. and 6 p.m., 7 tickets for 25c.

From Pointe aux Trembles to eastern limits of uniform tariff territory and vice versa:

- (a) From midnight to 5 a.m., 10c.
 (b) From 5 a.m. to 8 a.m., 5c.
 (c) For school children from 5 to 16 years of age, on week days only, and between 8 a.m. and 6 p.m., 7 tickets for 25c.

Extracts from Judgment.

The Quebec Public Utilities Commission, in concluding its judgment, said:—"Should the present tariff prove inadequate at any time the fares can be raised, but, as we read the contract, they can only be lowered when the accumulated surplus reaches \$2,000,000, whereupon one-half will be for such reduction.

"We believe we have made ample allowance for all expenditure the company may be called upon to meet, and have not been more optimistic in our forecast as to revenue than the Tramways Commission. Taking the contract in its entirety, the benefit of any doubt should, in our opinion, be construed in favor of lower fares.

"It is far from an agreeable duty to a public body to increase the rates of a public utility. It is simply, however, a matter of maintaining the public utility in question, as an efficient and going concern.

Urban transportation in this community is essential and it cannot be long maintained at less than cost. This has had to be recognized the world over and is a consequence of the abnormal conditions through which we are passing. In all spheres of activity, transportation among the rest, prices and rates have been increased, and we have not gone farther in this direction than necessity and the terms of the contract appear to demand."

The Chairman remarked verbally that

the Public Utilities Commission thought transfers had been abused a great deal, and they were going to take the question up with the Tramways Commission and the company, to see whether something could be done to prevent the abuses that have been in existence for some time.

The new schedule of fares goes into effect Oct. 3, and in preparation therefor, it is being advertised in Montreal papers, while the company is preparing its new forms of tickets and transfers. Under the franchise agreement tickets purchased at existing rates cannot be used after the new schedule comes into effect, but are to be redeemed by the company at the price at which they were sold. Under the new transfer plan, passengers, at the time of paying their fares, must state the first point at which a transfer is desired, and the transfer ticket will be punched accordingly. The new fare tickets will, it is said, be different from the old ones in color, and will have the value printed on the face. It is not expected that the new transfer forms will be ready for Oct. 3, and until they are, the present forms will be used.

The Sydney, N.S., Trades and Labor Council passed a resolution Sept. 10 opposing the adoption of one-man cars in the city by the Cape Breton Electric Co., and pledging itself to use every legitimate means within its power to oppose their introduction.

Quebec Railway, Light, Heat and Power Co's Report.

The annual meeting was held at Montreal, Sept. 10. Following are extracts from the report for the year ended June 30:

The gross earnings from operation for the year were \$1,797,852.83, against \$1,832,031.93 in 1917, a decrease of \$34,179.10. After adding miscellaneous income of \$230,088.32, there was a total revenue from all sources of \$2,027,941.15, a decrease of \$34,951.58. The operating and maintenance expenses were \$1,235,724.33, against \$1,155,969.25 in 1917, an increase of \$79,755.08. The fixed charges and taxes were \$696,909.92, leaving a net surplus of \$95,306.90.

After making provision for obsolete cars on the City Street Railway Division and portion of storage battery installed in Queen Street sub-station, there remained a total at the credit of surplus account of \$753,091.17. There was expended during the year \$243,225.48 on maintenance account, which was charged to operation, in order to maintain in a high state of efficiency the physical condition of the properties and plant of the company and its various subsidiary companies.

The assets are \$23,973,069.40, and the liabilities \$23,219,978.23, the surplus being \$753,091.17.

The directors for the current year are: Sir Rodolphe Forget, President; L. C. Webster, Vice President; C. A. Lavigne, L. J. Tarte, A. Picard, J. T. Donohue, P. Galibert, L. G. Morin, C. Donohue, T. J. Stewart and A. E. Labelle. W. J. Lynch is General Manager, and A. LeMoine is Secretary.

One Man Cars for Saskatchewan.—The Regina City Council has decided to apply to the Saskatchewan Government asking that the Railway Act be so amended at the next session of the legislature as to give permission to operate one-man cars on electric railways. The cities of Saskatoon and Moose Jaw are being invited to co-operate in securing the legislation. The operation of one-man cars is at present specifically forbidden—the section in the Railway Act expressly providing that all cars shall have two men in charge—and an attempt to have the section amended last year was not pushed beyond the committee stage.

Jitney men in Vancouver.—A fine of \$20 and costs was imposed in the Vancouver police court Sept. 12 on L. Shaw for an infraction of the city bylaw passed recently, for the elimination of jitney traffic. The cases of 16 other offenders were postponed until a later date, when it was stated fines would be inflicted. A large number of additional summonses have been issued since Sept. 12, the jitney men continuing to operate upon the advice of counsel, who has given notice of appeal.

The Detroit United Lines, which serve 159 cities in Michigan within 75 miles of Detroit, have been authorized by the Interstate Commerce Commission to charge 2c a mile plus a 5c fare on the street car lines in Detroit. All mileage and reduced fare tickets are withdrawn, with the exception of school tickets and children's rates.

Montreal Tramways Co.—The annual meeting of shareholders called for Aug. 29, was postponed to Sept. 27.

The Ottawa Electric Ry. announced Sept. 16, that it had decided to stop running night cars at 1 a.m. instead of 2 a.m. as formerly.

The Montreal Tramways Co's Annual Report.

Following are the principal portions of the Montreal Tramways Co.'s annual report for the year ended June 30, 1918:

Gross earnings, July 1, 1917, to Feb. 9, 1918	\$4,652,747.66
Allowance under new contract and other earnings, from Feb. 10 to June 30, 1918	874,048.71
Total	\$5,526,796.37
Surplus carried over from June 30, 1917	856,449.01
Total	\$6,383,245.38
Operating expenses, July 1, 1917, to Feb. 9, 1918 \$3,148,003.78	
Taxes, July 1, 1917, to Feb. 9, 1918	92,474.26
City percentage on earnings, July 1, 1917, to Feb. 9, 1918	250,509.12
Interest on bonds and loans for the year ..	940,242.38
Interest on debenture stock for the year ...	800,000.00
Dividends paid to April 30, 1918	254,637.75
Discount on bonds	223,112.00
Spent on renewals over amount carried forward from last year	106,808.15
Amount paid on account first Tramways Commission up to June 30, 1918	15,000.00
	\$5,830,787.44
General surplus	\$ 552,457.94

In the above figures the gross earnings to Feb. 9, 1918, the date of the termination of the old contract, are shown separately from the interest allowed the company under the terms of the new franchise. The gross credits amount to \$5,526,796.37, the surplus carried over from June 30, 1917, was \$856,449.01, making the total credits \$6,383,245.38. The total charges against this sum amount to \$5,830,787.44, leaving a balance to the credit of the general surplus account of \$552,457.94, a reduction from the surplus as it stood at the close of the fiscal year 1917 of \$303,991.07.

On Jan. 28, 1918, a contract was executed between the City of Montreal and the company, which was later assented to by the Quebec Legislature, granting a franchise on the Island of Montreal to the company for 35 years. Under this contract the rates of fares to be charged are to be fixed by the Tramways Commission, appointed by the Quebec Government to administer the contract, and must be sufficient to produce a revenue that will meet the allowances provided for under the said contract, viz.; operating expenses and taxes, operating profit, maintenance and renewals, 6% per annum on the amount of \$36,286,295.00, as established by the contract; 7% per annum on additional capital supplied during the continuance of the war, and for two years after its close, to be received over a period not exceeding five years beyond the close of the war; 6% per annum on working capital furnished by the company for the operation of its system; ½% per annum on \$36,286,295, or \$181,431.47, to cover expenses incurred by the company in procuring additional capital. A rental of \$500,000 a year to be paid to the city during the period of the contract. A sum equal to 1% per annum of the gross revenue to be paid annually into a contingent reserve fund, until such fund shall amount to \$500,000. All the portion of the gross revenues remaining after the payment of the charges above described shall constitute the divisible surplus, and shall at the end of each year be distributed as follows: To the city 30%; to the company 20%; and to the tolls reduction fund 50%. The tolls reduction fund shall be held in trust for the patrons of the company for the

reduction of tolls, and shall be administered by the commission as provided for under the contract. Whenever at the end of any year the amount in the tolls reduction fund shall exceed \$1,000,000, the commission may, and whenever the amount in said fund shall exceed \$2,500,000, the commission shall reduce the fares or tolls on the tramways system.

The company purchased during the past year a block of land on Mount Royal Ave., east of Fullum St., for the purpose of erecting suitable car barns. A contract granting the company an exclusive franchise in the Town of St. Laurent, for 36 years, was executed during the past year. The company sold a block of land in the Parish of Pointe aux Trembles, which was not required for its purposes.

The company received a general demand from its employes for an increase in wages. After many deliberations, including meetings with the Tramways Commission and the representatives of the City of Montreal, etc., it was agreed to grant a general increase to the employes.

During the past year, the company received an additional contract for machining shells, and is proceeding with the work satisfactorily.

The board decided to defer the declaration of the regular quarterly dividend of 2½% on the common stock, which would have been payable on Aug. 1 last, owing to the fact that the new fares and allowances provided for under the contract had not become operative, an appeal having been taken to the Quebec Public Utilities Commission.

Electric Railway Notes.

The Hamilton, Ont., City Council has authorized the Hamilton St. Ry. to stop its cars before crossing street intersections, instead of after passing them, as has been the practice.

The Edmonton, Alta., City Council has been invited to follow the lead of Calgary, and to grant free passes on the city's electric railway to all returned soldiers who have lost limbs.

The Regina, Sask., Municipal Ry. put in effect a reduced schedule of cars on its lines from Sept. 1 to 14, to enable 21 of its employes to join in the harvest campaign held in the province.

The London & Port Stanley Ry. has extended the use of the summer commutation book tickets to Port Stanley, Ont., to Oct. 15, and also the summer extension week end fares from London to St. Thomas and Port Stanley.

It was reported to the Hamilton, Ont., City Council, Sept. 10, that the report of the special committee on the street railway situation would be presented as soon as the reports from the city engineer and the city solicitor were received.

The Hydro Electric Power Commission of Ontario has received the last two of the 12 electric locomotives, for its Chipewa power development project, which it ordered from C. E. A. Carr Co., Toronto, recently, and which were built by the National Steel Car Co., Hamilton, Ont.

The Calgary, Alta., City Council, on Sept. 3, fixed a 5c fare for soldiers in uniform to or from the city on the Sarcee line of the Municipal Ry. Notice of motion was given to ask the Dominion Government to pay a lump sum, so that the city could carry soldiers to and from camp free.

The British Columbia Attorney General announced recently that the government has decided to introduce a measure at the next session of the legislature for the appointment of a public utilities commission. The constitution of the commission, he said, will be similar to the commissions already appointed in the eastern provinces.

The Hull Electric Co. has ordered a double truck snow sweeper from Ottawa Car Manufacturing Co. It will be arranged with a specially constructed frame on the ends of the underframe, the removal of which will enable it to be used as a locomotive. The underframe will be all steel, and the cab will be of wood. Trucks, air brakes and motor equipment will be supplied, and with the exception of the air brakes, which will be installed by the builders, will be installed by the Hull Electric Co. Following are chief dimensions: Length over all as sweeper, 39 ft.; as locomotive, 24 ft.; width over all, 8 ft. 8 in.; width of cab outside, 8 ft. 1 in.; length of cab outside, 12 ft. 4½ in.; distance between bolster centers, 12 ft. 6 in.

Nova Scotia Tramways and Power Co's. Taxation.

By an act passed by the Nova Scotia Legislature in 1916, the Halifax City Council was authorized to prepare provisions amending sections 369 to 483, both inclusive, of the city charter. These sections relate to taxation within the city. As soon as the new sections were prepared and approved by the city council, they were to be submitted to the N.S. Government for approval. This has now been done, and by an order in council dated Aug. 24, the new sections have been approved, and are declared to be incorporated in the Halifax charter, and to be in full force and effect. One of the new provisions, sec. 374, deals with the Nova Scotia Tramways & Power Co. and enacts that the company, "in addition to the taxation by law imposed upon the real property owned by it, including the real property formerly the property of the People's Heat & Light Co., Ltd., and of the Halifax Gas Light Co., and the sum of 4% on the gross tolls received from the operation of its railway, and the license fee of \$1,000 imposed by sec. 33, chap. 107 of the Acts of 1895, and water rates, shall pay half yearly to the city on May 1 and Nov. 1, in each year, a sum equal to 2% on its gross receipts during the half year preceding, from the supply of electric energy and gas for lighting or power, and such sum shall constitute a lien or charge upon all the property, real and personal, and the franchises of the company, and may be collected in the same manner and with the same remedies, and at the same time, as the city's other rates and taxes; and in addition to such remedies, if the said sum remains unpaid for three months after May 1 or Nov. 1 in any year, the Supreme Court or a judge thereof may appoint a receiver of the tolls and income of the company, who shall, out of the moneys so received by him, pay to the city the amount of the said taxes then in arrear. The company shall half yearly, on or before Nov. 1 and May 1, furnish the city treasurer with a statement of gross receipts showing the amount derived from electricity and gas respectively, verified by the oath of the superintendent or manager, and for the purpose of verifying such statement the city may, if it deems fit, examine the company's books and accounts."

Marine Department

Steel Cargo Steamships Building for Dominion Government.

The 5,100 Ton Type of Steel Cargo Steamship.

Canadian Railway and Marine World for August and September respectively contained full technical descriptions of the 4,300 and 3,750 ton types of steel cargo steamships for the Dominion Government, which are to be built under the shipbuild-

lifting leads for the derrick posts.

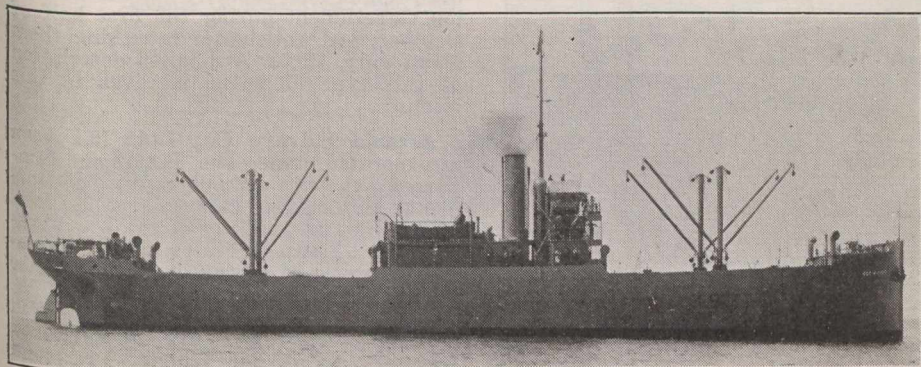
The anchor arrangements will be as usual in this class of vessel, viz., as follows: 2 bower anchors, stockless type, 48¾ cwt.; 1 bower anchor, stockless type, 41¾ cwt.; 1 stream anchor, ex stock, 13 cwt.; 1 kedje anchor, ex stock, 5¾ cwt.; 210 fathoms 2 in. stud link chain and the

compound wound, coupled direct to the engine shaft. The various leads will be on the double wire system, the wiring in the engine and boiler rooms being armored and in the accommodation lead covered. Six circuits will be provided, viz.: 1, navigation; 2, wireless; 3, machinery spaces; 4, accommodation amidships; 5, accommodation aft; 6, cargo holds.

The vessels will be provided with the usual armament, as required by law, and provision will be made for defence from floating mines.

The life saving appliances will be in accordance with the requirements of the Canadian Board of Steamship Inspection, and comprise: 2 lifeboats, 24 x 7½ x 3 ft.; 1 lifeboat, 20 x 6½ x 2¾ ft.; 1 dinghy, 18 x 5½ x 2 ft.; 2 lifeboats, 17½ x 8 ft., and the usual lifebelts and lifebuoys.

The ships' officers will be placed in deckhouses at the forward end of the bridge deck. The deckhouses will contain 1 cabin for each officer, wireless cabin, dining saloon, pantry, baths and water closets and the usual stores. An internal stairway will lead to the captain's quarters and chart room on the upper bridge, which will be surmounted by the flying bridge and wheel house. The engineers and petty officers will be housed in side houses, abreast of the engine and boiler casings, the mess room and pantry being arranged for at the after end of the engine casing on bridge deck. A petty officers' mess room will be provided at the



Steel cargo steamship War Wizard, built for British Government by Collingwood Shipbuilding Co.

ing policy of the Minister of Marine, Hon. C. C. Ballantyne, as first detailed in Canadian Railway and Marine World for February. Following is a description of the 5,100 ton d.w. type.

The principal dimensions of the 5,100 ton type will be:

Length b.p.	331 ft.
Breadth moulded ..	46 ft. 6 in.
Depth moulded ..	25 ft. 6 in.
Draft load ..	21 ft. 8 in.
Deadweight about ..	5,100 tons
Trial speed ..	12 knots
Complement ..	45

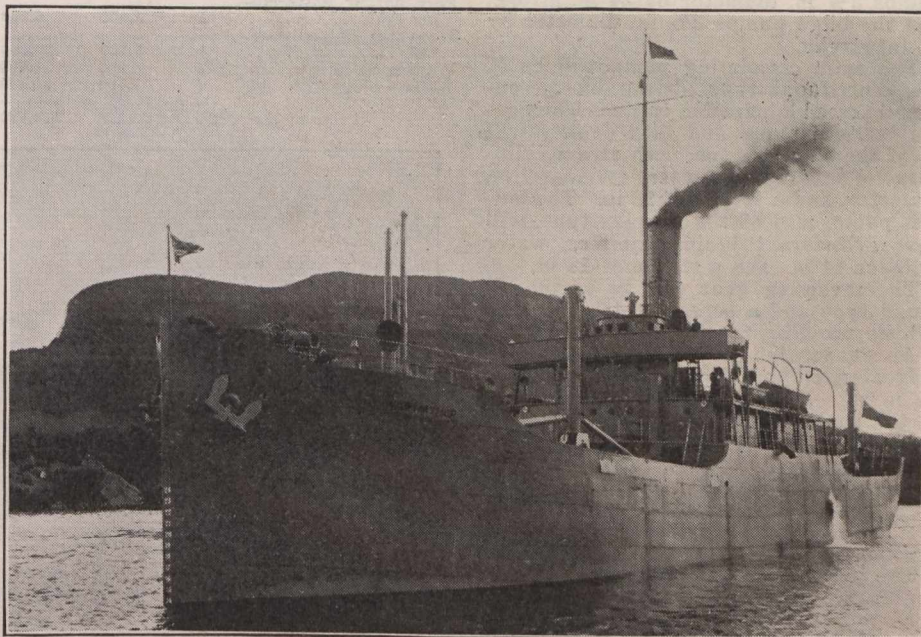
The vessels will be of the single deck type, with poop, bridge and forecastle, straight stem, elliptical stern, and will be subdivided into 16 watertight compartments, by 7 watertight transverse bulkheads and divisions. A double bottom, 39 in. deep, with solid floors on alternate frames, will be fitted from the collision bulkhead to the after peak bulkhead, each compartment being connected in the usual way to the steam suction.

The vessels are designed on the ordinary transverse system of framing, the frames and beams being of bulb angle, spaced 24½ in. apart. No side stringers will be fitted in the holds, the shell plating being increased by way of compensation. The main deck, poop, bridge and fore-castle decks will be of steel sheathed with British Columbia fir decking in way of the accommodation.

The cargo hatches will be arranged for the speedy handling of bulk cargoes, and will be of the following dimensions: Nos. 1, 2, 3 and 4 hatches, 26½ x 23 ft. each; after hold and reserve bunker, 10¼ x 18 ft. The usual pillar arrangement in the holds will be dispensed with, to facilitate loading and unloading. Each cargo hatch will have adjacent 2 collapsible derrick posts, provided with 2 derricks capable of lifting 5 tons each. The derricks to the after main hold will have a lifting capacity of 3 tons. The 10 cargo winches will be of the Clarke-Chapman type, 7 in. diameter by 12 in. stroke, 2 being placed at each hatch, one on the poop deck and one on the bridge deck. One pole mast with telescopic top mast will be fitted amidships, carrying the wireless aerials and

usual stream line, tow line, hawsers and warps. The windlass, which will be on the fore-castle head, will be of the Clarke-Chapman patent grip type, working under reduced steam pressure.

The steam steering engine will be placed in a deckhouse on the poop deck. The gear will be of the patent guided segment type, having cylinders about 9 in.



Steel cargo steamship War Hather, built for British Government by Port Arthur Shipbuilding Co. The photograph was taken as the vessel was leaving Fort William on Aug. 27 with a cargo of grain for Montreal, where she was turned over to the Imperial Munitions Board.

diameter by 12 in. stroke, controlled from the navigating position in wheelhouse by telemotor gear.

The electric generating set will be located in the engine room and will have a capacity of 10 k.w. The engine will be of the single cylinder enclosed type, with cylinder 8 in. diameter by 6 in. stroke, running at about 350 revolutions a minute. The dynamo will be of the four pole type,

after end of the bridge erection, with pantry adjoining. The hospital will be located under the fore-castle. In accordance with what is now recognized practice in modern cargo vessels, the seamen and firemen will be housed under the poop deck aft, in commodious compartments each accommodating two men. Separate mess rooms and stores will be provided, and all requirements such as lighting,

ventilation and sanitation will be in conformity with the British Board of Trade regulations governing the survey of masters and crew spaces. All the accommodation will be steam heated throughout.

The cold storage compartments will be at the after end of the bridge erection, with the refrigerating engine adjoining.

wood, Ont. The first keels will be laid shortly, and delivery of the first of the type is expected by June, 1919.

Orders for Steamships.—We are officially advised that the Marine Department has given the following orders for steel cargo steamships in addition to those mentioned in our previous issues:

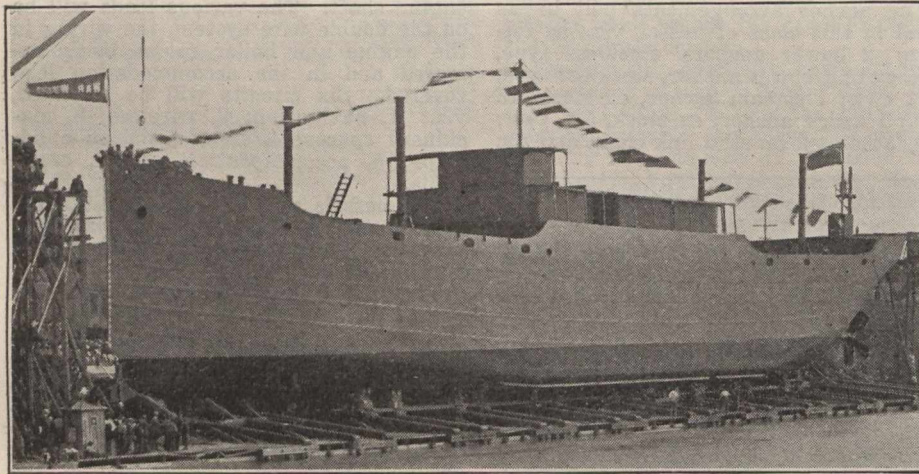
Halifax Shipyards, Ltd., Halifax, N.S.,

have the following dimensions: Length over, all 261 ft., beam 43½ ft., depth moulded, 26 ft. They will be equipped with triple expansion engines, with cylinders 18, 20 and 50 ins. diam. by 36 in. stroke, supplied with steam by two boilers 14 ft. diam. by 10¾ ft. long, with forced draft, for a speed of about 9½ knots when fully loaded. They will be of the usual poop, bridge and fore-castle design, with four hatches, four collapsible derrick posts and one mast amidships. A full description of this type of vessel was given in our last issue.

Davie Shipbuilding & Repairing Co., Lauzon, Que., intends to lay the keels of the two steel cargo steamships of 5,100 deadweight tons capacity for the Dominion Government during the first half of October, and anticipates launching them about July, 1919. A detailed description of this type of vessel is given in this issue.

Ascania Salvage Co., Ltd., has been incorporated under the Dominion Companies Act, with \$20,000 capital, and office at Montreal, to carry on the business of salvors and wreckers of ships and vessels of all kinds, and in connection therewith to own and operate steam and other vessels. The officers are—President, W. F. Walsh, Purchasing Agent, Halifax Shipyards, Ltd.; Secretary, H. McElliott, secretary to R. M. Wolvin, President, Montreal Transportation Co., and Vice President and General Manager, Halifax Shipyards Ltd.; and Treasurer, Jos. Leonard, chief accountant, Halifax Shipyards, Ltd. The company was incorporated with the intention of salvaging the s.s. *Ascania*, which was wrecked off Newfoundland earlier in the year.

Shipbuilding and Ship Losses.—Washington, D.C., press dispatch:—"Deliveries of completed vessels from shipyards in the U.S. during July and August, were more than enough to offset the submarine losses of the U.S. since the beginning of the war. Ships sunk aggregate 541,925 deadweight tons, while new ones put in service in the two months aggregated 610,779 deadweight tons. The total allied



Steel cargo steamship War Weasel, built for British Government by British American Shipbuilding Co., Welland, Ont., just prior to the launching.

The fresh water tanks will have a capacity of 2,200 gallons each, and will be connected to a distiller, having a capacity of 1,000 gallons per 24 hours.

Engines and Boilers.—The propelling machinery will be of the triple expansion, surface condensing type, having cylinders 25 x 41 x 68 in. by 45 in. stroke, the air feed and bilge pumps being worked from the main engine. The air pump will be 21 in. diameter by 24 in. stroke, the feed pumps 3½ in. diameter by 24 in. stroke, and the bilge pumps 3½ in. diameter by 24 in. stroke.

The main circulating pump will be of the centrifugal type, driven by an enclosed forced lubrication engine. The general service pump and feed donkey will be of the simplex type, with steam cylinders 9½ in. diameter, water cylinder 7 in. diameter, and a stroke of 18 in. The ballast pump, also of the simplex type, will have cylinders 10½ in. diameter, water cylinder 14 in., and a stroke of 18 in.

The reversing gear will be of the all round type and a separate steam engine will be provided for turning in port.

An evaporator of the Weir type, capable of supplying 25 tons of water per 24 hours, will be provided, and there will be the usual filter, heater, auxiliary condenser, drain tank, telegraphs, etc.

Steam will be generated in 3 single ended boilers 14 ft. diameter by 11½ ft. long, designed to work under Howden's system of forced draft and having a working pressure of 180 lb. a square inch.

The forced draft fan will be of the double inlet type, driven by a single cylinder open type engine situated in the engine room.

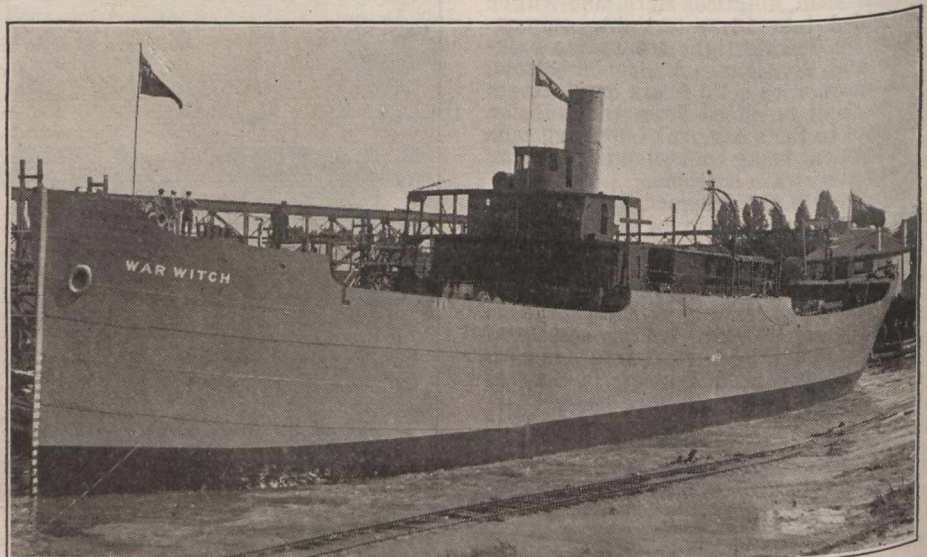
The vessels are designed to Lloyds 100 A1 class and will be built under special survey and the departmental constructors. The trials will consist of a dock trial of 4 hours duration, to be followed later by an official sea trial of 6 hours duration, with the vessels fully loaded.

Orders have been given by the Marine Department for 12 of these steel vessels, viz., 4 to Wallace Shipyards, North Vancouver, B.C.; 4 to Tidewater Shipbuilders, Ltd., Three Rivers, Que.; and 4 to Collingwood Shipbuilding Co., Colling-

wood, Ont. 2 of 8,100 tons d.w. capacity.

This makes orders for 24 vessels given to date as follows, the tonnage stated being dead weight in each case:—

	No.	Tons each	Total tonnage
British-American Shipbuilding Co.	2	4,300	8,600
Canadian Vickers, Ltd.	1	4,300	4,300
Canadian Vickers, Ltd.	1	8,100	8,100
Collingwood Shipbuilding Co.	4	3,750	15,000
Davie Shipbuilding & Repairing Co.	2	5,100	10,200
Halifax Shipyards, Ltd.	2	8,100	16,200
Port Arthur Shipbuilding Co.	2	3,400	6,800
Tidewater Shipbuilders, Ltd.	4	5,100	20,400
Wallace Shipyards, Ltd.	2	4,300	8,600
Wallace Shipyards, Ltd.	4	5,100	20,400
	24		118,600



Steel cargo steamship War Witch, built for British Government by Collingwood Shipbuilding Co. From photograph taken immediately after the launching.

It is said that a further order for two vessels of about 10,500 tons d.w. capacity each will probably be given Halifax Shipyards, Ltd., shortly.

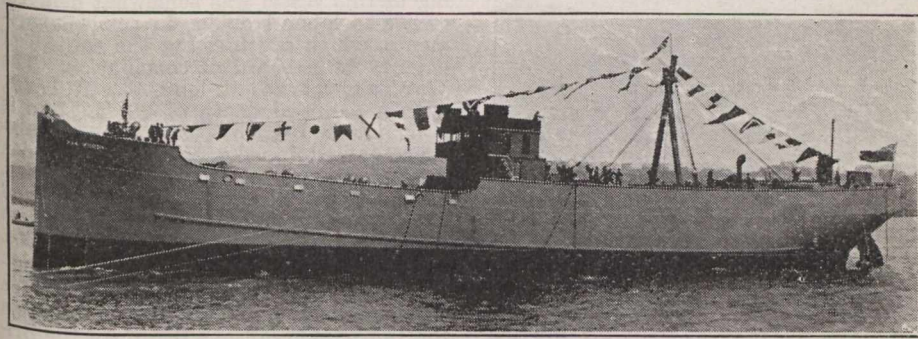
Collingwood Shipbuilding Co., Collingwood, Ont.—The steel steamships of 3,750 tons each, which the Dominion Government has ordered from this company will

and neutral losses during the war have amounted to 21,404,913 deadweight tons, while new allied and neutral construction has totalled 14,247,825 tons. With tonnage of enemy ships received by the allies added to this total, the net losses during the entire war period is shown to be 3,362,088 deadweight tons."

Cargo Steamship Building in Canada for British Government.

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 Sept. 8, giving in each case the date of the launching, the name of the steamship, the name of the builder and the deadweight tonnage:—

Steel Steamships.	
May 18, 1917	War Dog, Wallace Shipyards North Vancouver, B.C. 4,500
July 9, 1917	War Wasp, Nova Scotia Steel & Coal Co., New Glasgow, N. S. 1,800
Aug. 19, 1917	War Fish, Port Arthur Shipbuilding Co., Port Arthur, Ont. 4,300



Steel Cargo Steamship War Fundy, built for British Government.

Nov. 3, 1917	War Dance, Port Arthur Shipbuilding Co., Port Arthur, Ont. 3,400
Mar. 16, 1918	War Camp, J. Coughlan & Sons, Vancouver, B.C. 8,800
Mar. 23, 1918	War Power, Wallace Shipyards, North Vancouver, B.C. 4,600
Apr. 3, 1918	War Isis, Port Arthur Shipbuilding Co., Port Arthur, Ont. 3,400
May 8, 1918	War Wizard, Collingwood Shipbuilding Co., Collingwood, Ont. 2,900
May 21, 1918	War Bee, Nova Scotia Steel & Coal Co., New Glasgow, N.S. 2,400
May 27, 1918	War Osiris, Port Arthur Shipbuilding Co., Port Arthur, Ont. 3,400
June 8, 1918	War Earl, Canadian Vickers Ltd., Montreal 7,000
June 29, 1918	War Duchess, Canadian Vickers Ltd., Montreal 7,000
July 20, 1918	War Hathor, Port Arthur Shipbuilding Co., Port Arthur, Ont. 3,400
July 29, 1918	War Charger, J. Coughlan & Sons, Vancouver, B.C. 8,800
Aug. 19, 1918	War Chief, J. Coughlin and Sons, Vancouver, B.C. 8,800
Aug. 21, 1918	War Weasel, British-American Shipbuilding Co., Welland, Ont. 3,500
Sept. 6, 1918	War Witch, Collingwood Shipbuilding Co., Collingwood, Ont. 2,900
Total, 17 steel steamships.....80,900	

Wooden Steamships.

Dec. 28, 1917	War Songhee, Foundation Co., Victoria, B.C. 3,080
Jan. 4, 1918	War Nootka, Western Canada Shipyards, Vancouver, B.C. 3,080
Jan. 24, 1918	War Yukon, Cameron-Genoa Mills Shipbuilders, Ltd., 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 Masset, Foundation Co., Victoria, B.C. 3,080
Apr. 13, 1918	War Tye, 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 & Rob-

ertson, Quebec, Que. 3,080	
June 14, 1918	War Edensaw, New Westminster Construction & Engineering Co., B.C. 3,080
June 15, 1918	War Babine, Foundation Co., Victoria, B.C. 3,080
June 24, 1918	War Nicola, Wm. Lyall Shipbuilding Co., Vancouver, B.C. 3,080
June 28, 1918	War Quebec, Quebec Shipbuilding & Repairing Co., Quebec, Que. 3,080
June 29, 1918	War Ontario, Toronto Shipbuilding Co., Toronto. 3,080
July 5, 1918	War Huron, Fraser, Brace & Co., Montreal 3,080
July 5, 1918	War Erie, Fraser, Brace & Co., Montreal 3,080
July 6, 1918	War Casco, Western Canada Shipyards, Ltd., Vancouver,

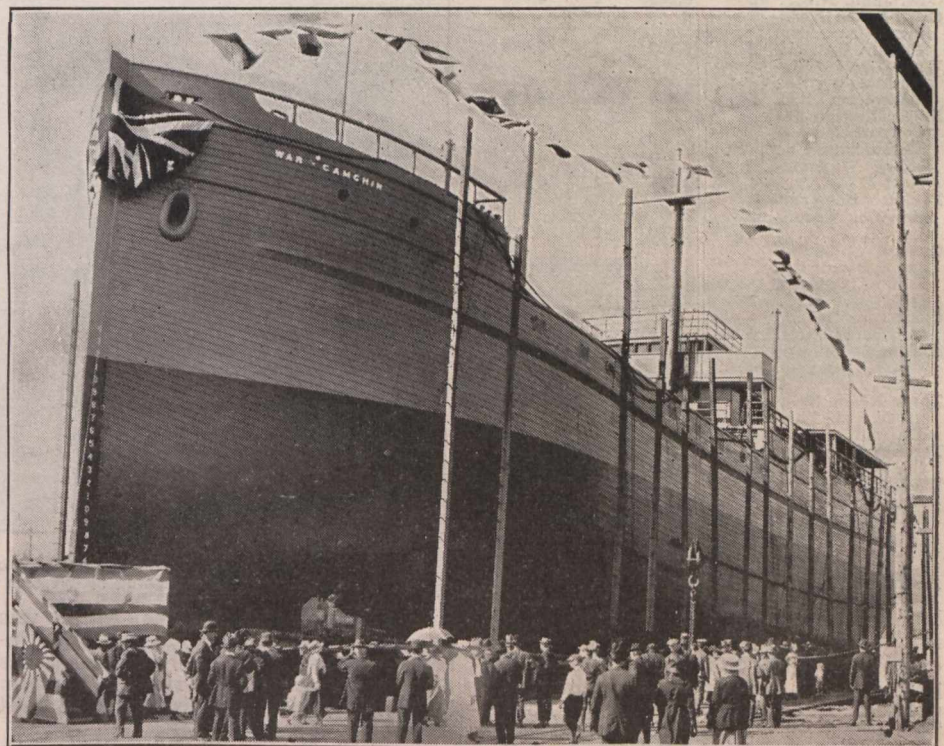
Aug. 31, 1918	War Camchin, Foundation Co., Victoria, B.C. 3,080
Sept. 7, 1918	War Sorel, Quebec Shipbuilding & Repair Co., Quebec. 3,080
Sept. 8, 1918	War Nanoose, Foundation Co., Victoria, B.C. 3,080

Total, 37 wooden steamships.....113,960
Total deadweight tonnage of 17 steel and 37 wooden steamships launched, 194,860.

Vessel Assignments.—It was announced at Victoria, B.C., that all wooden steamships under construction in British Columbia for the British Government, have been assigned to various firms for operation on the government's behalf. Of the 27 vessels built, or under construction in that province, 8 are said to have been assigned to English firms, and 19 to Scottish companies.

Steamships Ordered and Launched.—The following table shows the number of steel and wooden steamships ordered by the Imperial Munitions Board in Canada for the British Government and the number launched to Sept. 8, with the deadweight tonnage and the name of the builder in each case. The two vessels mentioned under the names of Dingwall, Cotts & Co. and the Port Arthur Shipbuilding Co., through subcontract, were being built for other owners when the general orders were placed, and taken over for the British Government. In addition to the foregoing, the car ferry steamship Leonard, 3,363 tons, was bought from the Dominion Government.

Contractor.	Steel Steamships.		Total deadweight capacity tons	Total deadweight capacity tons
	Ordered	Launched		
British-American Shipbuilding Co., Welland, Ont.	3	1	10,500	3,500
Canadian Allis-Chalmers, Ltd., Bridgeburg, Ont.	4	—	14,000	—



Wooden cargo steamship War Camchin.

Aug. 22, 1918	War Tanoo, Western Canada Shipyards, Vancouver, B.C. 3,080	Canadian Vickers Ltd., Montreal.	4	28,000	2	14,000
Aug. 24, 1918	War Fundy, Grant & Horne, St. John, N.B. 3,080	Collingwood Shipbuilding Co., Collingwood, Ont.	2	5,800	2	5,800
Aug. 26, 1918	War Kitimat, New Westminster Construction & Engineering Co., New Westminster, B.C. 3,080	J. Coughlan & Sons, Vancouver, B. C.	9	79,200	3	5,800

Dingwall, Cotts & Co., Vancouver, B.C.	1	4,500	1	4,500
Midland Shipbuilding Co., Midland, Ont.	3	10,200	—	—
Nova Scotia Steel & Coal Co., New Glasgow, N.S. . .	2	4,200	2	4,200
Polson Iron Works, Ltd., Toronto. . .	6	21,000	—	—
Port Arthur Shipbuilding Co., Port Arthur, Ont. . .	6	20,400	5	17,000
Port Arthur Shipbuilding Co. (through subcontract)	1	4,300	1	4,300

was launched by the Governor General, Sept. 28. She is a sister vessel of the War Earl and War Duchess, both launched by the company in June.

Collingwood Shipbuilding Co., Collingwood, Ont.—The second of the two steel steamships ordered from this company by the Imperial Munitions Board for the British Government, was launched, Sept. 6, and named War Witch. She is of 2,900 ton deadweight capacity, and similar to the s.s. War Wizard, which was launched May 8.

J. Coughlan & Sons, Ltd., Vancouver,

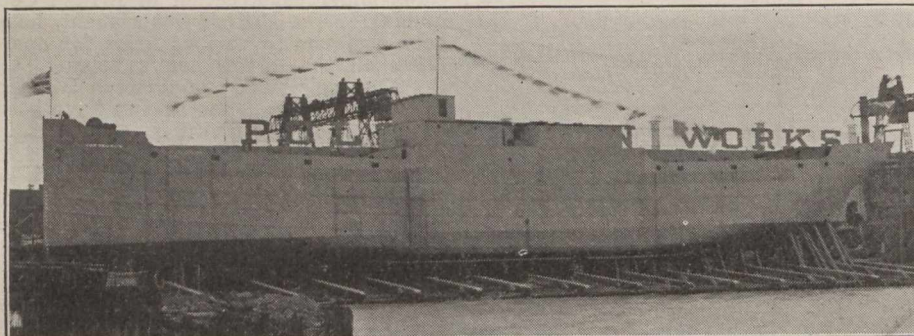
ately after the launching, but it is not anticipated that she will be launched until early in 1919.

New Westminster Construction & Engineering Co., New Westminster, B.C.—The third of the 4 wooden steamship hulls under construction for the British Government, under order from the Imperial Munitions Board, was launched Aug. 26, and christened War Kitimat, by Miss Janet Gray, daughter of the Mayor

Polson Iron Works, Ltd., Toronto.—The first of the 6 steel steamships ordered by the Imperial Munitions Board for the British Government, was launched Sept. 19, and christened War Taurus, by Lady Flavelle, wife of the Chairman of the Imperial Munitions Board. The building of this vessel was somewhat delayed, owing to labor troubles in some departments, which are forming the subject of enquiry by a board of conciliation. The War Taurus is 261 ft. long, 43½ ft. beam, with a moulded depth of 23 ft. She is built under British Corporation regulations, and equipped with triple expansion engines with cylinders 20½, 33 and 54 ins. diam., by 36 ins. stroke, 2,250 h.p., and supplied with steam by 2 Scotch boilers 12 ft. long by 14 ft. diam. at 180 lbs.

Quebec Shipbuilding & Repair Co., Quebec, Que.—The second of the 2 wooden steamship hulls, built under order from the Imperial Munitions Board for the British Government at this yard, was launched Sept. 7, and named War Sorel, being christened by Mrs. R. A. Carter, wife of the company's Managing Director.

Quinlan & Robertson, Quebec, Que.—The fourth wooden steamship hull built at this yard under order from the Imperial Munitions Board for the British Government was launched Sept. 23, and named War Matane. This completes the order placed with this firm.



Steel Cargo Steamship War Taurus, for British Government. Just prior to launching by Polson Iron Works, Toronto.

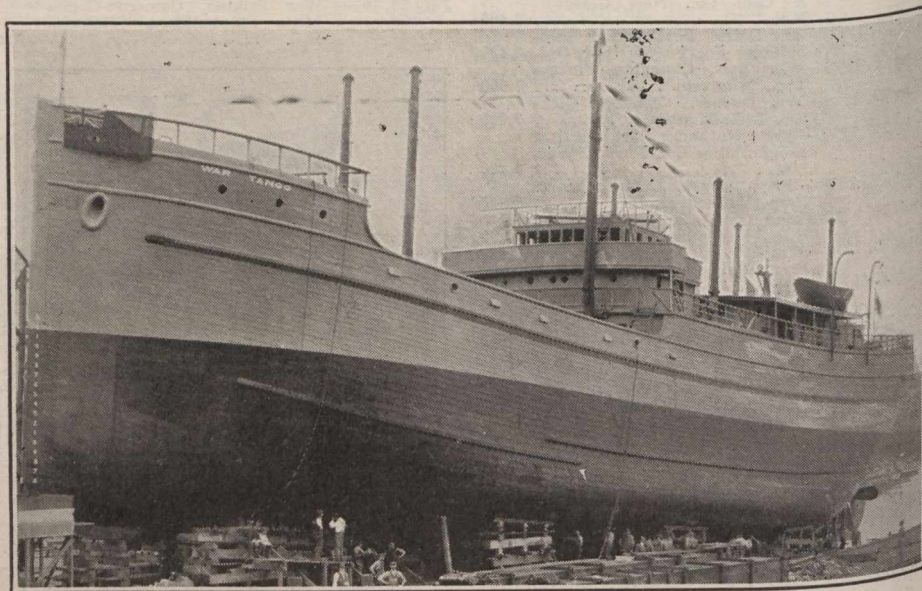
Wallace Shipyards, Ltd., North Vancouver, B.C.	2	9,200	2	9,200
Totals	43	211,300	19	88,900

Wooden Steamships.

Contractor.	Ordered	Total deadweight capacity tons	Launched	Total deadweight capacity tons
Cameron-Genoa Mills Shipbuilders, Ltd., Victoria, B.C.	4	12,320	4	12,320
Foundation Co., Victoria, B.C.	5	15,400	5	15,400
Fraser, Brace & Co., Montreal	4	12,320	3	9,240
Grant & Horne, St. John, N.B.	2	6,160	1	3,080
Great Lakes Dredging Co., Port Arthur, Ont.	2	6,160	1	3,080
Wm. Lyall Shipbuilding Co., Vancouver, B.C.	6	18,480	6	18,480
New Westminster Construction & Engineering Co., New Westminster, B.C.	4	12,320	3	9,240
Pacific Construction Co., Coquitlam, B.C.	2	6,160	2	6,160
Quebec Shipbuilding & Repair Co., Isle of Orleans, Que.	2	6,160	2	6,160
Quinlan & Robertson, Quebec, Que.	4	12,320	3	9,240
Southern Salvage Co., Liverpool, N.S.	1	3,080	—	—
Three Rivers Shipyards, Ltd., Three Rivers, Que.	2	6,160	—	—
Toronto Shipbuilding Co., Toronto	2	6,160	1	3,080
Western Canada Shipyards, Ltd., Vancouver, B.C.	6	18,480	6	18,480
Totals	46	141,680	37	113,960

B.C.—The s.s. Alaska, built for the British Government, was originally arranged for the consumption of oil as a fuel. The furnaces were, however, changed before the vessel was sent on her maiden trip, so as to allow the use of coal. This work, together with the general cleaning, painting, etc., was carried out by Yarrows Ltd., Victoria, B.C.

Foundation Co., Victoria, B.C.—The last of the wooden steamship hulls ordered by the Imperial Munitions Board for the Bri-



Wooden Cargo Steamship War Tanoo, for British Government. Just prior to launching by Western Canada Shipyards, Ltd., Vancouver, B.C.

British-American Shipbuilding Co., Welland, Ont.—The s.s. War Weasel, the launching of which was mentioned in our last issue, was the first of the three steel cargo steamships to be built by this company for the British Government under order of the Imperial Munitions Board. The second one is expected to be ready for launching early in October, and the keel of the third was laid on the berth occupied by the War Weasel, immediately after the launch of that vessel.

Canadian Vickers, Ltd., Montreal.—The fourth launching of steel steamships since the opening of the St. Lawrence navigation, took place when the s.s. War Faith

Government, at this yard, was launched Sept. 8, and named War Nanoose. The s.s. War Camchin, which was mentioned in our last issue as having been launched Aug. 8, was not launched until Aug. 31.

Grant & Horne, St. John, N.B.—The first of the two wooden steamship hulls ordered by the Imperial Munitions Board for the British Government, was launched at this yard Aug. 24, and named War Fundy, by Mrs. Carvell, wife of the Dominion Minister of Public Works. The keel of the second hull was laid immedi-

Western Canada Shipyards, Ltd., Vancouver, B.C.—The s.s. War Tanoo, the last of the wooden steamship hulls to be built by this company to the Imperial Munitions Board's order for the British Government, was launched Aug. 22.

Henriette Ship Co., Ltd., has been incorporated under the Dominion Companies Act, with \$100,000 capital, and office at 626 Pender St. West, Vancouver, B.C., to own and operate steam and other vessels and to carry on a general navigation and transportation business.

General Shipbuilding Notes Throughout Canada.

Annapolis Shipbuilding Co., Annapolis Royal, N.S., launched a tern schooner of 1,100 tons during September, and expects to launch one of about 1,000 tons early in December. It is reported that a repair dock is under construction, suitable for handling vessels up to 5,000 tons.

Barrington, N.S.—Local financial interests are reported to be considering the question of establishing a shipyard at this point, to revive the shipbuilding industry

per engine rooms. Included in the deck machinery equipment are: double cylinder, two drum steam trawl winch with reversing engines; double cylinder single drum steam hoister with non reversing engines, and a steam windlass. The vessels are of the following dimensions: length over all 143 ft., breadth moulded 22½ ft., displacement 630 tons. Of the whole order, 9 vessels have been launched, and the balance will be

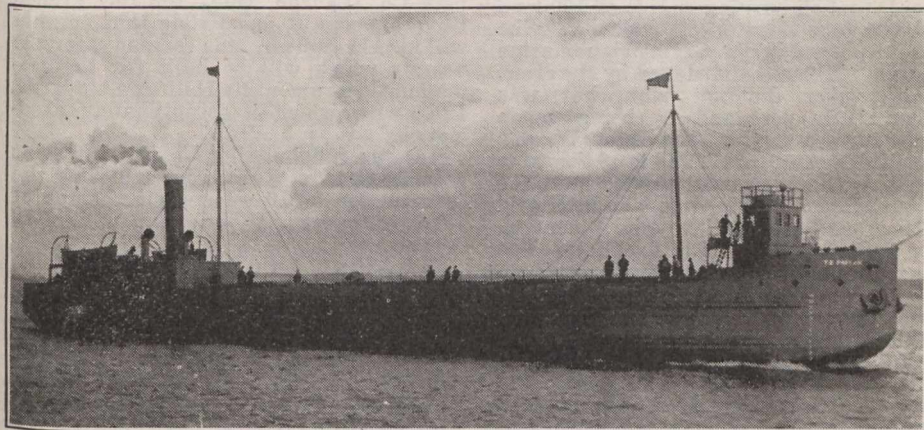
Co., and two are for H. C. Hansen, of Porsgrund, Norway.

Comeauville Shipbuilding Co., Comeauville, N.S., has launched the schooner Ruth Hickman for La Have owners. Another schooner has been laid down. She will be 112 ft. long, with a breadth of 23 ft., and a depth of 13 ft., and will be equipped with a 100 h.p. engine burning crude oil.

Connors Bros., Blacks Harbor, N.B.—Three trawlers are reported to be under construction by this firm, and it is said that they are to be equipped with Fairbanks-Morse oil motors of 200 b.h.p.

J. F. Deveau, Meteghan, N.S.—It was expected to launch a schooner during September for owners at La Have, N.S. The schooner Harold B. Cousins is under repair at this yard, prior to being handed over to New York purchasers.

Dominion Shipbuilding Co., Toronto.—The first vessel to be built in this company's new yards, was launched Sept. 26 and christened St. Mihiel, by Mrs. William Inglis. She is a bulk freighter of the Frederickstad type, with deadweight capacity of 4,300 tons. Her dimensions are: length over all 261 ft., breadth moulded 43½ ft., depth moulded 28 ft. 2 in. She is equipped with triple expansion engines, with cylinders 20, 33 and 54 in. diam. by 40 in. stroke, 1,500 h.p., supplied with steam by 2 Scotch boilers, each 14 x 12 ft., built by John Inglis & Co., Toronto. This vessel is being completed on builder's account, and negotiations were under way during the last few days of September for her acquirement for ocean service. In general design and construction she is similar to the steamships Angouleme and Troja built by the Thor Iron Works, Ltd., which business is now



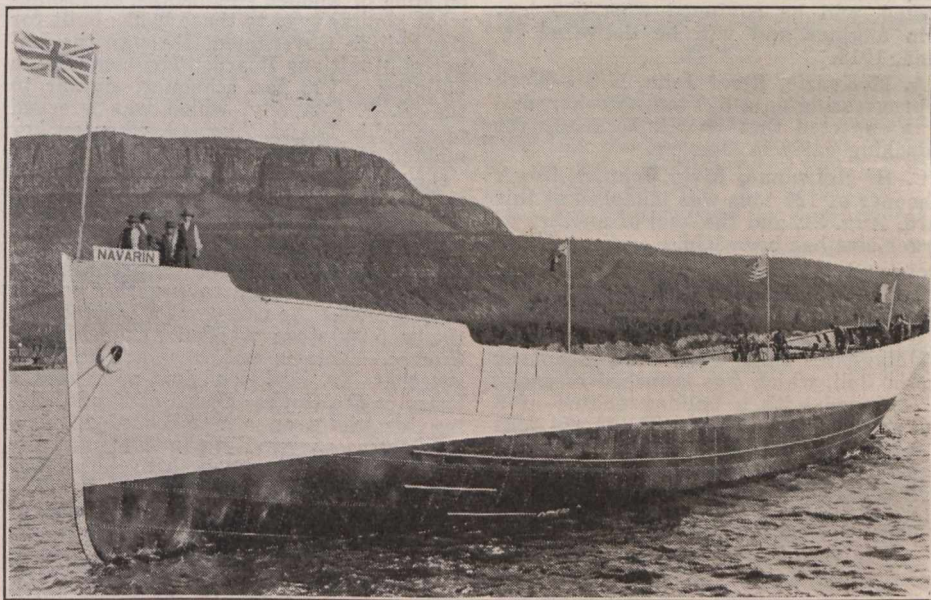
Steamship T. P. Phelan for Canada Steamship Lines, Ltd., built by Tidewater Shipbuilders, Ltd.

where in past years many notable schooners were built.

Cameron-Genoa Mills Shipbuilders, Ltd., Victoria, B.C.—At a special meeting of shareholders, Aug. 15, a resolution was passed that the company be wound up voluntarily forthwith, and Herbert Wright was appointed liquidator. This was confirmed at a meeting held Aug. 30. The company was organized in 1916 as an outcome of the agitation for increased vessel production within British Columbia for provincial needs. An order was placed with it by Canada West Coast Navigation Co. and allied interests, for 6 auxiliary powered schooners, of a comparatively new type, and these were successfully completed and placed in service, chiefly to the Antipodes. The company was subsequently given a contract for 4 wooden hulls for steamships, by the Imperial Munitions Board, for the British Government, and these have been completed, so far as the company's work is concerned, the last one, War Stikine, being launched July 27. At that launching, J. H. Price, President, stated that he could not give particulars as to the company's future, but it could be said that the yard would be in full swing again shortly.

Canadian Car & Foundry Co., Fort William, Ont., as mentioned in previous issues, is building 12 mine sweepers for the French Government. They are of the single screw, steel steam trawler type, and are built to the full requirements of Lloyd's register, class 100 A1 steam trawlers, single deck with raised quarter and forecabin decks and steel deck house. The top of the boiler house and winch casing form the navigating bridge, on which is a steel house containing the captain's room and wheel house. On top of the deck house aft is a steel house for the wireless telegraph operator, with platforms at sides for lifeboats. Two pole masts of Oregon fir are fitted, the foremast stepped in cast housing on the main deck, and the main mast is housed by the deck house aft. Steam steering engines are installed in the up-

launched shortly, and the whole delivered before the close of lake navigation. The vessels are being built in a specially constructed shed, and are moved from this to a transfer table, and thence to a chute whence they glide nearly a quarter of a mile, a decline of about 60 ft., into the mooring basin in the Kaminstikwia River.



French Mine Sweeper Navarin, built by Port Arthur Shipbuilding Co., Ltd.

Cholberg Ship Co., Victoria, B.C.—The laying out of a shipyard in the Mud Bay section of the old Songhees Reserve, is proceeding rapidly, the building ways having been rushed so that keels were laid during the second week of September. It is stated that four vessels will be built simultaneously, and that the company has sufficient contracts to keep the yard busy for two years. One vessel is for the Porsgrund Steamship & Sailing

Co., of which L. Dahlgren is Vice President and General Manager.

Fauquier & Porter, Hantsport, N.S.—The schooner Margaret F. Dick, which was launched at this yard Aug. 24, as mentioned in our last issue, for the British Colonies Transportation Co., St. John, N.B., is of the following dimensions: Keel 178 ft., breadth 39½ ft., depth of hold 18½ ft. The keel is of Douglas

fir and the frames of native spruce. The masts are of Douglas fir, which is also used in the finishing of the cabins. The vessel has a registered tonnage of 1,012 44/100. The builders have a second schooner of the same model and tonnage on the stocks, for completion in November, and they have also laid the keel of a three masted schooner with keel of about 142 ft.

Foundation Co., Victoria, B.C., has taken over the yard recently operated by Cameron-Genoa Mills Shipbuilders, Ltd., at Point Ellice, and this is now known as the company's no. 2 yard. The keels of 2 wooden vessels for the French Government were laid at this yard, Sept. 9, and the keel of one similar vessel for the same owners was laid on the same day, at the no. 1 yard. These are the first of an order for 20 such vessels for the French Government, and it has been announced that all the vessels will be fully equipped in the company's own yards.

Press reports state that this order has been secured on a cost plus percentage basis, and that there is some local resentment at this, as it leaves the building company open to offer higher wages, and pay more for materials to secure delivery, thus unsettling the labor market, and generally placing other builders at a disadvantage.

H. T. LeBlanc, Wedgeport, N.S.—It was expected that the trawler, which is being built at this yard for J. N. Rafuse & Sons, Conquerall Bank, would be launched about the last week in September. She is 157 ft. long overall, 27 ft. beam and 13 ft. deep. A contract has been entered into for the construction of another similar vessel, about 6 ft. longer, and the keel has been laid.

Wm. Lyall Shipbuilding Co., North Vancouver, B.C., has an order from the French Government for 8 wooden steamships of 1,500 tons deadweight capacity. They will be 205 ft. over all and well decked, will be equipped with 550 h.p. twin engines and will be delivered by June, 1919.

A. McKenzie, River John, N.B.—Work is progressing on a 600 ton schooner, and it is expected that it will be ready for launching early in October.

C. H. McLennan, River John, N.B.—A schooner of 125 tons was launched at this yard, Aug. 31, and the keel of another of larger size has been laid.

gross and 345 tons register, and is classified with Bureau Veritas with rating for 12 years. She is reported to have been sold to the French Government.

Meteghan, N.S.—The tern schooner Scotia Bell, which was launched recently, is equipped with a bulldog engine of 8 h.p. and patent anchors. She is 414 tons

John L. Mullen Construction Co., Prince Rupert, B.C.—The leasing of the Grand Trunk Pacific Ry. floating dry dock and plant at Prince Rupert, B.C., for a term of years, was mentioned in our last issue. We are advised that the lease covers the entire premises, and in addition a sufficient are adjoining the dry dock and shipbuilding plant property, for the laying down of five ways. It is said that it is not the company's intention to utilize the ship shed, which is ready for wooden vessel building, until the steel shipbuilding work is fully organized and in operation.

W. Naugler, Bridgewater, N.S., is building a schooner similar to the one named William Naugler, launched by him recently.

New Westminster Construction & Engineering Co., New Westminster, B.C., is reported to have an order from the

French Government for 5 wooden steamships of 1,500 tons deadweight capacity.

Nova Scotia Shipbuilding & Transportation Co., Liverpool, N.S., is building on its own account, two small three masted schooners of about 200 tons net. The first is expected to be ready for sea by Oct. 15, and the second by Dec. 1. Since this company commenced business about 18 months ago, exclusive of the above mentioned two vessels, it has built five vessels, which is claimed as a record for Nova Scotia yards. The first vessel, the Bianca, was launched in June, 1917. She is a three masted vessel, equipped with semi Diesel oil burning engine of 100 h.p., and 700 tons deadweight capacity. She was torpedoed by a German submarine in Aug., 1918, and abandoned by the crew. She, however, did not sink, but was brought into port and is being made ready for sea again. The Ruby W. was launched Nov. 10, 1917, and is of the same model as the Bianca. She was built for W. Wrightson, of Alabama, and later sold to Newfoundland parties. The Abomama was launched Mar. 21, for Peter Yee Wing & Co., Sydney, Australia, and arrived there recently after a successful trip. She is of 800 tons and equipped with auxiliary power. The two masted fishing vessel Sadie Knickle, owned in Lunenburg, N.S., 100 tons net, was launched May 15, and on Aug. 5, the auxiliary powered schooner James G. Joy, 900 tons deadweight capacity, was launched for Job Bros., St. John's, Nfld. H. A. Frank is Managing Director of the company, and J. S. Gardner is master builder.

Pacific Construction Co., Coquitlam, B.C., is reported to have an order from the French Government for 2 wooden steamships of 1,500 tons deadweight capacity each.

The Quebec Shipbuilding & Repair Co., Quebec, Que., is reported to be negotiating with foreign interests for the building of wooden steamships, of a somewhat similar type to those it has built for the British Government through the Imperial Munitions Board. The company is building a 700 ton schooner, similar to the M. P. Connolly, which was wrecked near Sable Island, Aug. 19, when on her maiden voyage.

Quebec, Que.—A press report from Quebec states that T. M. Kirkwood, formerly Managing Director, Three Rivers Shipyards, Three Rivers, Que., was in Quebec recently to promote the organization of a shipbuilding company with a capital of \$30,000,000, to carry out a contract for thirty 5,000 tons wooden steamships in Quebec. This is not correct; the facts are that Mr. Kirkwood has addressed a letter to the Quebec Board of Trade, giving his views on a number of requirements necessary to develop the port to its full capacity, amongst them being the establishment of a wooden shipbuilding plant, and the construction of a number of wooden steamships for handling grain and other commodities. He also suggests that as the Dominion is primarily interested in shipping from Canadian ports, it should be possible for it to guarantee the securities of a company to carry out the scheme. There appears to be nothing tangible in the scheme, and there is little or no prospect of the Dominion Government undertaking the guarantee of securities of this nature. The Government's shipbuilding programme is already laid out, and deals with steel shipbuilding only, it having been definitely decided that it will not built any wooden steamships.

Southern Salvage Co., Liverpool, N.S., launched the schooner Drallim Aug. 27. Her dimensions are: length 133 ft.,

breadth 33 ft., depth 12¾ ft.; tonnage, 440 gross, 379 net. She is classed with Bureau Veritas for 12 year rating, and is owned by the builders.

Tidewater Shipbuilders, Ltd., Three Rivers, Que., is building an engine and boiler shop 250 x 100 ft., which will be equipped with up to date motor machinery. Contracts have been entered into for building of 6 engines of 2,500 h.p. each for the 5,100 ton type of steamship to be built in Canada for the Dominion Government, and also for 24 engines of 275 h.p. each for the wooden steamships under order with the Davie Shipbuilding & Repair Co., Lauzon, Que., for the French Government. It is possible that engines will also be built by this company, for the vessels which will be built for the Dominion Government by Halifax Shipyards, Ltd., with which it is intimately associated.

Toronto Shipbuilding Co., Toronto, has a contract from French interests for the construction of 10 wooden steamships of 1,000 tons each, to be built within 12 months.

Tulk, Flett & Co., St. George's, Nfld., launched a schooner early in September. She is 490 tons gross, with a deadweight capacity of about 800 tons, and is equipped with auxiliary power.

Union Shipbuilding Co., Port Union, Nfld.—The 400 ton schooner Nina L. C. was launched Sept. 6 and was christened by Hon. W. W. Halfyard, Colonial Secretary. This vessel, which is the second one of the type turned out by the builders, will be ready for her first cargo of fish early in October.

Wallace Shipyards, Ltd., North Vancouver, B.C.—The two additional shipbuilding berths at this yard are practically complete, with the travelling cranes in place. Railway tracks run between the berths, with complete facilities for handling all material.

Western Canada Shipyards, Ltd., Vancouver, B.C.—C. V. Cummings, who returned to Vancouver from the east recently, announced that the company has concluded a contract with the French Government for 5 wooden vessels of about 1,500 tons each, and that everything was in readiness at the yards for the commencement of the construction.

The Maritime Wrecking Co. Ltd., which has been brought into prominence recently by the resignation of James Carruthers from the chairmanship of the board of Halifax Shipyards, Ltd., on account of his objections as stated in Canadian Railway and Marine World for September, was incorporated under the Dominion Joint Stock Companies Act, Dec. 29, 1917, with an authorized capital of \$1,000,000, of which \$300,000 is said to have been subscribed and \$250,000 paid in. The directors are: President, R. M. Wolvin, Montreal; Vice President, F. H. Markey, K.C., Montreal; Secretary, F. S. Isard, Treasurer, Canada Steamship Lines Ltd., Montreal. Other directors: W. W. Skinner, solicitor, Montreal, and J. T. Reid, Sarnia, Ont. The Treasurer is W. E. Burke, Director and Assistant Manager, Canada Steamship Lines, and the Assistant Secretary is W. Crawford, Secretary, Montreal Transportation Co. The head office is at 14 Place Royale, Montreal, with local office at Halifax.

S. & S. Transportation & Towing Co., Ltd., has been incorporated under the British Columbia Companies Act, with \$10,000 capital, and office at Vancouver, to own and operate steam and other vessels, and to carry on a tug owning and general navigation business.

Suggestions for Suppression of Canal Accidents.

C. H. Clark, Newmarket, Ont., wrote the Toronto Globe recently as follows:—"How long is this reckless disregard of 'safety first' to continue? On Aug. 10 the s.s. Canobie entered lock 8, Welland Canal, and struck the two head gates and carried them away, doing considerable damage, besides delaying navigation, which is of the utmost value now. On Aug. 16 the s.s. Pawnee carried away the head gates of lock 12, Welland Canal, also 6 ft. gates, drowning the lock tender and doing heavy damage to the gates, and still more to those interested in the shipping of grain, iron ore, coal, lumber, etc.

"If this regard for 'safety last' in place of 'safety first' continues, it will not be long before German enemies and sympathizers will have steamers by 'mistake' run into many other gates in different locks of the Welland Canal and Sault Ste. Marie Canal locks and gates.

"'Safety first' above all other considerations, and at any expense, should be held to for the protection of all canals, locks and gates, also of river navigation, and for the prevention of any vessels swinging across the channel and blocking navigation, as the s.s. Clemens Neiss did on Aug. 13, going out of West Neebish channel. 'Safety first' should demand all vessels to stop, say 500 to 800 ft., before reaching any lock, and make vessel owners pay for government tugs to place them inside of the canal lock.

"Soldiers guard the canal for 'safety first' against the enemy from attack. But no one guards the locks and gates against the possible enemy on board the vessel, who by 'mistake' may smash into the gates, doing damage in stopping navigation, which would result in the loss of millions of dollars, especially in the autumn. The breaking of the Sault Canal locks in the autumn would make an awful mess."

One of the foremost marine authorities in Canada, who was asked by Canadian Railway and Marine World for his opinion in regard to the letter republished above, has favored us with the following:—"The correspondent is so evidently ignorant of the real conditions on the canals that the letter scarcely requires an answer. Doubtless, however, there are many good citizens equally ignorant and it will do no harm to throw some light on the real facts.

"The suggestion is made that all vessels should be required to stop, say 500 to 800 ft., before reaching any lock, and vessel owners should be made to pay for government tugs to place them inside of the canal lock. This suggestion could not have been made by any one who had seen an ordinary full canal sized steamship in one of the ordinary sized locks. She fits much as a piston would fit a cylinder, and she was built to do so, so as to have the largest possible carrying capacity. Vessels of this size do not run much risk of causing damage to the locks, or their gates, as they are retarded by water pressure to such an extent that they could not very well strike the head gates. Furthermore, the vessel is placed in position in the lock, not by manoeuvring with its own engines, but by the use of cables and winches.

"If the list of accidents is examined, it will be found that most of the trouble is caused by the older class of smaller wooden steamboats, which have considerable freedom of action and readily reach the head gates, and may get into trouble

if they are not managed with caution. At the same time, the proposal to have these steamboats placed in the lock by a government tug would only be practicable where both steamer and tug were small enough, and if the government provided the tugs—which, by the way, it does not. The Globe correspondent might much better have suggested the method adopted with reference to certain barges which have no motive power. Many of them make their entry, and lock through, by the use of their lines, leaving the tug or towing steamboat to pass through separately. To apply this rule generally to all steamboats would necessitate provision by the government of much better appliances and of many men to receive and handle lines from the ships. At one time provision was made on the Cornwall Canal for pulling steamships through by electric power, but it was universally condemned and was finally abandoned.

"The Globe correspondent should understand that the accidents occur when a steamboat comes in contact with the head gates, as will appear from the cases cited and from any other reports. These gates, when closed, do not run straight across the canal, but meet at an angle, the apex of which is against the higher water above the lock, giving the necessary stability. If one gate is pushed very slightly up against the head of water, the other gate loses its support and falls into the lock under pressure of the water above. It is the slight displacement of one head gate, to the extent of a few inches, which causes all the trouble. A remedy for this can readily be found and many devices have been applied in different localities. Sometimes chains are attached to hold the gate in any event. Sometimes a bracket projects at the edge of each gate and rests against the other gate, even if the other is slightly displaced. The Dominion Marine Association has repeatedly urged that some such device should be installed on every pair of head gates. No doubt the government's failure to take action at the Welland Canal has been due in part to the desire to avoid accidents on a canal which was to be replaced by the new ship canal, work upon which has now been stopped during the war. Any new canal now constructed will undoubtedly have provision for safeguarding the head gates. The Panama Canal is protected, and the new Welland Ship Canal, it is understood, will also be properly safeguarded by one or other of the devices suggested.

"The trouble is not only one which could be remedied or avoided by the canal authorities, if proper provision were made for the expense, but the steamboat's difficulty is vastly accentuated in many cases by currents developed in the canal by the use of canal water for power purposes or otherwise. If the Globe correspondent watched a steamboat enter certain locks I have in mind he would marvel at the skill, nerve and good judgment displayed by the master in using his helm and his engines to counteract adverse conditions which a navigator should never be expected to have to contend with in a canal. Some of the locks are well known danger points, and many a good ship bears evidence of this in damaged plates and frames on her port or starboard bow, as well as further along her sides. This question of by-washes and currents in the canals is one constantly discussed, and the development of these currents is constantly protested against by vessel own-

ers. The Globe correspondent might take a hand in the good work of endeavoring to protect the canals for their natural purpose, that of facilitating navigation."

Investigation into Shipbuilding Employes' Wages, Etc. in Quebec.

Canadian Railway and Marine World for September contained the Dominion Government's order in council appointing a commission to enquire into conditions, wages, etc., of shipbuilding employes in the Province of Quebec. The commission held sittings during August, and heard evidence regarding disputes which had occurred at shipyards in Montreal, Quebec, Levis, Three Rivers and Sorel. The result was that an agreement was drawn up, providing that from Sept. 1 until the conclusion of the war, there shall be a sliding scale of pay, according to the cost of living, a 9 hr. day instead of a 10 hr. day, and payment of time and a half for overtime, and double time in certain cases. Regarding the sliding scale, it is provided that after Feb. 1, 1919, the scale of pay shall be revised in accordance with any increase or decrease that has taken place in the cost of living during the preceding year, as may be shown in the official tables published by the Dominion Labor Department. All disputes arising out of the agreement are to be referred to arbitration without any halt in vessel construction.

This agreement it is announced, has been adopted by Fraser, Brace & Co., Montreal; Davie Shipbuilding & Repair Co., Lauzon, Que.; Quebec Shipbuilding & Repairing Co., Quebec, and Quinlan & Robertson, Quebec, and agreements are stated to have been signed with the employes of these firms covering the points named. It is expected that similar agreements will be signed shortly by other shipbuilding firms in the province.

Dry Dock Tariff for Prince Rupert, B. C.

The Governor General in council has approved an amended tariff in connection with the floating dry dock at Prince Rupert, B.C., effective from Apr. 1, 1918, to the end of the war. The rates are:—

Merchant vessels (steam) on gross registered tonnage.			
Merchant vessels (sailing) on net registered tonnage.			
Warships on displacement.			
Tonnage.	First day.	Lay days.	
Up to 1,500 tons	\$300.	\$100.	
1,500 to 3,999 tons	.20 per ton	.10 per ton	
4,000 to 5,999 tons	.16 per ton	.08 per ton	
Over 6,000 tons	.14 per ton	.08 per ton	
Minimum charge for use of one small section separately.....	\$100.	\$35.	

Swiftsure Steamship Lines, Ltd., has been incorporated under the Dominion Companies Act, with 1,000 shares of capital stock, without nominal or par value, provided that it shall carry on business with a capital of \$24,000, and with its offices at Montreal. The objects include the owning and operation of steam and other vessels, and the conducting of a general transportation and trading business. The company is to be deemed to be a private one, under the provisions of the Companies Act.

Reid East Coast Salvage Co., Ltd., has been incorporated under the Dominion Companies Act, with \$1,000,000 authorized capital, and office at Halifax, N.S., to carry on a general salvage and wrecking business, and to engage in shipbuilding and transportation.

The Concrete Steamship Faith's First Voyage.

The concrete steamship Faith, 320 ft. long, 44 ft. 5 in. wide, and 30 ft. deep moulded, left San Francisco on Wednesday, May 22, with a cargo of salt and copper ore, bound for Seattle and Tacoma, Wash., and Vancouver, B.C. The draft forward was 21 ft. 10 in. and aft 23 ft. After rounding Point Reyes in the afternoon she encountered strong head winds with considerable sea, to which she responded very well, although a good deal of water was shipped on deck. On Thursday afternoon the wind having increased in violence and the ship shipping seas all fore and aft and making about 2 knots an hour, the captain wore ship, running back to shelter cove until the storm abated.

Left shelter cove at 4 a.m. on Friday, and shortly afterwards ran into a gale; the ship was pitching heavily, but pounded rather hard, due probably to shape of forward under body. This continued all day and during the night, when the gale was at its height, and which the captain estimated to have a velocity of 60 miles an hour. During the day the vessel was taking seas over fore-castle and all fore and aft, but responded well to these head seas, much in the manner of a steel vessel.

On Saturday the wind had fallen considerably and on the afternoon of that day the gale had subsided, which gave the opportunity of removing a hatch cover from holds 1, 2 and 3 and examining the vessel as far as the cargo permitted. It was then observed that the deck slab was cracked in several places in way of hatchways 1, 2 and 3 under the winch seatings, the cracks being more extensive in way of no. 2 hatchway. The cracks extended right through the slab, and evidence of slight leakage could be seen on underside, and were confined in extent to the area between the hatchways and under the winches. Small hair line cracks were also observed in the inside surface of the radius corners of all the hatchways, more particularly in no. 2. A certain amount of leakage also occurred through the fastening of the wooden deck houses and other deck fittings through the slab, and also from the fender bolts along the ship's side.

From Saturday afternoon until the arrival at Seattle on Tuesday, May 28, good weather prevailed. Draft on arrival: fore, 21 ft. 3 in.; aft, 22 ft. 8 in. During the voyage the bilges were sounded every hour, day and night, and except for port side no. 1 hold, which had about 5 in. on arrival, all other bilges were dry; this leakage only amounted to about a barrel full, and in my opinion was due entirely to seepage from cargo. After unloading part of cargo, left Seattle, Thursday, May 30, arriving Tacoma same day. Left Tacoma Saturday, June 1, arriving the following day at Vancouver, where remainder of cargo was discharged. On Friday afternoon, June 7, the vessel, being empty, was subjected to a thorough examination as far as possible, outside and inside. The outside inspection showed cracks on the paint running parallel to the outer layer of reinforcing rods, particularly over the midship portion of vessel and on the port bow, probably caused by a slight movement of the slab with the force of the seas. On the inside of vessel, in addition to the cracks in deck slab previously mentioned, hair cracks were observed in the walls between upper and second deck extending from about the middle of hold 1 to middle of hold 3. These are probably shrinkage cracks and

had been under observation before the ship left San Francisco. In the lower holds, at about the center of no. 2 and 3 hatchways, on both sides, hair-line cracks were observed in the shell slab and extending across one longitudinal. These cracks showed slight working and were the only ones seen below the second deck and were probably caused by straining when laboring in a cross sea. Apart from these minor failures, the ship, in my opinion, is a success; the failure of the deck slab is due to lack of sufficient reinforcement, and owing to the winches being bolted through the cement slab without any seatings.

The deck arrangements are only suitable, in my opinion, for coastwise trade, a wooden deck house bolted through the deck slab being the only protection for the engine and boiler openings, which, in my opinion, is not enough for transoceanic service. A concrete poop enclosing these openings would be a decided improvement. At the various ports of call the vessel was visited by large numbers of people representing the various shipping and shipbuilding interests, and their criticism on the whole was favorable to this type of construction.

On board the vessel also for the purpose of getting information were: Allan McDonald, the designer; Mr. Nicolsen, the builder; Prof. R. McMillan and his assistant; H. S. Loeffler, representing the Shipping Board; Charles C. Brush, Assistant Engineer, Bureau of Lighthouses.

Prof. McMillan had a number of his strainograph instruments placed around the midships of vessel, the cargo being so arranged that these were accessible at all times during the voyage, access to them being obtained through a ventilator to no. 2 hold. He informed me that the greatest stress registered during Friday's gale was only 8,000 lb. (that is, between hogging and sagging), on the indicators placed on the underside of deck, and the indicators on flat of bottom registered about three quarters of that amount.

Following is a copy of some of the observations made by Mr. Brush: "Established sight lines fore and aft, reading 0 in still water; passing out through Golden Gate vessel showed slight hog of $\frac{1}{4}$ in. port and $\frac{3}{8}$ in. starboard, and the greatest deflection taken during the voyage between extreme hogging and sagging was $\frac{7}{8}$ in., in a length of 180 ft., which is about one-third of what a steel ship would show under similar conditions."

Responsibility for Accidents in Panama Canal.—The rules for the operation and navigation of the Panama Canal have been amended providing that the master of a vessel in canal waters, except while the vessel is being passed through the locks, shall be charged with the safe handling and proper navigation of the vessel, the pilot being considered to be on board solely in an advisory capacity. Masters of vessels must abide by the canal rules as interpreted by the pilot. No claim against the Panama Canal for damages, on account of injury to a vessel or its cargo while in canal zone waters, arising from the operation of the canal, other than the passing of the vessels through the locks, shall be allowed unless it shall be determined by the Panama Canal Governor that such injury was due to negligence or want of care on the part of canal agents or employes, and there shall be an appropriation available for the payment of such claim.

Wreck Commissioner's Judgment.

Enquiry has been held, and judgment delivered in connection with the following casualty:—

Stranding of the s.s. Afghan Prince.

Held at Sydney, N.S., Sept. 12, before Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Lieut. H. C. Owen, R.N.R., and Capt. A. J. Morrison, as nautical assessors. The court came to the conclusion that the vessel was provided with all necessary instruments, and efficient compasses with little deviation, which were checked in a careful manner whenever opportunity offered. From the time the vessel left Hampton Roads, until she reached Canso, she was navigated carefully and frequent casts of the lead taken, and a chain established when off Canso which was passed at a safe distance. The weather was fair as regards sea and winds, but was foggy at intervals. After leaving Canso, a course was set which would have led clear of all points of land, but which the court is of opinion was too fine, especially when the master was working on a large scale chart, and had never navigated these waters before. Though he recognized there was a westerly set, an allowance being made to offset its possible effect, the court feels that when he obtained a depth of 17 fathoms, ordinary prudence demanded that the vessel should have been turned seaward and her half speed brought to slow, and she should have been navigated carefully until 40 or 45 fathoms had been obtained, and then the former course resumed. From the evidence of the chief officer it was gathered that there was some nervousness on account of submarines, and that the hugging of the coast was due to this and caused the master to err gravely in judgment, and prevented him from exercising that prudence he had shown between Baltimore and Canso. The Admiralty orders may be to navigate close to the coast, but the court is under the impression that there is a proviso, viz.: consistent with safe navigation. In ordinary circumstances the court would have dealt with such a case in no lenient measure, but in view of conditions existing, the dread which must exist in one's mind of meeting with an enemy ship, which must upset somewhat those in command, it felt that in this instance, taking into consideration the care exercised in navigating up to Canso, and the neat method followed in entering details in the log books, the watchfulness of the actions of the compasses, some consideration was deserved, and it therefore reprimanded the master severely, and did not deal with his certificate, cautioning him as to the future. The court suggested that the Admiralty enclose within the folios handed to shipmasters, some sectional charts of the coast which they are to frequent, especially with those they are called upon to sail for the first time.

Lafayette Steamship Co., Ltd., has been incorporated under the Dominion Companies Act, with \$100,000 capital, and office at Montreal, to build, own, operate and deal in steam and other vessels of every description, and to carry on a general business as common carriers.

The U.S. Lake Survey reports the levels of the Great Lakes in feet above mean sea level, for August, as follows:—Superior, 602.42; Michigan and Huron, 581.79; St. Clair, 575.93; Erie, 572.64; Ontario, 246.43. Compared with the average August levels for the past ten years, Superior was 0.20 ft. below; Michigan and Huron 0.95 ft. above; Erie, 0.04 ft. below, and Ontario 0.22 ft. below.

Shipbuilding Costs at the Pacific Coast.

An Ottawa press dispatch of Sept. 24 said:—Shipbuilders on the Pacific coast, claiming that the conditions under which they operate are exceptional, want more money for building government ships, and a delegation interviewed the Minister of Marine today about it. The builders representing Vancouver and Victoria yards state that they cannot satisfactorily compete with Seattle at the scale fixed, as higher rates are being paid in the U.S. They want a better figure than the regulation contract specifies.

Another Ottawa dispatch of Sept. 25 said:—"The Minister of Marine, when interviewed regarding government orders placed with the British Columbia shipbuilders for steel ships, stated that it was not a fact that steel ships similar in size are being built in Seattle at a higher cost than at Vancouver, and that, as a matter of fact, the U.S. Government is getting steel ships, somewhat similar in size and equipment at a lower finished cost than the Canadian Government is getting from the B.C. steel shipbuilders."

Australia's Shipbuilding Programme.

Realizing the imperative need of increasing its ship tonnage, to provide for transportation needs both during and after the war, the Australian Government has embarked upon a programme whereby from 35 to 40 vessels will be added to the Commonwealth-owned fleet of steamships within the next two years, and the Victoria State Government's shipbuilding yards at Williamstown have been taken over. On account of the great distance from European markets, the British dominions of the Antipodes are handicapped in the exchange of products with the shipping crisis as acute as it is at present. It has been recognized by Australia's statesmen that one of the most effective forms of aid to the empire lies in providing a large addition to the tonnage of the country's merchant marine.

Besides constructing ships with all possible speed, 61 vessels have been placed at the Imperial Government's disposal. This includes 26 ships, engaged in the Australian coastal and eastern trade, 8 in New Zealand trade, 22 oversea ships in the Australian service, and 5 vessels under the Commonwealth's control.

The labor difficulties in connection with the shipbuilding scheme have been overcome, although at one time they threatened to become insurmountable. Practically all the unions connected with the manufacture of the vessels have signed agreement providing for continuous operations, the dilution of labor and piecework.

The additions to the Australian fleet comprise: Two standardized steel ships, steam, of 5,500 tons, being built in Williamstown yards, Victoria; 6 others are planned for, which will be of the same or greater tonnage.

Six ships of the same pattern as those being built at Williamstown, which will be constructed at Walsh Island, New South Wales.

Fourteen first-class wooden ships of 3,200 tons, building in the United States, 4 equipped with Diesel engines, and the others with steam. Two of these have been launched, and the others are expected to reach Australia this year. This order was placed in June, 1917, but delivery was delayed by labor troubles, lack of materials, etc.

One steel ship to be built by a private firm in South Australia. This order may be extended to 2 vessels.

Two steel ships at Devonport, Tasmania.

Fourteen wooden vessels, 6 of 2,600 tons and 6 of 2,300 tons. It is believed that a company has been formed with a large capital, possibly £1,000,000, to build some of the steel or wooden ships in Tasmania.

An Ottawa report says that at least one Nova Scotian vessel will, in all probability, be purchased by the Australian Government at an early date. As it is impossible to obtain adequate supplies of wire rope and the favored hemp sail canvas from the United States, the attention of Canadian manufacturers of these articles is directed to the development of Australian shipbuilding as an outlet for their products.

St. Lawrence Power Dam Project.

The International Joint Waterways Commission has granted permission to the St. Lawrence Power Co., to place a dam south of Long Sault Island, in the St. Lawrence River, near Massena, N.Y., under certain conditions, and as a war necessity.

The Dominion Government in its arguments against the proposal, urged the clause in the Ashburton Treaty of 1842, whereby the channel directly in question south of Long Sault Island was expressly declared to be for all time, "equally free and open to ships, vessels and boats of both nations." It was argued that in view of this, the general terms of the treaty of 1909, under which the commission secured its jurisdiction, could not have sufficient force to enable it to permit a dam across the channel, and that the parliaments of the two countries alone could act. The commission, however, was so impressed with the U.S. Government argument, to the effect that more aluminum must be manufactured, and that this proposal affords the readi-

est means, that the order was granted, subject to substantial restrictions, which may or may not go so far as the Dominion Government desires. The order also provides for Government ownership and control. Representatives of the Dominion Government visited Washington recently to discuss the matter, and to establish a fair understanding.

Atlantic and Pacific Ocean Marine.

The Norwegian s.s. Bergsdalen was torpedoed and sunk by a German submarine recently, about 120 miles south of Cape Race, while bound in ballast, from France to Baltimore, Md.

Canadian Pacific Ocean Services' s.s. Lake Manitoba, which was burned at the Imperial Oil wharf at Longue Pointe, Montreal, at the end of August, is considered a total loss. The only part of the hull which escaped damage is the double bottom. The fire originated in the boiler room, and the heat engendered melted a lad pipe, through which oil was being taken aboard.

The Hudson's Bay Co.'s ship, Pelican, which has been a regular caller at Montreal for several years, is, according to reports, to be transferred to other waters. This vessel, of the corvette type, was engaged in Mediterranean waters in the Egyptian wars of the early 80's, and was purchased from the British Government by the Hudson's Bay Co. She is bark rigged and equipped with auxiliary steam power.

Canadian Pacific Ocean Services' s.s. Missanabie was reported, Sept. 10, from New York, to have been torpedoed, while west bound for the United States. She had been engaged for some time in conveying U.S. troops to European points, and was returning to the U.S. for that service. She was built at Glasgow, Scotland, in 1914, for the one class passenger service between England and Canada, and was 12,469 gross tons, 500 ft. long, 64 ft. beam and 38 ft. deep, with a speed of 17 knots.

Grain Statistics for Crop Year 1917-1918.

The following statement, prepared by the Board of Grain Commissioners, shows the total quantities of each kind of grain shipped by vessels from Fort William and Port Arthur during the crop 1917-1918, according to the ports at which the car-

goes were discharged. In addition to the figures given below, 3,600,056 lb. of sample mixed grain were shipped to Canadian ports, and 1,161,598 lb. of mixed grain and 45,345 tons of elevator screenings were shipped to U.S. ports.

	Wheat. Bush.	Oats. Bush.	Barley. Bush.	Flax. Bush.	Rye. Bush.
To Canadian ports:—					
Collingwood	221,592-10	.....	.....	.....	.....
Depot Harbor	2,747,622-40	180,800-00	.....	.....	.....
Goderich	7,274,245-20	3,535,158-29	157,374-40	349,110-50	.....
Kingston . . . . .	.....	372,525-29	57,700-00	34,000-00	.....
Midland	6,846,690-30	2,310,640-02	765,924-02	.....	.....
Montreal	702,003-50	1,188,672-15	847,409-34	141,967-46	.....
Port Colborne	14,403,983-50	1,445,174-21	770,435-45	.....	.....
Port McNicoll	15,359,065-40	5,795,985-08	1,170,039-47	81,537-54	.....
Port Stanley	108,531-00	.....	.....	.....	.....
Tiffin	10,637,664-40	581,493-21	699,959-01	27,000-00	.....
Total	58,301,499-40	15,410,450-23	4,468,843-25	533,616-38	.....
To U.S. ports:—					
Buffalo	39,088,091-50	2,431,658-16	560,126-19	1,822,521-18	62,585-14
Chicago . . . . .	.....	.....	.....	117,161-26	.....
Cleveland . . . . .	.....	.....	.....	125,000-00	.....
Detroit	510,838-50	.....	.....	.....	.....
Duluth-Superior . . . . .	.....	.....	.....	459,436-06	.....
Erie	304,821-10	.....	.....	.....	.....
Fairport	678,271-10	.....	.....	.....	.....
Ogdensburg	56,700-00	.....	.....	.....	.....
Port Huron	440,696-20	.....	.....	.....	.....
Toledo	114,096-00	.....	.....	173,807-08	.....
Total	41,193,515-20	2,431,658-16	560,126-18	2,697,926-02	63,585-14
Lost in wrecks	234,843-50	.....	.....	.....	.....
Grand total	99,729,858-50	17,842,109-05	5,028,969-44	3,331,542-40	63,585-14

The Japanese s.s. Canada Maru, which went ashore near Cape Flattery, recently, and which was eventually floated and taken to Esquimalt for repairs, was expected to clear from the dry dock about the end of September. It is stated that the repairs include the reconstruction of the bottom from the stokehold forward, the removal, straightening and replacing of nearly all the frames, and several new plates. The contract was placed with Yarrows, Ltd., and is reported to amount to about \$500,000.

Maritime Provinces and Newfoundland.

The Newfoundland Steam Screw Tug Co., Ltd., St. John's, Nfld., is in liquidation, with R. G. Rendell and W. G. Strong as liquidators.

The Naval Service Department has awarded a contract for the erection of two large coal handling bridges of the travelling type with clam shell buckets at the Government dockyard at Halifax, N. S., to the Dominion Bridge Co.

The Halifax Trading & Sealing Co.'s s.s. Seal has been sold to Newfoundland parties. She was built at Glasgow, Scotland, in 1911, and is screw driven by engine of 85 n.h.p. Her dimensions are: length 175 ft., breadth 22.6 ft., depth 12.3 ft.; tonnage 608 gross, 277 register.

Nova Scotia Steamships, Ltd., announces that at the request of the Canadian Government Railways management, it has decided to establish a steamship service between Halifax, Yarmouth and Boston, in connection with the service being operated between Halifax, St. John's, Nfld., and New York.

The s.s. Robert G. Cann completed an overhauling and repairing at Meteghan, N.S., early in September, and replaced the s.s. Keith Cann on the St. John-Yarmouth run. The latter vessel is being overhauled, and when this has been done, she will return to her own route, and the Robert G. Cann will take the Canso-Mulgrave route. Hugh Cann & Sons, who operate this service, chartered the s.s. Edna R. as a relief vessel.

Navigation of East River, Pictou County, N.S., from Pictou harbor to Trenton, has been improved by dredging a channel 150 ft. wide by 21 ft. deep from Pictou River to Narrows Point, and 15 ft. deep thence to Trenton. Above Shipyard Point, a turning basin has been dredged in front of Trenton, and a lock has been built through Stonehouse Point (Narrows Point), but it is not yet in operation. When it is in operation, it will raise the river level, so that a depth of 21 ft. will be available.

The s.s. Kite, owned in Newfoundland, was driven ashore at Point Rosier, on the Gaspe coast, Que., recently, and is reported to be a total loss. She was bound from Fox River, Que., to Gloucester, Mass., with a cargo of fish. She had been used for some time along the northern and western coasts of Newfoundland, and for the Labrador mail service. She was built in Germany in 1873, her dimensions being: length 117 ft., breadth 26 ft., depth 14 ft.; tonnage, 280 gross, 190 net.

The Reid Newfoundland Co. issued a notice recently that, owing to a strike at Port aux Basques, Nfld., it would endeavor to forward all freight via North Sydney and Port aux Basques, but reserved the right whenever circumstances in the company's opinion required it, to forward freight originally routed via North Sydney and Port aux Basques and

designated steamships, by way of Louisburg, collecting extra charges over the Sydney and Louisburg Ry., and also reserved the right to forward freight by any steamship owned or chartered by the company from North Sydney or Louisburg direct to St. John's or Newfoundland ports other than Port aux Basques.

Province of Quebec Marine.

The Dominion Public Works Department received tenders, Sept. 18, for the construction of a floating pontoon for the wharf at Ste. Anne de Chicoutimi.

The Ogdensburg Coal & Towing Co., Ltd., has been authorized to carry on its business in the province of Quebec, with W. L. McDougald, Westmount, as its attorney.

An order in council has been passed establishing a new schedule of fares on the Quyon ferry, operated across the Ottawa River, between Fitzroy Tp., Ont., and Onslow, Que.

The s.s. Winnifredian, which ran on the rocks at St. Mary's Islands, near Quebec, recently, was released Sept. 23 by the wrecking vessel Lord Strathcona. She is considerably damaged.

The dredged channel in the Saguenay River, has been swept recently, from deep water below St. Fulgence to Chicoutimi wharf. The standard depth of 16 ft. was found throughout the entire length, and over the width of 250 ft., except at the junction of the axes of the Poste St. Martin and Valin River ranges, where some boulders have been carried into the cut by ice, and the channel been reduced to a depth of 14 ft. at the sides.

Ontario and the Great Lakes.

The Pittsburg Steamship Co.'s s.s. Superior City grounded in a fog at the Limekiln Crossing, Sept. 23.

The Port Huron Navigation Co.'s s.s. David W. Mills, of U.S. register, after encountering heavy seas whilst en route from Ashtabula, Ohio, to Montreal, sank in Port Maitland harbor, Sept. 19, and is believed to be a total loss.

The Northern Navigation Co. is reported to have made arrangements for operating the s.s. Rapids King between Chat-

ham and Detroit, next summer. The Rapids King is owned by Canada Steamship Lines, Ltd., of which the Northern Navigation Co. is a subsidiary.

Canadian Steamship Lines' s.s. Calgarian has been sold to Brazilian parties. She was built at Port Arthur, Ont., in 1913, and is screw driven with engine of 115 n.h.p. Her dimensions are: length 244 ft., breadth 42.8 ft., depth 26 ft.; tonnage, 2,326 gross, 1,302 register.

The Minister of Public Works announced at Port Dover, Sept. 14, that he would place a contract for the improvement of the Port Dover harbor, with a firm during the following week, so that a start may be made immediately, and without the delay which would be occasioned by calling for tenders.

The Windsor City Council has renewed the Detroit & Windsor Ferry Co.'s license, which expires Oct. 2. A condition has been attached to the renewal providing that the company shall continue the same fare and service as now in effect. The council decided to withdraw the terms offered to C. Millar, K.C., Toronto, for the establishment of a new ferry service between Detroit and Windsor.

The Pennsylvania Coal & Transportation Co.'s steam tug S. O. Dixon, towing the barges Islewide and Louisa, were seized at Kingston, at the instance of the Keystone Transportation Co., Sept. 16, on a salvage claim. The tug, with its tows, was discovered by the s.s. Keyvive drifting helplessly in a gale about 20 miles off Kingston, and towed to port. The engineer of the tug had been washed off and drowned, and there was no one else to look after the engine.

The Montreal Transportation Co. has acquired the s.s. Cataract, which has had a unique career. Originally built at Hamilton, Ont., in 1882, as a steamship, and named Myles, her machinery was removed and she was converted into a schooner, and named Cataract, in 1916. Machinery has again been installed in the hull and she reverts to her former condition, maintaining the name Cataract. Her dimensions are: length 174.6 ft., breadth 33.2 ft., depth 15 ft.; tonnage, 839 gross, 451 register, and she is equipped with engine of 66 n.h.p., driving a screw.

The s.s. Natironco, which was sunk in collision with the Detroit & Cleveland

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie canals during August, 1918.

ARTICLES.	Eastbound.		Total.
	Can. Canal.	U. S. Canal.	
Lumber m. ft. b. m.	2,224	50,599	52,823
Flour Barrels	323,450	522,690	846,140
Wheat Bushels	422,550	78,500	501,050
Grain, other than wheat Bushels	1,220,455	140,243	1,360,698
Copper Short tons	2,675	6,942	10,617
Iron Ore Short tons	1,024,356	8,481,711	9,507,067
Pig Iron Short tons	.....	.....	.....
Stone Short tons	.....	1,192	1,192
General Merchandise Short tons	4,212	3,832	8,044
Passengers Number	5,107	1,894	7,001
	Westbound.		
Coal, soft Short tons	157,055	2,360,548	1,517,603
Coal, hard Short tons	3,570	295,985	299,555
Iron Ore Short tons	.....	25,616	25,616
Mfgd. Iron and Steel Short tons	3,040	3,600	5,640
Salt Short tons	3,300	10,133	13,433
Oil Short tons	.....	60,232	60,232
Stone Short tons	.....	69,571	69,571
General Merchandise Short tons	37,449	17,229	54,678
Passengers Number	6,894	1,570	7,664
	Summary.		
Vessel passages Number	690	2,402	3,092
Registered tonnage Net	1,223,868	7,664,285	8,888,153
Freight—			
Eastbound Short tons	1,105,787	7,637,686	9,743,473
Westbound Short tons	203,414	2,842,914	3,046,328
Total Freight Short tons	1,309,201	11,480,600	12,789,801

Navigation Co.'s s.s. Eastern States, in the Detroit River, June 19, 1917, is being rebuilt at Buffalo, for salt water service. She was built at Detroit, Mich., in 1892, and first named Pioneer. She was later acquired by the National Iron Co., Toronto, and renamed, and the National Steamship Co. was formed to operate her. Later she was taken over by the Merchants Mutual Line, Ltd. a subsidiary of Canada Steamship Lines, Ltd., and during the early part of 1917, was sold to A. B. Mackay Steamship Co., Hamilton.

The s.s. Ossifrage, which was operated by the Chatham Navigation Co., between Chatham and Detroit, for some time, left Chatham recently for Halifax, N.S., where, it is reported, her machinery will be transferred to another hull for ocean freight service. She was built of oak at West Bay City, Mich. in 1886, and rebuilt in 1896. She is an awning deck type with diagonal strapping on frames, steel arches, and equipped with electric light, with accommodation for freight and passengers. The machinery consists of triple expansion engines with cylinders 13½, 23 and 37 in. diam. by 24 in. stroke, 540 i.h.p. at 130 r.p.m., supplied with steam by a Scotch boiler 12 by 12 ft. at 115 lb.

The s.s. Maggie Marshall, owned formerly by the Louis Sands Salt & Lumber Co., Manistee, Mich., which was erroneously stated in press reports recently to have been purchased by Canada Steamship Lines Ltd., has been acquired by the Reid Towing & Wrecking Co., Port Huron, Mich., and will be changed to make her suitable for salt water service. It is stated that she will be equipped and utilized as a wrecking vessel at Halifax, N.S. She is an oak vessel and was built at Manistee, Mich., in 1873, and named Wm. Crippen, and was rebuilt and renamed in 1908. She is of the well deck type, with steel arches and steel boiler house. Her dimensions are, length 150 ft., breadth 30 ft., depth 11 ft.; tonnage, 365 gross, 279 net. She is equipped with steple compound engine with cylinders 18 and 36 ins. diam. by 30 ins. stroke, supplied with steam by a Scotch boiler 12 by 12 ft. at 140 lbs. pressure.

British Columbia and Pacific Coast.

The Department of Marine has authorized the Pacific Great Eastern Ry. to change the name of the steam tug Daring, which it has purchased from foreigners, to Clinton, the port of registration being Victoria, B.C.

The Puget Sound Navigation Co.'s s.s. Indianapolis is reported to have been placed on the Seattle-Victoria route, for operation in conjunction with the C.P.R. British Columbia Coast Service, on what is known as the triangular route.

The Grand Trunk Pacific Coast Steamship Co.'s s.s. Prince George was hauled out on the marine railway at Esquimalt, for general overhaul, recently, and later resumed her service on the Prince Rupert and Anyox route on a semi-weekly schedule.

The North Vancouver City Treasurer reported the ferry receipts for this year to the end of August, as \$114,102.67, including over \$3,000 insurance, and disbursements for the same period as \$110,157.85, exclusive of \$8,853 for August accounts, passed but unpaid.

The Board of Grain Commissioners has made Vancouver a basic port for grain, placing it on a par, so far as grain is concerned, as other ports from which grain is shipped. It is reported that from an

examination of the first cargo of wheat shipped from Vancouver to Great Britain, the total damage amounted to four-tenths of 1%.

Mainly About Marine People.

E. L. Cousins, Manager and Chief Engineer, Toronto Harbor Commissioners, has been appointed assistant to the Ontario Fuel Commissioner.

Sir George Gibbons, K.C., of London, Ont., a former Chairman of the Canadian section of the International Waterways Commission, who died recently, left an estate of \$897,000.

Sir Arthur H. Harris, formerly Special Traffic Representative, C.P.R., and latterly, Director of Overseas Transport, is reported to have been appointed Director General for Canada, British Ministry of Shipping.

David Richardson, second officer of Canadian Pacific Ocean Services' s.s. Empress of Russia, and who had been a master in the C.P.R. British Columbia Coast Service, died in the General Hospital, Vancouver, recently, aged 53.

Francis King, M.A., Counsel, Dominion Marine Association, Kingston, Ont., attended the Canadian Bar Association's annual meeting in Montreal recently, as one of the commissioners appointed for Ontario to promote uniformity of law.

T. R. Ferguson, Chairman, Board of Steamship Inspection, Ottawa, died at the Jeffery Hale Hospital, Quebec, Que., Aug. 28, after a very short illness. He was born at Pictou, N.S., Jan. 10, 1866, and received his temporary appointment in the civil service, May, 1889, his appointment being made permanent, Nov. 15, 1909.

Capt. Neil Campbell, master of Canada Steamship Lines' s.s. W. Grant Morden, died on board his vessel, while en route to Sault Ste. Marie, Sept. 1, as the result of a paralytic seizure. He was aged 68, and had been connected with lake service for over 50 years, during 40 of which he had been master. The body was landed at Sault Ste. Marie, and taken to Owen Sound, where the funeral took place.

Capt. J. O. Grey, who has been appointed Shipping Master for the port of Montreal, is well known in the district as the founder of a school of navigation and seamanship for training young men for the merchant marine, which was organized in Oct., 1917. From 1911 he acted as Superintendent of wharves and shipping at Montreal. He was born in 1872, and entered merchant marine service at the age of 14, as an apprentice on Australian and New Zealand square rigged vessels, and obtained his master's certificate five years later. He later entered the service of the American Line, and transferred to shore work in 1911. No salary attaches to the position the income obtained being from fees, which average from \$3,000 to \$4,000 a year.

Steam Navigation Co. of Canada, Ltd., which was incorporated under the Dominion Companies Act, recently, with office at Montreal, has changed its office to Halifax, N.S.

The schooner Bianca, owned by Bowring Bros., St. John's, Nfld., which was attacked recently by a German submarine on the banks, was towed into Halifax towards the end of August, by schooner Commonwealth, owned in Boston, Mass. The owners, master and crew of the Commonwealth, have labelled the vessel on a claim for \$125,000 for salvage.

Telegraph, Telephone and Cable Matters.

Jas. Colcleugh, who died at Vancouver, B.C., recently, was the first mayor of Selkirk, Man., during C.P.R. construction there, and claimed to have sent the first telegraphic message over the C.P.R. telegraph system.

The Great North Western Telegraph Co. has opened offices at St. Yvon, Que., Langruth, Man., and Mecheche, Alta., and has closed its offices at Manoir Richelieu, Pointe au Pic, Que., Glencoe, Queen's Royal Hotel, Niagara on the Lake, and Royal Muskoka Hotel, Ont., and at St. Boniface, East Selkirk, Scantlebury and Victoria Beach, Man.

Among the Express Companies.

W. D. Thompson has been appointed acting agent, Dominion Ex. Co., Calgary, Alta., vice F. R. Jelfs.

W. E. Norton, agent, Dominion Ex. Co., New Glasgow, N.S., has been appointed agent at Sydney, N.S.

R. Glover has been appointed agent, Dominion Ex. Co., North Bay, Ont., vice F. W. Carr, transferred.

F. Atkinson has been appointed acting route agent, Dominion Ex. Co., Levis, Que., vice G. E. Whitney, deceased.

F. W. Carr, heretofore agent, Dominion Ex. Co., North Bay, Ont., has been appointed agent, Kingston, Ont., vice G. W. Leavey.

F. A. Renwick, heretofore station agent, St. John, N.B., has been appointed cashier, Canadian Ex. Co., St. John, N.B., vice T. E. Doyle, deceased.

W. G. Everett, heretofore route agent, has been appointed agent, Canadian Ex. Co., St. John, N.B., vice Jos. Taylor, retired after 42 years service.

The American Railway Express Co., the federation of U.S. express companies, formed under the U.S. Railroad Administration, has been authorized to carry on its business in Canada. A. C. Heffernan has been appointed attorney general at Montreal, and J. E. Archer, at Vancouver, B.C.

A number of Dominion Ex. Co. employes struck work at various points, Sept. 10, owing to dissatisfaction with the existing schedule, and at the same time demanding recognition of the Canadian Brotherhood of Railway Employees. The strike was by no means general, but there was some dislocation of traffic. The majority of the company's employes are members of the Brotherhood of Dominion Express Employees, and it was contended that the cause of the trouble, was really a dispute between the two organizations. The schedule under which the men are working does not expire until May, 1919, and under these circumstances the Labor Department did not see its way to accede to the men's request for the appointment of a conciliation board. After some negotiations, in which V.G.R. Vickers, formerly General Superintendent, Atlantic Division, Dominion Ex. Co., and now Vice President, The Holden Co. Ltd., Montreal, took part, the strike was ended Sept. 13, and T. E. McDonnell, Vice President and General Manager of the company, consented to receive a deputation of the men, on their return to work, to hear any objections they may have regarding pay and working hours, etc. The contention for the recognition of the Brotherhood of Railway Employees was dropped.



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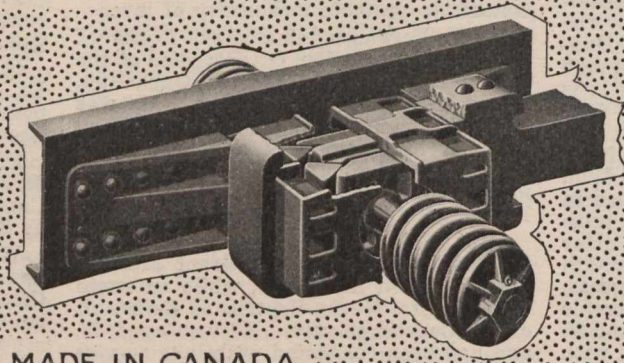
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Trade and Supply Notes.

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.

Lyman Tube & Supply Co. has appointed H. A. Jones, of Montreal, to its sales staff, with headquarters at Toronto.

Independent Pneumatic Tool Co., Chicago, Toronto, and Montreal, has issued a four page circular describing and illustrating its pneumatic and electric tools.

W. G. Gordon has retired from the Railway & Power Engineering Corporation, and from Malm, Gordon & Co., Toronto, and has returned to the Canadian General Electric Co. as Transportation Engineer.

Canadian Ingersoll-Rand Co., Sherbrooke, Que., has issued bulletin K303,

describing class E.L.-2 two-stage straight line air compressor. It deals with the tandem arrangement for certain classes of work where economy of space is to be combined with the advantages of 2-stage compression, and gives details of construction, including the leaf valves and other features, also particulars of the short belt drive with which this type of compressor can be furnished, and for which advantages are claimed where space is at a premium.

American Locomotive Co.'s Report. — The profits for the year ended June 30 were \$9,930,088.37, of which there is a balance available, after deduction of income and war taxes, of \$5,911,137.40. The usual dividend of 7% on the preference stock, and 5% dividend on the common stock absorbed \$3,000,000, leaving a surplus of \$2,911,137.40. Of this amount, \$1,000,000 is reserved for additions and betterments to plants, and the balance is added to the company's surplus. The cost of restoring the Richmond and Montreal Locomotive Works' plants was charged to a reserve created for this purpose out of previous years' profits. The bond-

ed indebtedness of the Locomotive & Machine Co. of Montreal, Ltd., now Montreal Locomotive Works Ltd., is \$1,500,000, consisting of 1st mortgage 4% gold bonds, issued Mar. 31, 1904, and maturing Mar. 1, 1924.

THE CANADIAN NORTHERN RAILWAY COMPANY.

Notice is hereby given that the Annual General Meeting of the shareholders of the Company will be held at the Head Office of the Company, 1 Toronto Street, Toronto, on Friday the 25th day of October, 1918, at the hour of 11 o'clock a.m., for the purpose of considering, and if thought fit, approving of the Directors' report and the consolidated Balance Sheet and Profit and Loss Account of the Canadian Northern Railway System for the year ending June 30th, 1917, also for the purpose of electing the Board of Directors of the Company and the appointment of Auditors; also for the purpose of considering, and if thought fit, approving and confirming a By-law respecting the appointment of an Executive Committee; also for the purpose of considering and dealing with such other matters as may properly be brought before the meeting.

By order of the Board of Directors,

R. P. ORMSBY,
Assistant-Secretary.

Dated at Toronto, this 19th day of September, 1918.