

Canadian Railway and Marine World

September, 1917.

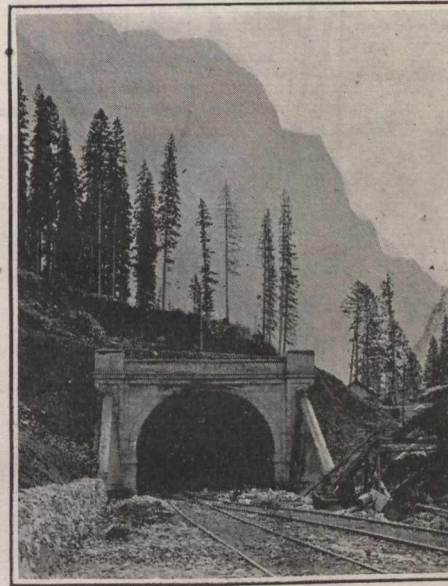
The Ventilation of the Connaught Tunnel, Selkirk Mountains.

By J. G. Sullivan, M.Can.Soc.C.E., Chief Engineer, Western Lines, C.P.R.

When the Connaught tunnel was first planned, it was generally supposed that it would be necessary to operate by electricity, but upon further studies of the subject it was found that the large cost of installing a plant for this short section and the enormous extra expense of operation, would have entirely wiped out any economical saving made by the construction of the tunnel. Therefore, a study was at once commenced on other methods of operation. As a result of the study a plan was adopted of blowing air through the tunnel by the use of fans, similar to the method adopted by an Italian engineer, in the ventilation of the St. Gothard tunnel, a number of years ago. However, instead of putting up an obstruction at the portal of the tunnel, where the fans are situated, to prevent the air from coming out of that end, a nozzle patented by C. S. Churchill and the late C. C. Wentworth was adopted, plans of which are illustrated in figs 1, 2, and 3. With this system we can with perfect safety operate this tunnel with steam locomotives.

The principle of the nozzle is as follows: Air is forced into a comparatively large chamber, which terminates in a nozzle inside the tunnel. If the pressure is great enough, there is sufficient energy in the air, leaving the nozzle at high velocities, to overcome the resistance of-

general, where tunnels are comparatively short, the ventilating plant would be locomotives reduced to a speed lower than the velocity of air in the tunnel, so that the



Connaught Tunnel, C.P.R., East Portal

of the question, but as the tunnel is of a large area, it was decided to establish the ventilating plant at the higher end of the tunnel, and blow fresh air against the approaching trains on the up grade, and thus dilute the gases coming from the locomotive. The dangerous gas generated by a locomotive is carbon monoxide, and it is usually generated in cases of an accident, where the draught to a heavy coal fire is shut off. The ordinary carbon dioxide, the usual resultant of complete combustion, is not so dangerous, and a much larger percentage of the latter gas is permissible. As our locomotives on this section use oil for fuel, in case of a sudden stop the fire can be shut off, and there is no danger of producing the deadly carbon monoxide.

Returning again to the plans of the ventilating system. The usual method is to put the fans at the side of the track, a little above the elevation of the base of rail. In this case, however, since the portal of the tunnel is in a very deep cut, it was decided to put the fans over the portal. Instead of running the fans by engines driven by steam, it was further decided to use Diesel engines. These will only consume 0.4 to 0.5 lb. of oil per horse power of work, while the best we could hope to get from a boiler would be one horse power for every 2 or 2.5 lb.

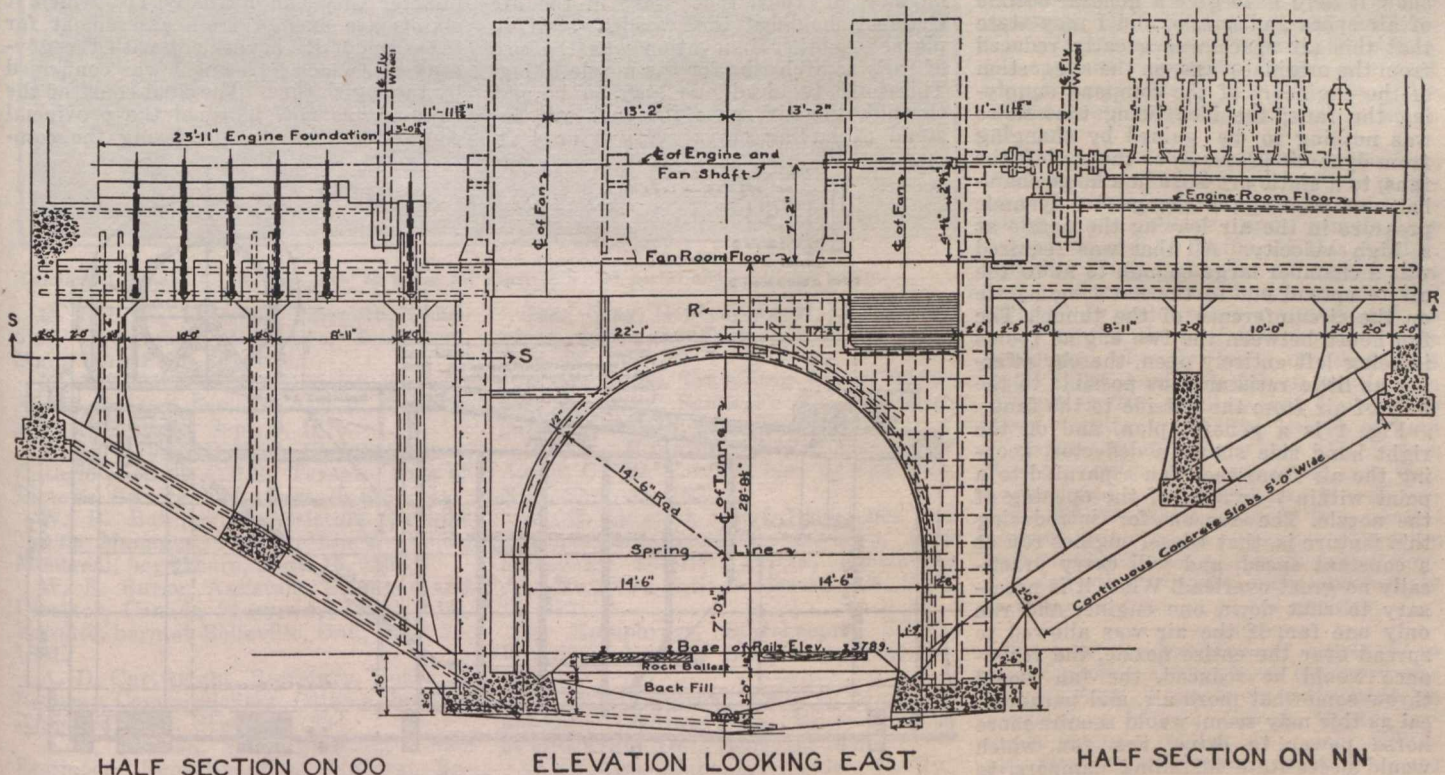


Fig 2.—Connaught Tunnel Ventilation.

fered by friction, variation in barometric cated at the lower end of the tunnel, and pressure, or other resistance to the flow of air, that may occur in the tunnel. In

smoke and gases are blown ahead of the moving train. In a tunnel as long as the Connaught one, this method of operation with a fan system was entirely out

oil, and possibly not as good results in this case, where the work is only intermittent, the fans being run only at intervals when a train is on the up grade

through the tunnel, and for a sufficient length of time after the train passes to entirely clear the tunnel of gas.

In fig 1 is a small diagram, showing the location of the plant in reference to the spiral of a 4 degree curve at the entrance of the tunnel. The reason I

and sections, with the arrangements of engines are shown in fig 2.

A change was made in the original plans, by building the inside arch, from the portal proper, as far back as the engine house extended, of concrete, and in this way eliminating entirely a great

the moving air approximately at the centre of the section of the tunnel.

The tunnel was opened for operation Dec. 9, 1916, and no annoyance or trouble of any kind from gases or smoke has been experienced in it. The work was laid out and commenced under F. F. Busted, M.Can.Soc.C.E., Engineer in Charge of Double Tracking. It was subsequently under the supervision of W. A. James, M.Can.Soc.C.E., Engineer of Construction, Western Lines, with H. G. Barber, as Assistant Engineer, T. Martin, Resident Engineer at the west end and J. R. C. Macredie, M.Can.Soc.C.E., Resident Engineer at the east end. The contractors were Foley Bros., Welch & Stewart. The construction work was supervised for the contractors by A. C. Dennis.

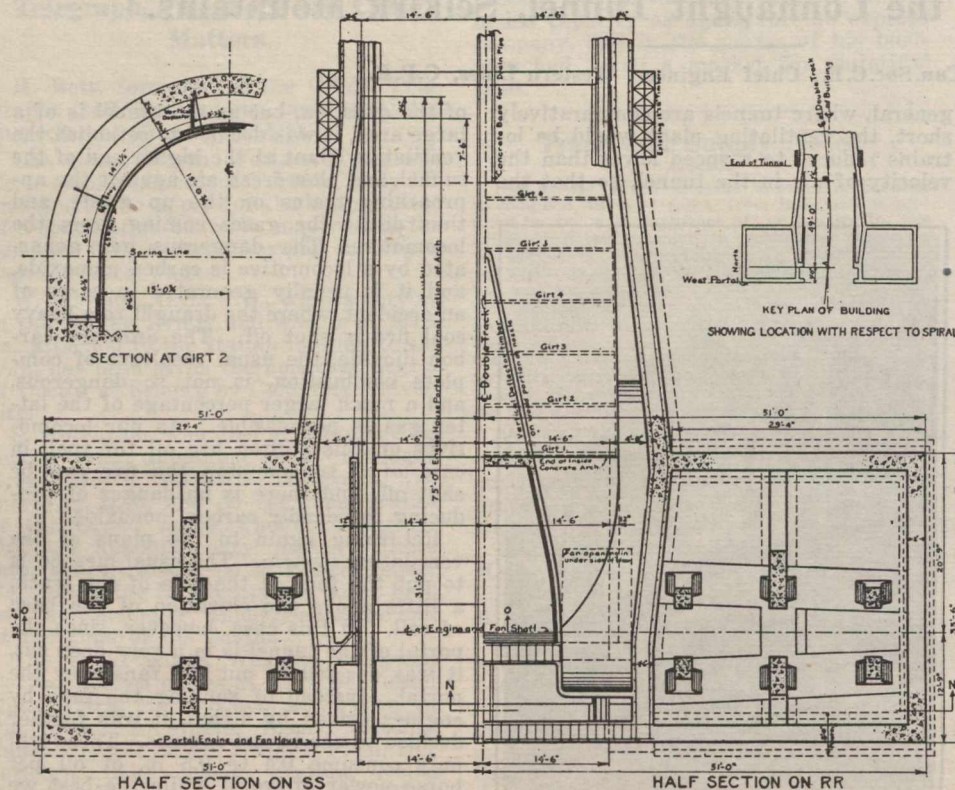


Fig. 1.—Connaught Tunnel Ventilation, Sectional Plan.

show it here is to give a general outline of air space and nozzle, and I may state that this air space was greatly reduced from the original plans, on the suggestion of the engineers of the company supplying the fans; the idea being that there was nothing to be gained by changing from dynamic pressure, as the air left the chamber, and then again change to dynamic pressure in the air leaving the nozzle at a high velocity. All that was required was a chamber large enough to allow the air to spread out to the flat long nozzle on the circumference of the tunnel. The fan house between the two engine rooms is being left entirely open, thereby offering as little resistance as possible to the flow of air from the outside to the fans.

Fig. 1 is a general plan, and on the right hand side shows a deflector, keeping the air from each fan separated to a point within 7 or 8 ft. of the opening of the nozzle. The reason for introducing this feature is, that Diesel engines run at a constant speed, and will carry practically no great overload. When it is necessary to shut down one engine, and run only one fan, if the air was allowed to spread over the entire nozzle, the resistance would be reduced, the fan would throw somewhat more air, and paradoxical as this may seem, would require more horse power to drive the fan, which would necessitate installing dampers, to choke the output of the fan, and also to entirely shut off the opening of the idle second fan to prevent the air coming back through it. The Diesel engines are of Swedish pattern, manufactured at Auburn, N.Y. Each engine consists of 4 cylinders, 4 cycle type, and is of 500 rated horse power at sea level. The elevations

number of rods that were in the air chamber holding the wooden arch in place. Another innovation was the use of rails as arch ribs for the nozzle lining. This only required one stay to be put through the air space for each rib, instead of having stays every 3 or 4 ft.

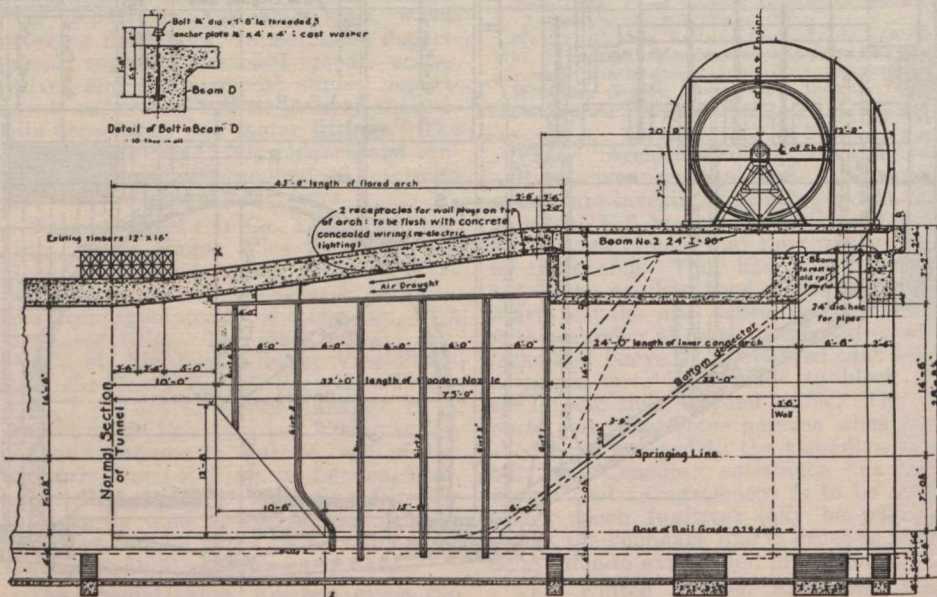


Fig. 3.—Connaught Tunnel Ventilation, Longitudinal Section.

which would offer obstruction of the free passage of the air. These features are shown in figs. 1, 2, and 3. The bottom of the nozzle is cut away, to enlarge the opening of the nozzle at grade line, which is a development of the opening of the nozzle, to keep the centre of gravity of

pany's appeal. Other municipalities are said to be interested in the decision, although they were not parties to the action. New Westminster is said to be interested to the extent of \$150,000; Burnaby Tp. to the extent of about \$20,000, and Kelowna to about the same extent.

Canadian Northern Pacific Railway Taxation Appeal Case.

The Imperial Privy Council gave judgment, Aug. 3, on the Canadian Northern Pacific Ry.'s appeal against the British Columbia Court of Appeal's decision as to the right of municipalities to tax railway owned lands not actually used for railway purposes. The case was taken direct from the Court of Appeal to the Privy Council. The case involved a rather important point, viz., whether a provincial government has the right to give away a second time something which it has already granted by charter to a corporate body. Under the powers vested in it by the British North America Act, the British Columbia Legislature had granted municipal charters, which confer the right to tax all lands within their bounds, with certain specific exemptions, which exemptions do not cover railway lands. The company has title to certain lands in New Westminster City and Burnaby Tp., which it claims are exempt from assessment for taxes under its agreement with the government, which agreement was confirmed by the legislature. The final court of the Empire has now affirmed the provincial court's decision by dismissing the com-

Birthdays of Transportation Men in September.

Many happy returns of the day to:—
G. W. Alexander, ex Local Treasurer, G.T.R. Western Lines, Detroit, Mich., born at Lightcliff, Yorks., Eng., Sept. 10, 1859.

H. Bailey, ex Bridge and Building Master, Canadian Government Railways, Parent, Que., now of Huntsville, Ont., born there, Sept. 2, 1879.

W. B. Bamford, District Freight Agent, C.P.R., Toronto, born at Belleville, Ont., Sept. 10, 1863.

G. T. Bell, Passenger Traffic Manager, G.T.R., Montreal, born there, Sept. 7, 1861.

W. H. Biggar, K.C., Vice President and General Counsel, G.T.R., and G.T.P.R., Montreal, born at The Carrying Place, near Trenton, Ont., Sept. 19, 1852.

Ry., Winnipeg, born at Stratford, Ont., Sept. 4, 1872.

J. P. Ferguson, representing Galena Signal Oil Co., Ottawa, Ont., born at Drummondville, Que., Sept. 12, 1856.

C. B. Foster, Assistant Passenger Traffic Manager, Eastern Lines, C.P.R., Montreal, born at Kingston, N.B., Sept. 30, 1871.

G. J. Fox, Superintendent, Schreiber Division, Algoma District, C.P.R., Schreiber, Ont., born at Montreal, Sept. 24, 1883.

R. S. Gosset, Auditor of Disbursements, Canadian Northern Ry., Toronto, born there, Sept. 28, 1879.

E. Goulet, Agent, C.P.R., New Westminster, B.C., born at Quebec, Que., Sept., 1865.

G. S. Lytle, Car Service Agent, Manitoba District, C.P.R., Winnipeg, born at Dennison, Ia., Sept. 23, 1878.

C. D. MacKintosh, Superintendent, Medicine Hat Division, Alberta District, C.P.R., Medicine Hat, born at Auckland, New Zealand, Sept. 24, 1882.

W. A. Mather, Assistant General Superintendent, British Columbia District, C.P.R., Vancouver, born at Oshawa, Ont., Sept., 1885.

J. F. Mundle, City Freight Agent, C.P.R., Montreal, born at Prescott, Ont., Sept. 20, 1857.

M. B. Murphy, Manager, Winnipeg Joint Terminals, Winnipeg, born at Napa, Cal., Sept. 11, 1866.

J. Paul, District Freight Agent, Canadian Northern Ry., Winnipeg, born in Euphrasia Tp., Ont., Sept. 13, 1858.

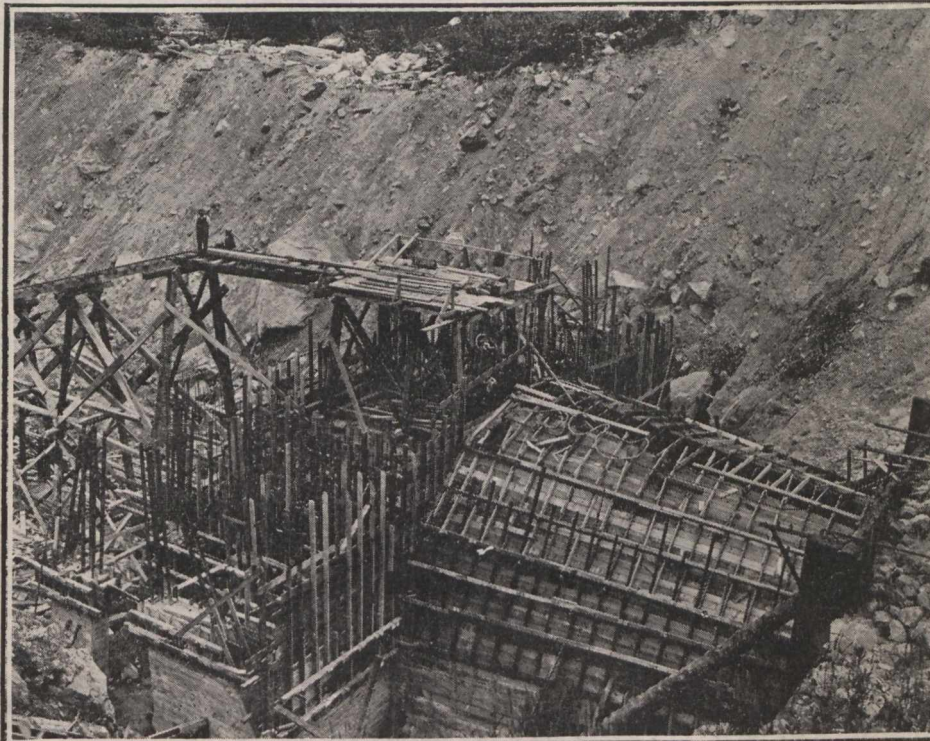
W. D. Robb, Superintendent of Motive Power, G.T.R., Montreal, born at Longueuil, Que., Sept. 21, 1857.

H. T. Ruhl, Engineer, Maintenance of Way and Structures, Delaware & Hudson Co., Albany, N.Y., born at Mifflinburg, Pa., Sept. 29, 1882.

A. Scott, Resident Engineer, Prince Edward Island Ry., Charlottetown, P.E.I., born at Kirkcaldy, Scotland, Sept. 6, 1884.

J. M. Silliman, Resident Engineer, London Division, Ontario District, C.P.R., London, Ont., born at Easton, Pa., Sept. 8, 1885.

H. A. Young, Ontario Storage & Cartage Co., Ltd., Toronto, born at Brooklyn, N.Y., Sept. 1, 1864.



Connaught Tunnel, C.P.R., side view of forms for construction of portal and ventilator nozzle.

E. J. Blais, Foreman Tinsmith, Canadian Government Railways, Transcona, Man., born Sept. 26, 1876.

E. R. Bremmer, ex-Division Freight Agent, Ottawa Division, G.T.R., Ottawa, born at Toronto, Sept. 9, 1875.

M. H. Brown, District Freight Agent, Ontario District, C.P.R., Toronto, born at Victoria Square, Ont., Sept. 2, 1866.

W. B. Bulling, ex-Assistant Freight Traffic Manager, Eastern Lines, C.P.R., Montreal, born there, Sept. 16, 1858.

W. E. Burke, Assistant Manager and Director, Canada Steamship Lines, Ltd., Toronto, born at Belleville, Ont., Sept. 23, 1881.

A. D. Cartwright, Secretary, Board of Railway Commissioners, Ottawa, born at Kingston, Ont., Sept. 30, 1864.

A. S. Dawson, M.Can.Soc.C.E., Chief Engineer, Department of Natural Resources, C.P.R., Calgary, Alta., born at Pictou, N.S., Sept. 6, 1871.

E. W. Delano, Division Engineer, Lake Superior District, Canadian Northern Ry., Capreol, Ont., born at Abbot, Me., Sept. 16, 1880.

W. E. Duperow, Assistant General Passenger Agent, Grand Trunk Pacific

John Gray, General Agent, G.T.R., Toronto, born at River Beaudette, Que., Sept. 28, 1863.

D. W. Hatch, Travelling Agent, Atchison, Topeka & Santa Fe Ry., Montreal, born at Bedford, Que., Sept. 1, 1841.

W. B. Howard, District Passenger Agent, C.P.R., Toronto, born at Chatham, N.B., Sept. 15, 1877.

W. R. Howard, Chief Dispatcher and Trainmaster, Brownville Division, New Brunswick District, C.P.R., Brownville Jct., Me., born at St. Andrews, N.B., Sept. 14, 1871.

E. Humphreys, Storekeeper, C.P.R., Winnipeg, born at Hull, Eng., Sept. 24, 1869.

J. E. Hutcheson, General Manager, Montreal Tramways Co., Montreal, born at Brockville, Ont., Sept. 15, 1858.

C. B. King, Manager, London St. Ry., London, Ont., born at Galena, Ind., Sept. 12, 1871.

S. King, Director, National Steel Car Co., Hamilton, Ont., born at Thetford, Norfolk, Eng., Sept. 12, 1853.

R. E. Larmour, General Agent, Freight Department, C.P.R., New York, born at Brantford, Ont., Sept. 26, 1868.

When To Use Trestles in Making Rail Embankments.

When to use trestles in making railway embankments and when to raise the track as the fill progresses are questions not to be settled by any general rule, according to the roadway committee's report at the American Railway Engineering Association's last convention. Some engineers, the committee states, consider it almost always preferable to use a trestle, while others would raise the tracks up to 25 ft. or more.

In treating each individual problem, the cost of raising the tracks, it is pointed out, should be carefully figured, including the delays and interference caused to and by traffic (if this exists), and this total should be set against the cost of trestling, including labor and materials. In some cases a run-around, to carry traffic clear of the work, can be made very cheaply, while in others this requires an auxiliary fill or trestle. In estimating for trestles that are not to carry regular traffic, the length of haul is important, because where this is less than two miles light side dump cars may be used and a very light trestle will suffice. Geographical location has an important influence, as climate, character and availability of materials, labor, lumber and other supplies vary enormously in different sections of the country.

Long service medals were presented to four Canadian Government Railways employees, Aug. 2, on their retirement on pension, as follows: George Moore, formerly foreman motion shop; John Gillespie, formerly foreman, erecting shop; William Steeves, formerly of the frog shop, and John H. Brown, formerly in the power house. Medals were also sent to Arthur Stockall, formerly in the blacksmith shop, and James C. Wortman, locomotive carpenter, who were too ill to attend. All the men were engaged at Moncton, N.B.

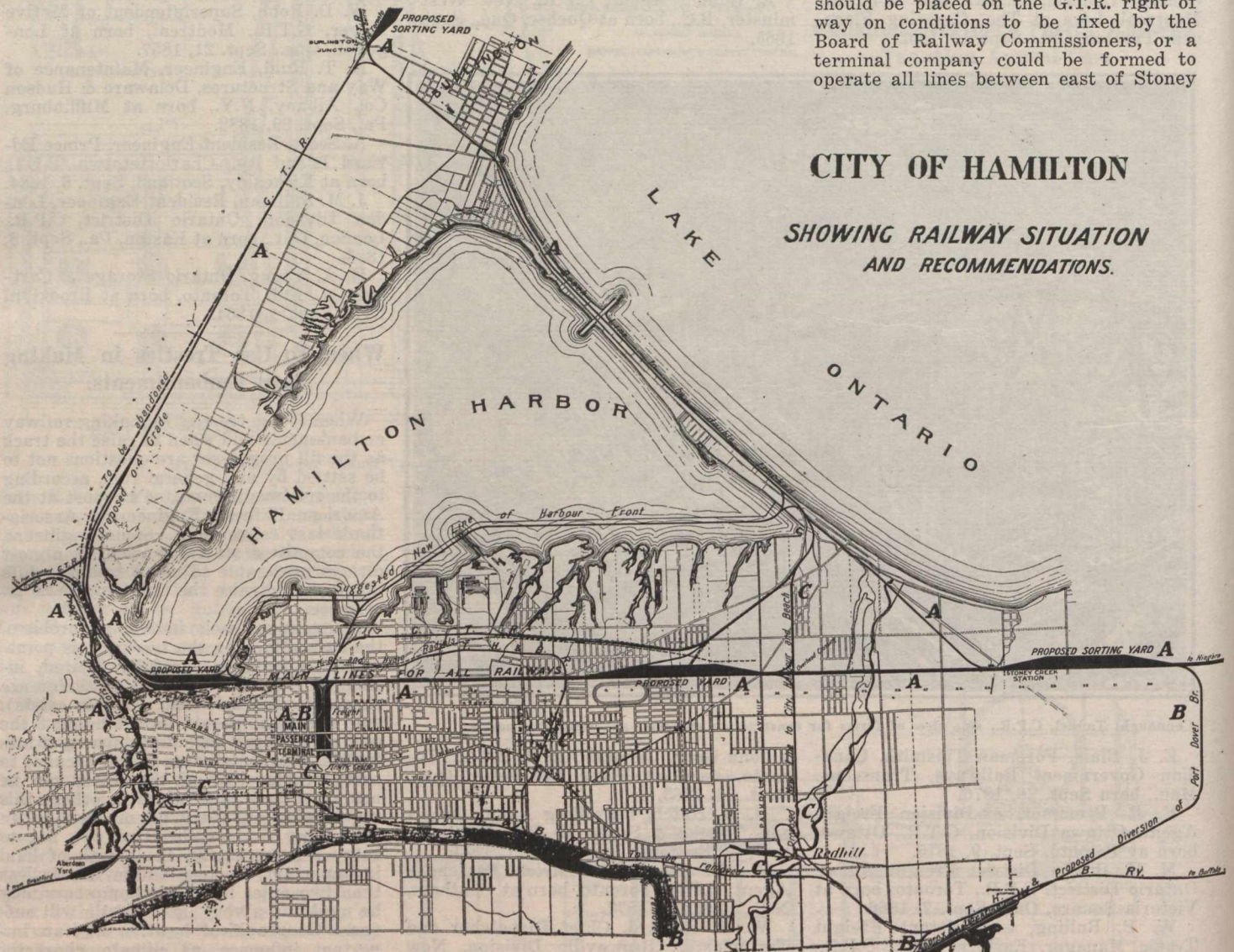
Engineers' Report on Railway Situation in Hamilton.

An important report bearing upon the railway situation at Hamilton, Ont., prepared at the instance of the city council by W. F. Tye, M.Can.Soc.C.E., consulting engineer, Montreal, and N. Cauchon, A.M.Can.Soc.C.E., consulting engineer, Ottawa, was made public recently. The railway situation in Hamilton has been a source of constant discussion for some years past between the city and the two companies at present owners of lines there, the G.T.R. and the Toronto, Hamilton & Buffalo Ry., the situation with the latter company in regard to the elimination of level crossings, either by depressing or elevating its line on Hunter

sult the city council engaged the two engineers named to look over the whole situation and make a report thereon.

After a lengthy introduction, in which the engineers review the present situation, they proceed to develop and discuss their suggestions under three heads as follows: Proposal A, referring to the entrance for new railways on a basis whereby the city would not be obliged to contribute in any way to their cost; proposal B, referring to the entrance of new lines and the elimination of the Ferguson Ave. cross town line, and proposal C, which is recommended for adoption; the entrance of new lines and the concentra-

sated. A double track should be built and electrified so as to permit the use of both steam and electricity. If the G.T.R. desires to reduce its gradients the line should be constructed as a 4 track one, of which 2 should be electrified. If this were done the junction of the G.T.R. line to London would be made about half a mile nearer to Toronto than at present. The T.H. & B.R. connection with the new line would be made by depressing the present line about 22 ft. and drilling a short tunnel under the Hamilton-London line, while the C.P.R. line to Guelph Jct. would be diverted a little westerly. From the present Stuart St. station all the lines should be placed on the G.T.R. right of way on conditions to be fixed by the Board of Railway Commissioners, or a terminal company could be formed to operate all lines between east of Stoney



CITY OF HAMILTON

SHOWING RAILWAY SITUATION
AND RECOMMENDATIONS.

St., having been before the Board of Railway Commissioners for the past two years. The Canadian Northern Ry. plans for a line through the city brought in some new factors, and the recently expressed desire on the part of certain municipalities, in conjunction with the Hydro Electric Power Commission of Ontario, to build a system of electric lines in the Hamilton district, using a parallel or the same route as the C.N.R., was a further complication. Some tentative plans for dealing with the problem as a whole, instead of continuing to negotiate with all the different companies concerned, were made during 1916, and as a re-

sult on one main line right of way through the city of all lines existing and to be built.

Proposal A.—All through freight traffic on the G.T.R. and new parallel lines from the Niagara frontier to Toronto should go by way of Burlington Beach. New sorting yards should be immediately built east of Stoney Creek station and at Burlington Jct. All new lines entering the city from Toronto should be on a common right of way, which should parallel the G.T.R. right of way on the south and east side from west of Burlington Jct. to the Valley Inn, thence to Stuart St., with a 0.4% gradient compen-

sated. There should be a 4 track line through the city, 2 tracks, with sidings, being electrified. A western yard for freight for new lines to be laid out north of the present Stuart St. yards; a new central yard to be laid out between Ottawa St. and Parkdale Ave., and small team delivery yards at various points. The new line should have access to all industrial spurs and sidings, and all switching to and from industries should be done by steam until the G.T.R. lines to the Niagara frontier are electrified. The gradients between Bay St. and Victoria Ave. should be reduced to a maximum of 0.4%. A

new union station should be built at the intersection of Cannon St. and Ferguson Ave. This would be a more convenient situation than would be one at James St., but would necessitate the putting of Barton St. in a subway. On this basis the city would not be called upon to contribute any of the cost, as the proposed route would give the new railways a better entrance at a lower cost than they can get on their one proposed route. The engineers recommend, however, that the present grade of the G.T.R. between Birch Ave. and Kenilworth Ave. be raised a maximum of 6 ft. at Gage Ave. to permit of future subways being easily drained. The city would probably be called upon to contribute part of this cost, as the principal advantage to be gained by such a change would accrue to it.

Proposal B.—All tracks, yards and spurs as they now exist to be removed from Ferguson Ave. The G.T.R. to build new lines from some point near Rymal station, on its Port Dover line, to a connection with the main line at Stoney Creek. A union station to be located at the intersection of Cannon St. and Ferguson Ave., to be built with a circular loop, so that trains may pass directly through without having to back in. A freight station to be built at Cannon St., having a connection with the main line, the tracks for both passenger and freight traffic to be depressed and Barton St. carried over them. Three plans are discussed, but the loop station is recommended as being the best, although it is estimated to cost \$175,000 more than either of the others. The street railway and local radial railways should be brought to circulate around this traffic centre.

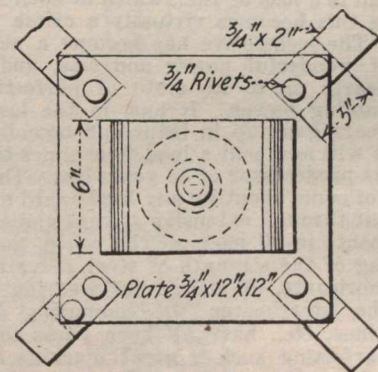
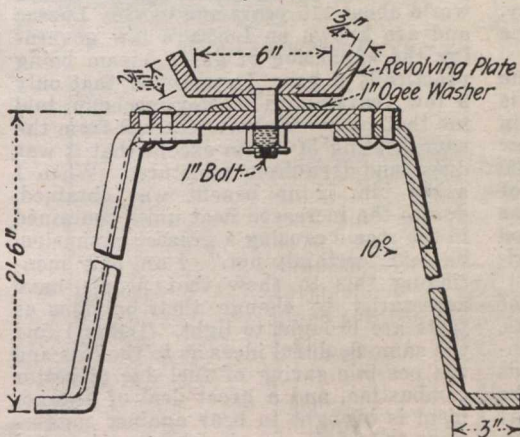
Proposal C.—The Toronto, Hamilton & Buffalo Ry. main line, yards and spurs from Red Hill Creek, between Stoney Creek and Bartonville, and the Y at Dundurn St., west of the Hunter St. tunnel, together with the greater part of the Gage Ave. cross town line, should be eliminated and replaced by a line from near Red Hill Creek to the G.T.R., near Parkdale Ave., and to the Burlington Beach line near the south end of the beach, and that company should join with the other companies in the formation of a terminal company to operate all main lines, yards and spurs between Stoney Creek yard on the east and Burlington Jct. yard on the west, including the Burlington Beach cut-off. The T.H. & B.R. should also build a tunnel under the park and cemetery to provide a connection between its Brantford line and the terminal tracks. All T.H. & B.R. through freight traffic to be sent round by Burlington Beach. A new union station to serve all lines entering or to enter Hamilton, to be built near King William St., with a circular loop, so that trains might pass directly into it; all tracks to be depressed and streets carried over them. This would be the most expensive station plan, costing about \$1,250,000 more than the cheapest (a through station on James St.), but the cost might be shared by all the railways and the city. In the event of proposal C being adopted in its entirety, the engineers recommend further that no industries requiring spur track accommodation should be permitted south of Barton St.; the erection of a sea wall along the harbor front, with the reclamation of the intervening low lying land for industrial purposes, and the laying out of switching tracks on the reclaimed area, connecting with the main line at the westerly end and with the Burlington Beach line at the

easterly end.

In conclusion, the engineers strongly recommend proposal C as the ideal to which the city should work, and appends numerous reasons why it would be advantageous, not only to the city, but to the railway companies. The engineers, in a statement made July 13, asked for a very careful consideration of the report, suggesting there was plenty of time to do so, as, owing to present financial conditions, any work of considerable magnitude was not likely to be taken in hand for a time. The statement concludes: The first of the works outlined in the report to be carried out should undoubtedly be the construction of the Stoney Creek yard and the improvement of the Burlington Beach line. . . . When the new roads are prepared to come in, Hamilton should insist that they follow the route outlined and should vigorously press for the carrying out of the various other works outlined.

The report, which was accompanied by plans, is being considered by the city's board of control.

The report was considered by the city's board of works and sent on to the city council with a recommendation that it be forwarded to the Board of Railway Commissioners as representing the city's views on the railway situation.



Small Turntable for Car Repair Yard.

New Union Station at St. Paul.

The plans for a new union terminal station in St. Paul, Minn., have been prepared, and the work of laying out the yards and erecting the station and other buildings will be started at an early date. The terminal project is being carried out by the St. Paul Union Depot Co., which represents the nine railways for which facilities will be provided. The site lies along the banks of the Mississippi River, upon the same frontage as formerly, the proposal to change the river channel having been abandoned, owing to the restrictions imposed by the U. S. War Department. The yard accommodation is to be widened by the purchase of all property out to Third St., while the passenger station will occupy a block along Third St., between Sibley and Waconta Sts., being connected with the tracks by a tunnel and a bridge. The tracks will be elevated through the terminals on a solid fill between concrete retaining walls, except where space is provided beneath the tracks for baggage, mail and express facilities. Jackson and Sibley Sts. will be carried under the tracks clear through to the waterfront, where there is a public levee for steamboat accommodation.

The track layout at the station provides for 22 passenger tracks and 2 freight

tracks, while in addition there will be 2 outside freight tracks of the Chicago, Milwaukee & St. Paul Ry. Of the 22 passenger tracks, 8 will be for the use of trains for which St. Paul is the terminus, while the remaining 14 will be for through trains. There will be about 5 miles of trackage in the yards, making the total length of tracks in the terminal 12½ miles. There will be a large interlocking switch and signal tower at each end of the station. A 4 stall house for the switching locomotive will be provided. The several companies using the station will maintain their car cleaning, storage yards and locomotive facilities upon their own independent properties.

The station building will be 150 x 300 ft., facing towards Fourth St., but set back nearly half way to Third St. The ticket office and other main public facilities will be on the level of the Fourth St. entrance, while the upper floor will contain offices, kitchen and rest room for women. Two lower, or basement floors, will provide for station facilities, immigrants' quarters, branch post office, etc. As the main floor, entered from Fourth St., will be 26 ft. higher than Third St., this will permit the latter to be spanned by a bridge carrying the smoking room and a connection with the main waiting room. This room, with the concourse,

will form a separate structure, 80 x 400 ft., extending across the tracks, with an elevator and stairway at each platform.

The estimated cost of the work is \$11,000,000. The plans for the new terminal were laid out by W. C. Armstrong, Chief Engineer, and the Architect for the station building is by C. S. Frost.

Small Turntable Cuts Cost of Handling Relay Rails.

The turntable shown in the accompanying sketch is proving a big labor and time saver in handling rails for the Pennsylvania Rd.'s new car repair yard, now under construction at Greenville, N.J. The 85 lb. rails used are second hand, and the ball of each is badly worn on one side. Since it is therefore necessary to place the unworn side on the inside of the track being laid, it happens that many of the rails have to be turned end for end before placing them. Previous to building the turntable it required considerable manoeuvring by a gang of at least six men to turn one rail. With the turntable, however, which is set up about 18 ft. from the track being laid, two men can turn a rail with ease. The device was made complete for \$8.—J. S. Sawkins, in Engineering News Record.

Fuel Economy as Related to its Use in Steam Boilers and Locomotives.

By S. H. Pudney, Fuel Inspector, Eastern Lines, Canadian Pacific Railway.

The article under the above heading in Canadian Railway and Marine World for August ended by giving the results of tests made with hand fired furnaces, and the showing of combustible gases at the surface of the fuel bed. The author's figures represent the whole of the air, and gases, rising from the surface of the fuel bed, and the 32% means that amount of combustible material was going up with the products of combustion.

How many of the actual consumers of coal and by this I mean locomotive men and locomotive firemen, as well as the heads of the mechanical departments, ever consider the possible saving of 10% of coal, due to the more perfect combustion of it in our furnaces or fireboxes? I venture to say not one in a hundred. The idea of escaping gases and black smoke, and the possible loss of fuel due to these causes, is usually ridiculed by mechanical men. But there is no valid reason why a 10% saving should not be effected in our fuel, and this would mean more than \$1,000,000 to some companies. Allowing good combustible gases to escape unburned to the atmosphere, is detrimental to the good of the community, and is a loss of fuel, which at such a time as this becomes virtually a crime.

The locomotive has become a machine of wonderful power and size, and it is nearly up to its state of perfection in hauling power. It has, in the last few years gone up in leaps and bounds until it will now pull a load four times that of its predecessor of 25 years ago. This has not come about by any haphazard method but through extensive studies and experiments in all parts of the world, the testing of the strength of steel, of valves, of lubricants, of metals for wearing parts, the superheater, the computing of engines, etc., have all been parts towards perfecting such a great machine as the modern locomotive. The greatest part that has been taken towards this perfection is that brought about by scientific mechanical engineering researches. How far would our locomotive have progressed if it had been left to the ordinary mechanical man, without the scientific assistance that has been given to it. This does not need any more remarks, as we each appreciate the fact that there would have been no modern locomotive.

With all that has been accomplished in the locomotive mechanically how far have we advanced with the burning of the fuel in it? I hardly like to say so, but we are today in practically the same age as we were when Stephenson left us, the same methods obtain today as then. Stephenson found that he could not get enough steam without increasing the draught on his fire, today if an engine does not steam we increase the draught by decreasing the exhaust pipe nozzle. This enables the engine to burn more fuel, and so we get the steam, and at the same time by decreasing the exhaust pipe we get much more back pressure on our cylinders, which increases the consumption of fuel per ton mile. So far, with the exception of the brick arch, and the costly Gains firebox, and a few freaks, such as chemical fuel economizers and steam jet devices nothing has been added to our locomotives to give a greater efficiency from the coal that is being burned.

There is no doubt that most of this is due to the total indifference of mechani-

cal men as to the question of the waste due to escaping gases and smoke. Some will tell us, even today, that they do not place much stock in the claim of loss due to this. Of course this is due to their deficient knowledge of the science of fuel and combustion or they would never make such statements. The same people will then tell us how much may be saved by the brick arch, and will exploit the saving effected by the use of powdered fuel. The saving brought about by both of these is due to the better combustion of the fuel being used, and if there was not any loss before it would have been impossible to effect the saving which they mention.

It is therefore quite necessary to reconcile ourselves to the fact that we do lose a lot of fuel in this way, before we can ever hope to accomplish any saving. It is not long since the idea of the superheater on the locomotive was scoffed at by the ordinary mechanical man, and even up to the last decade there was a great diversity of opinion as regards its use. But the laws that govern its beneficial properties were found out and given to the world about 115 years ago by Gay Lussac and are known as Lussac's law governing the expansion of gases, steam being practically a gas. I remember that only a few years ago a master mechanic told me that no benefit was received from the superheating of steam except that it was dried and free from moisture. When I asked him if no benefit was obtained, due to the increased heat units contained in the steam causing a greater expansion, he said "certainly not." I am only mentioning this to show that people have necessarily to change their opinions as facts are brought to light. Today I find the same doubtful ideas as to the loss and the possible saving of fuel due to better combustion, and a great deal of antagonism is brought to bear against suggestions as to a means whereby we might try and save fuel on these lines; all due to the lack of knowledge.

I have even had mechanical men tell me that the idea of anything like perfect combustion is all rubbish in locomotive practice, all they want is plenty of steam. One prominent man, a few years ago, told me when suggesting a system for imparting knowledge to the men, that we did not want science men firing our engines, but coal shovellers. But if that was so at that time no one will deny that at this time we want fuel savers, not coal shovellers. We have not yet in locomotive practice seriously attacked the combustion problem, in a systematic manner. Very few are able to do so, because of the long and tedious study that is needed before one becomes well enough versed in the science to impart it to others as well as to improve the conditions mechanically. Of one thing we are certain, and that is losses do occur. But to work out some idea for the saving one must be versed not only in the knowledge of fuel of different classes, but should also understand the principal mannerisms of each, the distinctive distillation, the formation of the chemical compounds, and the breaking up again of these, as the process of combustion goes on, with the formation of others, all of which are necessary to complete combustion. The prevailing idea is that coal is bought to burn, and that is an end to it, hence the

heavy losses in every day practice.

However little some may think of losses, yet they will exploit the wonderful results obtained by the use of powdered fuel. If the promoters of this device had not made a study of the subject they would never have been able to show us these results. Though my own opinion is the same today as for years past, viz., that powdered fuel is not destined to become the locomotive fuel of future use. Such enormous sums would have to be spent in the construction of plants, from one end of the system to the other, and then the cost of upkeep of our tenders, etc., would make it prohibitive, especially when the day is rapidly approaching that other mechanical means will be adopted, in which we will both increase the efficiency and at the same time do away with the dense smoke as seen today.

It is only necessary that we confine ourselves to the simple rules that govern combustion to get results. Any class of fuel of a certain given b.t.u. value will evaporate a given quantity of water. It does not matter if this fuel is powdered, or in commercial sizes, it is all the same. But what is different is the way we use it. If we use the commercial sizes in a haphazard manner we cannot expect to get results. The difference is not in the fuel, but in the supporter of combustion, and how it is administered to the fuel. The powdered fuel device is worked out on the principle of giving a sufficient supply of air intimately mixed with the fuel. Hence the results shown.

All great authorities on fuel matters are agreed on what is needed for the perfect combustion of fuel, 1st, That there must be plenty of air. 2nd, That this air must be well mixed with the fuel. 3rd, That the temperature must be kept high enough for their combustion. The first two are the most important for us to consider and if they are properly carried out the last will be a certainty, and it has been the carrying out of this principle that has made the powdered fuel show up in such a way. There is nothing new in this principle, the action and combustion of explosives is carried out in a theoretical manner, by actual weight and measurements, and it is on this principle alone that combustion of the explosive material is so rapid that it immediately turns the solid material to a gas of many thousands of times more volume than its original size. If this matter had not been taken care of any more than our every day use of fuel, a gun would fire about two rounds and then would become choked with unconsumed combustible matter, which would destroy its usefulness. Therefore, if one difficulty can be overcome why not the other; which we will have to admit is so much more simple to accomplish?

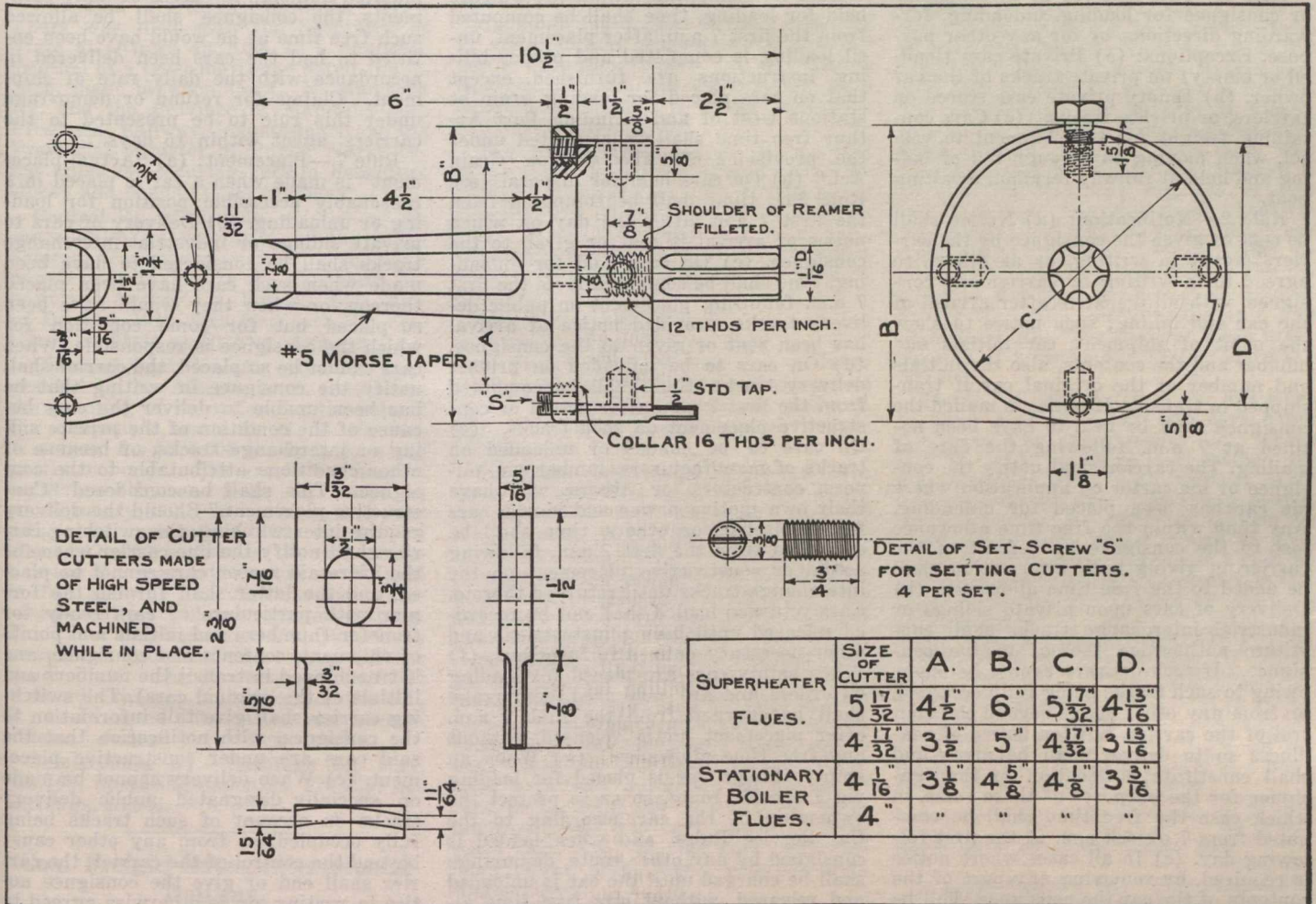
There is one reason and only one why the chemical fuel economisers and steam jet devices did not save fuel, because they operated in direct opposition to the laws that govern combustion, yet thousands of dollars have been spent throughout the country on these useless articles, without making a move towards the essential points that govern perfect combustion of fuel. A test made by the Pennsylvania Rd. with the brick arch, as against one which showed a saving due to the better facilities for the mixing of the gases and air showed a saving of 15% on fuel.

That the modern locomotive can burn its fuel much more economically than it at present does, recent tests show conclusively. I am confident that we can get a better arrangement for the supply of air to the fuel, than we have under existing conditions, and with far less effort on the part of our locomotives. That is to say, I believe and will endeavour in the next article to show how we can get these results, without decreasing the exhaust tip, which in turn means less back pressure on the cylinders, with a better working capacity of the locomotive.

person or persons operating the locomotive, to see a dark object, the size of a man, for a distance of 300 ft. or more ahead of the locomotive, under normal weather conditions. It is further ordered that these regulations be made applicable to all new locomotives acquired for road service, and to all road locomotives given a general overhauling subsequent to the date of this order, and that all road locomotives of the railway companies be equipped in conformity with the requirements of those regulations not later than Jan. 1, 1921. Every such railway com-

Cutter for Tube Sheets, Canadian Northern Railway.

The body of the cutter, a plan of which is given herewith, is made of mild steel and has four cutters screwed at right angles. The shank is turned down to a Morse standard taper and is used in a standard chuck on an air drill. Four slots are milled in the sides for cutters, which are of high speed steel and are screwed down, then the whole is put in a lathe and the cutters turned down on the lathe and



Cutter for tube sheets, Canadian Northern Railway Shops, Winnipeg.

Equipment of Locomotives with Electric Headlights Ordered.

The Board of Railway Commissioners passed general order 199, July 24, as follows: Re equipment of locomotives with electric headlights. Every railway is hereby required to equip its locomotives used in road service, between sunset and sunrise, with headlights which will enable persons with normal vision in the cab of a locomotive, under normal weather conditions, to see a dark object, the size of a man, for a distance of 1,000 ft. or more ahead of the locomotive; such headlight to be maintained in good condition. Every locomotive used in road service, which is regularly required to run backward for any portion of its trip, except to pick up a detached portion of its train, or in making terminal movements, to have on the rear a headlight which will meet the requirements of this order. Nothing in these regulations shall prevent the use of a device whereby the light may be diminished, in yards and at stations, to an extent that will enable a

pany failing to comply with the requirements of the provisions of these regulations will be liable to a penalty of \$100 for each such failure.

Canadian Northern Ry. Accident.—A collision between a freight train and an excursion train from Alberta Beach, on the Canadian Northern Ry. near Edmonton, Alta., July 28, killed five persons and injured a considerable number of others. At the inquest, Aug. 1, the jury returned a verdict that the deaths were caused by a head on collision owing to employees of the company not strictly complying with the Board of Railway Commissioners' Standard rules which have so long been disregarded that it has become habitual for employees to so conduct themselves." S. J. Harrington, the train dispatcher, alleged to be responsible, was arrested on a charge of manslaughter, and released on \$10,000 bail.

The Vancouver, B.C. Transportation Club held its annual picnic at Bowen Island, July 28, the party travelling from Vancouver by the Terminal Steam Navigation Co.'s s.s. Bowser.

ground slightly for clearance. The cutters can be slightly adjusted by slipping a filler between the cutter and the face of the tool. The cutters are set to follow one another and each engages at the same time, taking a successive cut and cutting more metal than the ordinary double cutter tool. With this cutter three sheets, or 22 holes, can be cut without re-grinding the tool. We are indebted for the foregoing information and for the drawing from which the illustration was made to W. H. Hollingshead, Foreman, Tool Room, C.N.R. shops, Winnipeg.

The C.P.R. Recreation Club has opened a country club at Sortin Jct., Montreal, where it has secured 60 acres of land, with the right to use a further 40 acres, and has built a club house with 45 rooms. There are over 700 members, the officers being: President, G. H. Horn; Vice President, F. Taylor; Secretary, A. E. Col-lary; Treasurer, Miss M. O'Keefe; chairman of grounds committee, J. B. Blair.

Railway Facilities in Great Britain are to be further reduced on account of the military situation's exigencies.

Canadian Car Demurrage Rules.

The Board of Railway Commissioners passed general order 201, Aug. 1, its principal feature being a considerable increase in demurrage charges as shown in rule 9. The order is as follows:

The rules hereinafter set forth shall be known as the "Canadian Car Demurrage Rules," superseding the "Canadian Car Service Rules," prescribed by order 906 (General order 1), Jan. 25, 1906.

Rule 1.—Cars held for or by consignor or consignee for loading, unloading, forwarding directions, or for any other purpose. Exceptions: (a) Private cars (loaded or empty) on private tracks of the car owner. (b) Empty private cars stored on carriers' or private tracks. (c) Cars containing freight for transhipment to vessel, when moving on through bill of lading and held at railway terminal awaiting boat.

Rule 2.—Notification: (a) Notice shall be sent or given the consignee by the carriers' agent in writing, or as otherwise agreed to in writing by carrier and consignee, with all dispatch, after arrival of the car and billing; such notice to show the point of shipment, car initials and number and the contents, also the initials and number of the original car if transhipped in transit. If notice is mailed the consignee shall be held to have been notified at 7 a.m. following the date of mailing. The carrier shall notify the consignee or his carter on application where his car has been placed for unloading. Any time within the free time allowance lost to the consignee by default of the carrier in giving such information shall be added to the free time allowance. (b) Delivery of cars upon private sidings or industrial interchange tracks shall constitute notification thereof to the consignee. If such delivery cannot be made, owing to such tracks being fully occupied, or from any other cause beyond the control of the carrier, written notice of readiness so to deliver shall be given and shall constitute notification to the consignee for the purposes of these rules, in which case the free time shall be computed from 7 o'clock a.m. of the first following day. (c) In all cases where notice is required, by removing any part of the contents of the car the consignee shall be considered to have received such notice.

Rule 3.—Free time allowance: (a) Twenty-four hours (one day) after notice of arrival (exclusive of Sundays and legal holidays) shall be allowed for any or all of the following purposes, if necessary: (1) For clearing customs. (2) In the case of the consignees not served by private sidings or industrial interchange tracks, to give orders for special placement. (3) For reconsignment or reshipment in same car. (4) When cars are held in transit for inspection or grading, or are stopped in transit to complete loading to partly unload, or to partly unload and partly reload, when such privilege of stopping in transit is allowed in the tariffs of the carriers. (b) If the 24 hours allowed for the above mentioned prices allowed for the above mentioned purposes are exceeded demurrage shall be charged. (c) Forty-eight hours (two days) free time (exclusive of Sundays and legal holidays) shall be allowed for loading or unloading all commodities.

Exceptions: (1) In the portion of Canada, Port Arthur and west, in which the Canada Grain Act applies, 24 hours free time only shall be allowed for loading grain. (2) Five days free time shall be

allowed at Montreal and at tide water ports for unloading lumber and hay for export. (3) Manufacturers, lumbermen, miners, contractors and others, who have their own motive power and handle cars for themselves or others, shall be granted an additional allowance of the time necessary for them to do the switching from and to the designated interchange tracks, but not to exceed 24 hours.

Rule 4.—Computing Time: (a) On cars held for loading, time shall be computed from the first 7 a.m. after placement, until loading is completed and proper billing instructions are furnished, except that on cars placed for loading grain at stations west of and including Port Arthur free time shall be computed under the provisions of "The Canada Grain Act." (b) On cars held for disposal (see Rule 3a), time shall be computed from the first 7 a.m. after the day on which notice of arrival is sent or given to the consignee. (c) On cars held for unloading, time shall be computed from the first 7 a.m. following placement on public delivery tracks, provided notice of arrival has been sent or given to the consignee. (d) On cars to be unloaded on private delivery tracks, time shall be computed from the first 7 a.m. after actual or constructive placement on such tracks. (e) On cars to be loaded or unloaded on tracks of manufacturers, lumbermen, miners, contractors or others, who have their own motive power and handle cars for themselves or others, time shall be computed from the first 7 a.m. following actual or constructive placement on the interchange tracks until returned thereto. Cars returned loaded shall not be recorded released until billing instructions and other necessary data are furnished. (f) When empty cars are placed for loading on orders and are not used, demurrage shall be charged from the first 7 a.m. after placement until released, without any free time allowance. (g) When an empty foreign car is placed for loading via a specific route, so as to protect the ownership of the car according to the Car Service Rules, and when loaded is consigned by any other route, demurrage shall be charged until the car is unloaded and released, without any free time allowance. (h) Time lost to the shipper or consignee through switching of cars, or through any other cause for which the railway company is responsible, shall be added to the free time allowance. (i) In computing free time or demurrage time, Sundays and holidays shall be excluded. The exemption for holidays shall not include half holidays.

Rule 5.—Weather interference: (a) If wet or inclement weather, according to local conditions, renders loading or unloading impracticable during business hours, or exposes the goods to damage, the free time allowance shall be extended so as to give the full free time of suitable weather. If, however, the cars are not loaded or unloaded within the first forty-eight hours of suitable weather no additional free time shall be allowed. (b) Should bulk freight be so frozen in transit, or before placement, as to render unloading impossible within the prescribed free time, such additional time shall be granted as may be necessary.

Rule 6.—Bunching: (1) Cars for loading. When, by reason of delay or irregularity of the carrier in filling orders, cars are bunched and placed for loading in accumulated numbers in excess of daily or

ders, the shippers shall be allowed such free time for loading as he would have been entitled to had the cars been placed for loading as ordered. (2) Cars for unloading or reconsigning: When, as the result of the act or neglect of any carrier, cars destined for one consignee, at one point, are bunched at originating point, in transit, or at destination, and are delivered by the line carrier in accumulated numbers in excess of daily shipments, the consignee shall be allowed such free time as he would have been entitled to had the cars been delivered in accordance with the daily rate of shipment. Claims for refund or demurrage under this rule to be presented to the carriers' agent within 15 days.

Rule 7.—Placement: (a) "Actual placement" is made when a car is placed in a reasonably accessible position for loading or unloading. (b) Delivery of cars to private sidings or industrial interchange tracks shall be considered to have been made when such cars have been placed thereon, or when they would have been so placed but for some condition for which the consignee is responsible. When cars cannot be so placed, the carrier shall notify the consignee in writing that he has been unable to deliver the cars because of the condition of the private siding or interchange tracks, or because of other conditions attributable to the consignee. This shall be considered "Constructive placement." Should the delivery require interswitching, the switching carrier shall notify the line carrier when for the aforesaid reason cars cannot be placed, and the latter shall furnish the former with particulars of cars ready for transfer (numbers and initials and points of shipment, contents and consignee, and if transhipped in transit the numbers and initials of the original cars). The switching carrier shall give this information to the consignee, with notification that the said cars are under constructive placement. (c) When delivery cannot be made on specially designated public delivery tracks on account of such tracks being fully occupied, or from any other cause beyond the control of the carrier, the carrier shall end or give the consignee notice in writing, or as otherwise agreed to by carrier and consignee, of its intention to make delivery at the nearest point available to the consignee, naming the point. Such delivery shall be made, unless the consignee shall before delivery indicate a preferred available point, in which case the preferred delivery shall be made.

Rule 8.—Customs or inspection delays. Demurrage shall not be collected from the consignee for any delays for which government or railway officials may be responsible.

Rule 9.—Demurrage charge. After the expiration of the free time allowed, the following charges shall be made until the car is released: For the 1st day, or fraction thereof, of delay, \$1; for the 2nd day, or fraction thereof, of delay, \$2; for the 3rd day, or fraction thereof, of delay, \$3; for the 4th day, or fraction thereof, of delay, \$4; for the 5th and each succeeding day, or fraction of a day, \$5.

Rule 10.—Non-payment. If payment of demurrage charges properly due on cars held on public delivery tracks be refused, delivery of only the car or cars on which such charges are due shall be withheld by means of sealing or locking, or by placing where such cars shall not be accessible. If the owners or users of

Railway Rolling Stock Notes.

private tracks, or the owners of industrial tracks referred to in rules 3 and 4, refuse to pay any charges which may already be due, delivery of cars to such sidings or tracks shall be suspended, and delivery shall be made on any available public team track until such charges have been paid.

This order becomes effective Aug. 20, 1917.

Railway Finance, Meetings, Etc.

Canadian Northern Manitoba Ry.—There was filed with the Secretary of State at Ottawa on Aug. 15 a duplicate original of a trust mortgage dated Jan. 2, 1916, made between the C. N. Manitoba Ry. and the Province of Manitoba—the Provincial Railway Commissioner and the Provincial Minister of Public Works being trustees—securing certain debenture stocks and bonds of the company.

Central Ry. of Canada.—Notice of the cancellation by resolution of the bondholders, of a mortgage deed of the company's undertaking, to the City Safe Deposit and Agency Co., London, Eng., dated Dec. 16, 1913, was filed with the Secretary of State at Ottawa, Aug. 10.

Diamond Coal Co.—An order has been granted by an Alberta court confirming the granting of an option for the sale of the company's assets to H. V. Hudson, Winnipeg, for \$675,000 partly in cash and partly in bonds. The assets are heavily encumbered by an issue of bonds on which nearly \$700,000 is owing, and miscellaneous mortgages and charges of about \$175,000, so that on the reconstruction the secured creditors will not be paid in full and the shareholders and unsecured creditors will not receive anything. The Trust and Guarantee Co., Toronto, is permanent liquidator and trustee for the bondholders. The property sold includes a six mile railway from Kipp, on the C.P.R., to Diamond City, Alta., and several miles of sidings and colliery tracks.

Temiscouata Ry.—Earnings for May, \$23,769; operating expenses, \$20,225; net earnings, \$3,544.

Coal Freight Rates, Intercolonial Railway.

Attention was called in the House of Commons, on Aug. 9, to the increased freight rate on coal from Sydney and other Cape Breton points to Lewis and other places on the I. R. C. from \$2.25 to \$3.75 a net ton. The Minister of Railways said it was well known that the old coal rate was exceedingly low; it was put into effect when traffic on the line was largely to the east, enabling it to take back loaded cars. The situation has changed; practically all the loading is now west; and if very much coal business was done it would be necessary to take down empty cars for it. The rate mentioned is less than ½c a ton per mile, which is as low a rate as obtains in the United States. It is 1,000 miles from Sydney to Montreal and ½c a ton per mile would bring the rate up to a good deal more than the one in force. It is only in proportion that this rate has been increased to Quebec City and other places in Quebec Province. Having regard to the tremendous increase in wages and the increased amount being paid to coal producers for coal for the operation of the line the Minister considers the new rate amply justified.

Canadian Government Railways have ordered 8 second hand baggage cars and 1 store car from Hotchkiss-Blue Co.

The Timiskaming and Northern Ontario Ry. has received 4 conductors' vans, the balance of an order of 6, from Preston Car and Coach Co.

The supplementary estimates laid before the House of Commons recently contain \$25,000,000 for rolling stock for Canadian Government Railways.

Canadian Locomotive Co. has delivered 11 consolidation locomotives to the Imperial Munitions Board for the British Government, and one 0-4-0 saddle tank locomotive and one 10 wheel locomotive to Canadian Equipment Co.

The Russian Government is reported to be about to place a second order for 10,000 four wheel box cars of 1,200 poods capacity, out of 40,000 such cars authorized. A number of this type of car has been built in Canada, and it is said that the order for 10,000 is to be placed in Canada.

The National Steel Car Co. is reported to have received orders from the U.S. and French Governments for a large number of regulation army wagons and trucks mainly for immediate delivery. The U.S. order is said to also include freight cars.

Canadian Government Railways have on order with Canadian Car and Foundry Co., 5,000 steel frame box cars, 40 tons capacity, and 1,000 stock cars. Some of the box cars have been delivered, and it is hoped to complete the order early in 1918. Of these orders, 2,000 box cars and 1,000 stock cars are being built at the company's Fort William, Ont., shops.

The C.P.R., between July 11 and Aug. 20, received the following rolling stock: 1 compartment car, 1 steel mail car, 73 freight refrigerator cars and 1 decapod locomotive from its Angus shops, and 6 vans from its Winnipeg shops. There have also been purchased 10 air dump cars, 26 ft. long, and 44 converted vegetable cars, 600 coal cars converted from stone cars, and 775 coal cars converted from ballast cars, were received from Angus shops.

The U.S. Government has on order with American Locomotive Co. and Baldwin Locomotive Works, 1,064 locomotives of various types for service in France. It has also ordered at various plants 8,997 freight cars of different types for similar service. Of the locomotives, 680 are of standard gauge, and the balance of 60 c/m (23½ in.) gauge, and of the cars, 6,000 are of standard gauge and the balance of 60 c/m gauge.

Canadian Government Railways received the following additions to rolling stock between July 13 and Aug. 16: 15 box cars, 50 tons capacity, from Eastern Car Co.; 89 box cars, 30 tons capacity, from Canadian Car & Foundry Co.; 23 second hand Hart-Otis cars, from F. H. Hopkins & Co.; 10 second hand passenger cars; 4 second hand coal cars, 40 tons capacity; 10 coal cars, 35 tons capacity; 32 second hand coal cars, 30 tons capacity; 38 box cars, 30 tons capacity; and 2 second hand locomotives, from General Equipment Co., and 4 baggage cars, from Hotchkiss-Blue Co.

The C.P.R. has ordered the following rolling stock: 102 steel underframe box cars, 36 ft. long, 4 Otons capacity; 19 steel underframe flat cars, 41 ft. long,

40 tons capacity; 2 freight refrigerator cars, 41 ft. long, 30 tons capacity; and 4 coal cars, from its Angus shops, Montreal; and 4 vans, 1 snow plough and 2 flangers from its Winnipeg shops. Orders have been placed for the conversion of 336 single insulated refrigerator cars to vegetable cars, half of the work to be done at Angus shops and half at Winnipeg.

The French Commission, with the assistance of the United States Government, has, according to a report from Washington, placed contracts for 17,000 four-wheel low side gondola freight cars with U.S. builders for railways in France. The distribution has been made among five or six builders, including Standard Steel Car Co., Pressed Steel Car Co., American Car & Foundry Co., Haskell & Barker Car Company and one or two other builders. Cars will be of 12 metric tons capacity with flat bottoms. Each car will require from 5 to 7 tons of steel, or a total of 85,000 to 120,000 tons. The orders for the steel are being distributed among the mills through the Iron and Steel Institute. The contract price is estimated at between \$20,000,000 and \$25,000,000.

The G.T.R. was stated in our last issue to have ordered 1,000 box cars from American Car and Foundry Co. These will be G.T.R. standard steel framed, inside sheathed cars, with friction draft gear, special drawbar uncoupling device, improved roller side bearing, outside all steel carline roof, latest design of door hangers and fixtures, flexible dust guards, etc. Delivery of cars will commence in October or November. Following are the chief details:

Length inside between end sheathing	.....	36 ft.
Width inside between side sheathing	8 ft. 6½ ins.	
Height top of floor to inside carlines at centre	.....	8 ft. 3 13/16 ins.
Length inside between end sills	.....	37 ft. 2½ ins.
Centre to centre of bolster	.....	26 ft. 10 ins.
Width over side sills	.....	9 ft. 9½ ins.
Width over all lat eaves	.....	9 ft. 0½ ins.
Height top of rail to roof at eaves	12 ft. 1 15/16 in.	
Height top or fail to roof at eaves	.....	12 ft. 1 15/16 ins.
Height top of rail to top of running board	.....	13 ft. 1 in.
Height top of rail to top of brake mast	.....	13 ft. 11 ins.

A press dispatch from Columbus, Ohio, states that the State Public Utilities Commission and the State Attorney General are investigating reports that the Toledo and Ohio Central Ry. and the Hocking Valley Ry. have sold coal cars to the Canadian Government Railways. It is said that John Kay, of New Brunswick, acting as agent for the Canadian Government, has admitted that he has purchased 1,700 coal cars from railways in Ohio. The Attorney General is reported to have stated that he is prepared to take drastic action to prevent another car from being sold for use in another state or country, and the discovery that the railways have been selling cars to another Government, while urging as a reason for increases in freight rates the need of additional rolling stock, is said to have caused much amazement. H. E. Speaks, General Superintendent, Toledo and Ohio Central Ry., Columbus, is reported to have stated that his company has sold 250 cars to the Canadian Government, and that they are undergoing repair at the company's shops at Logan. M. S. Connors, General Manager, Hocking Valley Ry., Columbus, is reported to have denied that his company has sold any cars recently, the last sale of cars having been made four years ago.

Great Northern Railway Terminals in Vancouver.

The accompanying illustrations show the passenger and freight stations which have been completed recently in Vancouver, B.C., by the Vancouver, Victoria and Eastern Ry., a subsidiary of the Great Northern Ry., and which are being used jointly by the company last mentioned and by the Northern Pacific Ry.

The Passenger Station, which is L shaped, the main front facing west, is about 375 ft. east of Main St. As the whole property is a fill, the building is

the plastering of the end walls for placing oil paintings showing the Glacier and Yellowstone National Parks. The lighting fixtures are of special design, and are executed in plaster. Alcoves off the main waiting room are fitted with seats and tables for the public. The ticket office is in the centre of the east wall, opposite the two main entrances. There are two principal entrances to the main waiting room from the west, directly opposite to which are

men's room, lavatory, mail room, Great Northern and Northern Express. The leg of the L is about 228 ft. long by 42 ft.

The ground in front of the passenger station is to be laid out in an attractive manner. The station will be reached by two driveways from Main St., and the remaining portion, not taken up by drives and walks, will be laid out with lawn and trees.

A hundred and fifty feet east of the baggage room wing, and in a direct line



Union Passenger Station, Great Northern and Northern Pacific Railways, Vancouver, B.C.

supported on a pile foundation, cluster piles being driven and cut off below the line of perpetual saturation. Upon these, concrete piers were poured, which support reinforced concrete beams, which in turn carry the exterior walls, columns and floors. The skeleton of the building is reinforced concrete, hollow tile, and concrete floors and roof. The exterior has a granite base, carrying up and around all exterior doors terracotta surbase, and red brick above, with terracotta trimmings and cornice.

two entrances leading to a glass covered concourse, running the full length of the building, which in turn leads to 11 tracks, the platforms being covered by umbrella roofs, 700 ft. long. Off the main waiting room in the south wing are located the smoking room, which has access to the concourse, women's retiring room and lavatories. In the south wing are an immigrants' room and lavatories, but having no connection with the main waiting room. A corridor, 12 ft. wide, runs down the centre of the north wing to a

is the power house, 50 ft. x 42 ft., with a brick stack at the east end 90 ft. high. The power house supplies heat to the different buildings through an underground reinforced concrete tunnel, steam to the passenger cars at the stub tracks, and to the passenger car yards. In connection there is a transformer room and a motor driven air compressor. Provision is made in the boiler house for three 125-h.p. return tubular boilers.

There are two freight sheds, the Great Northern one being next the passenger station and the Northern Pacific farther over. They are both 50 x 600 ft. set back 15 ft. from Park Lane, providing a small parking strip in front of the buildings. The Great Northern freight shed is separated from the passenger station at the narrowest point by a 60 ft. driveway. Between the two sheds there are 6 tracks, and on the north side of the Northern Pacific shed is a 60 ft. driveway, and then come the team tracks. The westerly 66 ft. of both sheds, adjoining Park Lane, are two stories high, containing the office portion, the remainder being simply a one story shed, cut in the middle by a fire wall, the easterly half for bonded goods and the westerly half for free goods. Customs accommodation is provided in both sheds. The foundations for the freight sheds are similar to the passenger station, above grade a granite base, brick with terra cotta trimmings, wooden floors.

Locomotive House.—At the east end of the yard there is a 15 stall locomotive house, with a machine shop and boiler house in connection. The depth of the locomotive house is 92 ft., and the machine shop and boiler house is 50 x 160 ft. The foundations are similar to the passenger station, with brick and wood construction above grade. In close proximity to the locomotive house are an oil house, 20 x 36 ft., and a store house, 30 x 73 ft., of similar construction to the machine shop, etc.

In connection with the passenger car



Freight Stations, G.N.R. and N.P.R., Vancouver, B.C.

The centre portion, 45 ft. high, and approximately 106 ft. long, contains the main waiting room, 60 x 100 ft., which runs the full height. Flanked on either side are two wings, about 56 x 65 ft., two stories high. The upper floors of the wings are appropriated to the Great Northern and Northern Pacific for offices.

The main waiting room is panelled in Alaska marble, 7 ft. high, and has marble and terrazzo floors and ornamental plaster ceiling. Provision was made in

carriage entrance. Off the waiting room in the north wing are the parcels and news office and station master's, validating and information offices. Off the corridor leading to the carriage entrance are an exhibition room, a room for station officials and a checking lobby which is connected direct to the baggage room.

The leg of the L, or baggage room wing, is a one story building containing the baggage room, bonded baggage, Canadian and United States customs, train-

yards there are a commissary building, 100 x 40 ft.; an oil house, 20 x 20 ft.; car repairers' building, 30 x 20 ft.; car foreman's building, 20 x 12 ft.; car cleaners' building, 20 x 20 ft.; carpet cleaning building, 16 x 20 ft., and a coal house, 40 x 20 ft.

Under the direction of A. H. Hogeland, Chief Engineer, G.N.R., the buildings were designed by Fred L. Townley, architect, Vancouver, in whose office all the drawings were made and under whose supervision the buildings were erected.

In connection with the erection of the terminals the Vancouver, Victoria and Eastern Ry. has filled in the whole of the area from the southern boundary of the property, which is purchased from the city, to the shore line on the north side of False Creek. This area was previously part of the bed of False Creek. The average depth of the fill required to bring

those now in service to be so stencilled from time to time when shopped for repairs.

Assessing Grand Trunk Pacific Railway Property in Calgary.

The Supreme Court of Canada has, in a recent judgment, upheld in several respects the contention of the City of Calgary, Alta, as to the assessment of the old Royal North West Mounted Police barracks in the city, acquired by the Grand Trunk Pacific Ry. for station purposes, and the company's other property in the city. The City Solicitor in reporting on the judgment to the Council said: "The company contended that the city's method of assessing in 1916 was illegal, claiming that the site comprising 25.3 acres should be assessed on a mileage

pany is entitled to have 4.8 acres assessed at the mileage basis instead of 3.64. The judgment is in effect a practical affirmation of the method of assessment contended for and adopted by the city."

Freight and Passenger Traffic Notes.

The Canadian Government Railways have opened a train enquiry office at Moncton, N.B., station.

The Lethbridge, Alta., Board of Trade is urging the C.P.R. to open a downtown ticket office there.

The Pacific Northwest Tourist Association, which is co-operating with the railway companies in promoting tourist travel in British Columbia, Oregon and Washington is said to have sent out \$150,000 of advertising matter this year.

The trans-Pacific steamship lines operating to the far east, out of Victoria and Vancouver, have advanced the steerage rates by approximately 10% from Sept. 1. The C.P.R. rates on the Empress of Russia are advanced from \$55 to \$60 and on the Empress of Japan and Mont-eagle from \$51 to \$55.

The Grand Trunk Pacific Ry. announces in connection with the removal of rails in the Yellowhead Pass district that tickets must not be sold to Alpland, Burrows, Dyke, Galloway, Geikie, Miette, Hot Springs, Obed, Parkgate, Pedley, Rainbow, rant Brook, Hinton, Hurgwen, Lucerne, Medicine Lodge, Red Pass, Resplendent, Roundcroft, and Yellowhead. Track connection is, however, being maintained and a stub service is in operation between Henry House and Pochontas, and tickets may be sold to Pochontas, Hawes and Interlakes.

The Canadian Freight Association issued on Aug. 1 a new all-rail tariff from Montreal and all eastern territory to Fort William and points west, effective Sept. 1. The new tariff provides an increase in class rates per 100 lbs. as follows—Class 1, 6c; class 2, 3c; class 3, 3c; class 4, 3c; class 5, 2c. Nos. 4 and 5 of Canadian Freight Association's tariff cover respectively class and commodity rates. This is a similar advance to the allowed recently by the Board of Railway Commissioners in connection with raid and water rates.

Delaware and Hudson Co. trains which now run into the G.T.R. Bonaventure station, Montreal, will after Oct. 1 be operated into the C.P.R. Windsor St. station, and from same date Rutland Rd. trains now operating to Montreal over the C.P.R. will be operated over the G.T.R. The new arrangement of the Rutland service is as follows: The Montreal-New York route will be as follows: Montreal to Rouse's Point, N.Y., by G.T.R.; Rouse's Point to White Creek, N.Y., by Rutland Rd.; White Creek to Troy, N.Y., by Boston & Maine Rd.; Troy to New York, by New York Central Rd. The Montreal-Boston route is: Montreal to Rouse's Point, by G.T.R.; Rouse's Point to Bellows Falls, Vt., by Rutland Rd.; Bellows Falls to Boston, by Boston & Maine Rd. The Ottawa-New York route is: Ottawa to Rouse's Point, by G.T.R.; Rouse's Point to White Creek, by Rutland Rd.; White Creek to Troy, by Boston & Maine Rd.; Troy to New York, by New York Central Rd.

Martin N. Todd, President, Galt, Preston & Hespeler St. Ry., and General Manager, Lake Erie & Northern Ry., who had been in ill health for some months, died at his home at Galt, Ont., Aug. 29, aged 59.



Main Waiting Room, G.N.R. and N.P.R. Union Station, Vancouver, B.C.

the property up to the approximate level of Main St. was about 12 ft. The company also owns considerable property on the south side of False Creek.

Stencilling Cars for Bulk Grain Shipments.

The Board of Railway Commissioners passed general order 205 Aug. 15, as follows: Re petition of Alberta Pacific Grain Co. and others, for an order requiring railway companies to stencil inches in box cars suitable for shipments of bulk grain. Upon hearing the matter at Calgary, June 18, the petitioners, the Alberta Farmers' Co-operative Association, and the Canadian Pacific, Canadian Northern, and Grand Trunk Pacific Railways being represented. It is ordered that railway companies be required to stencil inches, on the inside walls of cars used in the grain traffic in Manitoba, Saskatchewan, and Alberta, so as to show the depth of grain loaded therein, one stencil on each side of each door and 3 or 4 ft. therefrom; all such cars hereafter built to be so stencilled before going into service, and

basis of \$1,000 a mile. The city did assess the registered right of way, comprising 3.64 acres, according to the Alberta statute, which says that the roadway and any superstructure thereon of any railway company shall be limited to an assessment of \$1,000 a mile. The area actually comprised in the company's roadway from the eastern limits to the terminal site at the station is 4.8 acres, owing to the fact that the company did not build its station on the registered right of way which would have made it face Eighth Ave, consequently there is more land in the right of way. The Supreme Court rejected the company's contention that all of the terminal site should be assessed on a mileage basis, but allowed the company's appeal as to 4.8 acres comprising its actual roadway. All the rest of the acreage in question is to be assessed according to the method adopted by the city, viz., its actual value per acre. This means that the company's assessment for 1916 must be reduced by the difference between the assessment of 4.8 acres at \$8,000 an acre and the assessment figured on a mileage basis. For each subsequent year it means that the com-

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

Athabaska Northern Ry.—The Dominion Parliament has granted an extension of five years for the building of this projected railway from Edmonton to Athabaska Landing, Alta. The company was incorporated in 1905 to build a railway from Edmonton along the valley of the North Saskatchewan River to Tp. 59, Range 4 west of 5th Meridian, thence north easterly past Smoky Lake to Lac la Biche, and thence northerly to the Athabaska at the confluence with the Clearwater River. (Jan., pg. 18.)

British Columbia and White River Ry. The Dominion Parliament has extended for five years the time within which this projected railway may be built. The route authorized in the act of incorporation is from Bear Creek, where it is to cross the International Boundary between Alaska and British Columbia to the Chilkat River, thence northwesterly to the Alsete River, through the Shakwak valley to Lake Kluane, along the Donjek valley to the White River, thence to the International Boundary between the Yukon Territory and Alaska between the 62nd and the 64th parallels of latitude. The provisional directors named in the act of incorporation, passed 1911, are: C. M. Marpole, G. E. MacDonald, Angus McDonnell, Jas. Ironside, Vancouver, B.C., and J. Rosene, Seattle, Wash. (Mar., pg. 100.)

Calgary & Fernie Ry.—The Dominion Parliament has extended for five years the period within which the company may build its projected railway between Calgary, Alta., and Fernie, B.C. (Feb., pg. 50.)

Canadian Western Ry.—The Dominion Parliament has extended for five years the time within which the company may build its projected railway from the International Boundary through Pincher Creek and Cowley and along the Old Man River to Livingstone Mountain, and thence to Calgary, Alta., with a branch to Michel, B.C. This railway is projected by the same interests as are concerned in the Calgary and Fernie Ry. (Feb., pg. 50.)

Capilano Timber Co.—Rapid progress is reported to have been made with the logging railway being built by the company from the waterfront, immediately east of the Vancouver creosoting works, North Vancouver, along the west bank of the Capilano River to a short distance above the Vancouver waterworks intake. Grading is being gone on with from both ends and rails have been laid from the waterfront to the Capilano River, where a 200 ft. Howe truss span bridge is being erected. Grading was expected to be completed by Aug. 30, and the entire line completed and in operation by Oct. 1. (See Cedars Limited, July, pg. 273.)

Essex Terminal Ry.—The Dominion Parliament has authorized the company to build a branch line from its existing line near Ojibway to Pelton, Ont., seven miles. (May, pg. 193.)

Esquimalt & Nanaimo Ry.—A proposal with a view to settling the controversy with respect to the Johnson St. bridge, Victoria, has been submitted to the company and the Board of Railway Commissioners by the British Columbia Government. It is proposed to erect one bridge capable of carrying all traffic, but the details have not been made public. The three plans which have been under discussion at different times for nearly three years are: (1) A joint highway and rail-

way bridge, being the original scheme. (2) Two bascule bridges in close proximity (the railway company's plan shows a swing span); and (3) To adapt the present bridge for highway purposes and allow the railway to reach the Store St. yards by a more northerly route. (Aug. pg. 306.)

Grand Trunk Ry.—The Dominion Parliament has granted an extension of five years for building of the Lachine, Jacques Cartier, and Maisonneuve Ry. The projected route of the line is from the G.T.R. in Lachine parish, passing in the rear of Mount Royal to Hochelaga Ward, Montreal, or to Maisonneuve, with power to extend the line from the starting point to Dorval in one direction, and to the northern end of the Montreal Island in the other. This is a G.T.R. subsidiary, the company having been incorporated in 1909, and declared a work for the general advantage of Canada in 1911. The company has experienced considerable difficulty in securing its right of way, largely on account of the number of street crossings. It is reported that all difficulties have been cleared up, and that construction may be started next year. (Aug., pg. 306.)

Work is reported to have been started at Campbellford, Ont., on the Belleville-Peterborough line, on the preliminary work of raising the railway bridge over the Trent Valley Canal, which involves straightening the line as it approaches the bridge, and building a new bridge a short distance from the present one. The new bridge will be of steel on concrete piers. It is expected to complete the work this year.

Grand Trunk Pacific Branch Lines.—The Dominion Parliament has extended for five years the time within which the following lines may be built: (1) The completion of the partially graded line from Harte into Brandon, Man., and on to Regina, Sask., with a branch from Brandon to the southern boundary of Manitoba at Turtle Mountain. (2) The extension of the existing Melville-Canora line to Fort Churchill on Hudson Bay. (3) The final completion of the Young-Prince Albert line, on which a train service has been placed in operation recently. (4) The completion of the Tofield-Calgary line from Calgary to the southern boundary of the Alberta at Coutts. (5) The completion of the Regina-Moose Jaw line—this covers the terminal work in Moose Jaw. (6) The extension of the line from Biggar, Sask., now terminating at Loverna, 105 miles, to a junction with the Tofield-Calgary line, or by an independent route into Calgary. (7) A line from the last mentioned line easterly and south easterly to Moose Jaw. (7) The extension of the line now in operation from Oban through Battleford, Sask., to Caruthers, 104 miles, to the main line between Arland and Wainwright, Sask. (Aug., pg. 306.)

Great Northern Ry.—A press report states that plans are being prepared for the construction of a three-car barge landing with trestle approach on Burrard Inlet, at an estimated cost of \$20,000. Application has been made to the Vancouver Harbor Commissioners for permission to build. It is expected that tenders will be asked for at an early date. (Aug., pg. 306.)

Kenora and English Bay Ry.—The Dominion Parliament has incorporated a company with this title to build a railway

from the National Transcontinental Ry. in Kenora District, west of Superior Jct., northerly and westerly, crossing the English River west of Lac Seul, thence northerly and westerly in the District of Patricia, thence westerly and southerly to and in Manitoba to Winnipeg. The office of the company is to be in Toronto; the authorized capital is \$1,000,000, and the company may issue securities for \$50,000 a mile. The provisional directors are: W. Miller, A. LeR. Williams, E. Miller, C. Flatt, and A. A. Macdonald, Toronto. (June, pg. 224.)

Minden, Ont.—A press report states that the project to build a railway into Minden, Ont., has been revived; E. A. Rogers, clerk of the municipality, being interested. The G.T.R. has a line from Lindsay to Haliburton, the nearest point to Minden being at Gelert, about 9 miles off; while the Canadian Northern Ry.—the old Irondale, Bancroft and Ottawa Ry., connecting with the G.T.R. near Kinmount, is about 12 miles off. The country is a difficult one for railway construction.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—A press report states that a contract has been let for the erection of a 1,150,000 bush. grain elevator at North Minneapolis, Minn., and for a 2-story brick and reinforced concrete station at Stevens Point, Wis. (Mar., pg. 101.)

Pacific Great Eastern Ry.—A press report states that C.P.R. engineers have been inspecting this line, looking into its condition, and its possibilities for traffic. The report added that the C.P.R. might acquire the line. The Premier of British Columbia is reported to have stated that the C.P.R. had not made any approaches to the government on the matter. (July, pg. 273.)

The Pere Marquette Ry. is reported to have purchased six lots of the old Chain Co.'s property on Clifford St., Sarnia, Ont., upon which to erect a new station and that the present station near the Imperial Oil Co.'s plant, will be taken down. It is reported that building will be started at once and that the new station will be ready for occupation before the end of the year. (Jan., pg. 20.)

Prince Edward Island Ry.—The Minister of Railways said in the House of Commons recently that the Government had decided not to standardize the P.E.I. Ry. this year. It would take a considerable time to make the change of gauge. The rails would have to be shifted over, the bridges would have to be widened, the road would have to be straightened, and rolling stock would have to be widened or built new. It was, therefore, not desirable that the work be gone on with at present as the war is taking all the money the government has. The government had not decided as to the running of steamships between Pictou and Charlottetown, and between Summerside and Point du Chene for the balance of the year after the car ferry is put in operation. The government will endeavor to keep on all the steamships for which there may be business. (May, pg. 194.)

Red Deer Valley Ry.—An act passed at the Alberta Legislature's last session incorporating a company with this title authorizes the building of a railway from Princess, mileage 192, on the C.P.R. Swift Current-Empress-Bassano line, generally north westerly along the Red Deer River Valley to the Canadian Northern Ry. in Tp. 29, Range 20, west of 4th Meridian;

Canadian Pacific Railway Honor Roll 26.

with branches not exceeding 20 miles each along Berry Creek Valley, Bull Pound Creek Valley, Willow Creek valley, Michichi Creek valley, and a branch along Mitjwin Creek valley to Gem, thence south westerly to Bassano. The capital stock authorized is \$1,000,000, the office is to be at Medicine Hat, and the provisional directors are L. N. Laidlaw, C. S. Blanchard, J. W. Dempsey, H. O. Knowles, and C. F. H. Long, Medicine Hat. (July, pg. 274.)

St. John and Quebec Ry.—A press report states that the New Brunswick Government has cancelled the contract let in February to Nova Scotia Construction Co. for building the northern section of this line from Centreville to a connection with the C.P.R. at Andover, N.B.

The history of the letting of contracts on the line is being investigated by a commission, which has resulted in an admission by A. R. Gould, President of the company, that prior to its being taken over by the government, he had paid Hon. J. K. Fleming, the then Premier, \$100,000 in connection with the negotiation of the contract; and that there were agreements for payments, or actual payments, made in connection with other construction contracts let. A. R. Gould and his associates have entered action to recover about \$350,000 from the Government for the cancellation of the general contract, and the taking over of the undertaking. (July, pg. 274.)

Toronto, Hamilton and Buffalo Ry.—A press report states that work has been started on laying out for yard and terminal purposes the 50 acres acquired recently by the company at Bridgeburg, Ont. The work being done is probably of only a preparatory character, as we were advised recently that plans for laying out the area had not been settled. (Aug. pg. 306.)

Western Dominion Ry.—The Dominion Parliament has extended for two years the time for constructing the main line from the International Boundary in Range 23, west 4th Meridian, northerly via Cardston and Pincher Creek to Lundbreck, on the C. P. R. Crownsnest line, thence to Calgary and Edmonton, Alta, and Fort St. John, B.C., with a branch from Pincher Creek via the south fork of the Old Man River to the Alberta-British Columbia boundary; and has extended for five years the building of a branch line along the north fork of the Old Man River to the Alberta-British Columbia boundary; a branch line along the Highwood River to the Alberta-British Columbia boundary, and another branch along the south branch of the Sheep River to the Alberta-British Columbia boundary. (April, 1915, pg. 137.)

C. P. R. Water Supply in Winnipeg.—The question of the renewal of the contract with the C.P.R. for the supply of water is under consideration by the Winnipeg City Council, and has been referred to a sub-committee of the light, heat, and power committee. Some years ago the C.P.R. promised to pay the city \$200,000 in 10 or 20 yearly instalments for its water supply. The company now desires to be supplied with water from the Shoal Lake plant under construction for the Greater Winnipeg Water District. The constitution of this district provides that water cannot be supplied to any one not paying taxes except under a special agreement. The company contends that the payments made were the equivalent of taxes.

Adams, Wintour Maurice	Watchman	Lundbreck	Killed in action
Anderson, John Henry	Trainman	British Columbia Dist.	Killed in action
Banks, Harold Francis	Supply car man	Moose Jaw	Killed in action
Beer, Samuel Albert	Yardman	Fort William	Killed in action
Binyon, Herbert W.	Assistant agent	Claresholm	Killed in action
Boardman, Sydney A.	Apprentice	Vancouver	Wounded
Bocking, Alfred I.	Bartender	Winnipeg	Wounded
Bryant, James John	Clerk	Angus	Wounded
Buckley, Edward	Car checker	West Toronto	Presumed dead
Bull, James	Carpenter	Regina	Wounded
Carpenter, Kenneth	Laborer	Fort William	Wounded
Carroll, John	Car inspector	Regina	Killed in action
Casson, Robert	Clerk	Calgary	Wounded
Clarke, Andrew Walker	Ashpitman	Lambton	Presumed dead
Collis, Christopher	Constable	Winnipeg	Wounded
Costain, Eden Quayle	Foreman	Vancouver	Wounded
Craig, David Robert	Ashpitman	Lambton	Killed in action
Craig, William	Clerk	Montreal	Wounded
Creamer, Gordon	Locomotive fireman	Winnipeg	Wounded
Cullen, William P.	Apprentice	Ogden	Wounded
Darlin, John Robert	Storekeeper	North Transcona	Wounded
Donaldson, David	Clerk	Calgary	Wounded
Dougall, Ralph	Engineer	Bankhead	Presumed dead
Douglas, George N. C.	Conductor	Moose Jaw	Killed in action
Etheridge, Charles	Oiler	B.C. Coast S.S. Service	Wounded
Fletcher, Walter	Elevator operator	Victoria	Wounded
Graham, John	Yardman	West Toronto	Wounded
Greenway, Frank Gale	Cashier	Saskatoon	Wounded
Hanbury, William G.	Apprentice	Vancouver	Wounded
Hay, Thomas Stuart	Conductor	British Columbia Dist.	Wounded
Headon, Andrew Robert	Clerk	Toronto	Wounded
Henderson, William J.	Storeman	Brandon	Wounded
Hutchings, Charles	Foreman	Cluny	Wounded
Johnson, William P.	Conductor	Alberta District	Wounded
Johnston, Robin Louis	Asst. Trainmaster	Sudbury	Wounded
Keay, George Ness	Locomotive fireman	Cranbrook	Presumed dead
Kerby, Joseph	Helper	Ogden	Killed in action
Kinnear, George W.	Elevator operator	Calgary	Presumed dead
Law, Neil	Fitter	MacLeod	Wounded
Leaming, John	Locomotive fireman	Minnedosa	Wounded
Lockyer, Henry R.	Cook	Winnipeg	Killed in action
Luxton, Thomas Fred	Car cleaner	Winnipeg	Died of wounds
McCurdy, Martin E.	Locomotive fireman	Sutherland	Killed in action
McGary, Withy Paul	Brakeman	Victoria	Presumed dead
McKay, Hugh	Yardman	Lethbridge	Wounded
McLennan, Arthur	Apprentice	Ogden	Killed in action
McLennan, John Donald	Conductor	Field	Killed in action
McLennan, William J.	Waiter	Montreal	Killed in action
McNally, John	Locomotive fireman	Sutherland	Wounded
Marcoux, Adrien	Clerk	Winnipeg	Wounded
Mathers, John	Tuber	Toronto	Wounded
Montgomery, James	Checker	Fort William	Wounded
Murray, Peter	Car repairer	Winnipeg	Presumed dead
Myers, Franklin P.	Clerk	Winnipeg	Wounded
Oatway, Henry	Clerk	Coquitlam	Killed in action
Paulson, Paul Theodore	Locomotive man	Lethbridge	Killed in action
Pickering, Arthur	Steward	Calgary	Wounded
Poulter, Stanley	Checker	Lethbridge	Wounded
Preston, Roy	Fitter	Calgary	Presumed dead
Proctor, John Paterson	Stenographer	Winnipeg	Wounded
Pryce, Alfred Walter	Car repairer	Broadview	Wounded
Purves, Thomas	Locomotive man	Outremont	Wounded
Richards, Alfred	Car repairer	Lambton	Died of wounds
Rix, John Browne	Carpenter	Regina	Killed in action
Rosevear, Frank M.	Yard Helper	West Toronto	Wounded
Sims, Albert Edward	Car checker	Portage la Prairie	Wounded and prisoner
Sincail, George Gunn	Clerk	Montreal	Wounded
Spence, David	Pumpman	Broadview	Killed in action
Stanistreet, William G.	Checker	Sortin	Died of wounds
Stark, David Lightbody	Conductor	Calgary	Killed in action
Sterlin, James E.	Conductor	Medicine Hat	Wounded
Sutherland, William	Car cleaner	Toronto	Wounded
Switzer, Alfred C.	Brakeman	Calgary	Wounded
Tanner, Raymond	Carpenter	Glen Yard	Wounded
Timms, Arthur Charles	Tuber	Outremont	Wounded
Todd, John	Wiper	Kamloops	Killed in action
Toms, Edward	Sectionman	Peterboro	Wounded
Turner, Arthur Roy	Locomotive fireman	New Brunswick Dist.	Wounded
Urquhart, James	Clerk	Winnipeg	Wounded
Vine, Henry William	Clerk	Calgary	Presumed dead
Wall, Michael J.	Clerk	Angus	Presumed dead
Wallis, Henry Lewis	Helper	Winnipeg	Wounded
Warner, W.	Cook	Montreal	Wounded
Websdale, James F.	Brakeman	Medicine Hat	Wounded
White, John W. C.	Locomotive man	Fort William	Wounded
Wilde, Walter L.	Air brake tester	North Transcona	Wounded
Whitehead, Hezekiah	Locomotive man	Lambton	Wounded
Wilson, Richard	Wiper	Lethbridge	Wounded
Williams, William H.	Cook	Montreal	Wounded

Shown on Honor Lists to date: Killed, 456; Wounded, 996; Total, 1,452.

The Switching Problem at Fort William.—A conference of railway officials and representatives of industries at Fort William, Ont., was held there recently. The switching question was left in the hands of W. F. Hogarth, President, Mount McKay & Kakabeka Falls Ry., to draw up proposals whereby all railways may have equal facilities to all industrial plants in the city limits. It was arranged pending the preparation of the plans, that the Mount McKay & Kakabeka Falls Ry. will take over the operation of the spur line to the industrial property owned by the city in the west end.

Cost of Railway Enquiry.—The cost of the commission which reported on the railway situation in Canada, recently, was stated in the Senate recently by Sir James Lougheed, to have been \$70,088.41. W. M. Acworth received \$15,330 for services and \$1,127.99 for expenses; A. H. Smith received \$137 for expenses, he has not yet been paid for his services; Sir Henry Drayton returned the cheque for \$15,000 sent him for his services. Twenty-three engineers were employed in connection with the work, receiving \$28,016.33 for their services, and \$3,854.15 for expenses.

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 Northern Ry. Employees are being canvassed to raise \$101,000 a year for patriotic purposes. The idea is that the amounts subscribed will be deducted from the monthly pay and paid over to the local patriotic funds according to the number of men in the several districts.

Royal Naval Reserve, Auxiliary Motor Boat Patrol Section.—The Canadian Naval Service Department, during the fiscal year ended Mar. 31, entered almost 300 sub-lieutenants, and over 100 men, for

tion and entry of Canadian officers for this service is being continued through the Naval Service Department. Up to the end of the last fiscal year, 382 officers were entered and sent overseas, and several have been decorated for good service.

Royal Naval Canadian Volunteer Reserve (Overseas Division).—The Admiralty accepted the Dominion Government's offer of a number of men belonging to this reserve force, and an overseas division was formed during last year. From the commencement of recruiting for this branch of the service, in the autumn of 1916, to the end of the fiscal year, 1,331 men were enlisted, of whom 1,188 were sent overseas.

Personal Notes.

Major F. D. Burpee, formerly Superintendent, Ottawa Electric Ry., Ottawa, Ont., who went overseas as major in the 207th Battalion, C.E.F., recruited in

Major Jas. A. Macdonnell, D.S.O., (temporary Lt. Col.) of the 1st Canadian Pioneers, familiarly known on the Pacific coast as "Big Jim," has returned to Vancouver on sick leave, after having been at the front for nearly two years.

Lt. Col. H. A. C. Machin, M.L.A. for Kenora, Ont., who went overseas in command of the 94th Battalion, C.E.F., which was recruited from the Port Arthur, Fort William and Kenora districts, and which was broken up after arrival in England, and who was subsequently appointed in command of the 1st Canadian Labor Battalion, which has been engaged in railway construction in France for the 4th Canadian Division, is in Canada on leave of absence.

Lt. Col. D. S. MacInnes, D.S.O., of the Royal Engineers, Imperial Army, who has been granted the French Legion of Honor, is a son of the late Senator Donald MacInnes, of Hamilton, Ont., who was for years a C.P.R. director, and is a brother of W. R. MacInnes, Freight Traffic Manager, C.P.R. He was born in Hamilton, July 19, 1870, graduated from the Royal Military College Kingston, Ont., in 1891, winning the sword of honor and the Governor General's gold medal; was made a second lieutenant in the Royal Engineers in 1891, lieutenant 1894, captain 1905; served in the Ashanti expedition in 1895-6, and was honorably mentioned (star); was through the South African war, 1899-1902, commanding the Royal Engineers throughout the defence of Kimberley; conducted operations in Orange Free State, 1900, and in the Orange River Colony the same year, where he was twice mentioned in dispatches and received the Queen's Medal, with three clasps, the King's Medal, with two clasps, and the D.S.O.; served under the Canadian Government, heading the organization of the Canadian staff service; was D.A.Q.M. General, Halifax, N.S., 1905-7; was appointed chief staff officer, Maritime Provinces command, Sept., 1907, till Mar. 31, 1908, when he was transferred to England, since which he has been a member of the general staff.

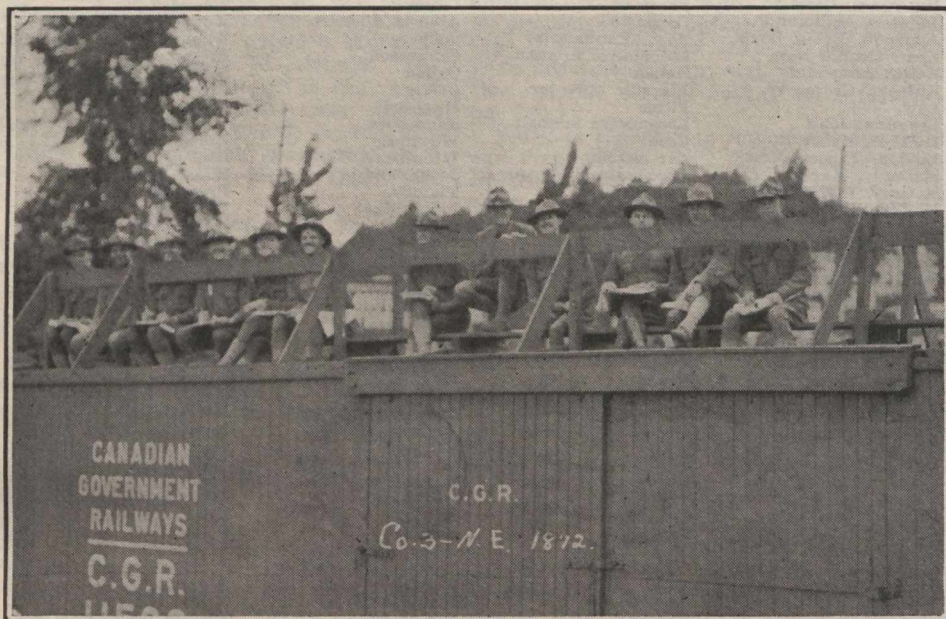
Lt. Col. C. H. Mitchell, M.Can.Soc.C.E., of Toronto, who was created a Companion of the Order of St. Michael and St. George recently, has been decorated with the Order of Leopold by the King of the Belgians.

Major R. Falshaw Morkill, Signal Engineer G.T.R., now serving overseas in the British army, has, it is stated, been appointed by the Director-General of Transportation to take over all signalling work in the area occupied in France and Belgium by the British forces, and is now at general headquarters.

Robert Patterson, formerly Master Mechanic, G.T.R., Stratford, Ont., and latterly with the General Car & Machine Works, Montmagny, Que., addressed a large meeting at Stratford recently, at which returned soldiers from Stratford and Perth County were welcomed home.

Lieut. Clifford Pestell, who is reported as lost in the North Sea, is said to have been in C.P.R. and G.T.R. service formerly, returning to England in 1915.

J. E. Pinault, who has resumed his duties as General Superintendent, Canada & Gulf Terminal Ry., Matane, Que., enlisted Jan. 20, 1916, in the 189th Canadian Battalion, as Major, and left for England, Sept. 21, 1916. On Feb. 25, 1917, he was recalled to Canada to re-



Canadian Government Railways Box Car upholding a portion of the United States Army at the Officers' Training Camp at Plattsburg, N.Y.

duty as chief motor mechanics and motor mechanics, for this branch of the Imperial service.

Canadian Troops Reach England.—It was officially announced, Aug. 27, that the following, among other Canadian troops, had arrived safely in England: Forestry and railway construction drafts from Ottawa and Camp Borden; railway construction draft from Regina; no. 1 draft, railway troops, from London, Ont.; Inland Water Transportation draft from Montreal.

Railway Men and the War.—Sir Eric Geddes, M.P., First Lord of the Admiralty, in his maiden speech in the British House of Commons, recently, said: "You have been told that I am a railway man and that I was once a porter. That is true, and I am very proud of it. Railway men I hold in the highest regard, and that regard has been intensified by what I have seen of their work in France. The railway men out there have given movement to the army. The railways are now ahead of the guns everywhere, and their work has saved thousands of lives at the sacrifice of many of their own."

Royal Naval Air Service.—The selec-

Ottawa, has been gazetted as a temporary lieutenant in the Canadian Railway Troops.

Lt. Col. J. J. Creelman, of the Field Artillery, C.E.F., who has been on active service since the beginning of the war, and who was some months ago made a member of the Distinguished Service Order, and also of the Russian Order of St. George, has returned to Montreal, and has announced that he will run for the House of Commons as a soldier's candidate in the St. Antoine district, there. He is a son of the late A. R. Creelman, K.C., at one time General Counsel, and a director, C.P.R., and is a member of the firm of Casgrain, Mitchell, Holt, McDougall, Creelman and Stairs, advocates, barristers, etc., Montreal. He is said to be the youngest artillery brigade commander in the service, being only 36.

Lieut. C. S. L. Hertzberg, M.C., who is on active service with the 7th Field Company, Canadian Engineers, has been transferred from associate member to member of the Canadian Society of Civil Engineers. He is a son of A. L. Hertzberg, M.Can.Soc.C.E., Engineer, Ontario District, C.P.R., Toronto.

cruit railway construction men, and returned to Canada, Apr. 21, 1917, after spending four weeks in France. He resumed his railway position, July 1, 1917, and is now a reserve officer, C.E.F.

Lt. Col. G. S. Rennie, formerly Chief Medical Officer, Toronto, Hamilton & Buffalo Ry., and Dominion Power & Transmission Co., Hamilton, Ont., has, according to a press dispatch, been made administrator of all British, Canadian and United States military hospitals in the district near Rouen, France, as well as maintaining command of No. 2 Canadian General Hospital. For nearly two years he was in charge of a chain of hospitals in England, and left for France some two months ago to take an important command.

Major J. M. Rolston, M.Can.Soc.C.E., of Vancouver, has been created a Chevalier of the Legion of Honor, by the French Government, for services in railway construction. He graduated from the Royal Military College, Kingston, in 1900, and was for a time in the Grand Trunk Pacific Ry. service, during the building of the mountain section. When war broke out, he was in northern British Columbia. He left Canada as Captain in "Tobin's Tigers," and after serving two months at the front was transferred to a railway construction corps. He was mentioned by Sir Douglas Haig in dispatches in February last.

Capt. Wm. Stewart McTier, who was reported recently to have been awarded the Military Cross for gallantry in the firing line, is the son of A. D. McTier, General Manager, Eastern Lines, C.P.R. He went to the front with the first Canadian Contingent and has been twice wounded, first at Ypres, and lately at Vimy Ridge. At the outbreak of war he was on the ocean returning from Europe and immediately on landing joined the 13th Battalion under Lt. Col. Loomis, now Brigadier-General and D.S.O. He went to the front with that unit and fought with it at Ypres and Festubert. He was wounded by shrapnel and returned to Montreal to convalesce. On returning to the front he was attached to Brigadier-General Loomis' staff, the latter having taken over the command of a brigade in the meantime. After serving in that capacity for a short time one of Lieut. MacTier's feet gave out and an operation was necessary. On his return to the front on this occasion he was transferred to a Montreal Highland battalion and promoted to captain.

Lieut. R. N. Stuart, V.C., D.S.O., was for many years in service of the Allan Line Steamship Co., and since that line came under the management of Canadian Pacific Ocean Services, Ltd., has been second officer on the s.s. Alsatian. He is a son of the late Capt. Neil Stuart, of Prince Edward Island, and obtained a commission in the R.N.R. soon after the declaration of war. In the early stages he was awarded the D.S.O. for services of a distinguished character, and for further services has been awarded the Victoria Cross. It has not transpired what the nature of the services is, but it is understood that he was selected by his brother officers for the honor, under rule 13 of the Royal Warrant of Jan. 29, 1856.

Lieutenant A. E. Voysey, who is reported to have been killed in action, was, prior to enlisting for active service, chief assistant to European Manager, C.P.R., London, Eng.

Lt. Col. F. A. Wanklyn, who has been gazetted a Wing Commander in the Royal

Flying Corps, is the eldest son of F. L. Wanklyn, General Executive Assistant, C.P.R.; Montreal. He was born at Montreal, Aug. 14, 1888; educated at St. Andrews School, Brockville, graduated from the Royal Military College, Kingston, in 1909; received a commission in the Royal Artillery (Imperial), in June, 1909; seconded to Royal Flying Corps in 1911. Since war broke out he has served as Flight Commander in France and Belgium, received the Military Cross June, 1915, and was mentioned in dispatches. In 1916 he was Squadron Commander in command of R.F.C. experimental depot at Orfordness, on the east coast of England, until gazetted Deputy Assistant Director at War Office, London. In July 1917 he was appointed Wing Commander, R.F.C., with lieutenant colonel's rank and sent to Canada to take command of one of the new aviation camps. He is now officer commanding at North Toronto.

Major Chas. Wesley Weldon McLean, D.S.O., of the Royal Horse Artillery, son of Col. (temporary Brig. Gen.) H. H. McLean, M.P. for Queens-Sunbury, N.B., and formerly President, St. John, N.B. Ry., has been given a second bar for distinguished service. Twice in the same day he went forward, at great personal risk, into a heavy barrage to reconnoitre. The following day he led a party under heavy shell fire, threatening to cause grave casualties, and saved the guns and ammunition. He served in the South African War and was in operations in Cape Colony, south of Orange River, 1899-1900, in operations in the Orange Free State, Feb. to May 1900, including operations at Paardeberg and actions at Poplar Grove and Driefontein, and in operations in Orange River Colony, May to Aug. 1900. He was given the Queen's medal, with three clasps, for his South African services.

Canadian Northern Railway Construction, Betterments, Etc.

Quebec Division.—The Dominion Parliament has extended for five years the time for building the projected branch line from St. Jerome to St. Eustache,

Mount Royal Tunnel and Terminal Co.—The Dominion Parliament has extended for five years the period within which the railways and other works authorized to be constructed by the company in Montreal may be built.

Central District.—The new passenger station to be built at Fort William, Ont., will be on Vickers St., between Victoria Ave. and Miles St. The main portion will be 2 stories high, with full sized basement and at the north side of the main building will be the baggage and express building, 1 story high. The main portion of the building will be 56 x 40 ft. with a total height of 28 ft. above the sidewalk. The baggage and express building will be 81 x 30 ft. and will be 16 ft. high over the sidewalk. The footings, foundation and basement walls will be of concrete. The main walls will be of stone and brick and the roof will be covered with felt, pitch and gravel. All floors will be double boarded with maple finish, and all doors and inside finish on ground floor will be selected oak. The first floor will be finished in fir. The interior of walls will be furred and plastered and all windows will be glazed with 32 oz. glass. The three main entrances will be covered over with ornamental iron canopies or marquises. The waiting room, ticket offices, women's waiting room and vestibule will have da-

dos of burlap and the lavatories will be finished with porcelain enamel. The whole of the color scheme will be strictly in accordance with C.N.R. standard colors. The building will be steam heated throughout, and lighted with electricity. There will be cement sidewalk round three sides and paved platform, 700 ft. long, on the track side, the top of which will be level with the rail. The estimated cost is about \$45,000. The plans have been prepared by the company's architect at Winnipeg, J. Schofield, and the work will be done under his supervision.

Tenders are under consideration for the erection of a 205 ft. addition to the company's freight shed on Water St., Winnipeg. J. Schofield, the company's architect, Winnipeg, is in charge.

Vancouver Terminals.—M. H. MacLeod, General Manager, Western Lines, is reported to have stated on a recent visit of inspection to Vancouver, that satisfactory progress was being made with the terminal works at False Creek, and that there was no doubt that the new station would be ready for operation by Dec. 31. A report has been prepared by F. L. Fellows, City Engineer, covering the work yet to be done by the company on the terminal property in order to fulfil the terms of the agreement of Feb. 1913. He says that two pieces of work mentioned in the agreement are not likely to be accomplished within the time fixed, Feb. 1918, viz., the complete filling of False Creek to the grade of city datum, and the boring of the double track electrified tunnel to give access to the terminal yards. Nothing has been done toward carrying out the latter work. Alderman Hamilton, chairman of the utilities committee, is reported to have said in an interview on Aug. 3, that the acquisition of the C.N.R. by the Dominion Government probably means that the city is at the end of its trouble with regard to the carrying out of the agreement under which the company acquired part of the False Creek flats from the city. The government was proposing to take over the line by the purchase of stock, which meant that the government would be in the same position as the company with respect to the city. He had no doubt that the terms of the agreement would be carried out by the government in a fair spirit.

Vancouver Island.—Track laying is reported to be progressing on the line between Victoria and Alberni, a number of Chinamen being employed. (Aug., pg. 309.)

A Grain Shipping Case.—The Matheson Grain Co. shipped a car containing 2,272 bush. of oats from the Dominion Government elevator at Moose Jaw to Ogema, Sask., on the C. P. R. The bill of lading showing the quantity of oats in the car was signed by a C.P.R. employe in the ordinary course, but the consignment was found on being delivered out to be 500 bush. short. The consignors made a claim against the C.P.R. which went to the courts, and was carried on appeal to the Supreme Court of Saskatchewan by the C.P.R. That court on Aug. 3, affirmed the judgment of the lower courts, giving a verdict for the grain company for the full amount claimed, with costs. The court held that the railway company, as a common carrier, was responsible for the safe delivery of the grain shipped.

The Pacific Northwest Passenger Association held its regular meeting at the Empress Hotel, Victoria, B.C., Aug. 10.

Mainly About Railway People Throughout Canada.

Arthur S. Piers, Manager, Real Estate Department, C.P.R., Montreal, was married there, Aug. 21, to Miss Marguerite Helen-Lodge.

G. B. Kirkpatrick, formerly Surveyor General for Ontario, who died recently, aged 82, was, in his early life, in G.T.R. service.

J. M. Cameron, General Superintendent, Alberta District, C.P.R., returned to Calgary at the end of July, after a vacation trip to Alaska.

Sir Augustus M. Nanton, director, C.P.R., and Vice President, Winnipeg Electric Ry., spent a short holiday on the Pacific coast in August.

Lord and Lady Shaughnessy have been entertaining some members of the Governor General's family, the Ladies Maude, Blanche, Anne and Lord Charles Cavendish at St. Andrews, N.B.

D. B. Hanna, Third Vice President, Canadian Northern Ry., was at Kennebunk Beach, Me., for a few days early in August, Mrs. and Miss Hanna spending several weeks there.

George Ham, of the C.P.R. head office staff, Montreal, was entertained to dinner there, Aug. 23, by a number of his friends, in celebration of his 70th birthday. C. E. E. Ussher, Passenger Traffic Manager, C.P.R., presided.

B. Grant Mont, Senior Assistant Engineer on the construction of the Dominion Government dry dock at Lauzon, Que., has been transferred from a student member to an associate member of the Canadian Society of Civil Engineers.

R. M. Halpenny, Superintendent, and **W. Jackson**, Principal Assistant Engineer, Edmonton, Dunvegan and British Columbia Ry., were entertained to dinner at Edmonton, Alta., Aug. 6, by their associates, on leaving the company's service.

W. B. McAllister, who has been in Allan Line Steamship Co.'s service at Boston, Mass., for 20 years, has, since the taking over of the Allan Line offices by Canadian Pacific Ocean Services, Ltd., entered Furness, Withy & Co.'s service there.

George M. MacLeod, who died at St. John, N.B., Aug. 21, aged 65, was father of R. F. MacLeod, Assistant General Passenger Agent, Canadian Government Railways, Moncton, N.B., and A. MacLeod, who is in C.P.R. service in Montreal.

H. K. Goodwin, whose appointment as Local Treasurer, Western Lines, Canadian Government Railways, was announced in our last issue, was, prior to this appointment, for 25 years, clerk in the Comptroller and Treasurer's office at Moncton, N.B.

A. G. Balcer, heretofore in the office of Assistant Manager, Canadian Pacific Ocean Services, Ltd., Montreal, has been appointed Freight Claims Agent, in charge of loss and damage claims in connection with cargoes carried on the company's vessels. Office, Montreal.

G. W. Alexander, who has resigned as Treasurer, Western Lines, G.T.R., Detroit, Mich., spent the summer with his family in the Georgian Bay district. He will continue to reside in Detroit, and contemplates a leisurely tour around the world on the termination of the war.

E. Pennington, President, Minneapolis, St. Paul & Sault Ste. Marie Ry., and Spokane International Ry., and **J. C. Be-**

langer, Agent, M. St. P. & S. S. M. R., Minot, N.D., are being proceeded against at Minot, on a charge of importing intoxicating liquors into North Dakota.

George H. Pope, land valuator for the Dominion Government, who died at Winnipeg, Aug. 2, aged 82, was for some time in Grand Trunk Pacific Ry. service there as Right of Way Agent. His brother, W. W. Pope, is Secretary Hydro Electric Power Commission of Ontario.

L. C. Fritch, who recently resigned from the position of General Manager, Eastern Lines, Canadian Northern Ry., Toronto, was presented with a silver service by the company's officials, prior to leaving Toronto, on his appointment as General Manager, Seaboard Air Line Ry., Norfolk, Va.



J. J. Rose
General Agent, Union Pacific System, Toronto

Lord Shaughnessy, President, C.P.R., dined with the Governor General at Ottawa, Aug. 9. The presence of several leading politicians gave rise to a report that he had been called upon for his views on the current political situation, and even went so far as to say that there was some likelihood of his being asked to head a national government for the remainder of the war.

H. B. Dufief, who has been appointed Assistant to Solicitor, Grand Trunk Pacific Ry., Winnipeg, was born at Washington, D.C., Sept. 16, 1883. He entered G.T.P.R. service, as Solicitor's assistant, at Winnipeg, in which capacity he remained until his present appointment. Prior to entering G.T.P.R. service, he was in the Chicago & North Western Ry.'s legal department, claims section, Chicago, Ill.

E. B. Hagarty, whose appointment as Local Auditor, Western Lines, Canadian Government Railways, Winnipeg, was announced in our last issue, was for some time District Accountant, Intercolonial Ry., New Glasgow, N.S., and since the

operation of the National Transcontinental Ry. by Canadian Government Railways, he has been special auditor at Winnipeg under the Comptroller and Treasurer.

Robert Crosby, who was appointed Car Foreman, Canadian Northern Ry., Moose Jaw, Sask., recently, was born at Hawick, Scotland, May 2, 1886, and entered C.N.R. service Oct. 1, 1911, since when he has been, to Dec. 3, 1911, car repairer, Winnipeg; Oct. 4, 1911 to Apr. 1, 1912, car repairer, Atikokan, Ont.; Apr. 2 to June 9, 1912, car repairer, Winnipeg; June 10 to Aug. 8, 1912, car repairer, Rhien, Sask.; Aug. 9 to Oct. 28, 1912, car repairer, Emerson, Man.; Oct. 29, 1912 to Jan. 23, 1915, Car Inspector, Neepawa, Man.; Jan. 24, 1915 to June 2, 1917, Car Inspector, Blue River, B.C.

John Joseph Rose, whose appointment as General Agent, Union Pacific System, Toronto, was announced in our last issue, was born at Toronto, Nov. 22, 1870, and entered transportation service, Jan. 1885, since when he has been, to Jan. 1887, ticket clerk and stenographer, C. P. R.; Jan. 1887 to Feb. 1891, ticket agent, C.P.R.; Feb. 1891 to May 1892, ticket, telegraph and express agent, C.P.R. Parkdale; May 1892 to Oct. 1906, Travelling Passenger Agent, C.P.R.; Oct. 1906 to Mar. 1911, chief clerk to District Passenger Agent, C.P.R.; Mar. 1911 to Mar. 1912, Travelling Passenger Agent, Robert Reford Co.; Mar. 1912 to July 1, 1917, Canadian Passenger Agent, Union Pacific System, all at Toronto.

Harry Roy Silcox, whose appointment as acting Resident Engineer, C.P.R., Toronto, was announced in our last issue, was born at Mount Brydges, Ont., Jan. 16, 1888, and was educated at the Collegiate School, Ingersoll, Ont., and McMaster University, Toronto, graduating with the degree of B.Sc. in 1912. During the vacations from July 1905 to Sept. 1908, he was engaged variously as section man, brakeman, fireman, operator, etc., on the Tillsonburg, Lake Erie and Pacific Ry., Tillsonburg, Ont.; May to Sept. 1909, on Grand Trunk Pacific Ry. construction with Fauquier Bros. and Foley, Welch & Stewart, contractors, Cochrane, Ont.; May, 1910 to Oct. 1915, chairman, rodman and transit man, C.P.R., Toronto; Oct. 1915 to Apr. 1916, Inspector, Canadian Inspection Co., St. Catharines, Ont.; Apr. 1916 to Apr. 1917, Inspector, Canadian Stewart Co., Toronto; Apr. to June 11, 1917, transit man, C.P.R., Toronto.

J. A. DeWolfe, who has been appointed Terminal Trainmaster, C.P.R., Moose Jaw, Sask., was born at Woodstock, Ont., Aug. 31, 1884, and entered railway service July 10, 1899, since when he has been, to Apr. 16, 1900, stenographer to Locomotive Foreman, G.T.R., London, Ont.; Apr. 17, 1900, to May 12, 1903, not in railway service; May 13 to June 23, 1903, clerk to Car Foreman, C.P.R., Toronto; June 23, 1903, to May 22, 1905, clerk in offices of Trainmaster, and of Superintendent, C.P.R., London, Ont., and Toronto; May 22, 1905, to May 7, 1907, clerk to Manager of Construction, C.P.R., Toronto; May 7, 1907, to June 21, 1909, secretary to General Manager, C.P.R., Montreal; June 23 to Aug. 23, 1909, assistant chief clerk, Second Vice President's office, C.P.R., Winnipeg; Aug. 24, 1909, to Dec. 31, 1914, chief clerk, Engineering Department, Western Lines, C. P. R., Winnipeg; Jan. 1, 1915 to Aug. 1,

1917, chief clerk to Vice President and General Manager, Western Lines, C.P.R., Winnipeg.

Morley Donaldson, M.Can.Soc.C.E., who has resigned from the position of Vice President and General Manager, Grand Trunk Pacific Ry., and Grand Trunk Pacific Coast Steamship Co., Winnipeg, on account of ill health, was born near Edinburgh, Scotland, May 1, 1851, and was educated in France and Canada. After spending some time in E. Gilbert & Co.'s engine works, Montreal, he entered W. & F. Shanly's service, and was with them during the construction of the Hoosac tunnel in Massachusetts. He entered railway service in 1881, as chief draftsman, Canada Atlantic Ry., since when he has been, consecutively, Superintendent Mechanical Department; Superintendent of Traffic and Mechanical Department, and to Apr. 11, 1898, Superintendent, same road, Ottawa; and on the absorption of the Canada Atlantic Ry. by the G.T.R., and its operation as the Ottawa Division, G.T.R., he was appointed Superintendent, retaining that position until June 17, 1912, when he was appointed to the position from which he resigned, Aug. 1.

William Pittman Hinton, who has been appointed Vice President and General Manager, Grand Trunk Pacific Ry. and Grand Trunk Pacific Coast Steamship Co., Winnipeg, was born at Hintonburg, Ont., Aug. 30, 1871, and entered railway service May 3, 1887, since when he has been, to Aug. 1891, clerk, freight passenger and car accounts, and travelling auditor, Canada Atlantic Ry.; Aug. 1891 to Mar. 1898, rate clerk, same road, and accountant, Canada Atlantic Fast Freight Line; Mar. 1898 to June 30, 1901, Assistant General Freight Agent, same road, and Canada Atlantic Transit Co.; June 30, 1910, to Jan. 30, 1913, General Freight Agent, same road; Jan. 30, 1903, to Oct. 1905, General Passenger and Freight Agent, same road; Oct. 1905 to Jan. 1907, General Agent, Passenger Department, G.T.R., Ottawa, Ont.; Jan. 1907 to Apr. 1909, Assistant General Passenger and Ticket Agent, same road, Montreal; Apr. 1909 to Feb. 1914, General Passenger Agent, Grand Trunk Pacific Ry., Winnipeg; Feb. to Oct. 1914, Assistant Passenger Traffic Manager, same road, Winnipeg; Oct. 1914 to Nov. 11, 1915, Assistant Passenger Traffic Manager, G.T.R. and Grand Trunk Pacific Ry., Montreal; Nov. 11, 1915, to Aug. 1, 1917, Traffic Manager, G.T.P.R., and Grand Trunk Pacific Coast Steamship Co., and Western Traffic Manager, Canadian Government Railways, Winnipeg.

Great Britain's Reduced Railway Service.—Roughly speaking, all train services in Great Britain have been reduced by one-third during the war. The companies intend to adhere to the present restricted time table, and in no circumstances will extra holiday trains be run. So many locomotives have been withdrawn for service in France and man power has been so severely depleted that any increase in number is out of the question.

Punishment for Intoxication.—J. W. Maher, a C.P.R. relieving agent, was sentenced at Camrose, Alta., Aug. 14, to two months imprisonment for being under the influence of liquor at Bawlf station, of which he was in charge. He was also charged with stealing liquor from a shipment under his charge and was sentenced to one month additional therefor.

Fuel Economy on the Canadian Pacific Railway.

Alfred Price, Assistant General Manager, Eastern Lines, has issued a circular to employes as follows:

War conditions have brought about a serious situation in the fuel supply of the country, both for railway and commercial purposes. As a patriotic duty, therefore, if not for any other reason, everyone in the railway service particularly, is called upon to exercise every effort within his power to conserve the fuel supply, so that the transportation of supplies, which is such an important factor in the successful prosecution of the war in the interests of the Empire, may not suffer throughout the coming winter as the result of a fuel shortage. Although on some few divisions of Eastern Lines our fuel consumption per 1000 ton miles hauled has recently been showing some slight decrease as



Morley Donaldson
ex Vice President and General Manager, Grand Trunk Pacific Railway

compared with previous years, on most divisions there have been heavy increases. It is, therefore, important that, quite apart from the heavy increased expense involved on account of the greatly advanced prices, we should economize in our consumption, so as, at the very least, to bring it down to what has been accomplished in the past. This appeal is, therefore, made to all employes to assist, in so far as they are personally able to do, in this important and patriotic effort in the country's interests. Close observation of the following rules by the various classes of employes mentioned, will materially assist in effecting a reduction in fuel consumption.

Locomotive Foremen.—Keep in close touch with yard and be kept advised of the probable time of arrival of inbound engines, and advise the yard of the time engines in the round house will be available for service. Engines for regular passenger trains to be turned out of round house on time, unless trains are reported to be more than 30 minutes late. Unassigned engines that are dead, not to be put under steam while there are engines

in the house or on shop tracks under fire and ready for service. Engines to be put under steam not to be lighted up more than an hour and a half before they are to be placed in charge of the engine crews. When it is known that an engine placed in the round house is to go into service again within 12 hours, the fire should not be dumped, unless upon special authority. Carefully select bank firemen and thoroughly post them in the best methods to employ in banking fires, and the proper amount of water and steam pressure required. Sufficient water to be put in boilers before fires are banked or dumped so as to avoid the necessity of having to work the inspirators while engines are in the round house. Excessive use of blowers to be avoided. Coal shutes and surroundings to be kept clean and all coal picked up regularly. Maintenance regulations, covering pistons, valves, mountings, boiler leaks, etc., to be strictly observed.

Hostlers.—Take charge of engines as soon as they arrive on the shop tracks and house them as quickly as possible. See that coal is properly trimmed forward on tenders, and so as not to fall off, at all coaling plants. Tenders to be given only the amount of coal prescribed by the superintendent and not to be overloaded. Excessive use of the injector and blower at the ash pit and on shop tracks to be avoided.

Air Brake and Car Inspectors.—Inspections and tests to be made promptly and thoroughly so as to avoid delays. Where there is yard testing plant in operation, endeavors to be made to have train line charged 15 minutes before the time set for departure.

Engineers and Firemen.—Examine their engines as soon as they come on duty, ascertaining condition of fire and build it up gradually so that when coupled on trains, start can be made with a good fire. Get away from shop track early enough to permit of engine being coupled to train at least 15 minutes before time set for departure. Take full advantage of velocity grades under conditions consistent with speed regulations. When switching is done at water stations take water after completion of switching, and while conductor is obtaining waybills and orders. On completion of trips, engine should be delivered to the hostler with sufficient water in boiler and a good fire in front of grates. Fire carefully and economically, avoiding waste of steam through safety valves.

Yardmasters and Yard Foremen.—Keep round house advised of probable arrival time of trains, and be kept advised of time engine in the round house will be ready for service. Keep tracks open for prompt movement of road engines between the shop tracks and trains. Use good judgment in ordering trains to leave at hours at which they will be ready and be able to get away. Avoid overloading engines in switching movements.

Conductors and Trainmen.—Where required to bring engines from shop track, be on hand to do so 25 minutes before time train is ordered for. Before beginning to switch cars first see that all hand brakes are released. Keep sharp look out for sticking brakes and air leaks, bleeding and carding cars when detected. On arrival at destination and clear on siding, detach engine and when required deliver it promptly on shop track. Avoid delays

within their control.

Train Dispatchers.—Order trains at hours when they can get away from terminals and move to best advantage. Anticipate train orders needed and have them ready before trains reach stations at which they are required, using "19" orders when permissible. Orders and telegrams, when at all possible, to be put out at stations where trains must stop for water or to meet other trains, so as to avoid unnecessary stops. Extra stops are

expensive and result in a waste of fuel. Take adverse grades into consideration in deciding which train is to hold main track at meeting points arranged by train orders. Avoid the running of light engines and full tonnage trains in the same direction, but divide tonnage moving in the opposite direction to the preponderating traffic equally between engines moving in that direction.

Agents and Operators.—Avoid unnecessary stops and delays to trains,

using train order hoops for "19" orders, clearances and telegrams. When switching is necessary prepare form 77a in triplicate, handing one copy to front trainman when train stops, the second copy to conductor, retaining the third on file.

[EDITOR'S NOTE.—The division superintendents are holding meetings of their local officers and employes, to enlist their interest in the campaign, and the management hopes to obtain very good results.]

The First Battalion, Canadian Railway Troops' Organization and its Work in France.

The organization of this battalion, under the name of the 1st Canadian Overseas Railway Construction Battalion, was started in Toronto, early in May, 1916, the head office being at 189 Queen St. West; branch offices being opened at St. John, N.B., Montreal, Ottawa, Pembroke, Hamilton, London, North Bay, Sudbury, Cochrane and Fort William. Recruits were taken everywhere throughout the territory between Halifax and Winnipeg, a few men coming from Edmonton and other western centres to enlist. On July 28, 1916, after recruiting was completed, the battalion went into camp at Valcartier, Que., for training, sailing for England on Sept. 13, 1916. While it was expected that a sojourn of at least two months would be made in England, the battalion found itself actually engaged on railway work in France on Oct. 28, 1916. Probably no other battalion from Canada spent so short a time in getting its men, and its training; and in afterwards getting overseas and down to actual business in France. There have been a number of changes in the officers since the battalion went overseas, owing to promotions, but with one exception, all the original officers are still with the battalion, the other, Capt. G. S. F. Grant, having been invalidated home to Canada. The organization is now as follows:

Headquarters Company: Officer commanding, Lt. Col. Blair Ripley, M.Can. Soc.C.E., M.Am.Soc.C.E., Engineer of Grade Separation, C.P.R., Toronto; 2nd in command, Major T. T. Loudon, Professor Civil Engineering, Toronto University, and consulting engineer, Toronto; Chief Engineer, Major Wm. Monds, of Clarke and Monds, consulting engineers and contractors, Toronto; Capt. and Adj., E. D. Toye, Storekeeper, Eastern Lines, Canadian Northern Ry., Toronto; Quartermaster, Capt. E. P. Muntz, B.A.Sc., Welland Canal staff; Paymaster, Capt. H. G. Henson, B.A.Sc., McGill University; Medical Officer, Capt. C. P. Fenwick; Chaplain, Capt. E. F. Church; Transport Officer, Mechanical and Horse Transport, Lieut. G. O. Fleming, Toronto Ry.; Officer in charge Technical Stores and Equipment, Lieut. L. McD. Fleming, formerly private secretary to Sir George Bury, Vice President, C.P.R.; Veterinary Officer, Capt. T. R. R. Hogan.

A Company.—Officer commanding, Major J. B. Heron, Division Engineer, Canadian Northern Ry.; 2nd in command, Capt. G. B. Little, contractor, Canadian Northern Ry.; Lieutenants, G. A. Butler, Division Engineer, National Transcontinental Ry.; C. P. VanNorman, Engineer, Toronto and York Radial Ry.; F. G. Pusey, engineer and contractor; W. J. Wright, civil engineer.

B Company.—Officer commanding, Major A. R. Ketterson, Assistant Bridge Engineer, C.P.R.; 2nd in command, Capt. H.

B. Muckleston, Assistant Chief Engineer, Natural Resources Department, C.P.R., Calgary; Lieutenants, G. H. Pethick, engineer and contractor; F. A. R. McNair, Superintendent, Toronto Works Department; J. A. Hamilton, Bridge and Building Master, C.P.R.; H. J. Black, Resident Engineer, C.P.R.

C Company.—Officer commanding, Major Holland, Division Engineer, National Transcontinental Ry.; 2nd in command, Capt. L. B. Allan, Assistant Engineer, City Works Department, Toronto; Lieutenants, W. J. Norman, Resident Engineer, C.P.R.; R. F. Francis, structural contractor; E. H. Jupp, civil engineer and contractor; O. P. Hertzberg, Engineering Department, C.P.R.

D Company.—Officer commanding, Major F. G. Cross, Inspecting Engineer, Natural Resources Dept., C.P.R.; 2nd in command, Capt. A. T. MacDonald, Resident Engineer, C.P.R.; Lieutenants, C. M. Saul, civil engineer; H. M. Jupp, engineer and contractor; H. R. McQueen, civil engineer; H. L. Gilmour, civil engineer; R. E. Lindsay, civil engineer.

The battalion's total strength is 1,062, including 6 warrant officers, 52 staff sergeants and sergeants, 89 corporals, and 40 lance-corporals, making a total strength of 1,065 all told. The transport consists of 10 riding horses, 100 teams of mules, 2 motor cars, 8 light motor lorries, 9 heavy motor lorries, 4 field kitchens, 4 water carts, etc. The equipment consists of practically the same articles that would be used in Canada under peace conditions. Each company and headquarters is furnished with first class engineering and surveying equipment, and each carries one surveyor with the regular survey party. Tools comprise practically everything that is necessary in building a road bed, culverts, bridges and buildings and the tracklaying and ballasting of a railway, and the size of the outfit can be judged from the fact that it took three train loads, totalling 130 cars to move the battalion from its former location in France to its present one. The battalion's headquarters staff is quartered, and move about in railway cars that have been fitted up specially for the purpose. These comprise an office car for the officer commanding and the second in command; orderly room car, in which the battalion's regular business, including preparation of plans and reports, etc., is carried on; tool car, messing car, cooking car, and two sleeping cars. The battalion also carries with it a pile driving apparatus, which was built in France, and occupies three cars. The majority of the men live in tents, but comfortable huts are being acquired to carry about with the battalion when conditions permit. They are collapsible and are easily taken down and set up again.

When the battalion first arrived in

France it was put on to double tracking of a then existing standard gauge line, which it double tracked for 8 miles, and station yards and terminals were doubled in capacity. In addition to the laying of track, putting in switches, ballasting, etc., the men moved 34,000 cu. yd. of earth, and the whole work was done in 28 days, which would probably compare favorably with similar work done in peace times in Canada. There was rather a novel experience on this work, in connection with putting in a water supply, which had been under consideration for months. Water was being hauled in in railway tanks and dumped into a reservoir, and on several occasions the consumption was such that the reservoir was nearly emptied before a further supply was brought in. A "push" was contemplated at the time, and it was deemed of the utmost importance that a safe and sufficient water supply be put in. Surveys were quickly made by members of the battalion, and it was found necessary to lay 30,000 ft. of 6 in. pipe line, and to pump the water against a head of nearly 300 ft. The pumps and other material were quickly secured and the excavation for the laying of the mains and the elevated water tanks were started at once. It was explained to the men that the work must be completed in less than two weeks time, and notwithstanding the terrible weather encountered, the system was in operation on the tenth day.

From the above mentioned work and location the battalion was suddenly moved on to light railways on a portion of the western front. Two weeks afterward it took over a portion of the French area, which was further augmented at a later date, and during last winter the battalion handled not only the maintenance of all the light railways in the Army, but did all the construction on the forward lines, some of which ran well in advance of the field guns. The light railway handled in the area referred to constituted more than half of the light railways on the western front at the time. Six light railway construction and maintenance companies of 250 men each, were organized and worked with the battalion, under its instructions on this work.

The importance of light railways and the difficulties of maintenance and construction, should not be underestimated. Some of them are built in summer when the ground is dry, and when it is possible to operate them without ballast, and of course when winter comes on, the maintenance is a very big matter, the battalion's experience last winter being, that in some cases it took 20 men per mile, which is very large when it is considered that two or three men per mile will maintain standard gauge railways in Canada. For ballast, brick from ruined towns and villages is hauled in and

tamped underneath the steel ties, and where ballast is not obtainable, it is necessary to salvage boards, pieces of planks, sheets of galvanized iron, or whatever is available, to be laid longitudinally under the track to keep it from sinking into the mud, so that operations can be carried on and rations and munitions carried up to the men at the front. A good deal of not only construction but maintenance had to be done at times when weather conditions would not permit the enemy's viewing the battalion, otherwise heavy casualties would have resulted. This necessitated the doing of considerable work at night, and the choosing of dull and foggy days, which were not uncommon, for the rest. The lines of course were built as far as possible so as not to be under observation, but could not always be done.

When lines were taken over from the French, in order to keep things going, it was necessary for the battalion, not only to handle maintenance and construction, but operation also. The operation was very novel and pleasing to the men, and the locomotive men and firemen, fitters, etc., were brought into play. This was their work, and they were right at home again. The battalion was able to furnish 25 locomotive men immediately.

Last spring, when the German retreat began, the battalion was at once taken off the light railways and put on to standard gauge ones. Surveys were made quickly and the first 11 miles connecting up with a well known city which had been blown to pieces by the Huns before retiring, was put in and operated on the fourteenth day. The battalion had a good many trains off the track during construction, on account of the mud, shell holes, etc., but fortunately the line has been doing good service ever since. Four days after it was handed over for operation, it was munitioning and feeding 80,000 men. The battalion was very short of equipment on this work, and notwithstanding the fact that it had only 6 spike mauls of the regular pattern to put in the spikes, an average of a mile a day, including grading and track laying, was maintained. The rails and ties had to be man handled. The battalion had on this work, attached to it for labor, two brigades, consisting of the flower of the British Army, including many titled officers. One of them, an Earl, was called by the rest of the officers "Lizzie," and as a matter of fact they all had nicknames. The spirit of these officers was splendid.

On standard gauge work in that area last spring the battalion built altogether about 60 miles of track, the larger portion of which is double tracked, and the line was of such importance that it was ballasted with crushed rock. A large volume of traffic is being carried over it. It was blown up in one or two places by the enemy during construction, but quickly repaired without casualties. This line was carried so close to the Hindenburg line that the Army command deemed it wise to discontinue the work, which the men of the battalion were only too anxious at the time to carry on.

The battalion is now in a new area, and on a very agreeable piece of work, where its experiences will not be quite so strenuous as they were at a previous location. Since spring the battalion's equipment has been brought up to what it should be, and it is now in a position to do good work. Without the use of an American track laying machine the battalion accomplished a mile and three-quarters of standard gauge track laying in a single day.

Transportation Appointments Throughout Canada.

Canadian Northern Ry. — G. A. KEELER, heretofore Manager, Prince Edward Hotel, Brandon, Man., has been appointed Manager, Prince Arthur Hotel, Port Arthur, Ont., vice J. F. Harvey, resigned.

H. MILNES has been appointed Service Inspector, Sleeping, Dining and Parlor Car Department, Western Lines, Winnipeg.

P. K. HUNT, heretofore Assistant Manager, Chateau Frontenac, Quebec, Que., has been appointed Manager, Prince Edward Hotel, Brandon, Man., vice G. A. Keeler, transferred.

L. E. AYER, heretofore Commercial Agent, St. Louis, Mo., has been appointed General Agent there, with supervision of both passenger and freight matters.

Canadian Pacific Ocean Services, Ltd. — H. F. BRADLEY, heretofore Passenger

Jaw, Sask., vice D. England.

S. F. PIERCE, heretofore acting Manager, Royal Alexandra Hotel, Winnipeg, has been appointed Manager, Hotel Paliser, Calgary, Alta., vice E. H. Godwin, resigned.

F. B. MacSWAIN, heretofore storeman, Ogden, Alta., has been appointed storekeeper, Calgary West, Alta., vice G. F. Rosengren, transferred.

G. F. ROSENGREN, heretofore Storekeeper, Calgary West, Alta., has been appointed Storekeeper, Lethbridge, Alta., vice N. C. Stibbs, transferred.

N. C. STIBBS, heretofore Storekeeper, Lethbridge, Alta., has been appointed Storekeeper, Nelson, B.C., vice D. S. Schofield, transferred.

D. S. SCHOFIELD, heretofore Storekeeper, Nelson, B.C., has been appointed Storekeeper, Revelstoke, B.C., vice T. W. Madden, transferred.

T. W. MADDEN, heretofore Storekeeper, Revelstoke, B.C., has been appointed Storekeeper, Coquitlam, B.C.

Grand Trunk Ry. — H. G. KELLEY, heretofore Vice President (Transportation, Maintenance and Construction), has been elected President, vice E. J. Chamberlin, resigned. Office, Montreal.

G. C. JONES, heretofore Vice President and General Manager, Central Vermont Ry., St. Albans, Vt., has been appointed Assistant to President, G.T.R. Office, Toronto.

U. E. GILLEN, heretofore General Superintendent, Western Lines, Chicago, Ill., has been appointed Vice President, in charge of operation. Office, Montreal.

W. D. ROBB, heretofore Superintendent of Motive Power, has been appointed Vice President, in charge of motive power, car equipment and machinery. Office, Montreal.

O. W. DUFF, heretofore dispatcher, has been appointed Chief Dispatcher, St. Thomas, Ont., vice J. A. McLardy, resigned.

Grand Trunk Pacific Ry. — H. G. KELLEY, heretofore Vice President (Transportation, Maintenance and Construction), G.T.R., who has been elected President, G.T.R., vice E. J. Chamberlin, resigned, has also been elected President, G.T.P.R. Office, Montreal.

W. P. HINTON, heretofore Traffic Manager, has been appointed Vice President and General Manager, G.T.P.R. and Grand Trunk Pacific Steamship Co., vice Morley Donaldson, resigned on account of ill health. Office, Winnipeg.

H. B. DUFIEF has been appointed Assistant to Solicitor, vice H. Wismer, resigned and enlisted in the United States Signal Enlisted Reserve Corps. Office, Winnipeg.

Kettle Valley Ry. — O. E. FISHER, heretofore Auditor-Traffic Manager and Superintendent, has been appointed Comptroller-Traffic Manager. Office, Penticton, B.C.

W. J. MULHERN has been appointed General Superintendent. Office, Penticton, B.C.

A. A. SMITH has been appointed Superintendent, vice O. E. Fisher, Office, Penticton, B.C.

New York Central Rd., West Shore Rd. — JOSEPH W. HICKSON, heretofore Contracting Freight Agent, Toronto, has been appointed General Canadian Freight Agent, in charge of Canadian traffic west of Sharbot Lake and Kingston, Ont., vice W. A. Wilson, retired under the pension system. Office, Toronto.



W. P. Hinton
Vice President and General Manager, Grand Trunk Pacific Railway and Grand Trunk Pacific Coast Steamship Co.

Manager, Allan Line Steamship Co., Montreal, has been appointed Assistant General Passenger Agent, Trans-Pacific Lines, C.P.O.S. Office, Montreal.

A. G. BALCER, heretofore in Assistant Manager's office, has been appointed Freight Claims Agent, in charge of loss and damage claims in connection with cargoes carried on the company's vessels. Office, Montreal.

Canadian Pacific Ry. — B. A. NEALE, heretofore accountant, Lake Louise, Alta., is reported to have been appointed Assistant Manager, Chateau Frontenac, Quebec, Que., vice P. K. Hunt.

A. MENARY has been appointed Yardmaster, Farnham, Que.

A. L. DUBOIS has been appointed Passenger Department representative, French River, Ont., to Nov. 30, to look after the hunter traffic to that district.

J. A. DeWOLFE, heretofore chief clerk to Vice President and General Manager, Western Lines, Winnipeg, has been appointed Terminal Trainmaster, Moose

The Dominion Government's Policy Respecting the Canadian Northern and Grand Trunk Pacific Railways.

The Finance Minister announced in the House of Commons, Aug. 1, that the government had decided to make a demand loan of \$7,500,000 to the Grand Trunk Pacific Ry. Co., to meet the deficit on operating account, and for betterments and rolling stock, the same to be secured by mortgage and to bear interest at 6%. He said that the government would take power to constitute the G.T.P.R. board of directors as it might see fit and that he looked forward to the government acquiring the line in the future. The G.T.R. would not be released from its obligations in respect to the G.T.P.R.

In regard to the Canadian Northern Ry., he said that the government already held \$40,000,000 of the capital stock, and that it proposed to acquire the remaining \$60,000,000 for the Dominion, making it the absolute owner of the C.N.R. system, including its many constituent and subsidiary railway, express, transfer, elevator, steamship, telegraph and other companies and giving the government entire control of the company's system from Nova Scotia to British Columbia. He gave notice of the following resolution to be moved in committee of the whole house:

"Resolved, that it is expedient to provide: That His Majesty may acquire on such terms and conditions satisfactory to the Governor in Council as may be set out in the agreement to be made with the owners and pledgees of not less than five-sixths thereof, and for a price to be determined as hereinafter provided, the 600,000 shares of capital stock of the Canadian Northern Ry. Co. (par value \$60,000,000), not now held by the Minister of Finance, in trust for His Majesty.

"That the Governor in Council shall appoint one arbitrator, the said owners and pledgees shall appoint another, and the two so appointed shall appoint a third, or failing agreement as to such appointment, the third arbitrator shall be appointed by the Senior Judge of the Exchequer Court.

"The said arbitrators shall determine the value of the said 600,000 shares as of the date of the said agreement and the said arbitrators shall proceed in a summary way and may apply their own judgment in determining such value and may receive with respect thereto, such reports and statements authenticated in such way as they may decide and such evidence as they may deem necessary or helpful, examine witnesses under oath and hear the parties by counsel or representatives and that the unanimous determination of the arbitrators shall be final, but should the determination not be unanimous an appeal from such determination shall lie to the Supreme Court of Canada on behalf of the Governor in Council, or of the owners or pledgees, upon any question of law or fact, such appeal to be made within 30 days from the rendering of the determination.

"That the amount of the value so determined shall be paid out of the Consolidated Revenue Fund, or otherwise secured in accordance with the terms of the said agreement.

"That upon the making of said agreement, at least five-sixths of the said 600,000 shares shall be transferred to the Minister of Finance in trust for His Majesty, and if there be any of said 600,000 shares not transferred as aforesaid, the Governor in Council may declare said

shares to be the property of the Minister of Finance in trust for His Majesty, and the same shall thereupon become the property of His Majesty and shall be paid for pro rata with the shares so transferred.

"That so soon as five-sixths of said shares has been transferred as aforesaid, the Governor in Council may assist the Canadian Northern Ry. Co., or any company included in the Canadian Northern Ry. System, in paying and settling any indebtedness of such company or postponing the payment thereof on such terms as may be agreed upon, and for such purposes may make advances out of the Consolidated Revenue Fund, may guarantee payment in whole or in part, and may give the obligations or securities of the government in connection therewith.

"That the Canadian Northern Ry. Co., and each company included in the Canadian Northern Ry. System, shall from time to time do such acts and things, make and issue such agreements, obligations and securities in connection with the payment or settlement or postponement of payment of the said claim as the Minister of Finance may require.

"That the necessary qualification shares for directors may be transferred to or allowed to remain in their names by the Minister of Finance on such conditions as he may determine."

After considerable debate, the resolution was agreed to on Aug. 9, and the Finance Minister at once introduced a bill providing for carrying out its terms. When the motion for the bill's second reading was under consideration, Hon. G. P. Graham, ex Minister of Railways, moved on Aug. 14, an amendment as follows:

"Whereas this Parliament was induced to guarantee the securities of the Canadian Northern Ry. for \$45,000,000 on the representation that with that amount the said railway could be completed and operated without further aid from Parliament, which arrangement is contained in chap. 20 of 4-5 George V. And whereas by sec. 24 of the said act it is enacted as follows: 'If authorized by the Parliament of Canada, the Governor in Council may on such terms and conditions (if any) as Parliament may prescribe at any time while any event of default shall exist and be continuing, by order declare the equity of redemption of the Canadian Northern Co. and of all other persons whomsoever in the mortgaged premises to be foreclosed, and thereupon the equity of redemption of the Canadian Northern (and of such other persons) in the mortgaged premises and every part thereof shall be and become absolutely barred and foreclosed, and the same shall thereupon be vested in His Majesty in right of the Dominion of Canada, any statutory enactment or any rule of law or equity to the contrary notwithstanding. And whereas the Minister of Finance in introducing this measure stated that the company is unable to pay its underlying interest charges and to continue the operation of the road. And whereas the report of the commissioners appointed by the present government to investigate and report upon the conditions of the Canadian Northern Ry. states that there is no value, either actual or potential, attached to the capital stock of the C.N.R. Co. It is therefore resolved that in the

opinion of this house, Parliament should proceed to take over the said railway for the benefit of the people of Canada under the said provision of the said act, and that the capital stock of the said C.N.R. Co. should be considered in the said foreclosure order as possessing no value and that nothing should be paid therefor."

This amendment was negatived on Aug. 16 by a vote of 67 to 41, the second reading was carried by the same vote reversed, and the bill was subsequently taken up in committee of the whole, the debate continuing until Aug. 29, when the second reading was carried by the application of closure by a majority of 27.

During its passage through the house the bill was amended in several respects, and it may, of course, be further amended before being finally passed by the Senate.

The Daylight Saving Proposal.

The bill introduced into the House of Commons to provide for the time in Canada being in advance of the solar mean time during the summer months, commonly referred to as the Daylight Saving Bill, has been dropped for the present session. While the measure was introduced early in the session it did not come up for a second reading until July 23. The full text of the measure was given in Canadian Railway and Marine World for July.

The Minister of Trade and Commerce, who had charge of the bill, said in part: "Daylight saving is a somewhat new thing in most countries and absolutely new, on a national scale, in Canada. The arguments in favor of daylight saving during the summer months are based upon a good many considerations. The primary consideration is that of economy. The substitution of an hour of early daylight, which may be used instead of an hour of artificial light, naturally lends itself towards economy, particularly in the matter of lighting, and in the use of coal for the manufacture of gas, and of electric light. Outside of these reasons of an economic kind, there are many collateral considerations, which, though not financial, are perhaps more important." He then reviewed what had been done in other countries since daylight saving had been first mooted in 1908, as shown by the report presented by a Committee of the Imperial House of Commons in 1916. The summer time act was now in its second year of operation in the United Kingdom. The operation of this proposal in Canada had been in restricted areas, consequently its benefits could not have full force and effect. There were, however, strong testimonies of its good effect during 1916. To be really effective it must be adopted nationally, and it would be better if it would be put in operation in Canada contemporaneously with a similar measure in the U.S. In Canada a very thorough enquiry was made, at which the railway companies were represented. He read the following letter from Sir George Bury, of the Canadian Pacific Ry.

"There may be various views on the advisability of daylight saving, but there is one point on which there is no diversity of opinion, and that is if daylight saving is to be successful it must be a measure passed by the government at Ottawa, which would require that all clocks in the

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Dominion be set ahead one hour at a stated time in the early spring, and set back an hour at a stated time in the fall. The daylight saving scheme has been tried in many localities, and the main reason for its failure was entirely due to it not having been universally adopted all over

Canada. As I see it, if the people of Canada as a whole wish daylight saving, it should be adopted; and so far as the railways are concerned, I believe they would gladly support it. If it were made universal in Canada, it could not, in any way, embarrass train operation."

Canadian Pacific Ry. Construction, Betterments, Etc.

New Brunswick District.—An exceptionally heavy thunderstorm on July 30 did considerable damage to the C.P.R. transcontinental line through Maine. As a result of the floods consequent, several embankments between the Quebec boundary and just east of Brownville Jet., were washed away, leaving the ties and rails suspended in some cases. At 25 miles east of Megantic, between Holeb and Jackman, Me., where 100 ft. of embankment which had been carried out by a flood on June 18, was under repair, the new work was carried away, with the addition of 50 ft more of the old embankment. At other points the sections of the embankment washed clean out were 20, 25, 50 and 60 ft. respectively and from 15 to 25 ft. in depth. A smaller amount of damage was done at other points of the 70 miles included in the area covered by the flood. No accidents resulted, but traffic had to be diverted while temporary repairs were made. Through traffic was resumed Aug. 4.

Northern Colonization Ry.—The Dominion Parliament has extended for five years the time within which to build the projected line from Labelle, westerly to Rapide de L'Orignal, now called Mont Laurier, thence westerly to Timiskaming Lake, Que. The railway has been built by the C.P.R. from Labelle to Mont Laurier, 57 miles.

Interprovincial and James Bay Ry.—The Dominion Parliament has extended for five years the time within which to build this projected line from Lumsdens Mills, on the C.P.R. line from Mattawa into the Kippawa Lakes district, to Des Quinze River, Que. The company is authorized to sell or lease its line to the C.P.R.

Ontario District.—The company, according to a press report, contemplates adding a number of sidings in the yard at Cobourg, Ont.

The second track construction between Leaside Jct. and North Toronto consists, we are officially advised, of building a second track between Leaside Jct. and North Toronto for the main line, and a third track over Reservoir ravine to form a switching lead to the yard. The switching lead will be laid on the location of the existing track, and the two new main lines will be on the north side. The old steel trestles over both ravines will be removed entirely and will be replaced by reinforced concrete structures. During construction the traffic will be carried over temporary trestles which are being erected. The contract for the erection of the bridge 1.8, at Reservoir ravine, has been let to Wells & Gray, Toronto, and that for bridge 0.9, near Leaside Jct., to the Dominion Bridge Co.

Manitoba District.—Application is being made to the Public Works Department, Ottawa, for approval of plans of a raft or float proposed to be constructed by the company in McKellar River, Fort William, Ont., for the protection of the north pier of the railway bridge there.

Saskatchewan District.—The Board of Railway Commissioners has authorized the company to build a spur track to

serve the Canada West Electric Co.'s warehouse at Regina.

Grant Hall, Vice President and General Manager, Western Lines, accompanied by J. G. Sullivan, Chief Engineer, made a trip of inspection recently through the country south of the Weyburn-Lethbridge line in connection with a projected extension there. The Saskatchewan Railways Department is desirous of having a section of the country beyond the Frenchman River given a railway connection and G. Spence, M.L.A., accompanied the officials on the trip.

Alberta District.—The distance between Weyburn, Sask., and Lethbridge, Alta., when the new line is finally completed between these points will be 455.8 miles, not 55.8 miles as stated in our last issue on pg. 309, owing to a compositor's mistake which was unfortunately overlooked in proof reading.

A contract is reported to have been let to Thomas, Jamieson & McKenzie Co., for laying out an additional stockyard at Calgary, at an estimated cost of \$75,000. In connection with this work the city council has under consideration the company's application to lay a spur track across Burns Ave., to increase the railway facilities at the yard.

Application was made to the Edmonton City Council, Aug. 14, for authority to lay a spur track crossing 111th St., and was referred to the City Commissioner for consideration.

British Columbia District.—A contract is reported to have been let to S. E. Junkins & Co. for salvaging the track material and snow sheds on the abandoned section of the line in Rogers Pass between Courlie and Stoney Creek, about 18 miles. This piece of line has been abandoned since the completion of the Connaught Tunnel. The old right of way will, it is said, be converted into a tourist highway in time for the tourist season of 1918.

The Kaslo and Slocan Ry. was built under a charter passed by the British Columbia Legislature in 1892. It has been operated for a considerable period by the C.P.R., and the Dominion Parliament has now declared it a work for the general advantage of Canada, and has given the company power to amalgamate with or sell its line to the C.P.R. The lines authorized to be built are: From Kaslo along the Kaslo River and its north fork to Fish and Bear Lakes, and thence to the mines in the vicinity of Carpenter and Sandon Lakes; a branch line from the confluence of the north and south forks of the Kaslo River to Montezuma mining camp; and from the mouth of Bear Creek to Jardine's mining camp. The line has been built from Kaslo to Slocan, 29 miles. (Aug. pg. 309.)

WANTED.—Complete sets of 12 copies of Canadian Railway and Marine World (Railway and Shipping World) for years 1904, 1905, and 1906. If you have these for sale write Box 3780 Canadian Railway and Marine World, Toronto, stating price.

Traffic Orders by Board of Railway Commissioners.

Penalty for Misdescription of Freight.

General order 200. July 26. Re application of C.P.R. under sec 29 of the Railway Act, for an order amending order 3249, dated June 29, 1907, approving Canadian Freight Classification 13; it appearing to the board that the clause objected to does not provide definitely the penalty recoverable under the order—it is ordered that order 3249 be amended by striking out the clause which reads: "That any person or company violating the provisions of sec. 400, sub-sec. 1, of the Railway Act, shall, in addition to the regular toll, be liable to pay to the company a further toll not exceeding 50% of the regular charge." and substituting therefor the following clause, viz.: "That any person or company violating the provisions of sec. 400, sub-sec. 1, of the Railway Act or any amendment thereto, shall, in addition to the regular toll, be liable to pay the company a further toll of 50% of such regular charge."

Increased Rates on Grain and Grain Products.

General order 202. Aug. 2. Re proposed increased rates on grain and grain products in the portion of Canada east of and including Fort William, which were included in, and were subsequently withdrawn by the applicants from, the application of the railway companies for a general increase in freight rates in eastern Canada, known as the Eastern Rates Case judgment and general order in which issued June 19, 1916; the said application with respect to grain and grain products having been renewed by tariffs filed by the companies and suspended by order 26172, June 5, 1917: Upon hearing the application at Ottawa, June 1, in the presence of counsel for Canadian Pacific, Grand Trunk, and Canadian Northern Railways, and the report and recommendations of the Chief Traffic Officer, judgment, dated July 17, was delivered by the Assistant Chief Commissioner, and concurred in by Commissioner Goodeve, a certified copy of it being attached hereto. It is ordered that order 26172 be rescinded, and the tariffs enumerated therein are hereby authorized, subject to the changes to be made therein as set forth in the said judgment dated July 17, which is made part of this order.

Transportation of Dangerous Articles Other Than Explosives.

General order 203. Aug. 11. Re application of Canadian Freight Association, for approval of regulations for transportation of dangerous articles other than explosives. It is ordered that the proposed regulations, as amended, marked A and certified by the Board's Secretary, on file with the board, be authorized, with the following exceptions:

(1) That all the restrictions pertaining to "Oil, described as 'oil,' or 'oil, n.o.s.,' or 'petroleum oil,' or 'petroleum oil n.o.s.'" as described in the list at page 8 of the regulations, be struck out, except that paragraph 1867 (c) be amended to provide for a certificate on the shipping order, over the signature of the shipper, or of his duly authorized agent, in the following terms: "This is to certify that the above mentioned barrels contain . . . oil only, and are in fit and proper condition for safe transportation."

(2) That the barrels at present in use for the carriage of wood alcohol, when labelled as required by the regulation pertaining thereto, be accepted for transportation, provided that the shipping or-

der bear a certificate over the signature of the shipper, or of his duly authorized agent, in the following terms: "This is to certify that the above mentioned barrels contain wood alcohol only, and are in fit and proper condition for safe transportation."

(3) That paragraph 1892 of the regulations be amended to provide that when the necessary supplementary stripping to the car lining is furnished by the shipper, he shall be allowed therefor \$2.50 a car.

(4) That all reference to paints be eliminated from the regulations.

Transportation of Explosives.

General order 204. Aug. 11. Re application of Canadian Freight Association for approval of revised regulations for the transportation of explosives: It is ordered that the said revised regulations as amended and filed by letter dated Dec. 16, 1916, from the Chairman, Canadian Freight Association, on file with the board and certified by the board's Secretary be authorized for the observance of the railway companies which accept explosives for carriage. It is further ordered that general orders 100, Jan. 16, 1913, and 105, May 22, 1913, be rescinded.

Cars Partially Loaded with Canned Goods or Live Stock.

26365. July 23. Re stopover charge for completion of part carloads of canned goods in transit. Whereas certain railway companies have published and filed schedules effective during the present month, showing an increased charge for stopping cars containing partial loads of canned goods for completion to full

carloads in transit, notwithstanding that order 25527, Oct. 13th, 1916, has not been rescinded. It is ordered that the increased charges for stopping cars containing partial loads of canned goods or livestock for completion to full carloads in transit, contained in the following schedules of the carriers named, be disallowed, and the pre-existing charges for the said services are hereby continued from and including July 30 until further ordered.

Transfer Tracks at Rosetown.

26386. July 31. Re application of boards of trade of Moose Jaw and Rosetown, Sask., for an order directing the Canadian Northern and Canadian Pacific Railways to provide transfer facilities between their respective railways at Rosetown, Sask. It is ordered that the Canadian Northern be directed to construct a transfer track between its railway and the C.P.R. at Rosetown; detail plans to be filed within 30 days from date; the work to be completed within 60 days from the approval of the plans; and the cost of constructing the track to be apportioned equally between the Canadian Northern and the C.P.R.

Interchange Tracks at Port Hope.

26400. Aug. 1. Re application of Town of Port Hope, Ont., for an order requiring the interchange of traffic between the Canadian Pacific and Grand Trunk Railways there. It is ordered that the C. P. R. be directed, at its own expense, to construct interchange tracks between its railway and the G.T.R. at Port Hope, detail plans of the tracks to be submitted within 30 days from date for the board's approval and the track to be completed within three months after the approval of the plans.

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

Week ending Aug. 10, 1917.	Wheat. bushels.	Oats. bushels.	Barley. bushels.	Flax. bushels.	Totals. bushels.
Fort William—					
C.P.R.	324,381	377,781	18,396	52,359	720,558
Consolidated Elevator Co.	226,401	140,837	15,593	125,083	435,190
Empire Elevator Co.	164,432	215,556	13,672	125,083	518,743
Ogilvie Flour Mills Co.	413,127	79,942	13,034	125,244	506,904
Western Terminal Elevator Co.	104,324	176,417	7,482	43,833	413,467
G.T. Pacific	332,274	389,445	21,379	57,443	786,931
Grain Growers' Grain Co.	320,072	392,980	17,957	57,443	731,000
Fort William Elevator Co.	15,109	94,176	4,066	57,443	170,794
Eastern Terminal Elevator Co.	161,688	219,555	8,786	57,443	390,029
Port Arthur—					
Port Arthur Elevator Co.	780,008	1,003,600	131,991	59,527	1,975,276
D. Horn & Co.	141,477	119,183	11,724	56,109	328,493
Dominion Government Elevator	474,188	662,131	46,220	91,233	1,273,772
Grain afloat	240,498	186,104	22,340	29,474	478,416
Total Terminal Elevators	3,698,069	4,057,768	333,440	640,305	8,729,582
Saskatoon Dom. Govt. Elevator Co.	85,212	72,480	4,018	8,751	170,461
Moose Jaw Do. Govt. Elevator	217,673	33,540	1,962	516	253,175
Calgary	16,295	21,135	1,305	516	39,251
Vancouver					
Total Interior Terminal Elevators	319,180	127,155	7,285	9,267	462,887
Depot Harbor	198,714				198,714
Midland—					
Aberdeen Elevator Co.	61,815				61,815
Midland Elevator Co.	89,351	740,840			830,191
Tiffin, G.T.P.	5,000	409,478			414,478
Port McNicoll	431,803	1,660,562	3,945		2,096,310
Collingwood		33,555			33,555
Goderich	253,087	284,546	1,000		538,633
Western Canada Flour Mills Co.	169,335				169,335
Kingston—					
Montreal Transportation Co.	185,449	81,175			266,624
Commercial Elevator Co.	15,087	77,100			92,187
Port Colborne	962,969	276,778			1,239,747
Prescott					
Montreal—					
Harbor Commissioners, No. 1	699,820	1,691,298	129,745		2,520,863
Harbor Commissioners, No. 2	799,020	740,777	14,446		1,554,243
Montreal Warehousing Co.	578,181	1,011,458	82,684		1,672,323
Quebec Harbor Commissioners	1,855	47,914			49,769
West St. John, N.B.				6,252	6,252
Halifax, N.S.	219,725				219,725
Total Public Elevators	4,671,211	7,055,481	238,072		11,964,764
Total quantity in store	8,688,460	11,240,404	578,797	649,572	21,157,233

*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 have a continuous record of the Board's proceedings. No other paper has done this.

26322. July 14.—Authorizing C.P.R. to divert road allowance at grade across its tracks at mile 2.5, Kerrobert Subdivision, Sask.

26323. July 13.—Amending order 1330, July 25, 1906, re crossing of G.T.R. by Napierville Jct. Ry.

26324. July 14.—Relieving Vancouver, Victoria & Eastern Ry. & Navigation Co. (G.N.R.) from providing further protection at crossing at mileage 150, near Vancouver, B.C.

26325. July 18.—Ordering Montreal & Southern Counties Ry. to rearrange stops by certain trains at Springfield Park, Que.

26326. July 17.—Approving C.P.R. plan showing clearances of outside track to Pier D, at north end of Granville St., Vancouver, B.C.

26327. July 18.—Ordering C.P.R. to protect crossing of Rockland Ave., Outremont, Que., by gates operated from elevated tower, to be operated day and night.

26328. July 17.—Declaring that excess charges on shipment of tough wheat (G.T.P. 312409), shipped to Keewatin account of G.T.P. embargo at Fort William, amounted to 2½¢ per 100 lb.; and authorizing Grand Trunk Pacific Ry. to rebate to Farmers Club Grain Co., Winnipeg, the excess amount.

26329. July 19.—Ordering that Canadian Northern Ry. station at Birch Hills, Sask., remain as at present located, platform to be extended 50 ft. west.

26330. July 16.—Approving agreement between Bell Telephone Co. and Weedon Telephone Co., June 7.

26331. July 17.—Dismissing application of Village of Fort Qu'Appelle, Sask., for order directing Grand Trunk Pacific Ry. to provide level crossing to connect with Segwin Ave.

26332. July 18.—Authorizing C.P.R. to build extension to spur for Regina Development Syndicate, Ltd., Regina, Sask.

26333. July 17.—Authorizing Town of Pointe Aux Trembles, Que., to carry Sixth Ave. across Canadian Northern Quebec Ry. within town limits.

26334. July 18.—Amending order 25202, July 24, 1916, re Edmonton Radial Ry. crossing of Grand Trunk Pacific Ry. at 27th St., Edmonton, Alta.

26335. July 17.—Ordering that 1/3 of cost of building bridge over Hereward Road, Victoria, B.C., be paid by Esquimalt & Nanaimo Ry., balance by municipality; cost of grading highway and approaches to be paid by municipality.

26336. July 18.—Authorizing C.P.R. to remove spur at mileage 9.0, Arborg Subdivision, Man., at Airdale, and to eliminate station from its tariffs.

26337. July 18.—Approving agreement between Bell Telephone Co. and the Hope Lumber Co.'s telephone system, June 14.

26338. July 19.—Ordering Grand Trunk Pacific Ry. to remove gates between station grounds and town site of Ribstone, Alta.

26339. July 18.—Ordering C.P.R. to repair loading platform at Benalta, and extend it to accommodate 2 cars and for at least 15 ft. clear of buildings; to repair culvert and make approach to station platform and buildings safe, and to build crossing over track west of station from south to Railway Ave.

26340. July 20.—Authorizing Militia Department to build public crossing over C.P.R. 50 ft. east of westerly boundary of Lot 89, Winnipeg, Man., and declaring that leave to move to set aside this order is reserved to C.P.R.

26341. July 20.—Authorizing Canadian Northern Quebec Ry. to build spur for International Mfg. Co., Montreal.

26342. July 20.—Extending to Jan. 1, 1918, time within which Vancouver, Victoria & Eastern Ry. & Navigation Co. shall complete bridge carrying North Road over its line near Sapperton, B.C.

26343. July 20.—Ordering that, for present and until earnings at Ribstone station, Alta., increase and business warrants employment of station agent, railway shall appoint caretaker, who shall have authority to act as grain agent, to see that station is kept clean and heated for passengers on arrival and departure of trains and care for l.c.l. freight and express matter.

26344. July 20.—Authorizing St. John & Quebec Ry. to operate trains over crossing of C.P.R. near mileage 20, Fredericton, N.B., without first stopping; and to operate over crossing, as provided by order 22559, Sept. 17, 1914; trains limited to 15 miles an hour.

26345. July 21.—Authorizing Village of Winnipegosis, Man., to build Jubilee Ave., Third St. and Second St. across Canadian Northern Ry.

26346. July 21.—Authorizing G.T.R. to build two sidings for Steel Co. of Canada, Belleville, Ont.

26347. July 23.—Authorizing C.P.R. to build spur for Toronto Electric Light Co., Toronto.

26348. July 20.—Ordering Canadian Northern Ry. to erect third class station at Birdview, Sask., to be completed by Oct. 31.

26349. July 21.—Authorizing G.T.R. to rebuild

bridge 125 over Potawattami River, Owen Sound, Ont.

26350. July 21.—Relieving C.P.R. from providing further protection at highway 3¼ miles south of St. Jerome, Que.

26351. July 21.—Amending order 24610, Nov. 7, 1916, re crossing over C.P.R. at Ensign, Alta.

26352. July 21.—Authorizing Canadian Northern Ry. to build spur for Fort William Grain Co., Fort William, Ont.

26353. July 16.—Approving agreement between Bell Telephone Co. and Charlevoix & Saguenay Telephone Co., June 26.

26354. July 24.—Authorizing C.P.R. to build two spurs for Britnell & Co., Toronto.

26355. July 24.—Authorizing Canadian Northern Ontario Ry. to build spur for Trenton Cooperage Co., Tudor Tp., Ont.

26356. July 24.—Authorizing G.T.R. to build siding for Office Bureau, Ltd., Whitchurch Tp., Ont.

26357. July 24.—Authorizing British America Nickel Corporation, to connect its spur with C.P.R. in McKim Tp., Ont.

26358. July 24.—Authorizing C.P.R. to build spur for Gunns Packing Co., Toronto.

26359. July 24.—Authorizing Steel Co. of Canada to build overhead narrow gauge railway on concrete trestles across G.T.R. on north side Lachine Canal.

26360. July 24.—Authorizing C.P.R. to build spurs for Wayagmack Pulp & Paper Co., on Bellelve Island, Que.

26361. July 24.—Authorizing G.T.R. to build siding and spur for Dupont Fabrikoid Co., New Toronto, Ont.

26362. July 24.—Ordering Canadian Northern Ry. to build fourth class station at Legal, Alta.

26363. 26364. July 24.—Approving Bell Telephone Co. agreements with Heath, Head & Grey Telephone Co., May 3, 1915; and Chisholm Tp., Ont., July 6, 1917.

26365.—July 23. Disallowing increased charges for stopping cars containing partial loads of canned goods of livestock for completion to full car loads in transit.

26366. July 3.—Relieving Grand Trunk Pacific Ry. from building highway over Government road allowance in Alberta, as authorized by order 26119, until public requirements demand otherwise.

26367. July 24.—Ordering Edmonton, Dunvegan and British Columbia Ry. to erect station at Donnelly, Alta., plans to be filed for approval.

26368. July 24.—Ordering Alberta Government to pay towards cost of maintaining bridge in n.e. ¼ sec. 34, Tp. 45, Range 21, West of 4th Meridian, \$100 a year, first payment to date from April, 1915, balance of maintenance to be paid by Grand Trunk Pacific Ry.; and that \$700 deposited with Canadian Bank of Commerce at Edmonton, with accrued interest, be paid to G.T.P.R. as provided by order 11823, Sept. 19, 1910.

26369. July 24.—Approving changed location of C.P.R. station at Mara, B.C.

26370. July 25.—Authorizing clearance of rock loading bins to be erected by Grand Trunk Pacific Ry. over Edmonton Cement Co.'s spur in n.w. ¼ sec. 35, Tp. 45, Range 1, West 6th Meridian; knee braces shown at top of diagram to be eliminated; no box cars to be used on siding, and no locomotive allowed to pass by or under east end of bin structure; sign post to be erected at east end of bin structure to this effect.

26371. July 24.—Authorizing C.P.R. to take certain lands in York Tp., Ont., for enlarging its terminals at West Toronto, Ont.

26372. July 26.—Ordering Canadian Northern Ry. to build a station at Kuroki, Sask., to be completed by Sept. 15.

26373. July 24.—Authorizing Town of Kenora, Ont., to remove bridge over Lawrinson's Creek, used for spur for Rat Portage Lumber Co., and operated by C.P.R.

26374. July 27.—Extending to Oct. 1, time within which Edmonton, Dunvegan and British Columbia Ry. shall build siding and station facilities at west switch of branch connection in Sec. 15, Tp. 78, Range 5, west 6th Meridian, Alta., as required under order 25961, March 22.

26375. July 25.—Ordering G.T.R. to widen culvert under its tracks near St. Gregoire Station, Que., to provide opening 40 sq. ft.; Quebec, Montreal and Southern Ry. to provide 24 in. pipe under its tracks at certain points and 30 in. pipe between St. Gregoire station and G.T.R. and change three 15 in. pipes under G.T.R. interchange track to 24 in., work to be done within 60 days

26376. July 27.—Authorizing City of Toronto to build double track electric street railway at grade over Don industrial spur and G.T.R., protection to be settled by Board's engineer.

26377. July 27.—Approving agreement between Bell Telephone Co. and Muskoka River Telephone Co., Sept. 21, 1915.

26378. July 26.—Dismissing application of Great North Western Telegraph Co., C.P.R., and Grand Trunk Pacific Telegraph Co. for order amending order 162, March 30, 1916, approving conditions of telegraph forms used by companies reserving leave for companies to apply for a stated case, for Supreme Court of Canada upon question of law involved.

26379. July 26.—Relieving C.P.R. from speed limitation of 10 miles an hour at highway crossing at mileage 7.67, St. Romuald de Farnham Parish, Que., upon installing improved type of automatic bell, 20% of cost to be paid out of railway grade crossing fund.

26380. July 27.—Extending for four months from May 1, time for completing C.P.R. interchange track on Pinnacle St., Belleville, Ont., required under order 25980.

26381. June 20.—Ordering C.P.R. to raise grade of and extend spur to Gibson, McCormick & Irvine Co., Toronto, Ont.

26382. July 26.—Approving agreement between Bell Telephone Co. and Emily Tp., Ont., July 17.

26383. July 28.—Amending order 23169, Jan. 6, 1915, re Canadian Northern Ontario Ry. location through Trenton, Ont.

26384. July 30.—Rescinding order 22200, July 11, 1914, requiring packages containing celluloid to be conspicuously labelled "Celluloid—Inflammable."

26385. July 24.—Ordering Canadian Northern Ry. to install shelter sheds for hogs at Mannville, Lavoy, Ranfurly, and Vegreville, Alta., to be completed by Sept. 1, company to dig 25 ft. or bore 40 ft. at Volmer, Alta., to obtain water for use in stock yards.

26386. July 31.—Ordering Canadian Northern Ry. to build transfer track with C.P.R. at Rose-town, Sask., to be completed within 60 days from approval of plans; cost apportioned equally between C.N.R. and C.P.R.

26387. July 26.—Ordering G.T.R. to rebuild crossing under its tracks on Lot 379, Laprairie Parish, Que.

26388. July 26.—Ordering C.P.R. to remove platform and shelter from north to south side of Bolger Creek, Ont., and trestle.

26389. Aug. 1.—Ordering C.P.R. to install its class A2 standard station at Magrath, Alta., to be completed by Sept. 1, 1918.

26390. July 26.—Approving revised location of C.P.R. siding between Stations 84-50 and 101, and across Summerhill Ave., at grade in Toronto.

26391. Aug. 1.—Requiring Canadian Northern Ontario Ry. to stop trains on flag at Trenton Jct., Ont.

26392. Aug. 2.—Prohibiting C.P.R. from allowing cars to stand within 125 ft. of centre of Horne Ave., Mission, B.C.; signboard to be erected at point 125 ft. from centre of street, containing notice to trainmen that cars must not be placed between such signboard and Horne Ave.

26393. Aug. 3.—Authorizing C.P.R. to build highway crossing over its line between Lots 8 and 9, Con. 5, Kirkpatrick Tp., Ont.

26394. Aug. 2.—Amending order 26357, July 24, substituting McKim Tp. for Murray Tp. This error was noticed and corrected in our summary before this amending order was issued.

26395. Aug. 3.—Dismissing International Bridge Terminal Co.'s application to build branch line along Front St., Fort Frances, Ont., from junction with Canadian Northern Ry. at Front St. to Shevlin-Clarke Lumber Co.; and to cross or join C.N.R. with its railway lines.

26396. Aug. 3.—Authorizing Niagara, St. Catharines and Toronto Ry. to build spur for Herbert Morris Crane and Hoist Co., Stamford Tp., Ont.

26397. Aug. 2.—Authorizing G.T.R. to build siding for James Bogue, Peterborough, Ont.

26398. Aug. 3.—Approving proposed change of location of C.P.R. station at Carey, Man.

26399. Aug. 3.—Authorizing C.P.R. to build spur for Independent Quarries, Ltd., at Garson, Man.

26400. Aug. 1.—Ordering C.P.R. to build interchange tracks with G.T.R. at Port Hope, Ont.; to be completed within three months after approval of plans which are to be submitted within 30 days from date.

26401. Aug. 3.—Authorizing C.P.R. to build spur and change location of present siding for E. W. Gillett Co., Toronto.

26402. Aug. 3.—Authorizing Canadian Northern Ry. to build highway over its railway between n.w. ¼ sec. 9 and s.w. ¼ sec. 16, Tp. 36, Range 5, West 3rd Meridian, Sask.

26403. Aug. 7.—Authorizing Algoma Central & Hudson Bay Ry. to build branch line at mileage 132.33, main line, in Tp. 28, Range 20, Algoma District, Ont.

26404. Aug. 7.—Relieving G.T.R. from providing further protection at St. Laurent Road crossing, near South Durham, Que.

26405. July 26.—Authorizing Niagara, St. Catharines & Toronto Ry. to cross certain highways in Thorold and highway to Allanburg, Ont.

26406. Aug. 8.—Approving G.T.R. plan of steel superstructure for high level bridge over Trent Canal at Campbellford, Ont.

26407. Aug. 11.—Extending for three months from date time within which C.P.R. to erect fences along both sides of its right of way from Lavant station south to mile 37.

26408. Aug. 10.—Amending order 26371, July 24, re C.P.R. diversion of St. Clair Ave., Toronto.

26409. Aug. 10.—Authorizing Canadian Northern Saskatchewan Ry. to cross certain highways on its Wroxtton-Yorkton line.

26410. Aug. 11.—Extending to Nov. 15 time in

which St. Martin's Ry. shall complete certain work which St. Martin's Ry. shall complete certain work on bridges on its line.

26411. Aug. 10.—Extending for 30 days time within which C.P.R. is to build flag station at Grant's Crossing, mileage, 50.5, Waltham Branch.

26412. Aug. 11.—Authorizing Grand Trunk Pacific Branch Lines Co. and Canadian Northern Ry. to operate trains over crossing in n.w. ¼ Sec. 18, Tp. 48, Range 25, west 2nd Meridian, Sask.

26413. Aug. 11.—Authorizing C.P.R. to divert road allowance on eastern boundary of s.e. ¼ Sec. 5, and on southern boundary of s.w. ¼ Sec. 4, Tp. 7, Range 19, west 4th meridian.

26414. Aug. 11.—Approving rearrangement of interlocking plant at C.P.R. crossing of G.T.R. at Woodstock, Ont.

26415. Aug. 11.—Approving C.P.R. clearances for 300-ton coal hopper track.

26416. Aug. 10.—Approving Northern Pacific Ry. bylaws authorizing A. M. Cleland and H. Blakeley to prepare and issue tariff of tolls.

26417. Aug. 11.—Authorizing C.P.R. to build second passing siding and to rebuild highway bridge across road allowance in Whitby Tp., mileage 76.92, Oshawa Subdivision, Ont.

26418. Aug. 11.—Authorizing C.P.R. to build spur for Constructing & Paving Co., at mileage 8.75, Galt Subdivision, Ont.

26419. Aug. 14.—Approving Central Canada Express Co. bylaw 7 authorizing C. Dowling, General Superintendent, to prepare and issue tariffs.

26420. Aug. 14.—Approving agreement between Bell Telephone Co. and Glengarry Telephone Co., July 30.

26421. Aug. 14.—Authorizing Saskatchewan Government to build highway crossing over C.P.R. in s.e. ¼ Sec. 12, Tp. 15, Range 14, west 3rd meridian.

26422. Aug. 13.—Authorizing Canadian Northern Ontario Ry. to take two portions of block G, Farry Sound, Ont.

26423. Aug. 14.—Prohibiting whistling by C.P.R., G.T.R. and Canadian Northern Ry. locomotives within limits of Brighton, except where necessary.

26424. Aug. 13.—Ordering Brantford & Hamilton Electric Ry. to erect shelter at Mountain Sanatorium.

26425. Aug. 9.—Relieving G.T.R. from providing further protection at blind line crossing near Petrolia, Ont.

26426. Aug. 15.—Rescinding order 26318, July 12, requiring G.T.R. to stop trains 94 and 14 at Oakville.

26427. Aug. 15.—Authorizing C.P.R. to build spur for Great Lakes Dredging Co., at Fort William, Ont.

26428. Aug. 15.—Authorizing Michigan Central Rd. to build spur for Quality Cannery Co., near McGregors station, Ont.

26429. Aug. 15.—Approving plan showing proposed installation of half interlocking plant at crossing of C.P.R. and Hull Electric Ry at St. Hyacinthe St., Beemer, Que.

26430. Aug. 15.—Approving plan and description of proposed protection at bridge over Kaministikwia River, Fort William, Ont.

26431. Aug. 16.—Extending for three months time within which fences to be erected by Kettle Valley Ry under order 25967, March 27, Midway to Penticton, B.C.

26432. Aug. 16.—Approving plan showing proposed location of new G.T.R. station and track changes at Orillia, Ont., and rescinding order 26166, May 30.

26433. Aug. 17.—Extending for 90 days time within which bell may be installed at G.T.R. crossing of Dufferin St., Weston, Ont., as required by order 26105, May 11.

26434. Aug. 17.—Ordering that gates installed at crossing of Lake Shore Road by G.T.R. and C.P.R. at Vaudreuil, Que., be operated by day and night watchmen and rescinding order 22255, July 22.

26435. Aug. 16.—Authorizing Esquimalt & Nanaimo Ry. to build spur for Cameron-Genoa Mills Shipbuilders, Ltd., Victoria, B.C.

26436. Aug. 15.—Approving proposed cancellation by Marconi Wireless Telegraph Co. of requirements of minimum toll as for 10 words on messages between ship and shore filed as supplement to tariff C.R.C. 7.

26437. Aug. 17.—Authorizing C.P.R. to build third track across Clavet, Nelson and McDougal Sts. at grade and under Steven St., Port Arthur, Ont.

26438. Aug. 17.—Authorizing C.P.R. to build spur for R. A. Lister & Co., Winnipeg.

26439, 26440. Aug. 17.—Extending for 90 days time within which gates may be installed at crossing of Victoria St., Thamesville, Ont., by G.T.R., as required by order 26179, and for 60 days time within which bell may be installed at crossing of G.T.R. near Gowanstown, Ont., as required by order 26252.

26441. Aug. 17.—Authorizing G.T.R. to re build bridge crossing public road immediately north of Danville station, Que.

General order 198. July 16.—Granting extension of time until July 1, 1918, to railway companies subject to jurisdiction of board within which to make changes required under general order 128, July 20, 1914, companies to continue present practice of filing with the board monthly reports of progress made in complying with requirements of said order.

General order 199. July 24.—Prescribing regulations for equipment of locomotives with electric headlights, and providing a penalty of \$100 for each failure to comply with requirements.

General order 200. July 26.—Amending order 3249 by striking out clause respecting violation of sec. 400, subsec. 1 of the Railway Act.

General order 201. Aug. 1.—Prescribing Car Demurrage Rules to supersede Canadian Car Service Rules prescribed by order 906 (General order 1), to become effective Aug. 20.

General order 202. Aug. 2.—Rescinding order 26172, June 5, and authorizing tariffs enumerated therein, subject to changes to be made as set forth in judgment, July 17, which is made part of this order.

General order 203. Aug. 11.—Authorizing with certain exceptions proposed regulations for transportation by freight of dangerous articles other than explosives.

General order 204. Aug. 11.—Authorizing observance of railway companies which accept explosives for carriage revised regulations for transportation of explosives as amended, and rescinding general orders 100 and 105.

General order 205. Aug. 15.—Requiring railway companies to stencil inches on the inside walls of cars used in grain traffic in Manitoba, Saskatchewan and Alberta, so as to show the depth of grain loaded; one stencil on each side of each door and 3 or 4 ft. therefrom; all such cars hereafter built to be so stencilled before going into service, and those now in service to be so stencilled from time to time when shopped for repairs.

Canadian Government Railways to be Under Board of Railway Commissioners.

A bill to amend the Government Railways Act has been passed by the House of Commons and was given its second reading in the Senate, Aug. 16. Section 3 provides that certain sections of the Railway Act, as amended and consolidated at the present session, shall apply to the Government Railways, which in section 2 are defined to include "all railways and all property and works in connection therewith owned, leased or in any way controlled by His Majesty in the right of his government of the Dominion of Canada, and all running powers or other rights held or enjoyed by His Majesty over or with respect to any other railway or part thereof." Section 4 provides that notwithstanding anything contained in the present or in the Railway Act no penalty can be imposed on the Crown or the Minister of Railways, and no order of the board requiring any expenditure of money shall have effect until it has been approved by the Governor-in-Council. Section 5 provides that the board may, subject to the approval of the Governor-in-Council, make general rules regulating the practice and procedure to be followed in cases affecting the government of railways. Section 6 repeals all sections of the Government Railways Act of 1906 which are inconsistent with this measure. Section 7 makes provision for the preservation of the rights of His Majesty, given by the Expropriation Act, or by the Exchequer Court Act, or any other general act; preserves the jurisdiction of courts; provides that pending litigation and agreements are not to be affected, and that existing bridges, crossings, etc., are to be maintained until any orders are obtained under the new state of things directing changes. The schedule sets out the various sections of the Railway Act which are applicable to the Government Railways. The measure is to come into force on the proclamation of the Governor-General.

It was explained in the House of Commons that the measure placed the Government Railways under the control of the Board of Railway Commissioners in the same way as other railways with the exception of claims against the railways and the appropriation clauses of the Railway Act. E. M. Macdonald, M.P., claim-

ed that the position was an anomalous one and entirely new in the realm of government ownership and operation of public utilities. Did the Minister mean to say that he had no confidence in himself and his officers that he must have the benefit and advantage of the control of the Board of Railway Commissioners in order to properly operate the railways? In respect of the Intercolonial Ry., which was constituted by virtue of the terms of the British North America Act, the people of the Maritime Provinces should have been consulted. F. B. Carvell, M.P., on the other hand, contended that the bill did not go far enough. The government was operating railways and it should be liable to all the obligations of a railway company. He contended the present operation of the Intercolonial Ry. is political operation, and as long as it is run as a government road I am afraid it will be a political operation. An honorable member says, 'Not necessarily.' Well, there must be a great regeneration in the minds of the people of Canada if you can run a government railway without having it a political affair." Hon. G. P. Graham, formerly Minister of Railways, pointed out that it might as well be taken for granted that the result of the Intercolonial Ry. being put under the Board of Railway Commissioners would be to raise the rates. The Minister of Railways stated that the Intercolonial rates were lower than on other railways, and he hoped and trusted they would not be lowered, as it was hoped to get something for running the road.

Proposed Changes in Freight Bills of Lading.

The Canadian Freight Association has applied to the Board of Railway Commissioners, under sec. 340 of the Railway Act, for an order approving the amendment of the conditions of the forms of bills of lading approved by order 7562, July 15, 1909, by adding to the first paragraph of sec. 6 of the said conditions the following: "Such notice shall be held to have been duly given if deposited in the post office, postage prepaid, addressed to the person to be notified, or to the consignee if no such person be named, at the address stated therein," and for an order varying order 7562 accordingly.

It is stated that the object of the proposed amendment is to remove the doubt whether notice so sent is a sufficient compliance with sec. 6 as it now stands. It is also stated that the practice of railway companies has been to give notice under the said section in the mode suggested, and contends that any other requirement would be unduly expensive and oppressive, and it submits that both as respects the identity and address of the person to be notified the proposal affords a reasonably certain and prompt means of communication.

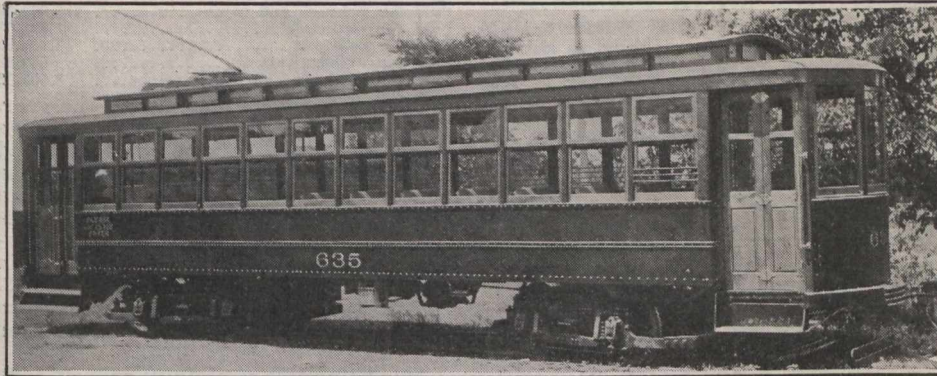
Railway Lands Patented.—Letters patent were issued during July, in respect of Dominion railways lands in Manitoba, Saskatchewan, Alberta and British Columbia, as follows:

	Acres.
Calgary and Edmonton Ry.	9,610.17
Canadian Northern Ry.	3,441.00
Canadian Pacific Ry.	20,385
Edmonton, Dunvegan and British Columbia Ry.	53.11
Grand Trunk Pacific Ry.	17.95
Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co.	4,630.12
Total	17,772.735

Electric Railway Department

The Ottawa Electric Railway's New Cars.

The Ottawa Electric Ry. Co. has added to its equipment recently 3 semi-convertible, double truck, single end, p.a.y.e. cars of semi-steel construction, similar to its last previous order. The principal dimensions are as follows: Length of body, 33 ft.; length of front vestibule, 4½ ft.; length of rear vestibule, 6½ ft.; length over all, about 45¼ ft.; width of body, 8½ ft.



New Car for Ottawa Electric Railway.

The underframes are of steel; the side sills are composed of a 5 x 3 x ¾ in. L, rivetted to an 18 x ¼ in. plate, forming a plate girder, whose top flange is made of a heavy double beaded bar on the outside and a 4 x 3/16 in. flat bar on the inside, and stiffened over the bolsters with 4 ft. x ¾ in. flat bar about 10 ft. long. The posts are of 2¼ x 3/16 in. steel, fitted with best white ash, and rivetted to the side sills with large gusset plates, also rivetted to the belt rails and wall plates. The belt rails are of 2 x ½ in. round edge steel; the window stools are pressed out of no. 16 gauge steel, pressed to shape and rivetted to the belt rails. The letter boards are of 6 x ¼ in. steel plates, reinforced with plates and angles and rivetted to the side posts. The side panels, between the side sills and the belt rails are of no. 16 steel, and made so that they can be removed easily by taking out a few screws.

The roof is of monitor type, and built of wood, reinforced with steel carlines, and covered with no. 10 duck and painted. The exterior of the car is finished naturally in red cherry, also the sash and doors. All metal trimming in the interior of the car, such as sash locks, lifts, curtain brackets, etc., are of red bronze, highly polished and lacquered; the p.a.y.e. rails, also the window guards, are of solid bronze tubing, with a special heavy wall. The cars are equipped with stationary rattan seats, with lift up cushions, to allow easy cleaning of the car floor. They are also equipped with curtains; buzzer system, with push button on each post; signal bells, alarm gongs, pneumatic sanders, conductors folding seat, also a seat for the motorman. The lighting is the railway company's standard, 3 circuits of 7 lights in series in each circuit, using special lamps, also using a method of automatically lighting front exit as designed by T. Ahearn, President of the railway company, some years ago, and which, owing to its adaptability, has been

made a standard. The cars are also equipped with sanitary hand straps, H-B life guards, Coleman stationary fare boxes, and 3 heavy brass stanchions in the centre of the body of the car, extending from floor to roof, between the longitudinal seats.

Each car is mounted on no. 27 F-E-1 trucks and equipped with 4 Westinghouse 1-1-B-2 motors and 1-K 35 controller, also Westinghouse S-M-E air brake equipment.

The cars were built by Ottawa Car Manufacturing Co.

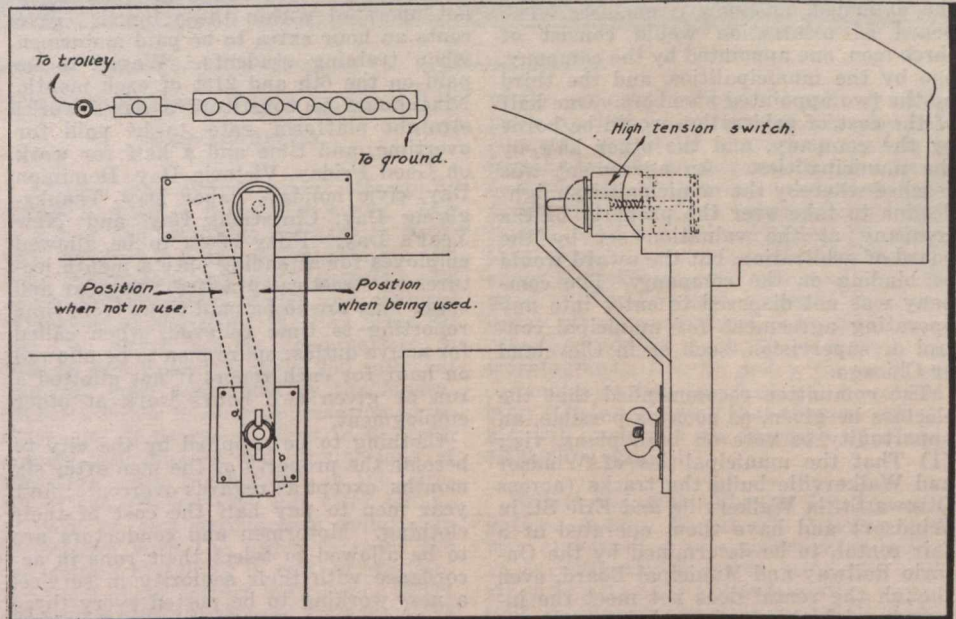
the first 5 days of July, saved \$3,294.64 and if one-man-cars had been operated over all the system an additional \$1,236.-48 would have been saved.

City Commissioner Graves issued a statement Aug. 1, in which he said: "I wish to direct attention to statements to the effect that I am conniving with the Superintendent of the street railway to juggle the financial report of the railway and thereby bolster up a deficit that would influence the members of the city council in favor of the general operation of one-man-cars. The above statement is absolutely false, as I would never knowingly be guilty of such a practice." He then went on to state that the street railway accounts are audited monthly by chartered accountants; that its finances are at present on as sound a basis as is possible under present day conditions; and that he has nothing whatever to do with its finances, nor with the distribution of the accounts. In conclusion he said: "The railway belongs to the public and it is in the interest of all citizens that this department be able to meet its annual expenditures and not become a burden on the taxpayers of the city. Further, it is at least some achievement that the railway can be operated at its present low fares, when numerous other railways in the United States are applying to utility commissions for permission to increase their rates, and are invariably receiving the consent of such boards to this course."

A special committee of the City Council to investigate the cost of operation of one-man-cars, as well as two-man-cars was appointed as a result of the meeting Aug 6 on the Mayor's casting vote, the appointment being made an amendment to a motion to endorse the one-man-

Operation of One-Man Cars on Calgary Municipal Railway.

The Calgary Municipal Ry. is claimed to be the largest street railway system on the continent with the biggest proportion of one-man cars in operation. Superintendent McCauley is in favor of using one-man-cars entirely on the line, but the



Automatic Lighting Arrangement, Ottawa Electric Ry. Cars.

project is not altogether favorably entertained, and even the use of such cars to a moderate extent does not meet with general approval. The question came up for discussion by the city council Aug. 6, after considerable prior discussion. According to a report made to the Mayor on July 25 by Mr. McCauley, the operation of one-man-cars on the system for

car system. The committee met Aug. 7, appointed Ald. Broatch chairman, and directed that information be tabulated by the City Electrician and the Controller.

Lethbridge Municipal Ry. employes are asking an increase of 22½% in wages, and that men employed on one-man cars be given 5c an hour extra.

The Sandwich, Windsor and Amherstburg Railway's Franchises.

At a public meeting held in Windsor, Ont., recently, called by the joint transportation committee for Windsor and Walkerville, a resolution was passed recommending the councils of the two municipalities to submit bylaws to the people granting an extension of franchise to the company with the right to purchase the entire system at any time during the continuance of the same on giving one year notice. The committee presented a lengthy report, in which it was stated that the company's system is operated under nine different franchises, which will expire as follows: In Windsor and upon the belt line in Walkerville in 1922; franchise in Sandwich in 1931; the franchises for the Windsor & Tecumseh Electric Ry., on Sandwich St., in Windsor, Walkerville and Ford, and on the Walker Road, Walkerville, in 1934. The company claims a perpetual franchise on the line from Sandwich to Amherstburg, and from Askin's Point in Ford to Tecumseh, by virtue of owning the right of way. The question of acquiring the railway and running it as a public ownership enterprise by two, three or more municipalities was dealt with in the report. It was pointed out that legislation might be obtained to give the Essex Border Utilities Commission the necessary power to apply to the Hydro Electric Power Commission of Ontario, which could operate the system for the nine municipalities served. A conference was held with the officers of the railway, and they agreed, if given new franchises until 1931 in Windsor and Walkerville, to build the needed extensions at once and sell to the municipalities at any time, upon one year notice, the entire system at its actual value as fixed by a board of arbitration, the valuation to include no value whatever for the extended, i.e., new, franchises. The board of arbitration would consist of three men, one appointed by the company, one by the municipalities, and the third by the two appointed members. One half of the cost of arbitration would be borne by the company, and the other half by the municipalities. An agreement was reached whereby the municipalities might decline to take over the property of the company at the valuation set by the board of arbitration, but the award would be binding on the company. The company was not disposed to enter into any operating agreement for municipal control or supervision, such as in Cleveland or Chicago.

The committee recommended that the electors be given, as soon as possible, an opportunity to vote on both plans, viz.: (1) That the municipalities of Windsor and Walkerville build the tracks (across Ottawa St. in Walkerville and Erie St. in Windsor) and have them operated at a fair rental, to be determined by the Ontario Railway and Municipal Board, even though the rental does not meet the interest, sinking fund and maintenance charges. (2) That the company be given an extension of franchise to 1931, without franchise values attached, and the right to purchase the entire system at appraised valuation whenever the people wish to purchase, which will be governed largely by market conditions of money, material and labor. In conclusion, the committee said: "If the Ontario Hydro Electric Power Commission is to operate the system for the municipalities we must

wait until after the war, because the Ontario Legislature passed an act in 1916 whereby the commission cannot borrow any money for new undertakings until after the termination of the war. In order to put the two plans before the people the two municipal engineers should ascertain the approximate cost of construction of needed tracks, poles and overhead wires, with the apportionment of such costs between Windsor and Walkerville, and the two solicitors should prepare the necessary franchise and debenture bylaws for submission to the electors."

At a meeting of the Windsor City Council, July 3, it was resolved to submit two questions to the people, the first whether they want to have the electric railways municipally owned, and secondly whether they are willing to grant an extension of the franchise to 1931, subject to conditions. (June, pg. 242; July, pg. 286.)

Calgary Municipal Railway Wages and Working Conditions.

An agreement signed June 22, between the Calgary, Alta., City Commissioners, and the Calgary Municipal Ry. employees provides for the following wages: Per hour, 1st year, 32c; 3rd 6 months, 33c; 4th 6 months, 34c; 5th 6 months, 35c; 6th 6 months, 36c; 7th 6 months, 37c. Five cents an hour additional is to be paid to motor-conductors operating one-man cars. Men operating one-man cars outside the boundaries of Eighth Ave. and Eighth St. West, and Seventeenth Ave. and Second St. East "shall be paid conductor and motorman's rate. Bonus included when not operated within these limits. Five cents an hour extra to be paid motormen when training students. Wages to be paid on the 6th and 21st of each month. Nine hours to constitute a day's work; straight platform rate to be paid for overtime, and time and a half for work on Good Friday, Victoria Day, Dominion Day, civic holiday, Labor Day, Thanksgiving Day, Christmas Day and New Year's Day. Fifty cents to be allowed employes for attending once a month lectures on street car practice. Regular and spare men are to be paid time, from time reporting to time relieved, when called for active duties; spare men to be allowed on hour for each report if not allotted a run or given two hours work at other employment.

Clothing to be supplied by the city to become the property of the men after six months, except as regards overcoats; first year men to pay half the cost of their clothing. Motormen and conductors are to be allowed to select their runs in accordance with their seniority in service, a new working to be posted every three months. Other sections provide for the granting of leave up to three months for men to go harvesting or proving up on homesteads; the recognition of the right to join any labor organization; giving the right to union men and conductors to be represented by a grievance committee, in the same way as non-union employes, for the settlement of grievances by arbitration; and guaranteeing the provision of all modern equipment for the safe and comfortable operation of the

cars. The agreement is to be in force until April 1, 1918, and from year to year thereafter, unless either party gives 30 days notice, prior to April 1, in any year.

Montreal Tramways Mutual Benefit Association.

The report for the year ended April 30 gives the following summary of relief work done during the year:

	1916-17
Members disabled through sickness or injury	1,426
Visits made by physicians to disabled members	567
Consultations given by physicians to disabled members	8,329
Prescriptions issued	6,026
Paid for sickness and injury	\$13,002.60
Paid for medicine	1,927.68
Paid for pensions	1,231.50
Paid for withdrawals	549.82
Paid for death and burial insurance	8,600.02

Twenty members died during the year. The committee reports the appreciation shown by the beneficiaries of deceased members for the prompt payment of the amount due to them for death and burial benefits. Since the formation of the association, to the end of April last, 261 members died, and the association paid in death and burial benefits \$107,509.53. During the year a motorman requested to have his benefits commuted, which was agreed to by the committee.

The committee gratefully acknowledge a special Christmas donation of \$2,500 from the Montreal Tramways Co., making the contributions received from the company \$17,256.56, which amount, added to the fees and dues received from the members, \$16,448.50, and interest received on investments and bank deposits, \$10,239.87, makes a total revenue for the year of \$43,944.93. The expenses being \$35,463.93, leaves a surplus of \$8,476.

The officers are: J. E. Hutcheson, President; Patrick Dubee, Secretary-Treasurer; the other members of the committee being C. Gagnon, E. A. Robert, N. Allard, A. Gaboury, N. Surprenant, A. S. Byrd, A. Morency, R. M. Hannaford, U. Perron, D. E. Blair, O. Morin, Hon. J. L. Perron, K.C., J. J. Gethings.

Winnipeg Electric Railway Co's Position.

Winnipeg press dispatch, Aug. 15:—"The city was astounded at the announcement that for \$100 shares of the Winnipeg Electric Ry., \$36 was bid in Montreal today. This is the same stock for which \$269 a share was actually paid in Toronto in March, 1912, and for which \$268 a share was actually paid in this city in February of that year. The value of the property hinges on the action which the City of Winnipeg may take on the jitney issue. The lowest estimate that is made of the loss which the railway suffers from the jitney competition is \$1,000 a day, or \$300,000 a year. The number of passengers carried by the jitneys is estimated at 20,000 a day, or 500,000 in a year. What the jitneys are doing to the Winnipeg Electric Ry. is indicated by the company's statement for June. For the first time in its history, the receipts were not sufficient to pay operating and fixed charges, where the company before the war made \$150,000 net a month. This year's June deficit was \$11,000. The late Sir Wm. Whyte's fortune was largely in W. E. R. shares, and many leading Winnipeg citizens have large holdings."

New Car for Sherbrooke Railway & Power Co.

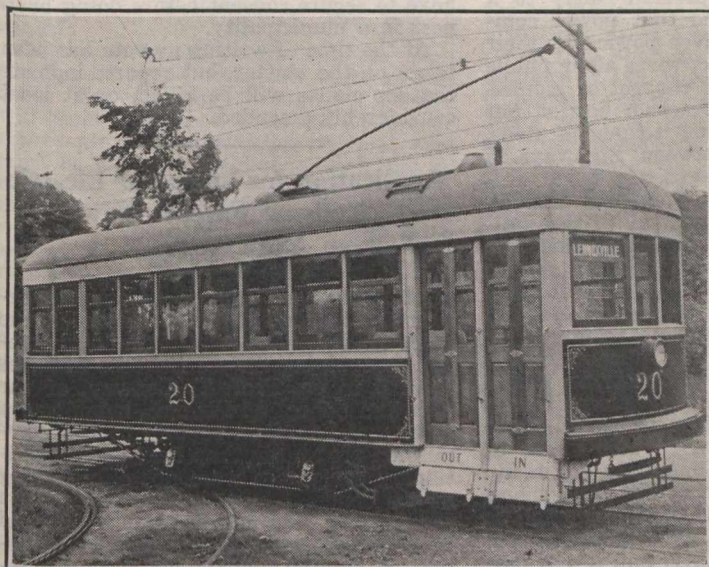
The Sherbrooke Ry. & Power Co., Sherbrooke, Que., has added to its equipment, for its Lennoxville line, a semi convertible car, of semi steel construction, 32½ ft. long, 8½ ft. wide, and 8 ft. high inside, with seating accommodation for 32 passengers, and standing room in the aisles and rear for 50 more.

It is mounted on a single truck and equipped with two 101 B motors and resistance. It is equipped with entrance and exit folding doors, and folding step device, the latter comprises a handle staff and swing rocker arm. By pressing on the steps or doors, the doors open automatically; they close by raising the step, or they can be shut by pulling them out from the ends. A whaleback top is especially constructed to prevent snow sticking, and the top is equipped with six stationary ventilators. Eight heaters are

company's property at Gorge Park is an integral part of the system, and a goodly part of the revenue is furnished by visitors and city people who have an inclination for this famous beauty spot. The street railway also reaches many other places of interest, including Caddboro Bay (within a short distance of the terminus of the Uplands line), Fowl Bay, the Wil-lows Beach, Beacon Hill Park, and Esquim-alt. There is also an interurban system from Victoria to Deep Bay, 24 miles, running along the whole length of the Saan-ich peninsula. This system takes in the Dominion Government Observatory, Brentwood Bay, the Dominion Govern-ment farm at Bazan Bay, and other points of interest. The round fare is \$1.10. There are two freight trains a day each way. An interesting fact in connection with the city street railway system is that on a 5c fare, with trans-fer, it is possible to travel 9½ miles, from Esquimalt to the terminus of the Uplands line."

pany's territory is divided into three classes, in order that each division may be charged according to traffic offered and expense of conducting the same. These classes are: Cities; towns connect-ing the cities; and rural territories.

About a year ago the company asked the Public Service Commission for a gen-eral increase on all its lines from a 5c to a 6c fare. After a protracted hearing before the commission and representa-tives of the various communities served, the company was allowed to advance its fare on certain rural lines to the 6c basis. This was far less than needed and par-ticularly so, since in the intervening period the cost of operation, because of rising prices, had advanced to much high-er levels. The events leading up to the present agreement were begun in April last when the company stated its case before the representatives of th communi-ties affected and then went before the Public Service Commission for a new hearing. Meanwhile the representatives



Sherbrooke Railway & Power Co.'s Semi Convertible Car for Lennoxville Line.

mounted under the seats, electric buzzers connect direct to the trolley. The car is equipped with life guard, and has illu-minated revolving route signs. It is built of steel, hard pine and red oak and finish-ed in birch, with ceiling of imitation bird's eye maple.

The car can be operated from both ends, as a two-man car, or as a one-man car. When used as a one-man car the rear end is closed, and passengers enter and leave at the front. When used as a two-man car, passengers enter from the rear and alight at the front. The car was designed by the company's Superinten-dent, F. X. Couture, and built in Sher-brooke under his direction, the approxi-mate cost being \$3,000. It is said the company may build some more as neces-sity arises.

Electric Railway Service in and Around Victoria, B.C.

The Victoria Times, in a review of Vancouver Island, in connection with the jubilee of Confederation, says: "The British Columbia Electric Ry and its allied industries form one of the big institutions of Vancouver Island." In addition to its electric power and gas enterprises, "the company owns a street railway trackage in the city and immediate suburbs of 41½ miles, 56 cars being operated. The

Electric Railway Fares Advanced in Massachusetts.

After a long and strenuous attempt to secure a raise in fares that would bring it a just and equitable increase in revenue, which it has demonstrated, time and time again, was perfectly justified and absolutely necessary under the changed conditions of operating, the Bay State St. Ry. Co., which has its headquarters in Boston and operates some 950 miles of line, has been authorized by the Massa-chusetts Public Service Commission to increase its fares on all lines to 6c, with certain adjustments and eliminations of transfers. For the present, in the opinion of the officials this will work out as a more or less satisfactory relief. In accordance with the order there is the proposition of selling in certain city sec-tions and under certain restrictions ticket books at a slightly reduced rate from the straight 6c fare. The arrangement is to be under the plan of a 6 months trial. The order followed an agreement between the company and the communities served and varies somewhat from the company's original request.

There are three outstanding features to the new situation which are generally commendable: (1) the 5c fare as a unit is eliminated. (2) The free transfer is limited principally to cities. (3) The com-

of the communities and the railway com-pany reached an agreement whereby the company would be allowed to give a 6 months trial to an increase in fares from 5c to 6c and, with a few exceptions, pay a cent for transfers between cities and towns. The schedule provides, however; that roads' patrons be allowed to pur-chase 20 tickets for \$1, which will not be good on Sundays and holidays and Sat-urday afternoons after 1 p.m. There are other schedules, such as increases in workmen's tickets, and withdrawal of commutation tickets, which will be settled later. It is estimated that the new sched-ule will result in an increase of about \$800,000 a year.

British Columbia Electric Ry. Investi-gation.—Adam Shortt of Ottawa, who was appointed a commissioner to make an investigation into the economic and other aspects of the transportation situa-tion in Vancouver, Victoria, and other places in which the British Columbia Electric Ry. operates, began his investi-gation in Vancouver, July 15. After hear-ing considerable evidence, inspecting the system, the company's power develop-ment plant at Buntzen Lake, and the dis-tributing plant, he went to Victoria, July 27, began his investigations there, and subsequently returned to Vancouver, where on Aug. 13 he recommenced hear-ing evidence.

Edmonton Municipal Railway Matters.

An Edmonton, Alta., correspondent wrote recently: "During the last year or so, economy of management has done much to lessen the burden of Edmonton's municipal railway, and it is now having the first opportunity for consolidation and getting things on a fair working basis. Last year there was a reduction in the cost of operation and management of about \$16,000, and it is hoped to pursue this policy of economy still further and to make a better showing, even with a dwindling population to contend with. To begin with, jitney competition is no longer a menace to street railway profits. At the last session of the legislature an amendment was secured to the city charter which practically put the jitneys out of business, and in a very short time they were no longer to be seen on the streets."

"Now a trial is to be given to the operation of one-man cars, with the idea of lessening expenses. It is claimed by the railway superintendent that if the whole system was worked by one-man cars that there would be a saving of \$100 a day in wages alone. The idea, however, is somewhat of a venture, as the one-man cars have been tested at Calgary with somewhat uncertain results, for, although the management say they are satisfied, yet there is a demand from a certain section that the old system should be reinstated. At Edmonton the cars have been tried on two or three stub ends of lines, with fair results, and other cars are being fitted for the work and will be tested on main routes. The railway employes have registered an objection to their use, sending a delegation to the commissioners and protesting on the ground that one-man cars are difficult of operation, will give a slow service, and fail to make any appreciable saving of expense."

"On the subject of the zone system, Commissioner Harrison says: 'We are carrying passengers for less than cost and know it. We cannot charge more than the straight 5c fare, and to get over it we must ask for an amendment to the city charter in order to use the zone system and charge for the distance that we carry. Now, for each passenger that we carry we go behind 1c, and by using the zone system we can obviate the great distances over which we now carry without making any revenue. What we have to do is to see how far we can carry passengers for 5c.'

"A straight 5c fare is charged on the railway, the only exceptions being that workmen's tickets, to be used before 8 a.m., are sold 10 for 25c, and school children are sold 12 for 25c. Special cars can be hired at \$5 an hour. The average number of cars in daily service is 32, and the daily bill for motormen and conductors' wages is something like \$460. The city has an agreement with the street railway employes, or rather with the local branch of the Amalgamated Association of Street and Electric Railway Employees of America, and the provisions of this agreement include all the employes of the department. In addition to the operating staff, there is a well organized staff at the barns, and Superintendent Moir says the department is equipped for and able to build its own cars should occasion arise."

"In 1916 the railway revenue was \$524,737.15, and expenditure \$664,334.81, leaving a deficit of \$119,597.66. During April 879,848 passengers were carried,

revenue totalled \$42,015, and there was a surplus over operation of \$2,433.55. Maintenance cost \$5,345 and operation \$26,013. This last was exceptionally heavy, the reason being that the figures include the payment of two damage claims for \$8,336. Otherwise there would have been that much extra surplus over the cost of operation. Capital charges amounted to \$00,875.03, and depreciation to \$2,194.70, and there was a deficit of \$18,636.17 on the whole."

Erection of Wires on Public Highways.

Under sec. 373 of the Railway Act, respecting the erection of wires along public highways, it had been held by the Privy Council that the word "company" therein mentioned, referred solely to a railway company, and that power companies, which were given powers by their special acts, could erect wires along public highways without the consent of municipalities concerned. Another section put certain restrictions on telephone lines, and distinguished between highways in cities, towns and villages, and those elsewhere. The House of Commons committee dealing with the revision of the Railway Act has made a change in this, and has defined a company to mean one with authority to erect wires, etc., for the transmission of electrical energy, etc., but not to include a railway, telegraph or telephone company. In dealing with this matter in the House of Commons, it was referred to as "the grossest piece of class or local legislation ever proposed, much less enacted into law." The House of Commons Railway Committee for many years has been carrying out the general provision of the act, that nothing shall be done in any municipality without the consent of the municipality, and if the parties interested cannot agree, they appeal to the Board of Railway Commissioners, whose decision is final. The changes made were especially aimed at the Toronto Electric Light Co., which is controlled by the Toronto Ry. Co. The change in the definition of the word "company," together with additional change in the section, which declares that the powers of such company are declared to have been so restricted, notwithstanding anything in a company's special act, since Jan. 31, 1907, are the chief points around which discussion centred. In the course of the discussion it was pointed out that the Toronto & Niagara Power Co., the parent company, had sold \$15,000,000 of bonds in England in good faith, and that the change was now practically confiscating the company's rights and reducing the value of the bonds, if not entirely destroying it. A motion to strike out the portion making the law retroactive 10 years was negatived, and the clause as changed in committee stands."

During the discussion of the bill in the Senate committee, the clause which abrogates the right of the Toronto and Niagara Power Co., to distribute electrical energy within the municipality of Toronto, was vigorously attacked by J. M. Beck, a former Attorney General for the State of New York, on behalf of U. S. bondholders of the company, Glyn Osler, K.C., Toronto and A. Geoffrion, K.C., Montreal, for British and Canadian bond holders, and D. L. McCarthy, .C., for the Toronto companies concerned. The argument present-

ed developed the point, that even if the T. & N. P. Co. acquired the Toronto Electric Light Co., which, he said, had not yet been done, the acquirement would be subject to all the franchise rights of the latter company, and therefore the city, which was favoring the proposed legislation, had nothing to fear. If the legislation were passed, the company would practically be put out of business, since the city would turn over to the Hydro Electric Power Commission, the business of the street railway and electric light companies, when they were acquired by the city, thus leaving the power company with 70,000 surplus horse power to dispose of and no customers. It was urged that the result would be to jeopardize a capital investment of \$35,000,000 and injure Canada's credit abroad."

Representatives of the City of Toronto strongly urged the retention of the clause, arguing that public ownership and operation should not be subjected to competition by a private company, which did not have to secure consent before doing business in a municipality."

At the time of writing no vote has been taken on the matter, but reports indicate that the clause will be killed, or at least considerably amended."

Application for Increased Electric Railway Fares in New York State.

At Albany, on Aug. 7, in opening before the Public Service Commission the cases of 28 up-state electric railway companies applying for an increase of fares from 5 to 6c, Prof. T. Conway, of the Wharton School of Finance, submitted a statement based on reports to the commission that more than half of the petitioning companies were not only paying no dividends, but they were not even earning the interest on their bonds and faced receivership if they obtained no relief. He stated that the net corporate income of 27 of the companies, despite an increase of total business, had fallen from \$1,143,294 in 1912 to \$423,711 in 1916. In the same period the interest on bonds in default had increased from \$11,875,000 in 1912 to \$374,007,000 in 1916. He said that 14 of the 28 companies failed to earn their fixed charges in 1916. He said even a 6c fare would not make up for the loss of purchasing power of the nickel in the buying of supplies for street car service, and unless relief were granted some of the companies must go into receivership."

E. P. Waller, Manager of the General Electric Co.'s railway department, and R. Seybold of the Westinghouse Electric & Manufacturing Co., testified that all kinds of electric apparatus used by street companies cost from 50 to 125% more than in 1914. Labor costs in the production of these supplies had advanced from 30 to 40% since 1914; steel plates had increased 700%, copper 120, steel castings 100, steel forgings 340, coal 80, and brass 200%. Other witnesses gave similar testimony as to cost increases."

Strong opposition to the application was voiced by corporation counsels of more than 30 up-state cities which have organized to fight the proposed general increase."

The Ontario Legislature has amended the Assessment Act, so that an electric railway owned or operated by or for a municipal corporation is not liable to be assessed for business tax."

Toronto Railway Employees' Wage Arbitration.

The conciliation board, consisting of Judge C. G. Snider, Hamilton, Ont., Chairman; Duncan McDonald, formerly General Manager, Montreal Tramways Co., representing the company; and D. A. Carey, Toronto, on behalf of the employes, appointed to enquire into the complaints of the men which led to the strike lasting from July 11 to 13, reported to the Minister of Labor, Aug. 23. The report was signed by the chairman and the men's representative, and Duncan McDonald, on behalf of the company, dissented from the recommendations made, on the ground that the award was not warranted by the evidence placed before the board. He is reported to have said that though the company might not reject the award, he felt that he could not join in the recommendations without its positive assent. Following is the board's award:

In the operation of the lines the parties hereto agree with each other as follows: The company through its officers will meet and treat with the officers or representatives of division no. 113, who must be members thereof, and elected as representatives at the regular meeting, in all matters of grievance and dispute which may arise from time to time with any of the company's employes who are members of the association, and will meet and treat with any others of its employes in the same class who are not members of the association who may have grievance or disputes with the company.

From June 16, 1917, until the termination of this agreement, the wages per hour shall be as follows:

Motormen and conductors, first 6 months, 30c (to apply only to men employed after this date); second 6 months, 32c; second year, 35c; third and subsequent years, 37c.

Motor and truck repair service, first 6 months, 30c (to apply only to men employed after this date); second 6 months, 32c; second year, 35c; third and subsequent years, 37c.

Shedmen, foremen, 37c; operating shedmen, men who operate cars and do general shed work, 33c; shedmen, men doing general shedwork, but not operating cars, 32c; car cleaners, 31c.

Wages for motormen and conductors engaged in train work on Sunday shall be 4c per hour platform time in excess of weekday rates. Emergency crews of motor and truck repair men shall receive time and one-fifth for Sunday work.

Extra motormen and extra conductors are to receive the same extra remuneration for all trips as they have been receiving in the past. Extra men to be told off the night before for all crews known to be open, as far as this can be done without risk of leaving cars out of service on the following day. Motormen and conductors while in charge of trainers shall be paid 25c a day extra.

The company will pay half the cost of uniforms for motormen and conductors who have been in service for one year, and will provide free uniforms for motormen and conductors who have been in the service longer than two years. No employe shall be required to pay for more than one uniform and a half. Regulations from time to time to be made by the company to provide for protection against loss in this matter from employes leaving the company's service.

All motormen and conductors (known

as regulars) shall have their respective places in the barn to which they are assigned, in accordance with their continuous employment in the service, and men known as regulars longest in the continuous service as motormen and conductors at the barns in which they are employed shall have first choice of runs. The right of such selection of runs shall be granted at least four times a year.

All motormen and conductors required to take the car at the car house shall at the first time reporting for the day report to the car starter at least 10 minutes before scheduled time, and in the event of them not reporting 10 minutes ahead of time the car starter shall fill the runs with other men. When the relief point is not at the car house, men shall at their first time reporting for the day report to the car starter 15 minutes ahead of scheduled time, as at present. Motormen and conductors shall be relieved at a point nearest to the barn at which they are employed, and if required to go to any other point or barn after reporting at their own point or barn for the purpose of relieving or taking out cars shall be paid for time occupied in so doing. Motormen and conductors on scheduled runs shall be paid for any overtime caused by being late from being relieved or running cars into barn when such delay is ten minutes or over.

The company will provide seats on all cars. Motormen to have the right to use such seats upon certain portions of the system. Notice governing will be issued by the company from time to time.

No man to be given a set offday from month to month, but shall take offday in accordance with his position on the board, except in cases mutually agreed upon between the company and the men or their representatives. Motormen and conductors reporting for duty after being off sick, on production of a doctor's certificate of unfitness, shall not be required to go on duty until the following day, when they shall take their regular place.

Only men in the shops required for the necessities of the service shall be compelled to work on Saturday afternoon, excepting when, in the management's opinion, the services of all the men or any of them are required on Saturday afternoon to meet the necessities of the business.

Tools necessary for work in the motor shop shall be supplied employes. The men shall not take tools away from the shops, and shall be responsible for breakages and losses occasioned by their negligence, and must return tools in good condition; in default of doing so, they must pay for them.

Men in the motor shops and its branches shall be given five minutes in which to wash before leaving work, and any employe abusing this privilege, in the management's opinion, shall be subject to discipline or may be released from further service with the company.

The following regulations shall apply to motor and truck repair and shedmen: The company shall supply suitable locks and keys for lockers at the shops and barns, and in case a man loses his key, he is to provide another at his own expense. Rubber boats and coats are to be supplied for emergency crew at the different shops and barns. In case of a lay off or reduction of staff, the men laid off, other things being equal, shall receive preferential consideration as to being

first taken into the service again. In laying men off, junior men, as a general rule, shall be the first men off, and in taking men on again, the senior men shall get first chance, qualifications being equal. On pay days the company will continue to pay until 8 p.m.

The following regulation is agreed upon as to discipline. Any employe against whom charges may be received will be required to report when off duty to the superintendent. His case will then be considered by the proper officials of the company, and will be dealt with upon the following principle: For minor cases he is to be warned. For serious cases, including drunkenness, drinking in uniform or drinking on cars, destruction of property, accidents through carelessness or neglect, missing fares through neglect, or carrying friends free, using stools on portions of route not allowed by the company, incivility to passengers, profanity on the cars, he may be disciplined or released from further service, but he shall in all cases have the right to appeal to the General Superintendent and have his case considered by him.

Any employe against whom a charge is received shall have the right of appeal in person to the General Superintendent, and, except as to a charge of dishonesty, may bring with him in his interest a deputation or any committee of the employes, or where the employe in question is a member of Division 113, he may be represented by its duly elected representative. Attendance in such capacity shall not operate to the employe's disadvantage. An employe attending on such deputation or committee shall give due notice to his car starter or foreman, and, if he be a motorman or conductor, shall take his car upon reporting to his car starter. Employes acting as dues collectors, board members, or otherwise doing work for the association, shall be allowed the time off required for such work.

All cars shall be properly equipped before being taken out each morning, but this shall not relieve the conductor and motorman from their obligation to see that their car is properly equipped.

The company will, upon application to the car starter or foreman, give leave of absence to employes for a reasonable period, when their services can be spared, and in the event of the refusal of the car starter or foreman, the matter shall be settled by the superintendent.

On lines where no office of the company is passed or close by, an officer of the company will collect and exchange fare boxes at points appointed for the purpose. The company shall also provide waiting room or shelter at these points if the city consents to the erection of the same on public streets and squares.

When the service was resumed after the strike on July 13, on the intervention of the Ontario Railway and Municipal Board, a temporary increase of 6c an hour was granted to the men, and the present award adds another 1c an hour to that increase, the men originally demanding an increase of 10c an hour. At a meeting of the employes, Aug. 25, it was decided by a vote of 684 to 289 to accept the award.

Up to the time of writing, Aug. 29, the company had not officially signified its acceptance of the award, but little, if any, doubt is entertained that it will accept.

Electric Railway Projects, Construction, Betterments, Etc.

Brandon Municipal Ry.—The financial position of this railway is being considered by the city council. Up to the present the railway has barely earned operating expenses, and the taxpayers are being called upon to provide approximately \$35,000 a year for interest, sinking fund and depreciation. A street car expert from Montreal was in the city recently discussing the situation with the railway committee. Alderman Curran, chairman of the committee, in an interview expressed the opinion that the city should develop the 50 acres given to it by the Dominion Government some years ago as a public amusement park and extend the car line there. Such an extension would not be a very expensive piece of construction, and would provide accommodation for the asylum, the experimental farm, the golf links and the Indian industrial school. There are other points in the vicinity of the city which might be developed if the car line was extended to them. It is expected that the committee will report on the whole matter to the council at an early date. (Oct. 1916, pg. 421.)

British Columbia Electric Ry.—Plans are being considered in North Vancouver, B.C., for the laying of rails on the east side of the ferry wharf in order to take care of increasing traffic. The work would be done by the municipalities owning the ferry. (Aug., pg. 324.)

Calgary Municipal Ry.—We are officially advised that about half a mile of temporary track is being laid to the site of the new reservoir, to haul gravel and other construction supplies. T. H. McCauley is Superintendent, Calgary, Alta. (Dec., 1916, pg. 502.)

Lake Erie and Northern Ry.—The Mayor of Brantford, Ont., wrote the company's management, Aug. 7, asking the carrying out of the Board of Railway Commissioners' order for the widening of Water St., Brantford. (Aug., pg. 324.)

London & Port Stanley Ry.—An agreement between the London Railway Commission and Beatty Bros., for the construction of a siding to the latter's factory has been approved by the City Council of London, Ont. The agreement provides that the firm is to pay for the work, including grading and ballast; the commission to pay for ties and poles and interest at 6% on the permanent materials with money advanced by the city and to be repaid by the commission from freight and operation charges. The sum to be advanced by the city will amount to \$3,435.37 and includes \$1,100 for ties and poles and \$2,200 approximately for rails and other non-perishable materials. Beatty Bros. will deposit with the commission \$1,719, the estimated cost of the work. The siding may be removed by the commission on two months notice by either party and the ownership of the material will remain vested in the commission.

The London Board of Control has authorized the taking up of the siding on Bathurst St., between Wellington and Waterloo Streets. (June, pg. 243.)

London & Lake Erie Ry. and Transportation Co.—Negotiations are reported to have been resumed with the St. Thomas, Ont., City Council, by representatives of the company with a view to the sale of that portion of the line from St. Thomas to Port Stanley. It is claimed that if this piece of line was owned by the city, it would be possible to make the city line,

which is owned by the municipality, a paying concern. (Sept. 1916, pg. 378.)

Niagara, St. Catharines & Toronto Ry.—In connection with the erection of a new passenger station by the G.T.R. in St. Catharines, Ont., the N., St. C. & T. Ry. will extend its tracks over the new Burgoyne bridge, across the old Welland Canal. (May, 1916, pg. 200.)

Port Arthur Civic Ry.—The Port Arthur, Ont., Public Utilities Commission has under consideration tenders for supplying the materials and for the erection of timber bridges across McIntyre River, to replace existing bridges which are not considered safe. The new bridges are to be built of timber because it is thought that it may be desirable to divert the street railway track to May St., in the near future. (Aug., pg. 324.)

Sandwich, Windsor and Amherstburg Ry.—We are officially advised that the company is moving about 0.75 mile of track from the side to the centre of



William J. Lynch,
General Manager, Quebec Railway, Light, Heat
and Power Co.

the streets in Amherstburg, Ont. The work includes new concrete paving. The company has just completed an addition to its power house in Windsor, Ont., in which is installed a low pressure turbine, 450 k.w. (July, pg. 286.)

Winnipeg Electric Ry.—We are officially advised that the company is building a Y at the end of the run at East Kildonan, Man., for turning cars, and that it is also building a small office and men's room at Fort Rouge, Winnipeg. (July, pg. 286.)

Electric Heating for Calgary Cars.—The Calgary Municipal Ry. is arranging to heat its cars by electricity. It is contended to use electricity only in the early mornings and the cool evenings in the autumn, and to augment the coal stoves during the very cold weather in winter. Electric heaters were too expensive when the railway had to pay 2c per kilowatt hour for power, but now when the city is producing power at 3/4c per kilowatt hour they can be used with advantage.

Mainly About Electric Railway People.

B. Sharpe has been appointed Assistant Roadmaster, Toronto Suburban Ry., Toronto.

D. Kinsman, heretofore Roadmaster, Toronto Suburban Ry., Toronto, has been appointed Timekeeper.

Frank Lindsay, heretofore Inspector, Toronto Suburban Ry., Toronto, has been appointed Roadmaster.

Jno W. Walker has been appointed Superintendent of Rolling Stock and Substations, Toronto Suburban Ry., Toronto.

James D. Fraser, Secretary-Treasurer and Director, Ottawa Electric Ry., went up the Gatineau River in August on a fishing trip.

G. W. Lang, acting Superintendent, Ottawa Electric Ry., has returned to duty after being absent for several weeks on account of ill health.

E. N. Horsey, Resident Engineer in charge of maintenance of way, city and suburban lines, British Columbia Electric Ry., Victoria, B.C., has been elected an associate member of the Canadian Society of Civil Engineers.

Robt. Gilbert, Purchasing Agent, Toronto Suburban Ry., who was a lieutenant in the 255th Battalion, Queen's Own Rifles, Toronto, during its recruiting and training before going overseas, has returned to his business duties.

William James Lynch, whose appointment as General Manager, Quebec Ry., Light, Heat and Power Co., Quebec, Que., was announced in our last issue, was born there, Jan. 17, 1882, not in June as then mentioned. He has held the following positions: Sept. 1897 to 1900, clerk, Montmorency Electric Power Co., and on the absorption of that company by the Quebec Ry. Light and Power Co., in 1900, was appointed cashier, holding that position until 1905; 1905 to 1907, Accountant; 1907 to 1909, Treasurer, Quebec Ry. Light and Power Co.; 1909 to July 18, 1917, Treasurer and Comptroller, Quebec Ry. Light, Heat and Power Co., all at Quebec, Que.

Increased Fares in Twin Cities.—The increased fares, details of which were given in Canadian Railway and Marine World for August, were put in force on the municipal railways in Fort William and Port Arthur, Ont., and on the inter-urban line connecting the two cities on July 25. The Port Arthur Chronicle says: "For the first time since the Port Arthur-Fort William St. Ry. was built nearly 25 years ago, an inter-city ride costs more than 5c. . . . However, the innovation of collecting a double fare at the boundary proved less troublesome than anticipated. The street railway management had posted extra conductors at the dividing line and they boarded each car, assisting the regular conductors to collect the second fare. As the public becomes accustomed to the new idea the extra help at the boundary will be dispensed with. There was little delay in collecting the fares, so that the schedule was not interfered with. The wait at the boundary was while Fort William men collected fares on cars going into that city and Port Arthur men on cars coming to this city. The plan is that conductors shall as heretofore change boxes at the boundary so that each city will get the fares collected therein."

Toronto Railway Overcrowding Judgment.

It was announced in our last issue that the Imperial Privy Council had allowed the appeal of the Toronto Ry. against a conviction at Toronto for overcrowding its cars, thereby maintaining a public nuisance. The judgment stated that the wrong done was a civil one, and consideration of the arguments disposed of the point as to the competency of the appeal, and in the Judicial Committee's opinion, the demurrer should have been allowed. The judgment continues as follows:

"The obligation of the appellants was a contractual obligation to the corporation. There was no duty to the public generally. These cars were on the street in recognition of a public right which the Ontario Legislature and the Toronto corporation have thought it advantageous to interfere with. The cars were not less thereby the property of the appellants, which the public could only enter by invitation. Whatever conditions in the grant of the appellants' title the corporation had contracted for, obtained merely between them and the appellants. The overcrowding was not a matter that affected the public as such, but only those members of the public who have obtained from the appellants licenses to enter the cars. This being, in their lordships' opinion, the conclusion to which the Court of Appeal ought to have come, it follows the demurrer should have been allowed and acquittal directed. Their lordships will, therefore, advise the appeal ought to be allowed, and the judgment of the Ontario Supreme Court set aside, and the matter remitted to the Supreme Court so that a verdict of acquittal may be pronounced in favor of the appellants. The respondents should pay the appellants' cost, and those of the proceedings in court of first instance should be left to the discretion of the court. The Attorney-General will neither receive nor pay costs."

Thus, therefore, ends a case which has, in various phases, served as campaign material in Toronto municipal elections for several years, and which, for waste of public time and money and general contumacy on the part of the prosecution, has not often been equalled. Comments by the Toronto press show that the judgment is taken generally as a condonation of overcrowding, but this is not the case. The company was charged with maintaining a public nuisance by overcrowding its cars, and a conviction was obtained, notwithstanding arguments for the defence, which, while admitting the overcrowding, clearly showed that, in law, it was not maintaining a public nuisance. This view has been upheld by the Privy Council.

Cape Breton Electric Co.'s Employees.—A conciliation board appointed to enquire into alleged grievances of Cape Breton Electric Co.'s employees, consists of Judge Chisholm, Chairman; Finlay McDonald, K.C., for the company, and D. A. Cameron, K.C., for the employees. It is stated that the chief point at issue is the discharge of three employees, two of whom the company has taken back, but refuses to re-employ the third. E. L. Milliken, General Manager, is reported to have stated that he is willing to meet employees, individually or collectively, to discuss all matters relating to employment or any grievance that they may have, but he declines to deal with any delegation of the Street Railwaymen's Union or persons not in the company's employ.

Electric Railway Finance, Meetings, Etc.

British Columbia Electric Ry. and allied companies.—

	June, '17	June, '16	6 mths. to June 30, '17	6 mths. to June 30, '16
Gross	\$37,078.16	\$30,946.37	\$211,961.71	\$179,384.47
Exp.	26,424.14	19,045.03	136,877.47	115,087.11
Net	10,654.02	11,901.34	75,084.24	64,297.36

Calgary Municipal Ry.:
Earnings for June \$47,528.13
Operating expenses and fixed charges.. 45,831.92

Surplus \$1,696.21

Cape Breton Electric Co.—

	June, '17	June, '16	12 mths. to June 30, '17	12 mths. to June 30, '16
Gross . .	\$373,029	\$400,814	\$5,325,756	\$5,063,114
Expens's	351,784	344,415	4,262,381	4,209,332
Net . . .	21,245	56,399	1,063,375	853,782

Edmonton Municipal Ry.—The six months ended June 30 show a surplus, over operation and maintenance, of \$42,488.04.

Hamilton St. Ry.—The City Treasurer of Hamilton, Ont., has received \$14,680.24 from the company, being the city's percentage of earnings for the quarter ended June 30. The total receipts were \$183,503.03, compared with \$175,926.84 for the corresponding three months of 1916.

London & Port Stanley Ry.—The Ontario Legislature has authorized the London City Council to borrow upon debentures \$100,000 for the London Railway Commission, and another \$100,000 to build a grain elevator at Port Stanley for use in connection with the London & Port Stanley Ry.

The Three Rivers Traction Co., which is a subsidiary of the Shawinigan Water & Power Co., held its annual meeting in Montreal, Aug. 22. The results of operation for the past year were encouraging, showing a slight surplus, and if conditions had been normal would undoubtedly have been still more satisfactory. The steam railway companies are not running the usual excursions this year, owing to war exigencies, and consequently the Three Rivers Co. did not get the pilgrimage business expected but which will undoubtedly be revived when conditions become normal again.

Toronto Civic Ry.—Receipts for July, \$23,262.63; passengers carried, 1,280,801, against \$19,812.72 receipts, and 1,169,411 passengers carried in July 1916.

Toronto Railway:

	1917	City percentage	1916	City percentage
Jan. . . .	\$510,053	\$76,508	\$473,784	\$69,847
Feb. . . .	473,184	70,976	470,704	70,614
Mar. . . .	531,080	105,857	518,555	97,237
Apr. . . .	510,334	102,066	496,172	99,234
May	510,870	102,174	500,515	100,103
June	499,732	99,946	467,086	93,417
July	467,382	93,476	469,846	93,969
	\$3,502,635	\$651,003	\$4,396,662	\$624,421

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

	June, '17	June, '16	6 mths. to June 30, '17	6 mths. to June 30, '16
Gross . .	\$984,529	\$884,491	\$5,873,584	\$5,335,199
Expens's	509,121	436,635	3,054,414	2,735,760
Net . . .	475,408	447,856	2,819,170	2,599,439

Winnipeg Electric Ry.:
June, '17 June, '16 6 mths. to June 30, '17 6 mths. to June 30, '16
Gross . . \$254,226 \$254,686 \$1,673,370 \$1,701,474
Expens's . 204,562 167,115 1,237,473 1,070,966
Net . . . 49,664 87,571 435,897 630,508

The fixed charges for June were \$61,136, thus showing a deficit for the month of \$11,472 in June, 1916. The net charges for six months ended June 30, were \$369,605.

Calgary, Alta., City Council has authorized the sale of 2 trailer cars to the Edmonton, Dunvegan and British Columbia Ry.

Electric Railway Notes.

The London St. Ry. has been authorized by the Ontario Legislature to operate its cars on Sundays in London Tp., between the north limits of the city and Brough's bridge.

The Brantford & Hamilton Ry. has been ordered by the Board of Railway Commissioners to erect a shelter at the Mountain Sanatorium, Hamilton, by Oct. 15.

The Quebec Ry. Light and Power Co. is building in its shops at Ste. Anne de Beaupre, 2 of the 650 class p.a.y.e., closed double truck cars, 40 ft. long overall. They will be numbered 656 and 657.

The Edmonton, Alta., City Council on Aug. 14 referred the municipal railway men's application for increased pay to the Utilities Commission. The men ask for a 20% increase all round, with 55c an hour for men operating one-man-cars, and an 8-hour day with a shift of 6 hours.

The Ontario West Shore Ry.'s rails have been sold to the Hydro Electric Power Commission of Ontario, and have been shipped to the Niagara Peninsula for use on the construction railway being built in connection with the commission's power development project at Chippewa Creek.

The Winnipeg Jitney Drivers' Association met Aug. 14, to discuss the bond question, and adjourned to meet again. The association offered a general bond by the association, but the city council desires bonds for every driver issued by an insurance company.

The Toronto & York Radial Ry. has filed a claim against the City of Toronto for damages to its property by the lowering of the grade of Yonge St. near Farnham Ave. The amount claimed is \$102,811 as follows:—Damages to land and depreciation of building, \$70,000; damages to 50 ft. on Yonge St., \$32,000; damages to railway track, \$811.

The Edmonton Radial Ry.'s agreement with its employes terminated Aug. 31. They notified the City Clerk, July 30, that they were willing to extend the agreement for another year on an increase of 20% over and above the present rate of wages, with 55c an hour for operating one-man cars; an 8 hour day and that no shift shall be longer than 6 hours without relief.

The Hamilton St. Ry. has made a contract with the Post Office Department to carry postmen on its cars for four years for the following amounts: 1st year, \$3,500; 2nd year, \$3,550; 3rd year, \$3,600; 4th year, \$3,650. There are said to be about 70 active postmen in Hamilton at present so that the rate for the first year averages about \$50 a man. The contract is retroactive to Oct. 1, 1916.

Moncton, N.B., City Council appointed a special committee, Aug. 7, to take up with the Moncton Tramways, Electricity and Gas Co., the question of noise made by the street cars. It was asserted at the meeting that the noise was "due to old and defective machinery and cars," and that "it would be more practicable to make the company move the tracks in the vicinity of the hospital than to keep the cars in repair."

Application was made to a British Columbia court, Aug. 9, for a mandamus to compel the Vancouver City Council to restore the license of a jitney driver which had been cancelled May 17 because he would not keep on a specific route as required by the bylaw. The case was

adjourned to enable counsel for the jitney driver an opportunity to show that a mandamus was the proper way to obtain relief.

The London and Port Stanley Ry. has placed in service one of the two new cars which were ordered from Newark, Ohio, in Nov. 1916. They are 71 ft. 7 ins. long over all, and are arranged with seating capacity for 72 passengers. The weight of the car body, including heat equipment, seats, light foundations, brake, draft gear and supports ready for the installation of the control equipment and air brakes, is about 49,733 lb., and the car complete with full equipment, weighs about 102,459 lb. The electrical equipment was supplied by Canadian General Electric Co., Toronto.

Telegraph, Telephone and Cable Matters.

The Great North Western Telegraph Co. has opened offices at Manoir Richelieu, Pointe au Pic and Valcartier Camp, Que., and Bala Park, Ont.; and has closed its offices at Carrot Creek, Jasper and Tollerton, Alta.

The Board of Railway Commissioners on application of the Marconi Wireless Telegraph Co. of Canada, has ordered that the proposed cancellation of the requirement of a minimum toll as for 10 words, the address and signature counted, on messages between ship and shore, be approved, and added to the company's tariff C.R.C. 7.

The Great North Western Telegraph Co. has appointed F. H. Markey, K.C., Montreal, as its representative on a board of conciliation to be formed to discuss a revised schedule for its employes. David Campbell, Winnipeg, has been appointed to represent the employes and Judge Gunn of Ottawa has been appointed as Chairman by the Minister of Labor.

The Minister of Marine, in the House of Commons, Aug. 6, confirmed the report that wireless telegraph services between Canada, the United States and Great Britain, had been suspended for the present. No reason for the suspension was given, but it is reported that messages were being intercepted, and that the enemy was benefitting.

The C.P.R. has arrived at an agreement with the Commercial Telegraphers Union regarding a revision of wages, etc., for its telegraph employes. The company grants a revised wage scale, including the Morkrums, and the right to legislate for all telegraph employes, and an 8½ hr. day and 7 hr. night on all tricks starting at, or later than 8 p.m., with a 10 hr. day, including 1 hr. for lunch, at one-man offices. It also grants a minimum increase of \$5 a month for each Morse telegrapher, and a rearrangement of percentages as follows: Vancouver, Calgary, Moose Jaw, and Winnipeg, each 30% at \$105, 30% at \$100, 30% at \$95 and 10% optional; Toronto and Montreal, each 30% at \$95, 30% at \$90, 20% at \$85 and 20% optional. The operators now receiving the maximum at these points, are increased \$5 a month over the fixed maximum, that is \$110 in the west and \$100 in the east. A \$60 minimum is fixed for Morkrum operators, \$65 after 6 months and \$70 after a year of service. Vacations will be granted to all employes who have been in the service 3 years or more, instead of 4 years as hitherto.

In the matter of the application to the Board of Railway Commissioners by the Great North Western Telegraph Co., the

C.P.R., and the Grand Trunk Pacific Telegraph Co., for an order approving conditions on telegraph forms on which messages to be transmitted are written, on hearing evidence by representatives of the applicant companies, Canadian Manufacturers Association, the Toronto, Montreal and Winnipeg Boards of Trade, the Winnipeg Grain Exchange and the Canadian Freight Association, and upon reading written submissions, the board has ordered that the application be dismissed, but that leave be reserved to the applicant companies to apply for a stated case for the opinion of the Supreme Court of Canada upon the questions of law involved. The changes which the companies desire to have made would make the same conditions prevail between the telegraph company and the addressee of a message, as exist between the company and the sender, and also that the same conditions should prevail in the transmission of a message over connecting lines, as between the sender and addressee and the company originally receiving the message for transmission. The companies also desire to limit the liability for damages in the case of repeated telegrams, to \$200. At present the liability is limited to 50 times the amount received for sending and repeating. To those conversant with English law on this point, the application for such a change seems unnecessary, as it has been finally settled, under English law, that the addressee has no right of action, and this law is applicable in all provinces of Canada except Quebec. It is chiefly to meet the possibility of some such action in Quebec, that the application is made.

Among the Express Companies.

T. W. Harrison has been appointed agent, Foreign Department, Adams Ex. Co., Montreal, vice G. C. Kaestner.

The Board of Railway Commissioners has approved the Central Canada Ex. Co.'s bylaw authorizing C. Dowling, General Superintendent, to issue tariffs.

The Board of Railway Commissioners, on the application of the Express Traffic Association of Canada, has rescinded order 22,200, July 11, 1914, requiring that packages containing celluloid be conspicuously labelled "Celluloid, inflammable."

The Manitoba Public Utilities Commission has ordered the Winnipeg Electric Ry to route every alternate car leaving St. Boniface for Dufferin Ave. so that instead of turning off at Dufferin Ave. it shall proceed continuously along Main St. to Redwood Ave., and thence along Hesper Ave and Kelvin St. to a Y which is to be installed near the John Black memorial church, returning over the same route to St. Boniface, maintaining a 10-minute service to the Y. A 22-minute service is to be maintained between the new Y and the north end of the line. The present schedule of fares is to be continued. This is the result of an application by East Kildonan residents for reduced fares and better service. The order went into effect Aug. 13.

Taxation of Public Utilities.—At a conference of Saskatchewan municipal officers at Regina, Aug. 3, a suggestion was made that public utilities operated by municipalities should be taxed in the vately. The conference was held in consame manner as if they were owned prinection with an investigation into taxation within the province at the provincial government's instance.

Transportation Associations, Clubs, Etc.

The names of persons given below are those of the secretaries unless otherwise stated:

Canadian Car Service Bureau—W. J. Collins, Manager, 401 St. Nicholas Building, Montreal.
Canadian Electric Railway Association—Acton Burrows, 70 Bond Street, Toronto.

Canadian Freight Association (Eastern lines)—G. C. Ransom, Canadian Express Building, Montreal.

Canadian Freight Association (Western lines)—W. E. Campbell, 805 Boyd Block, Winnipeg.

Canadian Railway Club—J. Powell, St. Lambert, Que. Meetings at Montreal 2nd Tuesday, each Dominion Marine Association—F. King, Counsel, Kingston, Ont.

Canadian Ticket Agents' Association—E. de la Hooke, London, Ont.

month, 8.30 p.m., except June, July and August.
Canadian Society of Civil Engineers—C. H. McLeod, 176 Mansfield St., Montreal.

Eastern Canadian Passenger Association—G. H. Webster, 54 Beaver Hall Hill, Montreal.

Engineers' Club of Montreal—R. W. H. Smith, 9 Beaver Hall Square, Montreal.

Engineers' Club of Toronto—R. B. Wolsey, 94 King Street West, Toronto.

Express Traffic Association of Canada—C. N. Ham, Montreal.

Great Lakes and St. Lawrence River Rate Committee—James Morrison, Montreal.

Hydro-Electric Railway Association of Ontario—T. J. Hannigan, Guelph, Ont.

International Water Lines Passenger Association—M. R. Nelson, New York.

Niagara Frontier Summer Rate Committee—James Morrison, Montreal.

Nova Scotia Society of Engineers—A. R. McCleave, Halifax, N.S.

Quebec Transportation Club—A. F. Dion, Quebec.

Shipping Federation of Canada—Thos. Robb, Manager, 42 St. Sacramento Street, Montreal.

Ship Masters' Association of Canada—Capt. E. Wells, 45 St. John Street, Halifax, N.S.

Toronto Transportation Club—W. A. Gray, 143 Yonge Street, Toronto.

Transportation Club of Vancouver—H. W. Schofield, 553 Church Street, Vancouver, B.C.

Twin Cities Local Freight Agents' Association—E. J. Travers, Fort William, Ont.

Western Canada Railway Club—Louis Kon, Box 1707, Winnipeg. Meetings at Winnipeg 2nd Monday each month, except June, July and August.

Winnipeg Traffic Club—James Gehrey, Bannatyne Avenue, Winnipeg, Man.

Sailor's Compensation Case.—The Montreal Transportation Co. has been ordered to pay \$287.45, and an annuity of \$230.33, representing half of the reduction in earning power, to an employe on the s.s. Indian, who was struck by a flying cable in the course of his work at Montreal. The company claimed that as the employe was engaged at Kingston, Ontario law should apply, but it was held that the accident occurred in Montreal, and therefore came under the Quebec laws, under which, it is not necessary for the employe to prove fault or neglect on the employer's part.

The British Corporation Registry, Glasgow, Scotland, in view of the amount of shipbuilding being carried on throughout Canada for British register, has established a branch in Toronto. The work has hitherto been carried on at Toronto by Capt. J. B. Foote, Manager of the Marine Department, Toronto Insurance and Vessel Agency, and under the new arrangement, he will have associated with him, D. Arnott and P. R. Court, naval architects and surveyors, who have arrived from Great Britain.

The Bellerive Towing Co., Ltd., has been incorporated under the Quebec Companies Act, with \$20,000 capital and office at Three Rivers, to carry on a general towing and transfer business there, as a subsidiary of the Wayagamack Pulp and Paper Co. The following are the officers, etc., C. R. Whitehead, Three Rivers, President; A. Pringle, Montreal, Vice President; J. W. Pyke, Montreal, director; and C. S. Smith, Three Rivers, Secretary-Treasurer.

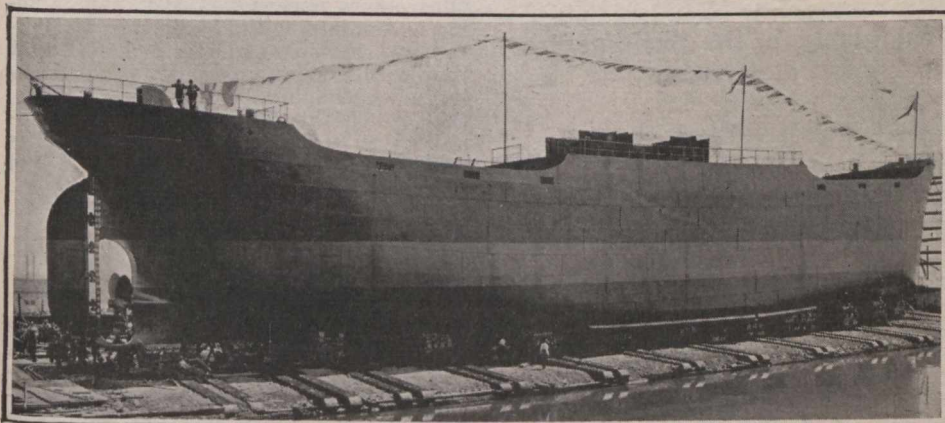
Marine Department

Freight Steamship Orleans for France Launched at Toronto.

The s.s. Orleans was launched at the Thor Iron Works, Toronto, Aug. 1, the christening ceremony being performed by Mrs. Stuart Playfair, Toronto. The vessel was originally ordered by James Playfair, President, Great Lakes Transportation Co., Midland, Ont., for his company, and was subsequently transferred to the Oriental Navigation Co., Nantes, France.

The hull is of the following principal dimensions: Length over all, 261 ft.; length between perpendiculars, 251 ft.; breadth moulded, 43½ ft.; depth moulded, 28 ft. 2 in. It is of the single deck type, with poop bridge and forecastle, steel deck house on bridge, and deck and chart room on top of deck houses, with navigating bridge. The hull is built on the transverse system, with the propelling machinery amidships, with the coal bunkers in wings. There are two cargo holds, with two hatches to each, one hold extending from the collision bulkhead to the boiler room bulkhead, and the other

rudder is of the single plate type, with arms alternately on the port and starboard side. The hull is divided by 4 watertight bulkheads, and a watertight sliding door is fitted in the engine room bulkhead, to give access to the tunnel. There is a screen bulkhead between the boiler and engine rooms, with door and portable plate for drawing the condenser tubes. The engine foundation is built up of plate and angles, with girders under the foundation, to line up with the fore and aft girders on the water bottom. The boiler foundations are of longitudinal plate girders, with large bouble angles on top edge, and connected to tank top with double angles at bottom. The deck house on the bridge is of steel, 7 ft. high, of plating, 12.2, stiffened with 3 x 3 x 6.1 angles, as are also the engine and boiler castings. The flying bridge is built from the roof of the chart house to the ship's sides, and is 4 ft. wide, carried on angle iron framing supported on angle iron stanchions. Steam windlass is 8 x 8 in.,



The Steamship Orleans, launched at Toronto recently.

from the engine room bulkhead to the after peak bulkhead, and there is a water bottom, 3 ft. deep, from the collision bulkhead to the after peak bulkhead. The construction is for the highest class of British Lloyd's ocean service, and in accordance with the British Board of Trade's requirements. The size of the machinery space has been arranged to approximate 13% of the gross tonnage, thus attaining a reduction of 32% from capacity tonnage.

The hull is built with flat plate keel and bilge keels, the latter extending for about 100 ft. amidships, and are of plate 9 in. deep, connected to the shell with angle bars fitted on short lengths, extending from butt to button shell, the plate being continuous. She has a straight stem and elliptic stern. Channel frames are fitted and extend from tank margin to main deck, and alternately to bridge deck, without hold stringers or 'tween deck beams. Plate floors are fitted on every third frame, except in engine and boiler space and forward, of 3/5s length, which are 24 in. centres. The propeller frame is according to Lloyd's requirements, with rudder post extending to main deck, to which it is attached by angles and deep transom plates. The

fitted with hand attachment and friction brakes. The steam steering engine, 6 x 6 in., is placed in the after end of the engine casings, with the horizontal shaft protruding through the after side, with the bracket and chain drum on deck. Two 22 ft. lifeboats, and one 18 ft. working boat, are to be provided, together with life belts and life buoys as required by law. The bridge deck will provide accommodation for the captain's, first and second officers' quarters, which, with the accommodation for the crew, are to be complete with every modern convenience. The electrical installation will include one 7½ k.w. generator, with equipment for lighting the whole vessel, the sidelights to be fitted for electric light as well as for oil.

The propelling machinery, which is being built by John Inglis & Co., Toronto, consists of engines of the single screw, 3 cylinder, 3 crank type, with cylinders 20, 33½ and 55 in. diam. by 40 in. stroke, developing about 1,400 i.h.p. at 80 r.p.m. Steam will be supplied by 2 boilers, each 14 ft. diam. by 12 ft. long, built for natural draught, at 185 lb. pressure. The boilers will be equipped with corrugated furnaces, 42 in. inside diam., with separate combustion chamber for each fur-

nace. It is expected that the vessel will be completed and ready for service before the winter.

Canadian and United States Coasting Regulations.

Canadian Railway and Marine World for August contained a copy of the order in council permitting United States vessels to engage in the coasting trade on the Great Lakes, so long as a similar regulation by the U. S. authorities as regards Canadian vessels in U. S. waters, shall remain in force. The U. S. Shipping board has submitted a resolution to Congress for approval along these lines, and in commenting on this, the Secretary of Commerce said: "The chief purpose of the resolution is to allow Canadian vessels on the Great Lakes to do coastwise business between U. S. ports. The Canadian Government very handsomely acted on the matter some time since, as concerns us, allowing the coastwise privilege to U. S. vessels in Canadian ports. There is urgent necessity for the employment of all possible tonnage on the Great Lakes in coal and iron ore hauling. The stocks of coal at lake distributing points are thousands of tons short of what they should be, so it is important to get every possible bottom carrying coal to the northwestern points before navigation is stopped. The unprecedented demand for iron and iron ore makes the need for additional ore carriers acute, almost as much so as for more coal carriers. There are numerous Canadian vessels that will engage in this trade if the restrictions are removed during the war emergency."

Stranding of the s.s. Clematis Investigated.

An enquiry was held at Halifax, N.S., July 12, into the cause of the stranding of the British s.s. Clematis, near Red Cape, Framboise, N.S., June 16, by Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Commander E. Wyatt, R.N.R., and Capt. T. A. Hill, master of R.M.S. Chaleur, as nautical assessors.

The court found that the master was foolhardy in his navigation, when he found himself in shallow water, and it also wondered how it was possible for the master being unable to differentiate between a fog horn of the power of the one at Scatarie and one blown by a vessel. The weather was foggy, but calm, and the court considered that too great a speed was maintained during such weather. It therefore found him in default, not for negligent navigation, as his deviation book shows that some painstaking efforts were made to bring the vessel safely to her destination, but he erred greatly in judgment, in not taking means to assure himself of the nature of the fog horn he heard, and he committed a fatal mistake in maintaining the good half speed while such climatic conditions existed. Having regard to the circumstances, and to the fact that his navigational work previous to this was faultless, the court did not deal with his certificate, but reprimanded him severely, and trusts that it will serve as a lesson to exercise more prudence in future. It did not appear that the officers were negligent, and they were exonerated from blame.

Encouragement of Shipbuilding in Nova Scotia.

Some details of the Nova Scotia legislation to encourage shipbuilding there have already been given in *Canadian Railway and Marine World*. Under the act passed last session, the Governor in council is authorized to appoint five, and not more than seven persons to form a shipbuilding commission, together with a secretary, all of whom may be remunerated. The commission's duties are to investigate the province's facilities for vessel building and for the carrying on of other manufacturing incidental thereto, to make suggestions for regulations for the use of all resources for such development, and for such purposes to engage technical and expert assistance and enter into arrangements with similar commissions in other provinces, or with the Dominion Government. The Governor in council may create the commission a body corporate under the name of the Nova Scotia Ship Building Commission, with all the rights and powers of a corporation, so that it may build, purchase, and operate vessels, establish shipbuilding plants, and generally carry on business as usual with an incorporated company. It is authorized to issue bonds or other securities, expropriate lands, and raise \$2,000,000 on the province's credit, etc., under order of the Governor in council. The proceeds of the loan raised are to be paid into the provincial treasury, and applied for the following purposes—payment of the commission's expenses in carrying out the objects of the act, payment of subsidies granted to the Commission, or to any company engaged in the building, equipment or operation of vessels, and payment of obligations which the commission may incur in carrying out its objects.

The following commissioners have been appointed,—D. Macgillivray, Halifax, Chairman; C. F. McIsaac, K.C., Antigonish; D. E. North, Hantsport; A. MacKenzie, River John; F. L. Kelly, North Sydney; and Murray Macneill, Halifax, Secretary.

Imperoyal-Maisonneuve Collision.

An investigation was held at Montreal, recently, by Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. F. Nash and C. Lapierre, as nautical assessors, into the cause of the collision between the steamships *Imperoyal* and *Maisonneuve*, near the intersection of Contrecoeur range lights (traverse), in the St. Lawrence River, June 5. The court found that the *Imperoyal* was being navigated with improper lights, the additional red light which was exhibited with the red side light being contrary to the regulations and therefore misleading, and also stated that it failed to find any regulations directing a vessel carrying dangerous goods to exhibit additional lights, other than those prescribed for a vessel under way. If it can be shown that there is any regulation empowering a vessel carrying dangerous goods to exhibit an additional red light when under way, the court will withdraw its conclusion of default against the master of the *Imperoyal* and the pilot, but until then, the master stands to be censured for a wrong action. The court considered that the master of the *Maisonneuve* was misled by the lights in the first instance, but had he kept a proper lookout he would have seen the masthead light, and that

the vessel was moving, and he should have adopted precautionary measures, as called for by article 29. He also showed lack of elementary bravery, in abandoning his vessel without making himself acquainted with the injury sustained; the fact that three members of the crew returned to the vessel and steered her to shoal water shows conclusively that the master lost his head. He ordered the engineer to leave his post, and the engines were left full speed ahead. The *Imperoyal* was correctly navigated, apart from the matter of lights. The court, after weighing these facts, found that the master of the *Maisonneuve*, Jean Paquet, had been negligent and is not competent to command a vessel, and therefore cancelled his master's certificate 5033. The engineer of the *Maisonneuve* abandoned his post without first stopping the engines, but as this was done under the master's personal orders, the court could not express an opinion on the engineer's conduct.

In the course of the investigation it developed that two men and a child were on board, not members of the crew, or the owner's family, nor servants of his household, and the *Maisonneuve* being a freight vessel, not licensed to carry passengers, sec. 671, par. vii., chap. 113, R.S.C., was violated. The court therefore recommends that the fine mentioned in this section, viz., \$100, be imposed.

Coal Supply for the Maritime Provinces.

The question of a coal supply for the Maritime Provinces was raised in the House of Commons, Aug. 2, by Hon. W. Pugsley of St. John, N.B., who asked for a definite statement as to what arrangements, if any, had been made to provide against a shortage; what steamships have been placed at the disposal of the authorities, and what are to be the rates of freight.

The Minister of Trade and Commerce, in reply referred to the appointment of a Fuel Controller, who had Dominion wide authority and who had had the question of Canada's fuel supply under consideration for over a month. An agent has been appointed in the United States to act under him, whose duty it is to report upon the supplies of coal, at what points these supplies are, the prices at which they can be obtained, and the transportation facilities available between the point of production and the Canadian border. At the time of speaking that officer was gathering information in Canada as to requirements. The Fuel Controller was in communication with the Board of Railway Commissioners and the different Canadian railway companies as to the arrangements necessary for the distribution of coal in Canada. The Minister then said:

"The anthracite situation in Halifax and St. John is somewhat different, because it is practically impossible to take coal in there by rail, and the ordinary way hitherto has been by vessel. At present facilities for water carriage are very scarce, and very difficult to obtain. It is true that the disparity of cost as regards St. John and Halifax is mainly due, not so much to different prices at the points of production, although in obtaining coal from independent companies in New York there is a difference in the prices paid as compared with prices at the point of production where the coal is taken up by the railway companies. The matter

of freights comes in there. They are very high. Schooners and small vessels which take lumber from St. John and which hold themselves open to bring back freight, have their own costs and charges and they are very high. How to obtain the necessary transport is a difficult question. The Fuel Controller has appointed an aide in St. John and another in Halifax. The appointee in St. John, Mr. Frink, is, with committees, working upon the problem there. I am not aware that the government has any steamships that can be placed at the disposal of parties in St. John and Halifax for the carriage of this coal. I am inclined to think it has not. It is equally difficult for the government to obtain vessels for that purpose. In the main, the transport will have to be arranged, I think, by the parties interested in obtaining coal, aided as far as they possibly can be, by the Fuel Controller and such agents as he is working in co-operation with."

The Minister of Trade and Commerce again referred to the matter, Aug. 4, when he said: "The government has intervened in the matter to the extent of arranging for the necessary transport for supplying hard coal to Halifax and St. John and the districts supplied therefrom. The difficulty appears to be the finding of suitable accommodation for these vessels, which are of large size, and have to be unloaded quickly to avoid unnecessary expense. This matter is being looked into by the authorities of Halifax and St. John, and it is hoped that they will be able to arrange for the docking and unloading of these vessels. If so, they will be at their disposal at reasonable rates for carrying the coal that is required to supply these two cities and the surrounding districts."

Government Naval Vessels and Dockyards.

The Minister of Marine stated in the House of Commons recently, that H.M.C.S. *Rainbow* is maintained in full commission, as is also the *Shearwater* (submarine depot ship), and the submarine flotilla. The *Niobe* is being utilized as a depot and receiving ship, and a large number of men have passed through her, in addition to her regular complement and drafts for patrol vessels. The naval dockyards at Halifax, N.S., and Esquimalt, B.C., have been worked to their full capacity, the nature of the work done being practically all repairs. Halifax is being used as the base for vessels of the North Atlantic fleet, which has been strengthened lately. At Esquimalt yard, work has been carried out on Imperial vessels as well as on those of the Canadian service. The floating dock at Prince Rupert has been completed, but it has not been operated for the use of the mercantile marine. It has proved very useful in connection with the repairing of Royal Navy ships. In addition to repairs to vessels of the fighting fleet, the docks are carrying out a large number of small repairs to vessels employed for auxiliary purposes, patrol and other defensive work on the coasts.

War Profits on Shipping.—The Chuyetsu Steamship Co., a comparatively small Japanese steamship concern, which had one of its vessels sunk by a German submarine recently, decided to sell its vessels and retire from business. In the liquidation, stockholders, who paid \$2.50 a share originally, received \$500 a share.

Shipbuilding Activities Throughout Canada.

Steel Steamship Building for British Government.

The Port Arthur Shipbuilding Co. launched the s.s. War Fish at its yards at Port Arthur, Ont., Aug. 4. This is the second vessel launched this summer. It is 251 ft. long over all, 43½ ft. beam and 28 ft. 2 in. deep, and of 4,200 tons capacity. The keel has been laid for another similar vessel. Keels have also been laid for a number of trawlers.

The s.s. War Dog, which was built at the Wallace Shipyards, North Vancouver, recently, and described and illustrated in Canadian Railway and Marine World for June, underwent her trials at the end of July. She was built for an average speed of 9½ knots an hour, and in her trials reached 10.4 knots, with an average of

interests. It is stated that eight of these vessels are under contract, with the first vessel in the frame and partially plated. Among the information given in Canadian Railway and Marine World for August, which was as far as could then be ascertained, the Dominion Government had authorized the construction of seven steel steamships in British Columbia, on foreign account, for export, four of them to be built by Wallace Shipyards, Ltd., North Vancouver, and three by J. Coughlan & Sons, Vancouver. Of these latter, a contract was made for one vessel, and this was requisitioned by the British Government. In the former case, no contracts were entered into, but one steel vessel was built for Japanese interests, and was taken over by the British

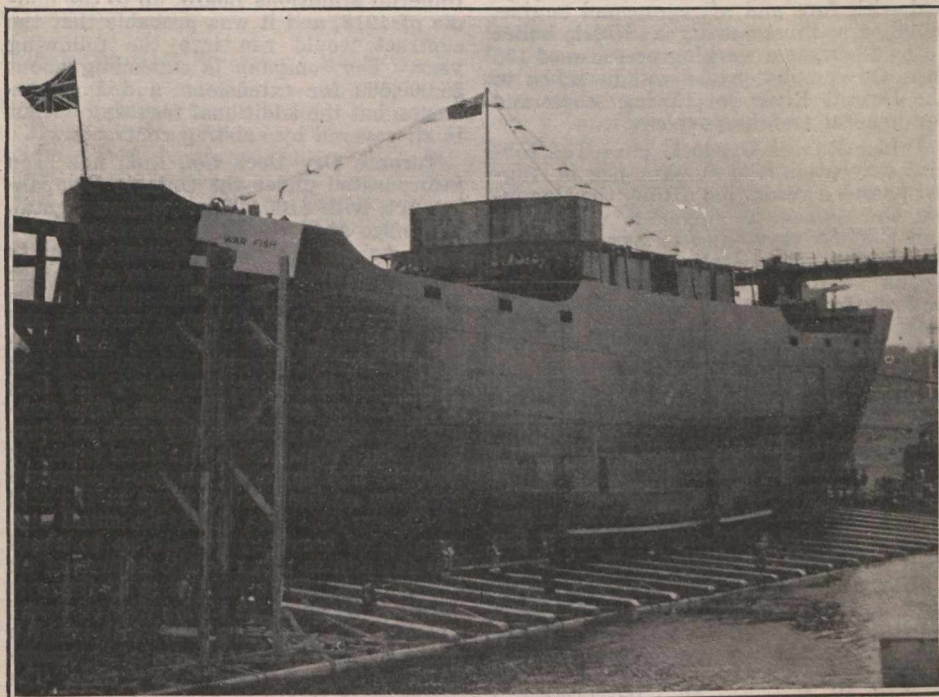
vessels of the tonnage required, have received contracts except the Prince Rupert yards, where suitable timber is not available, and one other firm, which did not care to undertake wooden shipbuilding.

Cameron-Genoa Mills Shipbuilders, Ltd., Victoria, B.C., has laid the first keel of its order for 4 wooden steamships for the Imperial Munitions Board. A number of shipbuilders engaged by the Foundation Co. have been loaned to the Cameron-Genoa Shipbuilders, to rush construction as much as possible, until the Foundation Co.'s plant is advanced to the stage when it can commence actual shipbuilding. In the meantime, it is expected that the Cameron-Genoa Mills Shipbuilders will be able to release other men for the Munitions Board's orders, as the vessels under construction for Canada West Coast Navigation Co. and H. W. Brown & Co. are about completed.

The Foundation Co. has keels laid at its plant at Hope Point, Victoria, B.C., for three of the five wooden steamships, for which it has a contract from the Imperial Munitions Board. The frame has been erected on the first keel. Before the last keel is laid, a considerable quantity of filling will have to be placed on the west side of the plant.

Imperial Munitions Board.—E. H. Gurney, Second Vice President, Gurney Foundry Co., Toronto, who has been in Ottawa for some time, assisting the Imperial Munitions Board in connection with shipbuilding, has been appointed Assistant Director, Marine Machinery Supply.

The William Lyall Shipbuilding Co., Ltd., has been incorporated under the Dominion Companies Act, with \$1,000,000 capital, and head office in Montreal, to carry on shipbuilding throughout the Dominion, or elsewhere, and to manufacture and deal in materials incidental thereto. The directors are, Wm. Lyall, President, P. Lyall Construction Co., Montreal, President; J. N. Greenshields, K.C., and H. W. Beauclerk. The company has acquired Wallace shipyard no. 2, from Wallace Shipyards Ltd., North Vancouver,



S.S. War Fish, launched at Port Arthur, Ont., August, 1917.

10.2 knots. The test runs were between Point Atkinson and the Hollyburn wharf, a measured course of 4.12 nautical miles. In the three tests, the engines developed 1,260 h.p. at 98 r.p.m.; 1,155 h.p. at 80 r.p.m., and 1,305 h.p. at 98 r.p.m., respectively. The tests of this vessel, the first steel steamship to be built in British Columbia, are considered most satisfactory. When she leaves for England shortly, she will be in charge of Capt. J. H. Kay, with J. Black and T. Thom, all of Liverpool, Eng., as first officer and chief engineer respectively.

The s.s. War Fish, the seventeenth vessel built at the Port Arthur Shipbuilding Co.'s yards at Port Arthur, Ont., was launched there Aug. 4. She was built to the order of James Playfair, President and General Manager, Great Lakes Transportation Co., Midland, Ont., and has been acquired by the Imperial Munitions Board for the British Government. Her dimensions are, length 261 ft., beam 43½ ft., depth 28 ft. 2 ins., and she has a gross tonnage of 2,406, with deadweight carrying capacity of 4,280 tons.

Vancouver Steamship Building.—It is stated that the British Government had taken over a number of steel steamships under construction there for Norwegian

Government. This company has contracts for three steel steamships for the Imperial Munitions Board.

Wooden Steamship Building for British Government.

In response to complaints to which publicity has been given in the British Columbia press, that contracts for the building of wooden steamships have been awarded to eastern contractors, who have located their yards in the west, in preference to local yards already established, the Imperial Munitions Board has issued a statement to the effect that out of 27 wooden steamships ordered in British Columbia, two contracts covering 11 vessels, have been let to firms hitherto established in the east. Both of these firms were in negotiation with the board prior to any offer being received from British Columbia, and it was their intention to build in the east until the board stated that as a certain amount of B.C. lumber was to be used, it would be better to locate their yards in that province. Of the total number of vessels ordered by the board, three-fifths have been ordered in British Columbia, and all yards in the province, which are equipped to build

keys, and fastened with galvanized bolts, the ends being secured with 19 in. spikes.

The New Westminster Construction & Engineering Co., which has an order for 4 wooden steamships for the Imperial Munitions Board, laid the first keel at Poplar Island, New Westminster, B.C., July 28, and the second one, July 30. This is an entirely new plant, and no time has been lost in getting construction under way. It is stated that there is no difficulty in obtaining the necessary labor.

The North Shore Iron Works, North Vancouver, B.C., has received orders from the Imperial Munitions Board for a number of windlasses, winches, etc., for delivery by April, 1918, for wooden steamships under construction for the Board in B.C.

General Shipbuilding Notes.

The British American Shipbuilding Co., Ltd., has been incorporated under the Dominion Companies Act with \$1,000,000 authorized capital and office at Toronto, to build all types of vessels and to carry

on a general constructing and contracting business. F. H. Keefer, Thorold, Ont., and A. A. Kinghorn, Toronto, are chiefly interested.

Canada West Coast Navigation Co.—M. J. Haney, of Toronto, Chairman of the Company, who was in Vancouver, B.C., recently, is reported to have stated that the company is in the shipbuilding business to stay, and what is planned for the future might be a surprise to local concerns. The company, he said, had contributed 10 ships toward the prosperity of the province, and originally contemplated building 50, but owing to existing conditions, the company's individual plans cannot be extended for the present.

Canadian Government Wooden Steamships for Panama Route.—It was announced in our last issue, that the Dominion Government had concluded two contracts with Wallace Shipyards Ltd., and Harrison and Lamond Shipbuilders, Ltd., Vancouver, B.C., respectively, for the construction of two wooden steamships for service between Pacific and Atlantic coast ports via the Panama Canal, at an approximate price of \$230,000 each. It was announced in the House of Commons, Aug. 25, that the firms had declined to proceed and had cancelled their tenders, offering instead to proceed with the work on a cost, plus 10% basis.

Concrete Vessel Building.—A syndicate has been formed in Montreal, under the name of the Atlas Construction Co., for the construction of concrete vessels, and is said to be building a steamship of reinforced concrete, 125 ft. long, 20 ft. beam and 11 ft. deep, as an experiment. Barges of concrete construction have been in limited use for special purposes for a number of years in Italy and France, and of recent years on the Welland and Panama Canals.

The Eureka Shipbuilding Co., Ltd., has been incorporated under the New Brunswick Companies Act, with \$32,000 capital, and office at North Head, N.B., to build, own and operate vessels of all kinds, and to carry on the business of traders and the transportation of merchandise, mails and passengers. The incorporators are: F. Ingersoll, J. E. Gasgill, F. S. McLaughlin, F. L. Lakeman, Grand Manan, and N. M. Mills, St. Stephen.

North Vancouver Drydock, Etc.—It is reported that negotiations are proceeding for the purchase of the site acquired by the Dominion Drydock and Shipbuilding and shipbuilding plant at North Vancouver, B.C. This company originally planned a dry dock, provided a Dominion subsidy could be obtained. No doubt the subsidy would have been granted if the company had been able to finance the affair and to arrange for a dry dock of the type necessary to gain the subsidy, but so far as can be seen, the financing of the construction depended on the granting of the subsidy, so no progress was made.

Nova Scotia.—It is reported that a steel shipbuilding plant will be located at Dartmouth, N.S., under the Nova Scotia Government's scheme for aiding shipbuilding in the province.

Nova Scotia Schooner Building.—A 3-masted schooner, named Esther Adelaide, 148 ft. long, 36 ft. wide and 12.4 ft. deep,

was launched at Port Greville, N.S., Aug. 8, and on the same date a schooner, named William Melbourne, 158.4 ft. long, 12.7 ft. deep, was launched at Parrsboro, N.S., for C. T. White & Son, Sussex, N.B. It is reported that both vessels have been sold to Australian parties.

The Nova Scotia Shipbuilding and Transportation Co. has commenced the construction of two 500-ton schooners at Liverpool, N.S., and is arranging to launch one similar vessel every three months as long as the demand continues. The two vessels now laid down have been sold. H. A. Frank, New York, and W. E. Hansel are chiefly concerned in the company's management.

The Ontario Gravel and Freighting Co., Windsor, Ont., had a wooden steam tug named Windsor launched from R. Morrill's yards, Collingwood, Ont., Aug. 18. Her dimensions are: length 105 ft., breadth 23 ft., depth 12 ft. She is equipped with fore and aft compound engine, supplied with steam by a Scotch boiler 13 by 13 ft., at a working pressure of 155 lbs. On completion she will be taken to the Detroit River for towing scows and for general freight purposes.

Prince Rupert Drydock, etc.—The Liberal convention held in Winnipeg in August passed a resolution urging the Dominion Government to instal a permanent and efficient staff, and to assemble materials for the operation of the Grand Trunk Pacific drydock and shipbuilding and repair plant at Prince Rupert, so that shipbuilding and repairing may be carried on in the national interest.

The negotiations which were reported to have been in progress with the Union Iron Works, San Francisco, Cal., for the lease of the G.T.P. plant at Prince Rupert, are stated to have fallen through, though it is announced that negotiations are proceeding with other firms with some signs of success, the chief obstacle being the supply of steel for shipbuilding.

The St. John Shipbuilding Co., mention of which has been made in previous issues, is completing arrangements for commencing the building of wooden vessels at an early date. The directors include J. W. Norcross, Vice President and Managing Director, Canada Steamship Lines, Ltd.; Senator W. C. Edwards, R. M. Wolvin, President, Montreal Transportation Co., and President, Canada West Coast Navigation Co.; M. J. Haney, Chairman, Canada West Coast Navigation Co.; Angus McLean, Bathurst, N.B., Richard O'Leary, Richibucto, N.B., Thos. Bell, St. John, N.B., and Thos. Nagle, St. John, N.B., the last mentioned being the General Manager.

The St. John Shipbuilding Co., organized recently, has plans for the construction of five ways at Courtenay Bay, St. John, N.B., where it intends laying keels for five 5-masted schooners with auxiliary power. It is reported at St. John that 10 ways are to be laid down, that vessels will probably be built there for the Imperial Munitions Board, and that eventually steel vessels will be built.

The schooner Malahat was launched at the Cameron-Genoa Shipbuilders' yard, Victoria, Aug. 11. Considerable delay has been experienced in obtaining delivery of the Bolinder engines intended for this vessel, they being made in Sweden. It has, therefore, been decided that she will accomplish her first voyage as a schooner, after which, it is hoped that her engines will have arrived. The Malahat has been sold to Canada Steam-

ship Lines, Ltd., and she is at present under charter with lumber for Australia. She was built for Malahat Motor Ship Co., a subsidiary of H. W. Brown & Co., the principal of which is General Manager of the Canada West Coast Navigation Co., and which, in turn, is closely associated with people interested in Canada Steamship Lines, Ltd.

The Steel Co. of Canada is extending its plant at Hamilton, Ont., and it is stated that in addition to manufacturing general-sheet metal, it will arrange a special department for rolling steel plates for shipbuilding.

Steel Shipbuilding Probabilities.—Mark Workman, President, Dominion Steel Corporation, Montreal, is reported to have stated recently, that Canada will not be in a position to build steel steamships to any considerable extent for two or three years, owing to the scarcity of steel. He said that his company's entire output had been contracted for by the Imperial Munitions Board, up to the middle of 1918, and it was probable that the contract would run into the following year. The company is expending about \$5,000,000 for extensions and improvements, but the additional resulting output is all covered by existing contracts.

Toronto Dry Dock Co., Ltd., has been incorporated under the Ontario Companies Act, with \$100,000 authorized capital, and office at Toronto, to take over a dry dock, or dry docks, at Toronto, and to build, own and operate steam and other vessels. Among those interested in the company are C. S. Boone, President, and J. E. Russell, Vice President and Managing Director, Toronto Shipbuilding Co.; L. Solman, Manager, Toronto Ferry Co.; J. J. Manley and H. Dickson. The company bought a floating dry dock at Sturgeon Bay, Wis., which has been towed to Toronto and installed on the company's property on the harbor front at the foot of Cherry St. The dock is a small one, capable of handling vessels up to about 160 ft., and is more in the nature of an experiment. It is said that if there is sufficient inducement in the way of vessel repairs, etc., the company will build a modern floating dry dock to accommodate the larger type of lake vessels. The company is stated to have made application to the Dominion Government for a subsidy.

The Toronto Shipbuilding Co., Ltd., has been incorporated under the Ontario Companies Act, with \$100,000 authorized capital, and office at Toronto, to build, own and operate steam and other vessels of all kinds, and to carry on a general contracting business. Following are the officers: C. S. Boone, President, Boone Dredging & Construction Co., Toronto, President; J. E. Russell, Contractor, Vice President and Managing Director; C. A. Boone, Second Vice President; J. M. Russell, Secretary; J. J. Manley, Treasurer, and C. L. Hayes, Engineer and Superintendent. A plant is being laid out on the harbor front at the foot of Cherry St., where the company will build two wooden steamships, for which it has a contract from the Imperial Munitions Board.

The s.s. Ugelstad, which was launched recently at the Port Arthur Shipbuilding Co.'s yards at Port Arthur, Ont., was completed and handed over to the Great Lakes Transportation Co., early in August. It is said that negotiations are under way for the transfer of the vessel to Norwegian interests, but it is anticipated that such transfer would not be authorized by the Dominion Government, but dently made a mistake in referring to

rather that she would be taken over for the British Government.

Wallace Shipyards, Ltd., which, as previously announced, has sold its no. 2 yards at North Vancouver, to Wm. Lyall Shipbuilding Co., does not give up actual possession until the completion of two auxiliary powered ships being built there for Canada West Coast Navigation Co., the last one, named Mabel Stewart, being launched Aug. 11.

Western Canada Shipyards Ltd. has secured a permit for the construction of an office building, etc., on the site it has acquired from the British Columbia Electric Ry., at the foot of Carroil St., Vancouver, B.C.

C. T. White & Son, Ltd., Sussex, N.B., have, it is reported, added shipbuilding to their other industries, and have laid out a yard at Alma, N.B., on the west side of the river, beyond the breakwater.

The Yarmouth Shipbuilding Co. Ltd., is reported to have leased O'Hanley's wharf formerly the Gilbert Sanderson shipyard, at Yarmouth, N.S.

British Columbia Steamboat Men's Work.

From the glacier-fed waters of the Upper Fraser River in British Columbia to the Garden of Eden is a far cry, but many of the adventurous steamboat men, scowmen and canoemen who blazed the trails of progress in the north and are remembered as the pioneers of navigation in central British Columbia, made the long trip to the plains of Arabia to play their part in the Empire's battles. Glowing tributes have been paid to British Columbia men so active in the Inland Water Transport Service, and owing to the efficiency of the rivermen who have learned, through years of experience on the Fraser and the Skeena Rivers, how best to master the problem of river transportation, special calls were sent out from Britain for more men from the Pacific province. The work on the northern rivers is similar to that on the Tigris and Euphrates, and a short period of acclimatization finds the rugged frontiersmen no the far west at home in the land of Caliphs.

Patrol Steamship Building for British Government.

In response to questions by members as to the progress in building ships in Canada for the British Government, the supervision of which was undertaken by J. W. Norcross, Vice President and Managing Director, Canada Steamship Lines, Ltd., the Minister of Marine stated in the House of Commons, Aug. 6, that the work is progressing satisfactorily, but not as rapidly as had been hoped for. There is difficulty about getting engines and boilers, which has caused delay. A number of vessels have been launched, and it is hoped to have a number of them in patrol service in such places as the British Government desires to place them. The British Government asked the Marine Department to undertake the work, and this is being done, with the assistance of Mr. Norcross and other gentlemen. The work is being performed in a number of places in Canada. In Quebec it is being done by George Davie of Levis, in Montreal by Canadian Vickers, Limited, and in Toronto by Norcross and Polson. Work is also being done at Collingwood and Port Arthur, and other points. On the whole it is going ahead satisfactorily, but there are delays in obtaining material, and it has not proceeded as quickly as was hoped for at the time the orders were placed.

[EDITOR'S NOTE.—The Minister evi-

vessels being built in Toronto by "Norcross and Polson." J. W. Norcross is acting as Director of Naval Construction, under the Naval Service Department, in connection with the building of steam trawlers and drifters. The Polson Iron Works has a contract for a number of patrol boats as well as trawlers and drifters, as referred to elsewhere, and others are being built by other concerns in Toronto as well as in other places.]

Lake Vessels for Winter Service on the Atlantic.

In Canadian Railway and Marine World for August, some mention was made regarding the suggestion of a correspondent of a Toronto daily paper, as to utilizing lake vessels for Atlantic service during the winter, when lake navigation is closed. It might betaken from the correspondent's letter that on the closing down of navigation on the Great Lakes, all the vessels are tied up until the spring. So far as Canada is concerned, especially since the commencement of the war, this is not the case. During the last two winters, a considerable number of Canadian registered lake vessels have been transferred to the coast and to Great Britain and France, under charter for any service which they may be called upon to perform. Some of these charters were for winter service only, such vessels returning to their customary service in the spring, and other charters have been for periods of from two to five years. Canadian Railway and Marine World has from time to time given details of the vessels so engaged.

There are still a number of vessels which might engage in this service with advantage, but it must be understood that all vessels operating on the Great Lakes are not suitable for salt water service, and also that there are several vessels which would have to be cut in two and towed through the canals, and pieced together again before taking up the ocean service. A great many of the lake vessels have been built in Great Britain, and so have had some Atlantic experience, but there is very little doubt that vessels of the customary lake type, with propelling machinery located in the stern, are not suitable for continuous service in trans-Atlantic trade. This conclusion is not derogatory to the type or construction of the vessels. They are originally designed and built for lake service, and fulfil their duties in that service, but the type is not of the kind adapted to ocean service.

Several U.S. shipping companies are considering the question of sending some of their vessels to the coast for coast service during the winter, and consider that they could be used to advantage on the east coast between November and April. The cost of refitting the vessels for salt water service is mentioned as about \$5 per horsepower, and it is believed that with some government backing, the plan is feasible. It is hoped to get the government to pay the initial cost of changing the equipment, the owners to repay the amounts out of the profits of the winter business.

Press reports state that arrangements are being made in the United States to select about 80 vessels, which are deemed suitable for ocean and coast service, and take them through the Welland and St. Lawrence canals. Those which are too long for passage through the Welland Canal will be cut in two and joined, pos-

sibly at Montreal. It is also reported that a Canadian Government representative has classified a number of Canadian vessels suitable for ocean service, and it is stated that all vessels which can pass the Welland Canal, and are deemed suitable for the service, will be taken. These number about 100, and are additional to those Canadian Lake vessels which have been in such service from the commencement of the war.

Enquiry into Triple Strandings of Steamship Turbinia.

Capt. L. A. Demers, Dominion Wreck Commoissoiner, assisted by Capt. J. B. Foote and Jas. McMaugh, as nautical assessors, held an enquiry at Toronto recently, into the causes which led to the stranding of Canada Steamship Lines s.s. Turbinia in the Niagara River, June 30, on Centre Island, Toronto, July 1, and in Toronto harbor, July 5. The court found that the grounding in the Niagara River, between Queenston and Lewiston, was due to an error of judgment on the part of the master, A. Jeffreys, in miscalculating the force of the current and wind, but that it was not of a culpable nature. Regarding the second grounding, the court considered that the master did not apply his judgment in the proper channel; he had expressed his doubts as to the correctness of the compass but did not take means to ascertain its deviation; he was running at too great a speed during fog, and did not use the lead as he should have done. He bears a good reputation as an officer, and for this reason the court dealt leniently with him and suspended his certificate for one month from July 20. The court absolved the mate, M. J. Lawless, from blame for the stranding, but remarked that his conduct indicated indifference. With respect to the third grounding, the evidence was not very clear, as the master stated that a number of small boats were almost blocking the channel, and in endeavoring to clear them he grounded. The wheelman and second officer said that they saw no boats. The court found that he was not in fault in this case, but warned him to be more careful in future and not to lose sight of his responsibilities as a master.

The Federal Shipbuilding Co., associated with the United States Steel Corporation, is credited with the intention of building the largest shipbuilding plant in the world at New York. It is said that 10 shipways are to be established, each about 500 ft. long, which will probably be extended to take vessels 1,000 ft. long, later in, that the steel buildings, which are planned to cover 10 acres, will include a plate mill, structural steel, fabricating and assembling shops, all the equipment is to be made in the plant, and that a large basin, 1,000 by 220 ft. is being dredged, large enough to enable six vessels to be fitted out simultaneously. The plant is being modelled on plans adopted by the most modern yards in Scotland.

The Oriental Navigation Co. of Nantes, France, which has acquired the s.s. Orleans, now under construction at Toronto, from the Great Lakes Transportation Co., is reported to have also bought the s.s. Turret Crown from the Coastwise Steamship and Barge Co., Vancouver, B.C. The Turret Crown, which was formerly operated on the Great Lakes, has latterly been in the ore trade between Granby Bay and Puget Sound.

Atlantic and Pacific Ocean Marine.

A derelict vessel about 220 ft. long, floating keel upward in the North Atlantic, was reported recently by the s.s. Rounton Grange, as a menace to navigation.

The Blue Funnel Line will resume its trans-Pacific service about the end of this year. It was interrupted owing to a number of the vessels being commandeered for war work.

The British s.s. Heliopolis, formerly Maine, is reported to have been purchased by Canadian Pacific Ocean Services, Ltd., and renamed Methven. She was built at Glasgow, Scotland, in 1906, and is 4,852 tons gross, 3,042 register.

Maritime Provinces and Newfoundland.

The Public Works Department received tenders, Aug. 31, for extensions and repairs to Negro Point breakwater, St. John harbor, N.B.

The Eastern Steamship Corporation is not operating its usual direct service between St. John, N.B., and Boston, Mass., this year, but is continuing its service on its International Division, to St. John, via Portland, Me.

The Dominion Iron and Steel Co.'s s.s. Heathcote was sunk in a collision with a Dutch steamship in the St. Lawrence, toward the end of July, while carrying a cargo of limestone to Sydney, N.S. She was built at Sunderland, Eng., in 1888, and was 2,345 tons gross.

The British s.s. Clematis, which stranded near Red Cape, Framboise, N.S., June 16, and which was towed to Halifax for examination, will be repaired there. The contract was given the Halifax Dry Dock Co., for \$164,000, against a New York tender for \$210,000.

On Aug. 22, the s.s. Northumberland was withdrawn from service between Point du Chene, N.B., and Summerside, P.E.I., for repairs, and thae service was discontinued temporarily at least. The s.s. Aranmore is continuing the service between Pictou, N.S., and Charlottetown, P.E.I.

The Department of Marine has bought for \$7,000 the s.s. Wilfrid C. from the Shepody Navigation Co., Moncton, N.B., for use in connection with the naval defence of Halifax harbor. She was built at Yarmouth, N.S., in 1897, and is screw driven by engine of 16 n.h.p. Her dimensions are, length 80 ft., breadth 18.5 ft., depth 8 ft.; tonnage, 90 gross, 48 register. The name has been changed to Wilfrid.

The Norwegian s.s. Kristianiafjord, which was reported in our last issue as ashore near Cape Race, Nfld., has become a total loss, owing to the heavy weather prevailing. The Quebec Salvage and Wrecking Co.'s s.s. Lord Strathcona, which was sent to her relief, did some good work, but the wreck was driven farther inshore, and her bows and keel were badly ripped, as well as causing considerable damage to her machinery, making salvage practically impossible. The sale of the vessel as she lies, by public auction, has been advertised.

Toronto Coal and Dock Co., Ltd., has been incorporated under the Dominion Companies Act, with \$100,000 capital and office at Montreal, to own and operate steam and other vessels, and to deal generally in coal, lumber and other merchandise.

Province of Quebec Marine.

The Quebec and Levis Ferry Co.'s s.s. John S. Thom, was reported ashore at Devil's Neck, near Charlotte, N.Y., Aug. 21.

Canada Steamship Lines Ltd., has decided that it will not deliver grain from its vessels to any elevator, above lock 2, on the Lachine Canal, unless such unloading was pre-arranged when the contract for freight was made.

Ontario and the Great Lakes.

The s.s. Thousand Islander, which, during the summer, has been making a Sunday call at Brockville, has eliminated it on the objection of the Lord's Day Alliance.

The Marine Department has announced that the flashing white catoptric light at the west end of Long Point, Lake Erie, has not been discontinued, a previous notice to that effect having been cancelled.

The light near the outer end of the west pier at Charlotte, N.Y., has been changed from a fixed red light to an occulting white light, visible 6 secs. and eclipsed 4 secs alternately.

Supplementary estimates laid before the House of Commons, Aug. 17, include \$1,020,000 for the purchase of the steamships J. A. McKee and Thomas J. Drummond, to which allusion has been made in previous issues.

The s.s. Agwinde, formerly owned by the Rainy River Navigation Co., Fort William, has been sold to Capt. I. Boudreau, for fishing service at the mouth of Rainy River, and it is stated that it may later on be placed in passenger service on the river.

The s.s. Natironco, which was wrecked in collision with the s.s. Eastern States in the Detroit River, June 19, and beached on the Canadian bank, opposite the Ecorse Shipbuilding Co.'s plant, has been sold to Theo. Colombier, Bordeaux, France, through A. B. Mackay, Hamilton, Ont., for \$32,500. She is to be taken as she lies. There were six bids received, all approximating this sum.

It was reported recently that Canada Steamship Lines' s.s. Turbinia, at present running between Toronto and Hamilton, would probably be taken over by the British Government, for war service. We are officially advised that the vessel has been looked over by representatives of the British Government, but that no arrangements have been made for requisitioning her.

The Minister of Marine stated in the House of Commons, Aug. 16, that the s.s. Laurentian was purchased recently from Canada Steamship Lines Ltd., for \$50,000. She was formerly known as King Edward, and was built in Great Britain in 1902. She is a screw driven vessel, with engine of 84 n.h.p., and her dimensions are, length 149 ft., breadth 24 ft., depth 11.1 ft.; tonnage, 355 gross, 155 register.

The Brockville-Morristown Transportation Co. is reported to have sold the s.s. John Webster to the United States War Department for about \$40,000. This vessel was built in April and was operated between Brockville, Ont., and Morristown, N.Y. She is being taken down the St. Lawrence to the Atlantic and thence to the Delaware River, where it is proposed to use her for transporting soldiers at Fort Dupont.

The Montreal Transportation Co.'s s.s. Westmount, which ran aground at Caribou Island, in St. Marys River, July 30,

was released Aug. 4, after about 60,000 bush. of her cargo of grain was lightered.

The Canadian Steel Corporation has filed plans for the construction of a marine slip, harbor works, docks and wharves with a canal running through the property for 2,500 ft., 200 ft. wide and 25 ft. deep, at Ojibway, Ont. It is proposed to build docks along this canal, and also on the Detroit River front.

The Public Works Department has refused an application for the construction of a wharf at Lot 10 at the junction of the Mission and Kaministikwia Rivers, Fort William, on the ground that it would restrict the navigable area in the basin there. The department has also notified the City of Fort William, that its water mains under the Kaministikwia River are dangerous to navigation, and that they must be laid at a greater depth and subject to the department's approval.

A Sarnia dispatch of Aug. 9, stated that the s.s. Rochester, "purchased recently from American parties by the Northern Navigation Lines, and tried on the Georgian Bay run, has been sold to Toronto parties, and will be taken there." The s.s. Rochester was built in 1910 for the Richelieu and Ontario Navigation Co. of the United States, and placed on the U. S. register. On the acquirement of the R. & O. N. Co. by Canada Steamship Lines, Ltd., the ownership of this vessel passed to the new company, and she was retained on the U.S. register, and owned by American Interlake Line. She was not in operation last year, being laid up in Canadian waters, but this year she was chartered to the Northern Navigation Co., which is under Canada Steamship Lines control, and used on that company's Georgian Bay route. We have been advising that nothing is known officially of the reported sale of the vessel.

Furness Withy and Co.'s annual meeting of shareholders was held in London, Eng., July 28. The accounts for 1916 showed a profit, including the balance brought forward from the previous year of £1,182,845 1s. 5d., after providing for the tax on excess profits. Three quarterly dividends were paid on the ordinary shares, at 10% per annum, and the usual half yearly dividends on preference shares, leaving an available balance of £1,004,720 1s. 5d. Of this balance, £350,000 was applied to depreciation account, and £200,000 to trades contingencies fund, making the company's total reserves £1,500,000. A bonus of 10% free of income tax was declared, in addition to the usual 10% dividend on the ordinary shares. The fund which has been formed for distribution amongst the company's masters, officers and engineers, at the close of the war was augmented by £40,000, bringing the total of the fund to £70,000. The company has disposed of its interest in Irvine's Shipbuilding and Dry Docks Co., West Hartlepool, and has acquired a controlling interest in the Prince Line, Ltd., and has also purchased the capital stock of the Queenstown Dry Docks, Shipbuilding and Engineering Co., of Passage West, Ireland. The company is acting as agent for the Admiralty transports loading in America for account of the allied Governments, and the London office is devoted almost exclusively to government work, which is undertaken by the company without remuneration.

It was announced in the British House of Commons, Aug. 7, that the first of the standardized steamships built in Great Britain under the new war schemes, would be placed in service during August.

British Columbia and Pacific Coast.

During June the coastwise tonnage inbound at Vancouver, was 306,958, and outbound 343,314. The ocean tonnage, including all vessels of foreign registry, was, inbound 172,559, and outbound 120,454 tons.

The Dominion Public Works Department has authorized the commencement of dredging work at the entrance to the inner harbor, Victoria. The channel is to be widened about 100 ft., and temporary lights will be placed during the progress of the work.

A motor boat service has been established between South Prince George and Quesnel, on the Fraser River, during the navigation season. The boat leaves South Fort George on Wednesdays and Saturdays, and Quesnel on Mondays and Thursdays. The single fare is \$10, and \$15 for the round trip; way points at 10c a mile, meals 50c and beds 50c.

The C.P.R. is reported to be dismantling the s.s. *Rosslund*, which has been operated in the Arrow Lakes service for several years. She was built at Nakusp, B.C., in 1897, and was driven by a paddle wheel, with engine of 38 n.h.p. Her dimensions were: Length, 183.4 ft.; breadth, 29.1 ft.; depth, 7 ft.; tonnage, 884 gross, 532 register.

The C.P.R. put a new schedule in effect, Aug. 8, for its steamship service to the west coast of Vancouver Island. The s.s. *Princess Maquinna* leaves Victoria on the 1st, 8th, and 22nd of each month, for Quatsino Sound, calling at way ports, and on the 16th of each month she will run to Nootka Sound, calling at intermediate ports.

The Coastwise Steamship & Barge Co.'s s.s. *Anyox* was launched from the Winslow Marine Railway & Shipbuilding Yards at Seattle, Wash., Aug. 2. On completion she will be used in the ore trade between Anyox and Puget Sound ports. She is 205 ft. long, 39 ft. beam, 23 ft. deep, and is equipped with oil burning engines for a speed of from 10 to 12 knots an hour when fully loaded. The company also owns the steamships *Amur*, *Henriette* and *Turret Crown*.

The Grand Trunk Pacific Alaska Co.'s auxiliary powered vessel *Tillamook* has been placed in service between Prince Rupert, B.C., and Ketchikan, Alaska, and intermediate ports. The owning company is a subsidiary of the Grand Trunk Pacific Ry., and was recently incorporated at Olympia, Wash. The vessel is registered in the U.S. She is 119 ft. long, 29 ft. beam, and has berth accommodation for 21 passengers. The cargo capacity is about 450 tons, and she will be used chiefly in the fish trade. Two round trips will be made weekly, and an additional trip each week should occasion warrant it.

British Shipping Statistics.—The British Prime Minister stated in the House of Commons, Aug. 16, that during the first six months of this year, 484 of new shipping tonnage was built, and during the last six months, including purchases, the additional tonnage would be 1,424,000 tons. During April, 560,000 gross tons of shipping were lost through enemy submarines, while in July, the lost tonnage due to enemy submarines dropped to 320,000 gross tons. He stated that with the co-operation of the U.S., there would be sufficient tonnage for 1918, and if necessary 1919 as well.

Canadian Government Vessels Launched at Toronto.

By the launching of 2 hulls, Aug. 1, Polson Iron Works, Ltd., Toronto, completed the preliminary stage of the construction of 6 steel steamships for Canadian Government service. Four of these hulls were launched June 16, and a full description with diagrams of the vessels and a view of the hulls on the launching ways, were given in *Canadian Railway and Marine World* for July. The first four launched were named respectively, *Ypres*, *Vimy*, *Messines* and *St. Julien*, and the last two launched were named *St. Eloi* and *Festubert* respectively. The christenings on Aug. 1 were carried out by Mrs. J. B. Miller and Mrs. A. H. Jeffrey, the wives respectively of the President and the Manager and Secretary, Polson Iron Works.

The dimensions of the vessels are: Length over all, 140 ft.; breadth, 23½ ft.; depth moulded, 13½ ft. The propelling machinery consists of fore and aft compound surface condensing engines, with cylinders, 18 and 38 in. diam. by 24 in. stroke, developing 500 h.p., and supplied with steam by water tube boilers at 180 lb., and equipped with down draught. Each of the vessels will be fully equipped for salt water service before leaving the Toronto yards, and some special equipment is to be added at Montreal before the vessels enter their ultimate service.

Grounding of the s.s. *Letitia*.

Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Commanders C. White, R.N., and E. Wyatt, R.N.R., as nautical assessors, held an enquiry at Halifax, N.S., Aug. 13 and 14, into the grounding of *Anchor-Donaldson Line s.s. Letitia* near Portuguese Cove, in Halifax harbor, Aug. 1. The vessel was being utilized as a hospital ship, and conveying a number of wounded and convalescent soldiers to Canada. One life was lost as a result of the casualty. After hearing the evidence, which the court pronounced as straightforward and to the point, the commissioner commented on the conduct of the master and officers. In the former case, he said, "His share in the landing safely of the wounded soldiers and others, speaks well in his favor, as well as his long and successful career, and these are sufficient reasons for belief that in trusting so faithfully to the pilot, was under the circumstances an excusable error of judgment, and a warning in his case is unnecessary, as the court is positive that no pilot well ever succeed in imposing in such a manner on him again."

Regarding the pilot, it was found that the exceptional prudence and care demanded, owing to the exceptional circumstance of navigating a hospital ship, were not exercised, and a haphazard method was adopted, with the consequence that a valuable vessel was lost, one life lost and one officer crippled for life. It is providential that a greater disaster was not registered, and this was due to the calm weather, strict discipline and sang froid shown by the military and the ship's staff. The court also considered what was described as the unenviable reputation which the coast and the port of Halifax is gradually gaining, and hopes that this action, not wilful, but stupid, of this pilot, will not remain a stigma on a port with such natural facilities and so easy of access. While condemning the pilot for gross negligence, it also condemned the custom which seems to pre-

vail, as admitted by the pilot, of giving and receiving a course or bearing from a member of the cutter's crew. That such a man should offer a bearing and that it should be accepted by a licensed pilot, supposedly rational, would seem a fable, were its reality not brought so forcibly to general knowledge. The court felt keenly about this casualty, and in order that a repetition may be impossible and as a deterrent to any inclined to carelessness, decided to deal severely with the pilot. Had it not been the custom for pilots to take their possible position from another, the criminal courts would have been requested to deal with this case, but under the circumstances the court cancelled the license of the pilot, Walter White, no. 24, and the Halifax Pilotage Commission was requested to see that the court's order is carried out. The court also suggested that a general and thorough enquiry should be made into the pilotage system in Halifax, in order to bring about a betterment so as to induce the confidence of the shipping public. A better and more thorough system of examination is needed.

Mainly About Marine People.

W. G. Ross, President, Montreal Harbor Commission, has been given the British Navy League's special service decoration, as a recognition of his services for British sea power.

Robert Preston, organizer and Manager of the Westminster Towing & Fishing Co., died at New Westminster, B.C., Aug. 1. He was a native of St. Stephen, N.B., and had lived in British Columbia since 1864.

C. H. Nicholson, Manager, Grand Trunk Pacific Coast Steamship Co., Vancouver, B.C., was presented with a silver tea and coffee service by the local office staff and vessel crews, Aug. 1, to mark the 25th anniversary of his wedding.

Major H. Maitland Kersey, D.S.O., Managing Director, Canadian Pacific Ocean Services, Ltd., London, Eng., is offering a prize to be given at the end of each year, to the cadet studying on the training ship *Conway*, showing the greatest proficiency in the management of boats. The prize consists of a sextant.

T. H. Allan, heretofore yard superintendent, Wallace Shipyards, North Vancouver, B.C., has been appointed General Superintendent. He has been 25 years connected with shipbuilding, having served his apprenticeship at Superior, Wis., though of English birth. He was later in service with John Brown & Co. and Vickers Son & Maxim, shipbuilders, of Scotland and England respectively.; Collingwood Shipbuilding Co., Collingwood, Ont.; British Columbia Marine Railway Co., Esquimalt, B.C., and since Jan., 1916, with Wallace Shipyards, Ltd.

Hugh A. Allan, Chairman of the Allan Line Steamship Co., was presented with an illuminated address by the directors and staffs of the London, Liverpool and Glasgow offices, recently, on his retirement, due to the Allan Line passing under C.P.R. control. He was connected with the Allan Line for 40 years, 32 of which were spent in Canada, and the last 8 years in London, Eng. In referring to the passing of the Allan Line, Mr. Allan said: "The Allans have been in the North Atlantic trade for 98 years, and now that my brother, Andrew, and I, the last representatives of the family, are giving up the agencies on both sides of the Atlantic, I feel that the connection has been broken."

Overseas Transportation and the War.

The overseas transportation service, which is under the direction of the acting Director of Overseas Transport, is closely associated with the Marine Department, and its work was referred to by the Minister of Marine in the House of Commons, Aug. 6, in dealing with his report for the year ended Mar. 31, generally as follows: The branch is responsible for the movement of all transports, carrying either troops or munitions, for the provision of all necessary escorts at sea, and for advising the Imperial authorities, giving detailed information by telegraph of the cargoes of all transports before they arrive in England, the Admiralty and War Office then being able to make the necessary arrangements for handling the cargoes on arrival. During the year under review, the work increased greatly. There is general control of the traffic inland, by rail or otherwise, covering its reception and storage at points of shipment, the allocation of cargoes to different vessels, and the storage on board. The Naval Service Department is responsible for the movement of these vessels, the supply of sufficient tonnage to meet transportation demands, and the routing of same. Through co-operation, the transportation problems have to a large extent been overcome, and a high degree of efficiency has been attained. All expenses in connection with this service are defrayed by the Dominion Government on behalf of the Imperial Government, on presentation of certified invoices. Contracts are made for the supply of bunker coal as required, and during the year, 230,000 tons were purchased from Canadian firms for transports. Arrangements were also made for repairing and fitting vessels for special purposes, and for the supply of provisions, stores and gear as are required while vessels are in Canadian ports.

The average export movement for the year ended Mar. 31, was over 200,000 tons a month, or roughly, 8 fully loaded freight trains of material a day. The monthly total now exceeds 360,000 tons, and the sailings average two a day. During the year, a total of 386 sailings, comprising 2,429,829 tons, cleared from Canadian ports. These figures show a large increase over the previous year, when 198 sailings comprising 970,911 tons, were made. The Minister said that the department's thanks were due to the C.P.R. for the services of a number of experienced transportation officers, as well as for its ready co-operation at all times.

Stranding of the s.s. Singapore.—An investigation was held at Montreal recently by Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. F. Nash and C. Lapierre, as nautical assessors, into the causes which led to the stranding of the s.s. Singapore at Metis Point in the River St. Lawrence, July 1. The court found that the master, F. W. Hatswell, showed proof of poor judgment, and that a very indifferent lookout was kept by the second officer. Under the circumstances the master's certificate was not dealt with, but he was reprimanded very severely. The court said that it had no warrant to eulogize or to condemn the St. Lawrence or Canadian waters, but having had 14 years in exploring every part of it, it could safely say that if ordinary prudence be exercised, there is no reason for such a casualty to occur.

The Equipment of Auxiliary Powered Vessels.

With reference to the auxiliary powered vessels built for the Canada West Coast Navigation Co., on the Pacific coast, *Motorship*, a paper devoted to the interests of motor driven vessels, says: "If the motors are genuinely used as an auxiliary to the sails, the power is sufficient, but if the sails are auxiliary to the engines, she is without doubt underpowered. The non-success of several auxiliaries has been due to the fact that when such vessels were ordered, owners intended to use the motors for getting in and out of harbors and for docking; but after the vessels were in service the captains receive instructions to use the engines continuously, which, of course, is quite unfair to the machinery. Personally, we think that these vessels are underpowered and that two 300-400 b.h.p. motors should have been installed, because the motors are sure to be used constantly, which, of course, is too much work to expect from engines which are not meant to drive the boat at any substantial and prolonged speed. The engines are there, and doubtless the crew, if not the owners, will expect them to do the work of machinery of a full powered ship of this size." The vessels are equipped with two 160 b.h.p. Bolinder surface ignition oil engines.

Radiotelegraphy in Canada During the War.

In a statement to the House of Commons, Aug. 6, respecting the work of his department for the fiscal year ended Mar. 31, the Minister of Marine, in dealing with radiotelegraphy, said that the government's policy, to develop and maintain under government control, the radiotelegraph service, was being continued. All amateur stations, which were closed down at the commencement of the war, remained so. The service is playing an important part in the war, particularly in providing communication for such vessels of war as may be operating in the vicinity of Canadian waters. The government stations on the Atlantic and Pacific coasts are well adapted for such purposes, and by reserving certain stations for naval work solely, adequate facilities have been provided. There are 156 coast, land and ship stations in the Dominion, 67 being government land and ship stations, 75 are commercial ship stations and the remaining 13 are commercial land, coast and instructional stations. There are 404 persons employed in the service, or whom 137 are in the government's employ. Of the 43 coast stations, 42 are owned by the government. Those on the west coast and Hudson Bay are operated directly by the Naval Service Department, and those on the Great Lakes and east coast, with certain exceptions are operated by the Marconi Wireless Telegraph Co. under contract. During the war, certain stations on the east coast have been taken over and operated directly by the Naval Service Department, for naval purposes solely. The section of the Radio-Telegraph Act calling for the compulsory equipment of certain steamships with wireless facilities, has been efficiently carried out, and no attempts to evade the act's requirements were reported. During the year, 141 operators were examined for certificates and 87 were successful, and to the end of the year, 176

proficiency certificates had been issued. The regular work of the stations was carried on so far as war conditions permitted, and there were large increases in the number of messages and words, as well as in revenue over the previous year.

Government Hydrographic Surveys.

In discussing the estimate to provide \$200,000 for hydrographic surveys, the work under W. J. Stewart, Chief Hydrographic Officer, was outlined by the Minister of Marine, in the House of Commons, Aug. 6, as follows:

Atlantic Coast.—Survey along the southeast coast of Nova Scotia, from Halifax harbor; to modernize present charts.

Lower St. Lawrence, s.s. Cartier.—Extending eastward from the river; work has been completed as far east as Point des Monts on the north shore and Cape Chat on the south shore. It is intended to carry the work along the south shore, covering the route of vessels approaching the St. Lawrence.

Lake Superior.—The s.s. Bayfield will survey the more exposed coasts on the lake, in the vicinity of Caribou Island and Michipicoten. The s.s. La Canadienne is surveying more sheltered waters; that on Nipigon Bay has been completed, and Black Bay is to be completed this year, and if time permits the vessel may be moved to work in the north channel of Lake Huron.

Pacific Coast.—The s.s. Lillooet is working round Queen Charlotte Islands and Hecate Strait.

Trade and Supply Notes.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers distinctly to understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

L'Air Liquide Society.—E. Jordan has been appointed Canadian Representative and Chief Engineer, succeeding C. Royer, resigned.

Independent Pneumatic Tool Co., Chicago, Ill., and 334 St. James St., Montreal, has issued circular Z, describing in detail its line of Thor pneumatic tools and electric drills.

Berry Brothers, varnish manufacturers, Walkerville, Ont., have arranged for group life insurance, covering all their employes who have been in their service for six months, the insurance ranging from \$500 to \$1,000, according to the term of service.

Smoke Nuisance Along Navigable Waterways.—The Dominion Marine Association is taking up this matter with the Ontario Department of Lands, Forests and Mines, with the view of obtaining some changes in the regulations respecting the burning of brush, and the making of fires of any kind which tend to increase the smoke nuisance along navigable waterways, particularly in the Upper Lakes channels. The Department is investigating with regard to the period during which the lighting of fires shall be permitted.